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**ANÁLISE DAS RELAÇÕES FILOGENÉTICAS ENTRE OS
GÊNEROS DE CHEIRODONTINAE (OSTARIOPHYSI:
CHARACIFORMES: CHARACIDAE) UTILIZANDO
SEQUÊNCIAS DE DNA MITOCONDRIAL E NUCLEAR**

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Orientador: Prof. Dr. Claudio de Oliveira

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Dedicatória

À minha família...

Ao Diogo...

“No princípio Deus criou o céu e a terra. A terra, porém, estava informe e vazia, e as trevas cobriam o Abismo, mas o espírito de Deus pairava por sobre as águas. Disse Deus: “Haja luz”. E houve luz. Viu Deus que a luz era boa; e Deus separou a luz das trevas. Deus chamou a luz de “dia”, e as trevas, “noite”. Houve tarde e houve manhã: um primeiro dia.

Disse Deus: “Haja um firmamento no meio das águas, para separar umas das outras”. E assim se fez. Deus fez o firmamento que separou as águas que estão debaixo do firmamento daquelas que estão por cima do firmamento. E assim se fez. Deus chamou o firmamento “céu”. Houve tarde e houve manhã: um segundo dia.

Disse Deus: “Juntem-se num só lugar as águas que estão debaixo do céu, e apareça o elemento seco”. E assim se fez. Deus chamou o elemento seco “terra”, e o ajuntamento das águas chamou “mares”. E Deus viu que isso era bom.

Disse Deus: “Verdeje a terra com o que é verdejante, ervas que produzam sementes e árvores frutíferas que dêem suas espécies de frutos nos quais está contida a semente, por sobre a terra”. E assim se fez. A terra produziu o que é verdejante, ervas que contêm semente conforme sua espécie e árvores frutíferas com suas espécies de frutos nos quais está contida a semente. E Deus viu que isso era bom. Houve tarde e houve manhã: um terceiro dia.

Deus disse: “Haja luzeiros no firmamento dos céus para separar o dia da noite. Sirvam eles de sinais para as estações, os dias e os anos. Sejam eles no firmamento dos céus os luzeiros que iluminem a terra”. E assim se fez. Deus fez os dois grandes luzeiros: o luzeiro maior, para dominar o dia, e o luzeiro menor, para dominar a noite, e as estrelas. Deus os colocou no firmamento do céu para iluminar a terra, para que presidissem ao dia e à noite e para que separassem a luz das trevas. E Deus viu que assim era bom. E houve tarde e manhã: um quarto dia.

Deus disse: “Pululem as águas de seres animados e voem as aves por sobre a terra, debaixo do firmamento do céu”. E assim foi feito. Deus criou os grandes monstros do mar e todos os seres animados que deslizam pelas águas, de cujas diferentes espécies pululam as águas, como também todas as espécies de seres alados. E Deus viu que assim era bom. Deus os abençoou dizendo: “Sede fecundos e multiplicai-vos, enchei as águas do mar; multipliquem-se também as aves sobre a terra”. Houve tarde e manhã: um quinto dia.

Disse também Deus: “Produza a terra seres vivos de diferentes espécies: animais domésticos, animais rasteiros e animais selvagens de diferentes espécies”. E assim foi feito. E Deus fez as diferentes espécies de animais selvagens, de animais domésticos e de animais rasteiros da terra. E Deus viu que assim era bom.”

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Resumo

Os Characiformes são peixes exclusivamente de água doce e encontram-se distribuídos nas Américas e na África, atingindo maior diversidade nas principais drenagens neotropicais. A família Characidae é o grupo mais especioso entre os Characiformes, porém, a relação dessa família com outras famílias é ainda incerta. São conhecidas cerca de 1000 espécies de Characidae das quais cerca de um terço estão distribuídas em 14 subfamílias, e as demais não tem uma posição filogenética clara, sendo incluídas em um grande grupo considerado *incertae sedis* em Characidae. A subfamília Cheirodontinae compreende cerca de 60 espécies, sendo um grupo de characídeos amplamente distribuídos nas bacias hidrográficas da América do Sul e Central, incluindo espécies trans-andinas. Os gêneros de Cheirodontinae atualmente estão divididos em três tribos: Cheirodontini, Compsurini e Odontostilbini. No presente estudo, o principal objetivo foi investigar as relações de Cheirodontinae com as subfamílias de Characidae e as relações internas dos membros de Cheirodontinae através da análise de sequências de DNA mitocondrial (16S e Citocromo *b*) e nuclear (RAG1, RAG2 e Myh6). As análises mostraram que *Spintherobolus* não pertence à subfamília e *Cheirodon stenodon*, que era considerado *incertae sedis* em Characidae, deve fazer parte da mesma. Diversos gêneros apareceram polifiléticos, principalmente *Odontostilbe*. As espécies trans-andinas e andinas, são as espécies mais antigas da subfamília. As relações observadas nas análises são bastante diferentes das correntemente aceitas para Cheirodontinae e assim é proposta uma nova classificação para o grupo. O gênero *Holoshesthes* é considerado válido e pertencente a um clado juntamente com o gênero *Aphyocheirodon* e *Acinocheirodon*. *Odontostilbe* forma um clado monofilético com as espécies antes pertencentes à *Serrapinnus*, uma espécie nova e *Compsura heterura*. As tribos Cheirodontini, Compsurini e Odontostilbini são mantidas, com diferentes composições e uma tribo adicional é sugerida (Pseudocheirodontini).

Abstract

The Characiformes are exclusively freshwater fishes and they are found distributed in Americas and Africa, reaching more diversity in the major Neotropical drainages. The family Characidae is the most specious group among characiforms, but the relationships among this family and other families remains unclear. It is known about 1,000 species belonging to Characidae, one third distributed in 14 subfamilies, and the remaining does not have a clear phylogenetic position, and currently are included in a large group considered *incertae sedis* in Characidae. The subfamily Cheirodontinae comprises about 60 species, being a characid group widely distributed in the South and Central America hydrographic basins, including trans-Andean species. The genera of Cheirodontinae are currently divided in three tribes: Cheirodontini, Compsurini, and Odontostilbini. In the present work, the main goal was investigate the internal relationships of the members of Cheirodontinae through sequencing and analysis of mitochondrial (16S rRNA and Cytochrome *b*) and nuclear (RAG1, RAG2, and Myh6) genes. These analyses shown that *Spintherobolus* does not belong to the subfamily and *Cheirodon stenodon*, which was considered *incertae sedis* in Characidae, belongs to the same. Several genera are polyphyletic, mainly *Odontostilbe*. The trans-Andean and Andean species are the older species of the subfamily. The relationships observed in the analyses are very different of the currently accepted to Cheirodontinae and thereby it is suggested a new classification to the group. The genus *Holoshesthes* is considered valid and belonging to a clade jointly with the genus *Aphyocheirodon* and *Acinocheirodon*. *Odontostilbe* form a monophyletic clade with the species currently belonging to *Serrapinnus*, a new species, and *Compsura heterura*. The tribes Cheirodontini, Compsurini and Odontostilbini are preserved, with different compositions and an additional tribe is suggested (Pseudocheirodontini).

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1. INTRODUÇÃO

A ictiofauna de água doce Neotropical é a mais rica de todo o planeta. De acordo com Reis et al. (2003), das 13.000 espécies de peixes de água doce supostamente existentes, aproximadamente 6.000 espécies encontram-se na região Neotropical, das quais, cerca de 4.500 são consideradas válidas e cerca de 1.550 são conhecidas e ainda não foram descritas formalmente. Dentro desse universo de espécies de água doce destacam-se os representantes da superordem Ostariophysi, que representam 71% dessa fauna (Reis et al. 2003).

Entre os Ostariophysi, os Characiformes são peixes exclusivamente de água doce e encontram-se distribuídos nas Américas e na África, atingindo maior diversidade nas principais drenagens neotropicais (Buckup 1998). Esta ordem compreende atualmente 1.460 espécies divididas em 14 famílias, sendo quatro africanas e as demais neotropicais (Reis et al. 2003). Os Characiformes apresentam uma grande variação na forma corporal, estrutura da mandíbula, dentição e anatomia interna (Vari 1998). Além disso, nessa ordem são encontrados desde espécies predadoras que alcançam cerca de 100 cm de comprimento total até espécies cujas formas adultas não ultrapassam os 15 mm, sendo as chamadas espécies miniaturas (Weitzman e Vari 1988).

Dentro da ordem Characiformes estão espécies de grande importância ecológica e econômica para o Brasil. Assim, temos muitas espécies utilizadas na pesca comercial, esportiva e na aquicultura como os curimbatás (Prochilodontidae), piaparas e piaus (Anostomidae), traíras (Erythrinidae), pacus, tambaquis (Serrasalminidae), dourados e matrinhãs (Characidae), etc. Há ainda um enorme número de espécies, principalmente da família Characidae, exportadas na forma de peixes ornamentais, o que tem gerado importantes divisas para o país, embora tenha causado sérios impactos ambientais (Chao et al. 2001).

Embora muitos grupos dentro da ordem Characiformes tenham sido objeto de vários estudos de taxonomia e sistemática, o conhecimento das relações filogenéticas da maioria de seus táxons é muito restrito. Assim, ainda que a maioria das famílias que compõem a ordem Characiformes já possam ser identificadas por caracteres sinapormórficos (ver referências em Reis et al. 2003), os estudos filogenéticos na ordem não são compatíveis com sua importância ecológica e econômica. A primeira hipótese filogenética abrangente de base cladística para os Characiformes (Figura 1) foi proposta por Buckup (1998), cujo estudo, ainda que

bastante importante, deve ser visto com muita cautela pois o autor utilizou apenas 27 táxons em seu grupo-interno, sendo estes apenas sete gêneros de Characidae (*Cynopotamus*, *Charax*, *Phenacogaster*, *Tetragonopterus*, *Oligosarchus*, *Bryconops* e *Brycon*), uma das famílias mais importantes em Characiformes.

1.1. A Família Characidae

O grupo mais especioso entre os Characiformes, a família Characidae, abrange cerca de 950 espécies válidas, 170 gêneros e 12 subfamílias (Reis et al. 2003), o que corresponde à aproximadamente 65% das espécies da ordem. Ao longo dos anos, essa família vem sofrendo várias modificações na sua classificação, mas muito pouco se conhece sobre as relações filogenéticas de seus membros constituintes. Isto decorre, dentre outras causas, do fato de que muitas espécies da família são de pequeno porte, apresentando redução no sistema da linha lateral, na complexidade do sistema esquelético, no número de raios das nadadeiras, na quantidade de escamas e diminuição do tamanho dos olhos em relação ao da cabeça, além de possuírem uma série de outros caracteres associados à pedomorfia, os quais podem ser convergentes ou homoplásticos, devendo ser utilizados com restrições nas análises cladísticas (Weitzman e Malabarba 1998). Além disso, vários trabalhos empregando caracteres morfológicos, realizados em diversos táxons de Characidae, inclusive os mais abrangentes (Lucena 1993; Moreira 2007), não foram publicados, estando apenas disponíveis no formato de teses, o que torna sua citação problemática.

Malabarba e Weitzman (2003), em uma análise visando posicionar filogeneticamente seu novo gênero de Characidae, *Cyanocharax*, propuseram, com base na presença de ganchos, principalmente nos raios das nadadeiras pélvicas e anal de machos adultos, um grupo monofilético de “characids” incluindo os Roestinae, Gasteropelecidae, Serrasalminae, Cheirodontinae, Characinae, Stethaprioninae, Iguanodectinae, Aphyocharacinae, Rhoadsiinae, parte de Tetragonopterinae juntamente com gêneros *incertae sedis*: *Salminus*, *Brycon*, *Bryconops*, *Lignobrycon*, *Triportheus* e o “Clado A” (Figura 2). Muitas espécies fazem parte do “Clado A”, sendo este, definido pela presença sinapomórfica de uma nadadeira dorsal com fórmula ii, 8 raios e quatro dentes na série interna do pré-maxilar. Apesar de representar um avanço no entendimento das relações filogenéticas em Characidae, o estudo é baseado em relativamente poucos

caracteres examinados (todos observáveis sem dissecção) sendo que a maior parte dos táxons do “Clado A” é parte de uma grande politomia não resolvida.

Além do que foi citado acima, muitas questões sobre a composição e as relações internas das subfamílias de Characidae permanecem em aberto. Assim, por exemplo, a subfamília Tetragonopterinae, outrora considerada como a subfamília mais bem sucedida entre os Characidae, estando presente em quase todos os ambientes neotropicais (Géry 1977), não pode ser reconhecida como monofilética, assim como muitos de seus gêneros mais especiosos (Weitzman e Malabarba 1998; Malabarba e Weitzman 2003). Recentemente, para assegurar a monofilia de Tetragonopterinae, somente o gênero *Tetragonopterus* foi mantido no grupo e todos os demais gêneros de Tetragonopterinae foram considerados *incertae sedis* em Characidae (Reis et al. 2003).

No último levantamento da fauna de água doce da região Neotropical, 88 gêneros e cerca de 620 espécies, anteriormente alocados em Tetragonopterinae, Cheirodontinae, Characinae, Bryconinae, Paragoniatinae e Aphyocharacinae, foram alocados como *incertae sedis* em Characidae (Reis et al. 2003). Portanto, somente as subfamílias de Characidae que apresentavam alguma evidência de monofilia foram retidas no grupo, sendo elas: Clupeacharacinae (1 espécie), Agoniatinae (2 espécies), Tetragonopterinae (2 espécies), Roadsiinae (6 espécies), Aphyocharacinae (10), Stethaprioninae (12 espécies), Bryconinae (43 espécies), Cheirodontinae (46 espécies), Glandulocaudinae (50 espécies), Characinae (70 espécies) e Serrasalminae (72 espécies), num total de 79 gêneros e cerca de 325 espécies (Reis et al. 2003). Embora algumas das subfamílias de Characidae, tais como Serrasalminae (Machado-Allison 1983), Glandulocaudinae (Weitzman e Menezes 1998; Menezes e Weitzman 2009) e Cheirodontinae (Malabarba 1998) tenham sido foco de estudos morfológicos recentes, as relações filogenéticas entre as subfamílias de Characidae e entre essas e os demais Characiformes permanecem desconhecidas. De acordo com Weitzman e Malabarba (1998), para que haja progresso na elucidação das inter-relações filogenéticas dos táxons da família Characidae, serão necessárias análises mais detalhadas de muitos aspectos da anatomia dessas espécies, assim como, o emprego de outros tipos de dados como fisiológicos e comportamentais.

O trabalho mais recente, abrangendo uma grande quantidade de gêneros e espécies de Characidae, é o de Mirande (2009) (Figura 3). O autor utilizou 160 espécies de Characidae e famílias relacionadas, comparando 360 caracteres

morfológicos, e concluiu que a monofilia da família é suportada por sete sinapomorfias. Uma nova subfamília, Heterocharacinae, foi proposta e as subfamílias Aphyocharacinae, Aphyoditeinae, Characinae, Gymnocharacinae e Stevardiinae foram redefinidas. Mirande (2009) também propõe que Glandulocaudinae seja incluso em Stevardiinae junto com membros remanescentes do “Clado A” e os gêneros *Auxilidens* e *Nantis*. A maioria dos gêneros *incertae sedis* estudados foram alocados à algum clado diagnosticado existente (Mirande 2009).

Mesmo com estudos englobando subfamílias de Characidae e espécies *incertae sedis*, dificilmente um trabalho abrange todas os gêneros de uma única subfamília, para que sejam conhecidos quanto as suas relações dentro da própria subfamília. Um exemplo disso são as relações da subfamília Cheirodontinae, a mais amplamente distribuída de Characidae.

1.2. A Subfamília Cheirodontinae

Cheirodontinae é a subfamília mais amplamente distribuída de Characidae. São encontrados na maioria das bacias hidrográficas da América do Sul e Central, como bacia Amazônica, Orinoco, Paraná-Paraguai e São Francisco. Possui os únicos representantes da ordem ocorrentes no oeste dos Andes no Chile e habitam ambientes lênticos e regiões de planície. Atualmente, um total de 17 gêneros são reconhecidos na subfamília (Malabarba 1998, 2003, 2007; Bührnheim et al. 2008), com cerca de 55 espécies válidas (Malabarba 2003; Malabarba et al. 2004; Bührnheim e Malabarba 2006, 2007; Bührnheim et al. 2008).

Cheirodontinae foi inicialmente definida por Eigenmann (1915) como sendo formada por 21 gêneros e 56 espécies. Eigenmann incluiu no grupo os seguintes gêneros: *Aphyocharax*, *Aphyocheirodon*, *Aphyodite*, *Cheirodon*, *Compsura*, *Grundulus*, *Holoshestes*, *Leptagoniates*, *Leptobrycon*, *Macropsobrycon*, *Megalamphodus*, *Microschemobrycon*, *Mixobrycon*, *Odontostilbe*, *Oligobrycon*, *Paragoniates*, *Parecbasis*, *Phenagoniates*, *Prionobrama*, *Probolodus* e *Spintherobolus*.

Entre a publicação de Eigenmann (1915) e o ano de 1960, 14 novos gêneros foram descritos em Cheirodontinae, todos inseridos na subfamília por apresentarem uma única série de dentes no pré-maxilar: *Pseudocheirodon* Meek & Hildebrand, 1916, *Monotocheirodon* Eigenmann & Pearson, em Pearson, 1924, *Prodontocharax* Eigenmann & Pearson, em Pearson, 1924, *Rachoviscus* Myers, 1927, *Othonocheirodon* Myers, 1927, *Amblystilbe* Fowler, 1940, *Pedalibrycon* Fowler,

1943, *Saccoderma* Schultz, 1944, *Cheirodontops* Schultz, 1944, *Odontostoechus* Gomes, 1947, *Distoechus* Gomes, 1947, *Auxilidens* Böhlke, 1952 e *Thrissobrycon* Böhlke, 1953.

Géry (1977) considerou que a subfamília Cheirodontinae, senso estrito, continha 13 gêneros: *Aphyocheirodon*, *Aulixidens*, *Cheirodon*, *Cheirodontops*, *Compsura*, *Holoshestes*, *Monotocheirodon*, *Myxobrycon*, *Odontostilbe*, *Odontostoechus*, *Othonocheirodon*, *Petitella* e *Saccoderma*. Além da inclusão de espécies no decorrer dos anos, muitos outros autores discutiram também os aspectos da sistemática de Cheirodontinae sem oferecer nenhuma proposição geral de classificação do grupo.

Algumas classificações agruparam Cheirodontinae e Tetragonopterinae em uma mesma subfamília (Regan 1911; Gregory e Conrad 1938), e mesmo após passar por muitas revisões durante os anos seguintes, Weitzman e Vari (1988) ainda não reconheceram essas duas subfamílias separadamente. Mirande (2009) corrobora a monofilia de Cheirodontinae, e sugere sua relação com Aphyocharacinae e Aphyoditeinae, apesar de ter analisado apenas seis espécies pertencentes a quatro gêneros da subfamília (Figura 3).

Malabarba (1988) e Casciotta et al. (1992) redefinem o gênero-tipo da subfamília, *Cheirodon*, com base em caracteres apomórficos compartilhados. Somente Malabarba (1998), após ampla revisão baseada em métodos cladísticos, encontrou quatro sinapomorfias para a subfamília Cheirodontinae com base em caracteres relacionados à(s): (1) presença de pseudotímpano junto à porção anterior da bexiga natatória, entre a face pósterio-dorsal da primeira costela e a face ântero-dorsal da segunda costela; (2) ausência de mancha umeral ou de pigmentação diferenciada na região anterior do corpo; (3) dentes do pré-maxilar, maxilar e dentário, expandidos na porção distal, pedunculados, fortemente comprimidos no plano ântero-posterior na porção distal e com cúspides alinhadas em um mesmo plano; (4) presença de uma única série de dentes no pré-maxilar, semelhantes em forma e número de cúspides.

Após analisar essas características, Malabarba (1998) concluiu que a subfamília Cheirodontinae é composta pelos gêneros: *Acinocheirodon* (citado como *New gen. & sp. B*), *Aphyocheirodon*, *Cheirodon*, *Cheirodontops*, *Compsura*, *Heterocheirodon*, *Kolpotocheirodon* (citado como *New gen. & sp. A*), *Macropsobrycon*, †*Megacheirodon*, *Nanocheirodon*, *Odontostilbe* (*Holoshestes* e *Lobodeuterodon* como sinônimos), *Prodontocharax* (*Amblystilbe* como sinônimo), *Pseudocheirodon*,

Saccoderma, *Serrapinnus*, *Spintherobolus* e um táxon identificado como *New gen. & sp. C* (Figura 4). Após isso, Malabarba (1998) dividiu os gêneros nas tribos Cheirodontini (formada com base, principalmente, em caracteres relacionados ao dimorfismo sexual secundário observado nos raios procorrentes ventrais da nadadeira caudal e raios da nadadeira anal dos machos) e Compsurini (inclui os cheirodontíneos com inseminação, sendo caracterizada pela transferência de esperma dos testículos dos machos maduros para os ovários das fêmeas) e o restante foi alocado como um grupo de gêneros considerados *incertae sedis* (os que não possuem as características que definem as tribos Compsurini e Cheirodontini).

A tribo Cheirodontini compreende os gêneros: *Cheirodon*, *Nanocheirodon*, *Heterocheirodon*, †*Megacheirodon*, *Spintherobolus* e *Serrapinnus* e a tribo Compsurini os gêneros: *Saccoderma*, *Compsura*, *Macropsobrycon*, *Acinocheirodon* e *Kolpotocheirodon*; os gêneros *Odontostilbe* (= *Holoshestes*), *Cheirodontops*, *Pseudocheirodon*, *Prodontocharax* e *Aphyocheirodon*, são os considerados *incertae sedis* dentro de Cheirodontinae.

Um novo gênero e espécie, *Amazonspinther dalmata*, foi descrito por Bührnheim et al. (2008) somando mais um gênero na subfamília Cheirodontinae. Neste trabalho, *Amazonspinther* foi diagnosticado como pertencente à tribo Cheirodontini e mais relacionado ao gênero *Spintherobolus*.

Recentemente, a monofilia de Cheirodontinae apresentada por Malabarba (1998) foi confirmada por Bührnheim (2006), baseando-se em uma nova análise filogenética com 53 táxons e 169 caracteres pesados (Figura 5) e não pesados (Figura 6). A subfamília é redefinida por 15 sinapomorfias, duas correspondentes às encontradas por Malabarba (1998) e algumas novas unicamente derivadas. Segundo Bührnheim (2006) essas sinapomorfias são: “(1) anteromedial process of the mesethmoid forming a short projection, wide at its base and narrower at its tip, with slightly sinusoidal lateral borders, similar to brackets contour [2*-1]; (2) first infraorbital subrectangular with anteroventral portion extended [14*-1]; (3) long, preopercular canal reaching the anterodorsal corner of opercle [27-0]; (4) laminae of the medial border of the premaxilla in articulation with the mesethmoid slightly pronounced, forming a V-shaped bifurcation, the posteromedial lamina oblique to anteromedial lamina [34-1]; (5) posterior edentulous portion of the maxilla approximately of equal size of the anterior tooth bearing portion of maxilla [50*-1]; (6) ventral margin of posterior portion of maxilla extended ventrally beyond maxillary teeth tips [51-1]; (7) usually two or three maxillary teeth [54*-2]; (8) all

tooth bearing portion of dentary nearly straight and forming an angle of approximate 120° relative to the posterior dorsal border of dentary, in lateral view [56-2]; (9) short lateral ridge with a somewhat straight surface of the upper portion of angulo-articular, on posterolateral portion of lower jaw, near the posterior portion of maxilla, observed in dorsal view [57-1]; (10) approximately the third anterior portion of dentary longitudinal axis with teeth [62-1]; (11) anteriormost portion of dentary, at the symphyseal joint, narrow, 4-5 times in the height of middle portion of dentary; (2) narrow, 7 times or more the height of middle portion of dentary, in lateral view [64-1]; (12) posteroventral border of the coracoid nearly forming an angle of 90° or slight extended, forming a small point or a truncate corner [100-1]; (13) anal-fin profile of males with the anterior lobe pointed and distal profile concave; sexually dimorphic; the last unbranched anal-fin ray and first two branched anal-fin rays in males elongate, longer than in females [112-1]; (14) absence of humeral spot [157-1]; (15) a large pseudotympanum between the first and second pleural ribs, nearly triangular hiatus on muscles covering the anterior swimbladder, limited dorsally by the *lateralis superficialis* muscle, posteriorly by a naked anterior surface of the second pleural rib, anteroventrally by the *obliquus superioris* muscle, and posteroventrally by the *obliquus inferioris* [163-1].

Bührnheim (2006) propôs uma nova tribo, Odontostilbini, baseada em 13 sinapomorfias: “(1) longitudinal branch of the laterosensory canal of parietal posteriorly contiguous to the transverse laterosensory canal of parietal, and anteriorly contiguous to the laterosensory canal of frontal [11-0]; (2) laterosensory canal along almost the entire length of the longest axis of the first infraorbital or reaching to about half length of the longest axis [15-0]; anterodorsal border of the sixth infraorbital with a small to well-developed pointed projection, underneath the posterodorsal portion of the first infraorbital [18-1]; (4) anterior border of the sixth infraorbital with the anterior lamella expanded in a lingual-like shape [22-2]; (5) palatine regular rectangular, well developed [30-1]; (6) present of the flange on anterodorsal portion of the maxilla, posterior to rod-like ascending process of the maxilla [45-0]; (7) laminar ridge with a straight surface of the upper portion of the angulo-articular, on posterolateral portion of the lower jaw, near the posterior portion of the maxilla, well-marked in dorsal view [57-3]; (8) lower branch of the angulo-articular on lateral surface of dentary short, not extended anteriorly or slightly extended, anterior border forming a slight convexity, 4-5 times in the longitudinal length of the dentary [61-0]; (9) ventral border of the posteriormost

branchiostegal ray in males slightly concave on the anterior to median length of the ventral border [77-1]; (10) unbranched pelvic-fin ray elongate [103*-1]; (11) anal-fin profile of males concave to almost straight; absence of sexual dimorphism [112-0]; (12) laterosensory canal of the lateral line relatively long, extending nearly half-length of the middle caudal-fin rays [114-1]; (13) lateral line complete [153-0]”.

Bührnheim (2006) também propôs diversas alterações nomenclaturais, assim, *Aphyocheirodon* e *Cheirodontops* seriam sinônimos juniores de *Holoshesthes*, *Lobodeuterodon* e *Holoshesthes* sairiam da sinonímia de *Odontostilbe*, e *Amblystilbe* sairia da sinonímia de *Prodontocharax*, sendo revalidados. Para a autora, a tribo Odontostilbini é composta por 26 espécies distribuídas nos seguintes seis gêneros: *Amblystilbe* Fowler 1940; *Holoshesthes* Eigenmann 1903; *Lobodeuterodon* Fowler 1945; *Odontostilbe* Cope 1870, *Prodontocharax* Pearson 1924 e *Pseudocheirodon* Meek & Hildebrand 1916.

1.3. Estudos Moleculares

O estudo das relações entre organismos tem recebido nos últimos anos, um considerável impulso com o advento das técnicas de sequenciamento de DNA. Estudos filogenéticos empregando sequências parciais ou totais do DNA mitocondrial em peixes é uma realidade bastante atual, o que pode ser confirmado pelo grande número de trabalhos recentemente publicados com essa abordagem (Ortí et al. 2008; Heckman et al. 2009; Betancur-R 2009; Javonillo et al. 2010; entre outros). Por outro lado, o número de publicações que usam genes nucleares nesses estudos ainda é pequeno em relação ao dos que utilizam genes mitocondriais. Contudo, diversos trabalhos tem sido publicados nos últimos anos, mostrando a utilidade desses genes em estudos de diversos grupos de peixes (Li et al. 2008; Ilves e Taylor 2009; Musilová et al. 2009; Javonillo et al. 2010) e espera-se que nos próximos anos, muitas filogenias baseadas em genes nucleares estejam disponíveis, juntamente com genes mitocondriais e outros tipos de caracteres.

Estudos filogenéticos, utilizando dados de sequências de DNA com representantes da ordem Characiformes tiveram início em 1996 com a publicação de um estudo sobre a filogenia de piranhas e pacus (Ortí e Meyer 1996), sugerindo a existência de um padrão de relacionamento intergenérico ainda não conhecido para o grupo. Estudos abrangentes com representantes da ordem Characiformes foram publicados por Ortí e Meyer (1997) e a filogenia molecular de consenso

obtida, utilizando dados de genes mitocondriais, está apresentada na Figura 7. A filogenia é bastante diferente das demais propostas para a ordem Characiformes com base em caracteres morfológicos, mas muitos nós são suportados apenas por baixos valores estatísticos. Essas discrepâncias podem estar relacionadas ao pequeno número de grupos estudados e a pequena quantidade de dados moleculares utilizada. Por outro lado, as relações inter-genéricas foram bem suportadas nas análises estatísticas. Stethaprioninae e Aphyocharacinae formam um grupo irmão do clado onde estão Characinae, Cheirodontinae e Glandulocaudinae.

Calcagnotto et al. (2005) estudaram 135 taxa da ordem Characiformes, representando todas as famílias da África e América do Sul com exceção de Curimatidae e Gasteropelecidae, utilizando seis genes, sendo dois do DNA mitocondrial (16S e Citocromo *b*) e quatro nucleares (Rag2, Fkh, Sia e Trop). A análise de 3.660 caracteres resultou em 18 árvores construídas com o método de máxima parcimônia. O uso de espécies de Siluriformes e Cypriniformes como grupo externo mostrou que a ordem Characiformes é monofilética. Muitas das relações entre as famílias de Characiformes foram bem resolvidas e a monofilia de vários grupos como Distichodontidae, Citharinidae, Alestidae e Characidae (parcial) foi recuperada. As relações entre representantes da família Characidae foram bem resolvidas, porém, somente 24 gêneros foram amostrados (Figura 8) e a subfamília Serrasalminae apareceu fora dessa família. Nesse estudo, os gêneros pertencentes a Cheirodontinae, *Aphyocheirodon*, *Cheirodon*, *Cheirodontops* e *Prodontocharax*, formaram um grupo monofilético entre os demais Characidae estudados. Cheirodontinae é grupo irmão de Characinae e este grupo é irmão de Glandulocaudinae.

O estudo molecular mais abrangente para a subfamília Cheirodontinae, até o momento, é o de Javonillo et al. (2010), onde foram utilizados os genes mitocondriais 12S, 16S e COI e o gene nuclear RAG2, para o estudo das relações filogenéticas entre várias espécies pertencentes a Characidae (Figura 9). Cheirodontinae aparece monofilético (os seis gêneros estudados) como grupo irmão de vários gêneros como *Aphyocharax*, *Exodon*, da subfamília Characinae (*Phenacogaster*, *Roeboides*, *Galeocharax* e *Cynopotamus*) e *Tetragonopterus*. Cheirodontinae forma um grupo monofilético (*Prodontocharax*, *Cheirodon interruptus*, *Macropsobrycon uruguayanae*, *Compsura*, *Serrapinnus kriegi*, *Odontostilbe*, *Serrapinnus 1* e *Serrapinnus 2*), mas a relações entre as espécies

utilizadas apresentam baixo suporte estatístico e, além disso, a análise não apresenta um número representativo de gêneros e espécies da subfamília.

Considerando-se o pouco conhecimento disponível das relações entre Cheirodontinae e as subfamílias de Characidae e principalmente, a falta de conhecimento das inter-relações dos atuais membros de Cheirodontinae, pretendeu-se, no presente trabalho, realizar uma análise com base em sequências de DNA mitocondrial e nuclear de um número representativo de gêneros e espécies, visando elaborar hipóteses que melhorem nossa compreensão da composição e história evolutiva desse grupo.

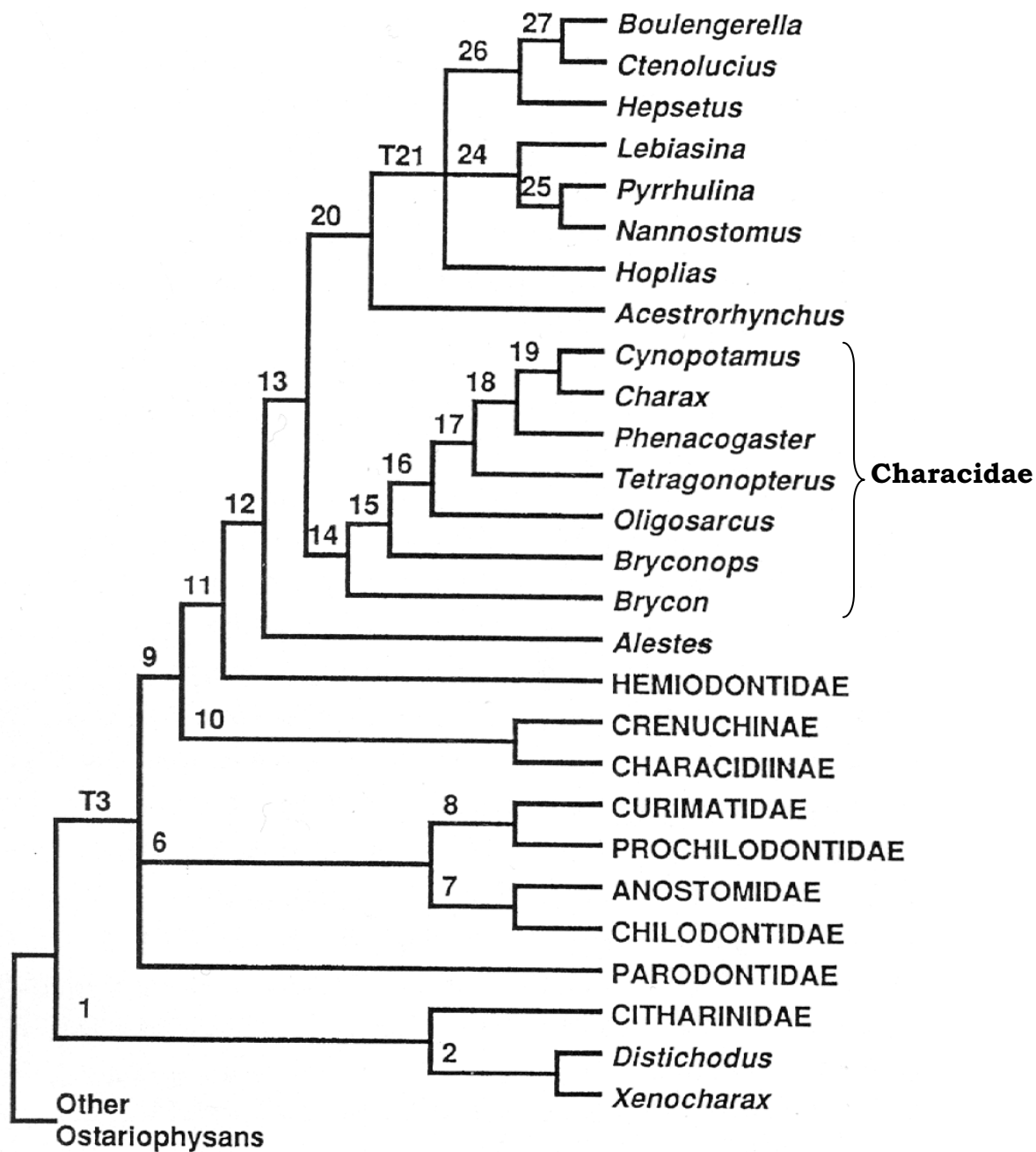


Figura 1. Hipótese de relacionamento entre as famílias de Characiformes e alguns gêneros de Characidae segundo Buckup (1998). Os números identificam os clados discutidos pelo autor da hipótese.

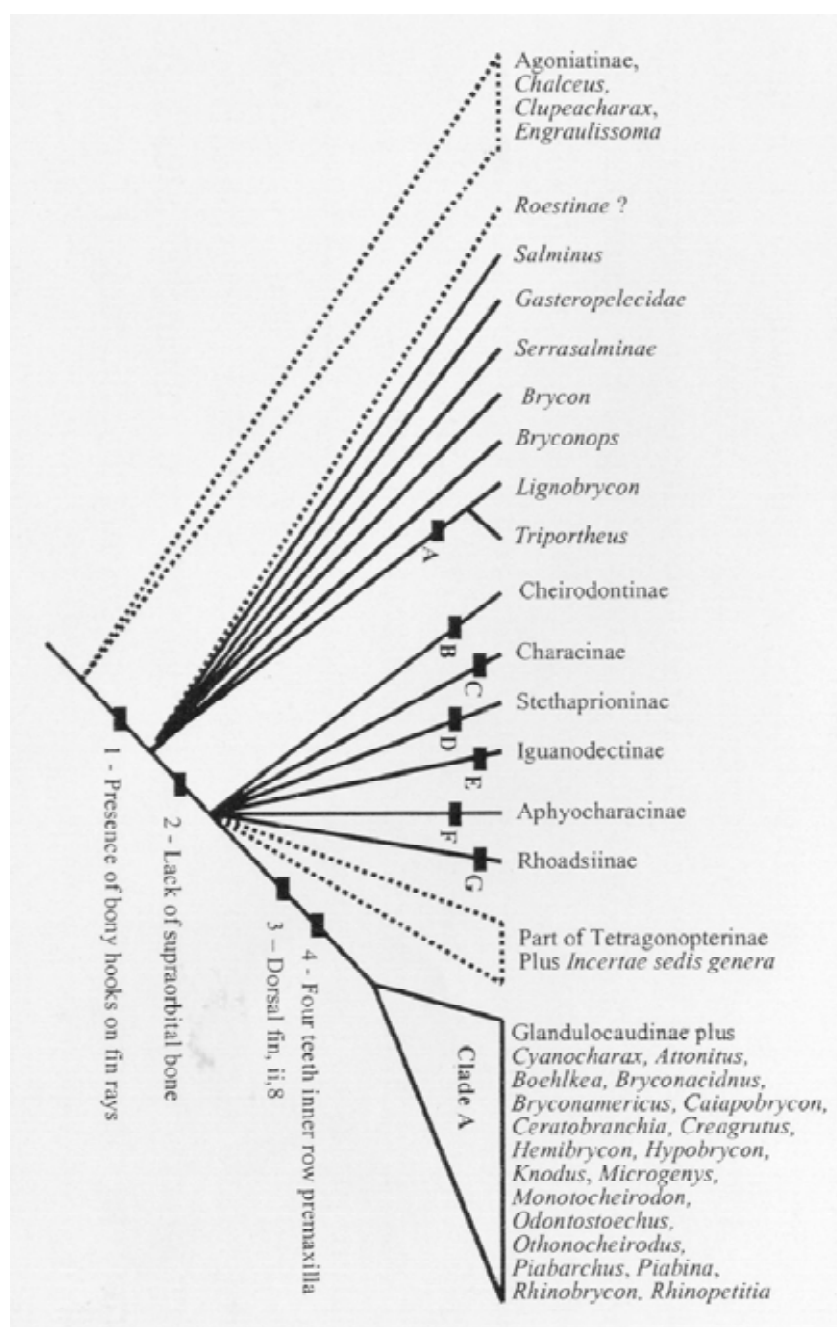


Figura 2. Cladograma resumindo o conhecimento sobre as relações de Characidae, segundo Malabarba e Weitzman (2003).

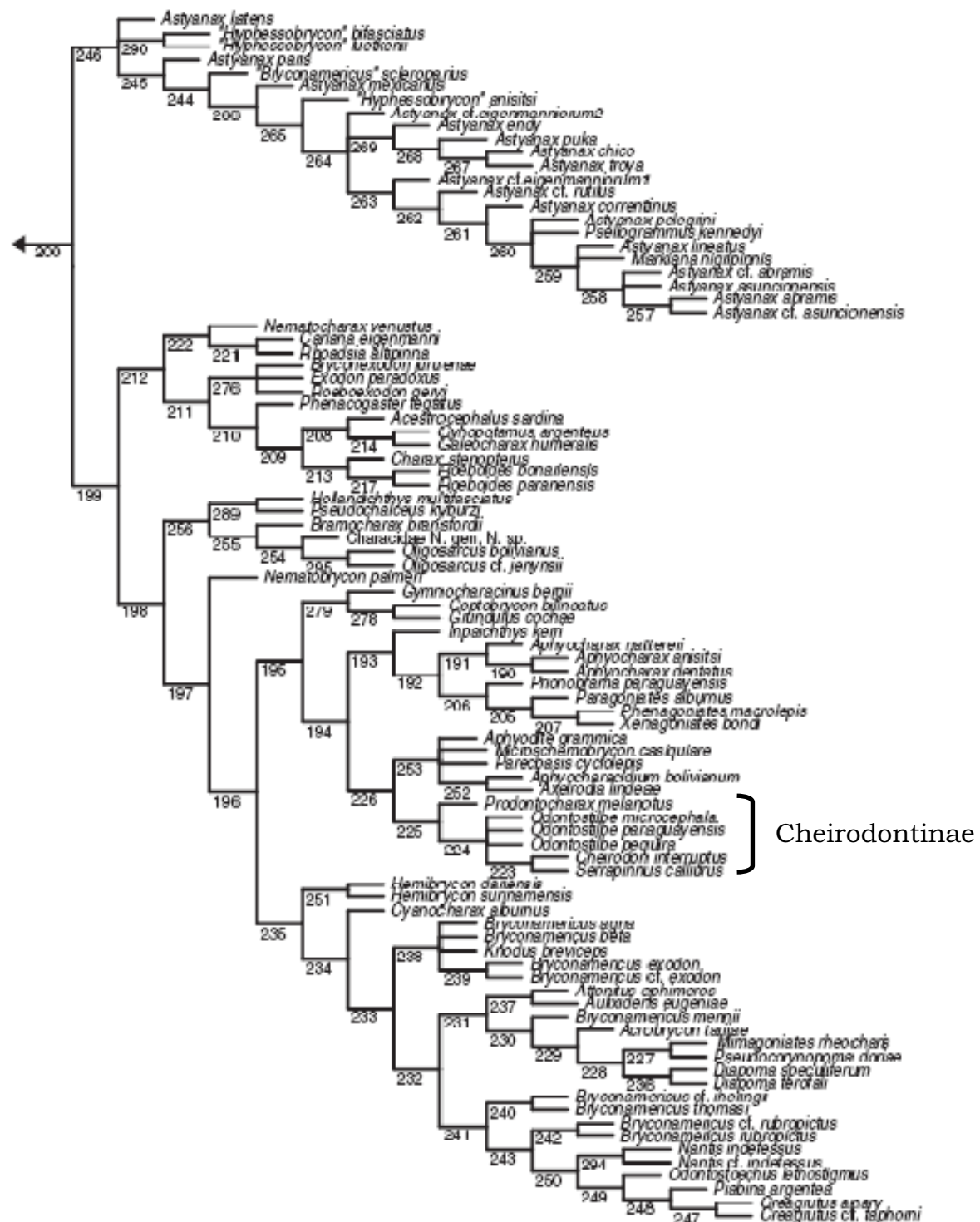


Figura 3. Hipótese final, parte 2, de Mirande (2009). Os números nos ramos representam clados obtidos nas análises de *implied weighting*.

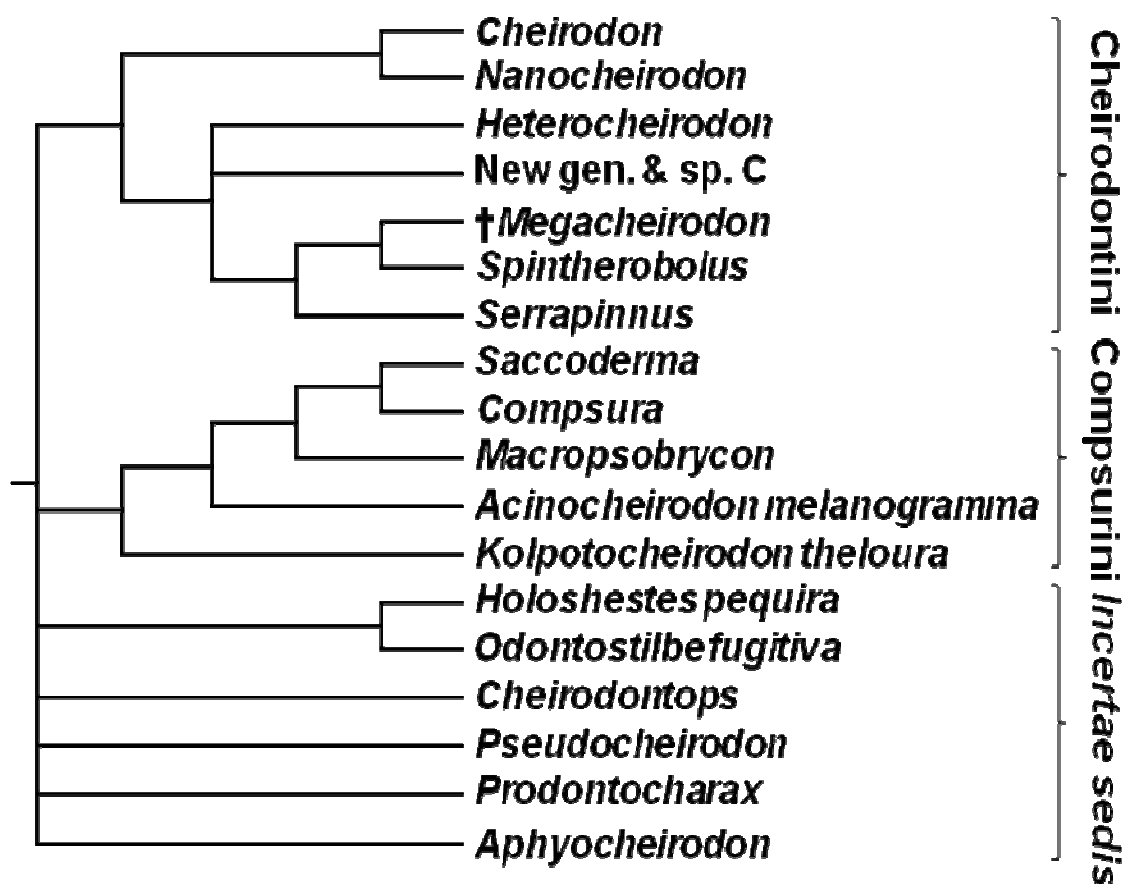


Figura 4. Cladograma de consenso estrito mostrando as relações entre os gêneros de Cheirodontinae, modificado de Malabarba (1998).

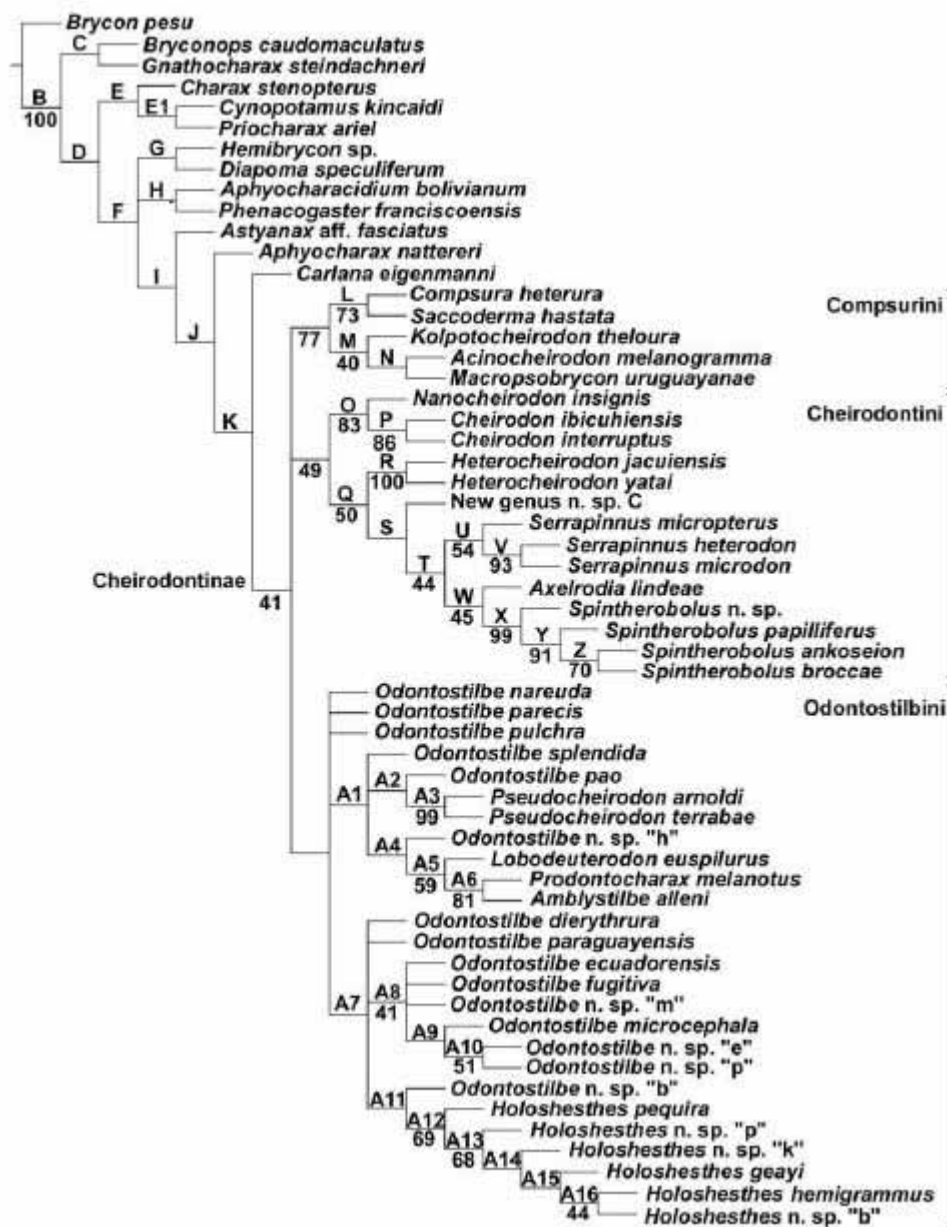


Figura 5. Cladograma apresentado por Bührnheim (2006), com atribuição de peso, sugerindo a nova tribo Odontostilbini e as relações entre Cheirodontinae. Os números abaixo dos nós são valores de *bootstrap*.

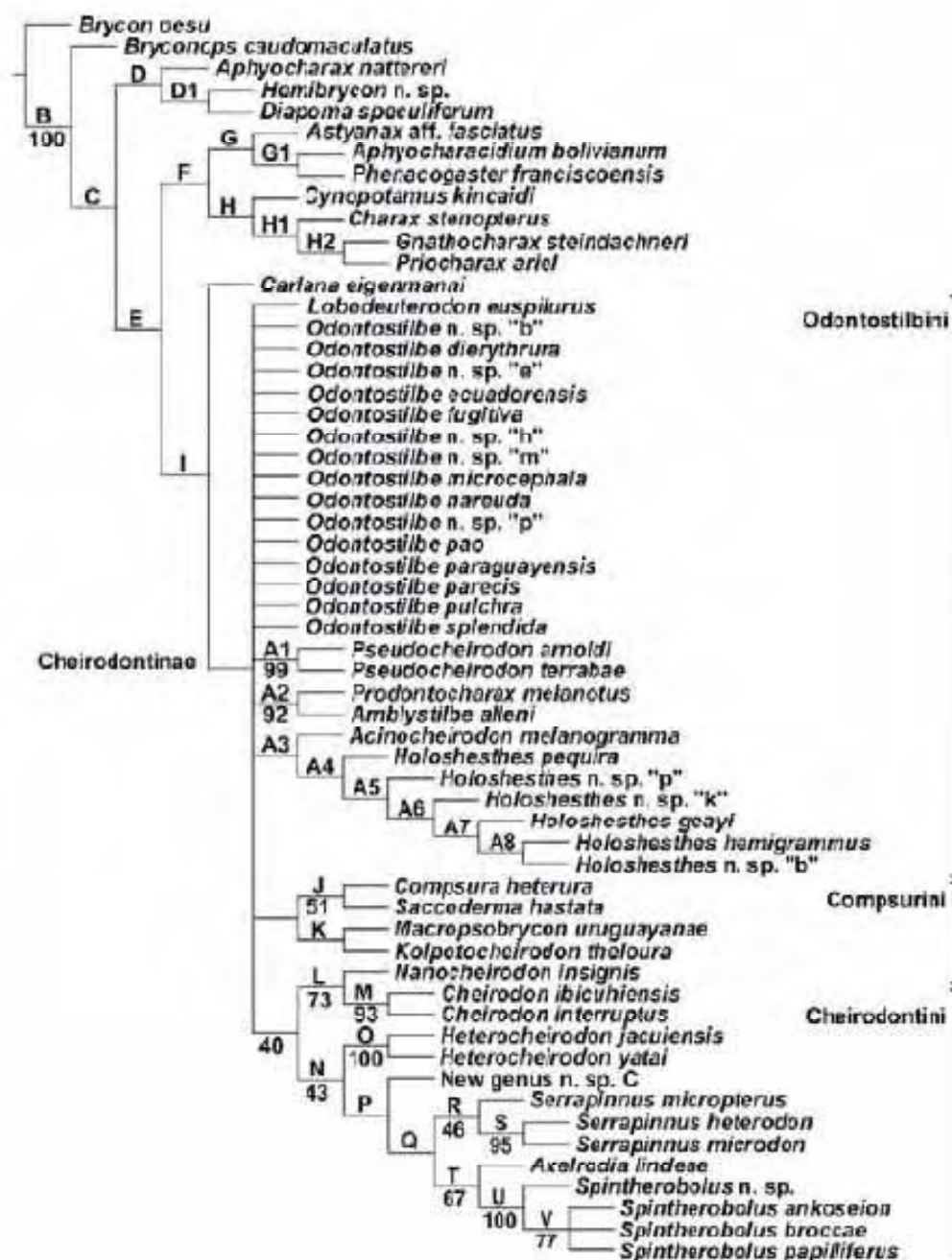


Figura 6. Cladograma apresentado por Bührnheim (2006), com caracteres sem atribuição de peso, sugerindo a nova tribo Odontostilbini e as relações entre Cheirodontinae. Os números abaixo dos nós são valores de *bootstrap*.

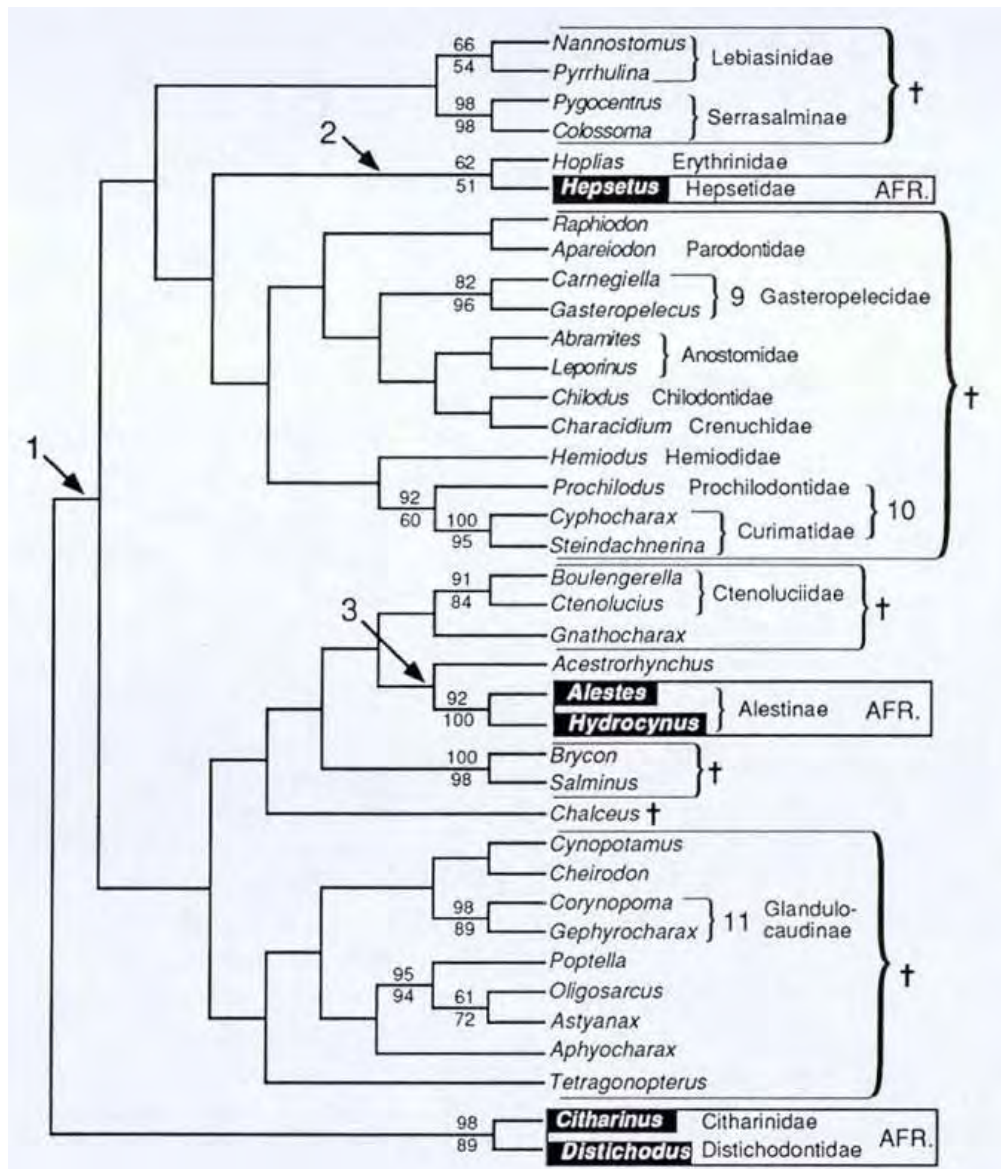


Figura 7. Árvore de consenso obtida para 38 táxons de Characiformes utilizando sequências parciais dos genes mitocondriais 12S e 16S rRNA, segundo Ortí e Meyer (1997). Os números acima e abaixo dos ramos representam os valores de *bootstrap* obtidos nas análises de máxima parcimônia e “neighbour-joining” respectivamente. Os gêneros marcados em negro representam grupos africanos.

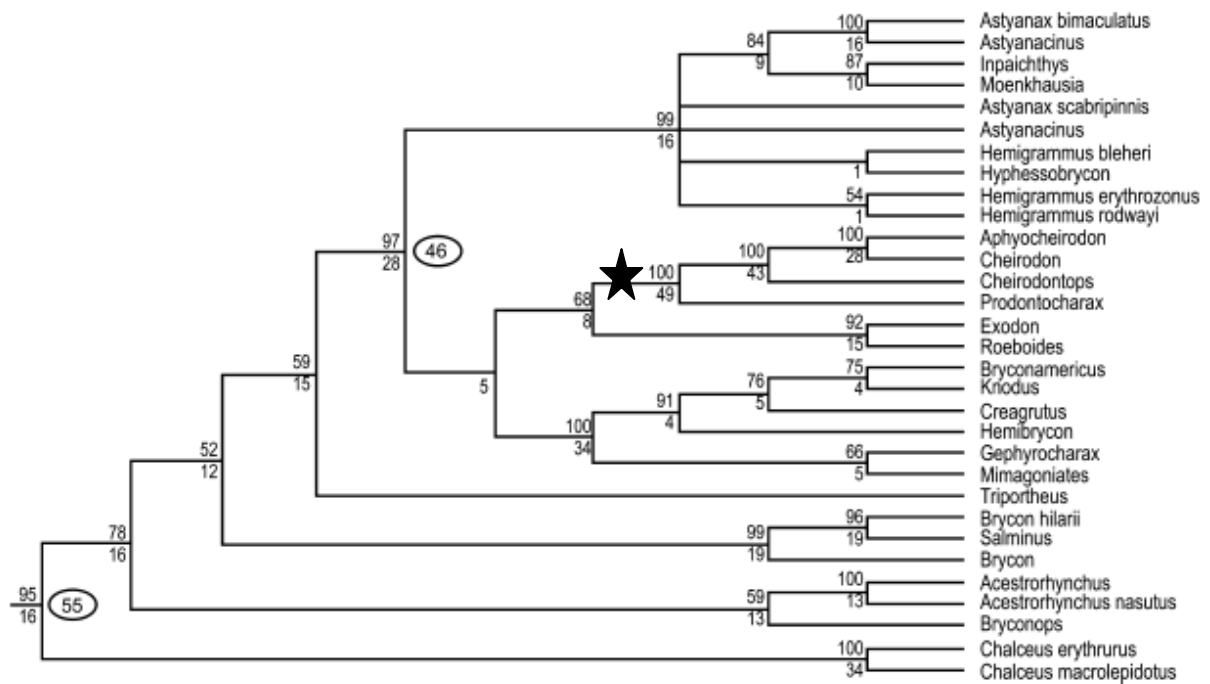


Figura 8. Árvore de consenso estrito obtida para Characidae, segundo Calcagnotto et al. (2005). Os números acima e abaixo dos ramos representam os valores de *bootstrap* obtidos nas análises de máxima parcimônia e os índices de Bremer, respectivamente. A estrela mostra a subfamília Cheirodontinae.

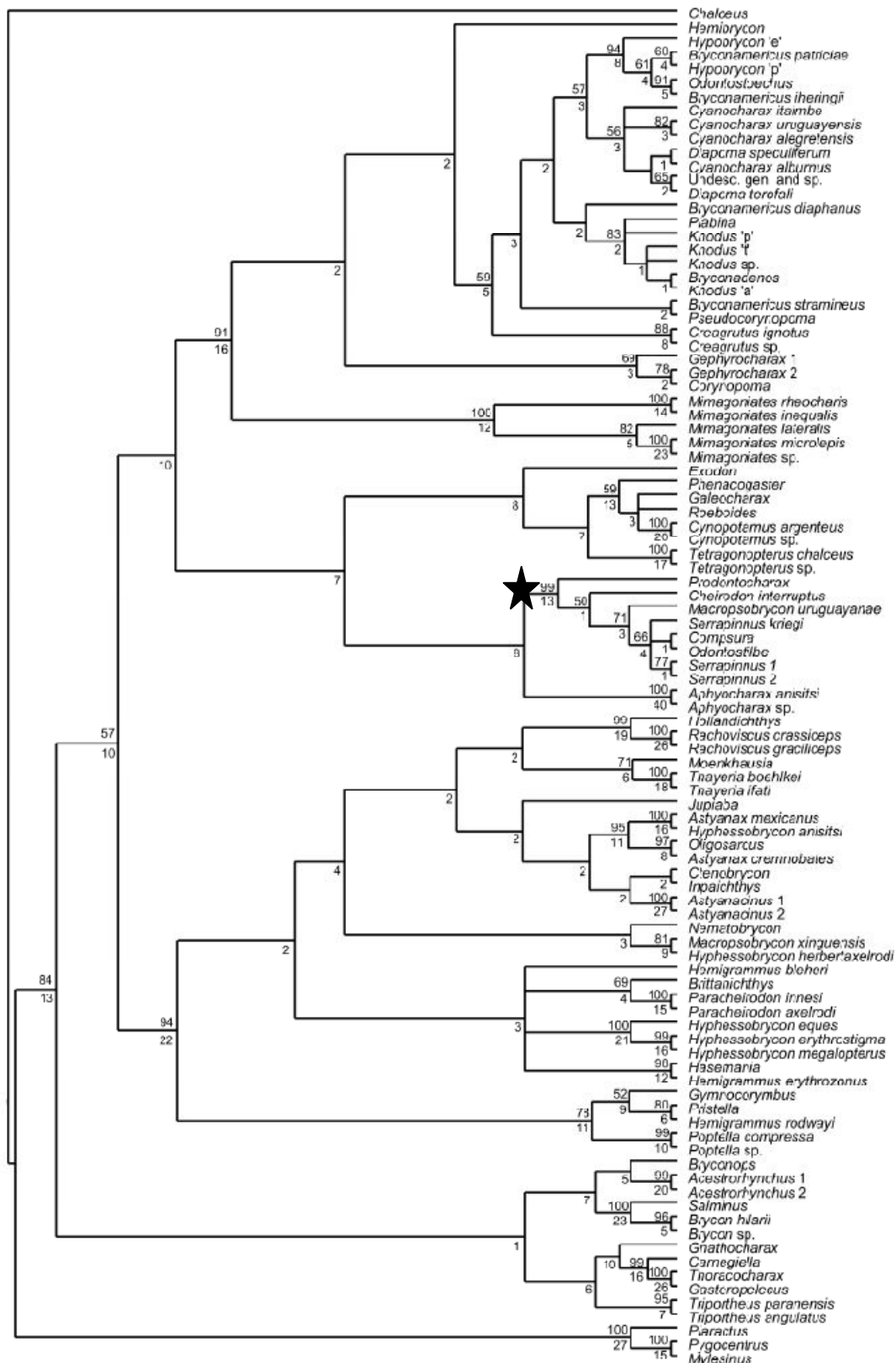


Figura 9. Árvore de consenso obtida para Characidae, segundo Javonillo et al. (2010). Os números acima e abaixo dos ramos representam os valores de *bootstrap* obtidos nas análises de máxima parcimônia e os índices de Bremer, respectivamente. A estrela mostra a subfamília Cheirodontinae.

2. OBJETIVOS

Considerando que a família Characidae é o grupo com maior diversidade taxonômica entre os Characiformes; que a grande maioria de suas espécies é de pequeno porte; que atualmente a família não pode ser diagnosticada como um grupo monofilético; e que as relações filogenéticas entre seus táxons constituintes são pouco conhecidas, o estudo de seqüências de DNA de genes nucleares e mitocondriais pode ser de grande valia para um melhor entendimento das relações filogenéticas entre seus táxons constituintes (principalmente subfamílias). Assim, o objetivo principal do presente trabalho foi testar as hipóteses de relacionamento entre Cheirodontinae (*sensu* Malabarba, 2003) e as demais subfamílias de Characidae, testar se Cheirodontinae é um grupo monofilético e por fim testar as hipóteses de monofilia e relacionamento entre os gêneros de Cheirodontinae.

Os objetivos operacionais foram:

- 1- Sequenciar segmentos do genoma mitocondrial e nuclear de exemplares de gêneros e espécies das subfamílias representativas de Characidae, para que sejam conhecidas suas relações com Cheirodontinae;
- 2- Sequenciar segmentos do genoma mitocondrial e nuclear de exemplares dos gêneros e espécies de Cheirodontinae (*sensu* Malabarba, 2003) com o propósito de obter dados suficientes para testar a monofilia dessa subfamília;
- 3- Obter dados para elaborar e testar hipóteses de relacionamento entre espécies e gêneros dessa subfamília.

3. MATERIAIS E MÉTODOS

3.1. Materiais

No presente estudo, foram utilizadas espécies pertencentes à Cheirodontinae, identificadas com base nos estudos de Malabarba (2003) e Malabarba (2007).

As coletas dos exemplares da subfamília Cheirodontinae foram realizadas em diversos pontos da América do Sul (Brasil, Chile, Uruguai e Venezuela). Algumas das amostras de DNA foram cedidas pelo Smithsonian Tropical Research Institute (Panamá), American Museum of Natural History (AMNH), Universidade Federal do Rio Grande do Sul (UFRGS) e Museu de Ciências da Pontifícia Universidade Católica do Rio Grande do Sul (MCP/PUC-RS) e suas identificações foram realizadas por pesquisadores dos próprios institutos mencionados.

Para testar a hipótese de relação entre Cheirodontinae e as demais subfamílias de Characidae foram escolhidas 14 espécies como grupo interno, visando incluir representantes de todas as subfamílias de Characidae, seguindo Malabarba e Weitzman (2003) e Weitzman et al. (2005). As espécies escolhidas foram: *Brycon petrosus* (Bryconinae), *Aphyocharax anisitsi* (Aphyocharacinae), *Iguanodectes* sp. (Iguanodectinae), *Piaractus mesopotamicus* (Serrasalminae), *Charax leticiae* (Characinae), *Tetragonopterus argenteus* (Tetragonopterinae), *Pseudocorynopoma heterandria* (Stevardiinae), *Glandulocauda melanogenys* (Glandulocaudinae), *Carlana eigenmanni* (Rhoadsiinae), *Stethaprion crenatum* (Stethaprioninae), *Clupeacharax* sp. (Clupeacharacinae) e *Agoniates halecinus* (Agoniatinae).

As espécies utilizadas como grupo externo nas análises das inter-relações de Cheirodontinae foram escolhidas com base nos estudos realizados por Bührnheim (2006). Espécies de Characinae foram escolhidas a fim de testar a possível relação entre Cheirodontinae e Characinae como sugerido por Malabarba e Lucena (1995), e pelos dados moleculares de Ortí e Meyer (1997) e Calcagnotto et al. (2005), como citado em Bührnheim (2006). As espécies basais inclusas, das principais linhagens de Characinae identificadas por Lucena (1998), são representadas pelos gêneros *Gnatocharax*, *Phenacogaster*, *Cynopotamus* e *Charax*. *Aphyocharax* foi também incluso nas análises baseando-se nas sugestões prévias de relação próxima entre Aphyocharacinae de Eigenmann (1909) e o antigo senso de Cheirodontinae de Eigenmann (1915). *Chalceus* foi incluso no grupo externo porque, mesmo sendo

considerado um Alestidae por Zanata e Vari (2005), aparece como grupo irmão de Characidae em Calcagnotto et al. (2005), com exceção de Serrasalminae.

Outra espécie, *Aphyocharacidium* sp., atualmente considerada *incertae sedis* em Characidae, foi utilizada nos estudos. Bührnheim (2006) utilizou *Aphyocharacidium bolivianum* e *Axelrodia lindeae*, sendo esta última não incluída no presente trabalho. O gênero *Aphyocharacidium* foi descrito por Géry (1960b) para acomodar *Odontostilbe melandetus* Eigenmann, 1912 e não foi considerado Cheirodontinae por Malabarba (1998), embora eles compartilhem um pseudotímpano similar. A espécie foi inserida como grupo externo para que fosse testada uma possível relação com Cheirodontinae. Portanto, as espécies utilizadas como grupo externo no presente trabalho das relações entre os membros de Cheirodontinae foram: *Brycon insignis*, *Carlana eignmanni*, *Chalceus epakros*, *Astyanax mexicanus*, *Aphyocharax anisitsi*, *Bryconops affinis*, *Gnatocharax* sp., *Hemibrycon* sp., *Diapoma* sp., *Tetragonopterus argenteus*, *Phenacogaster* sp., *Cynopotamus magdalenae*, *Charax leticiae* e *Aphyocharacidium* sp..

Os peixes foram identificados e depositados na coleção de peixes do Laboratório de Biologia de Peixes (LBP), Instituto de Biociências, Universidade Estadual Paulista - UNESP, Botucatu, SP, Brasil. A confirmação da identificação dos animais pertencentes à subfamília Cheirodontinae foi feita com a ajuda do Professor Dr. Luiz R. Malabarba da Universidade Federal do Rio Grande do Sul (UFRGS). Na Tabela 1 estão relacionados os 52 exemplares de Cheirodontinae, representando 15 gêneros, utilizados como grupo interno, os locais de coleta e o número de catálogo da coleção onde estão depositados os exemplares. As espécies representantes das subfamílias de Characidae e o grupo externo utilizado, suas localidades, e o número de catálogo, estão listados na Tabela 2. Na Figura 10 estão indicados os pontos onde foram obtidas as espécies de Cheirodontinae, amplamente distribuídas na Região Neotropical.

Dos animais capturados foram retiradas amostras de tecidos, como fígado, músculo e brânquias. Os tecidos foram preservados em etanol 95% com 0,5 µM de EDTA. Os exemplares foram fixados em formol 10% e também estão conservados em álcool 70% para realização de estudos taxonômicos futuros.

Os exemplares denominados *Odontostilbe* sp.1 e gênero e espécie nova tiveram suas identificações feitas com base na tese de doutorado do Prof. Dr. Luiz R. Malabarba (1994), não sendo possível, por essa razão, a utilização dos nomes dados por não terem sido publicados. A identificação correta das espécies, baseado no estudo citado, é '*Odontostilbe britskii*' e '*Ctenurus pristis*' [ou New Genus and

Species C, segundo Malabarba (1998)], respectivamente. O exemplar *Odontostilbe* sp.2 ainda não possui uma identificação exata, devendo essa espécie ser nomeada posteriormente.



Figura 10. Região Neotropical e as localizações das espécies utilizadas no presente trabalho. As coordenadas cartesianas e os nomes das espécies estão listadas na Tabela 1.

Tabela 1. Relação dos exemplares utilizados como grupo interno nas análises filogenéticas e seus respectivos dados sobre localidade de coleta.

Espécie	Localidade	Coordenadas	Número	Voucher
<i>Acinocheiroidon cf melanogramma</i>	Rio Jequitinhonha/MG	S 16°30'35.0" W 41°20'02.0"	37550	LBP8112
<i>Aphyocheiroidon hemigrammus</i>	Rio Paraná/SP	S 22°22'42.4" W 47°25'37.9"	40025	LBP8306
<i>Cheiroidon ibicuiensis</i>	Rio Guaíba/RS	S 30°18'03.9" W 51°20'40.8"	25598	LBP4777
<i>Cheiroidon interruptus</i>	Arroio dos Corrientes/RS	S 31°28'46.3" W 52°12'46.9"	21266	LBP3381
<i>Cheiroidon interruptus</i>	Rio Grande/RS	S 32°09'06.9" W 52°06'24.2"	20486	LBP3343
<i>Cheiroidon australe</i>	Rio Quinchilca/Chile	S 39°51'36" W 72°45'16"	24979	LBP4732
<i>Cheiroidon australe</i>	Lago Pumquipulli/Chile	S 39°36'30" W 72°14'01"	24963	LBP4728
<i>Cheiroidon killiani</i>	Rio la Laja/Chile	S 37°12'54.8" W 72°26'49.1"	19803	LBP3115
<i>Cheiroidon killiani</i>	Rio Renuico/Chile	S 37°39'16" W 72°39'45"	24969	LBP4730
<i>Cheiroidon killiani</i>	Rio Duqueco/Chile	S 37°31'27" W 72°14'13"	24974	LBP4731
<i>Cheiroidon killiani</i>	Rio Quinchilca/Chile	S 39°51'36" W 72°45'16"	24964	LBP4729
<i>Cheiroidon stenodon</i>	Rio Tietê/SP	S 22°45'48.2" W 48°15'41.8"	20130	LBP3015
<i>Compsura gorgonae</i>	Rio Yape/Panamá	N 8,1125 W -77,5914	1	-
<i>Compsura heterura</i>	Natal/RN	S 05°37'47" W 35°37'09"	24984	LBP4733
<i>Compsura sp. nova</i>	Rio Tabasará/Panamá	N 8,2039 W -81,5861	4	-
<i>Genêro e espécie nova</i>	Barra do Garças/MT	S 15°40.678' W 52°17.863"	27603	LBP5699
<i>Heterocheiroidon yatai</i>	Durazno/Uruguai	S 33°23'49" W 56°24'10"	24954	LBP4872
<i>Kolpotocheiroidon figueiredoi</i>	Rio Paraguaçu/BA	S 12°22'19.0" W 41°31'06.3"	37575	LBP7178
<i>Kolpotocheiroidon theloura</i>	Rio Paraná/DF	S 15°43'42.7" W 47°54'39.4"	25982	LBP5033
<i>Macropsobrycon uruguayanae</i>	Cachoeira do Sul/RS	S30°14'46" W52°45'53"	29061	LBP6039
<i>Macropsobrycon xinguensis</i>	Rio Tapajós/AM	N 10°12'54.0" W 54°58'04.0"	40499	LBP8731
<i>Nanocheiroidon insignis</i>	Venezuela	N 10°09'42.0" W 72°25'58.0"	27476	LBP6104
<i>Odontostilbe dialeptura</i>	Rio Santa Maria/Panamá	N 8,1962 W -80,7657	2	-
<i>Odontostilbe ecuadorensis</i>	Santa Cruz/ Bolívia	S 17°34'42" W 63°44'16"	AMNH	102077
<i>Odontostilbe fugitiva</i>	Mâncio Lima/AC	S 07°26'35.5" W 73°03'33.5"	23714	LBP4129
<i>Odontostilbe fugitiva</i>	Cruzeiro do Sul/AC	S 7°37'20.0" W 72°47'42.2"	22932	LBP4052
<i>Odontostilbe mitoptera</i>	Rio San Juan Coclesito/Panamá	N 8°80'42" W 80°58'08"	3	-
<i>Odontostilbe paraguayensis</i>	Botucatu/Capivara/SP	S 22°44' W 48°23'	20129	LBP3486
<i>Odontostilbe pequirá</i>	Botucatu/Capivara/SP	S 22°44' W 48°23'	20124	LBP3013
<i>Odontostilbe pequirá</i>	Paysandu/Uruguai	S 32°18'36" W 58°05'54"	24958	LBP4726
<i>Odontostilbe pequirá</i>	Coxim/MS	S 18°25'42.5" W 54°50'02.8"	12659	LBP1469
<i>Odontostilbe pulchra</i>	Venezuela	N 07°38'11.6" W 66°19'04.2"	25845	LBP3070
<i>Odontostilbe pulchra</i>	Rio Turure/Panamá	N 10,5897 W -61,0903	8	-
<i>Odontostilbe sp.1</i>	Rio Araquá/SP	S 22°47.135' W 48°28.892	22626	LBP4650
<i>Odontostilbe sp.2</i>	Rio Grande/SP	S 20°56'49.5" W 48°08'51.9"	29616	LBP6280
<i>Prodontocharax melanotus</i>	Santa Cruz/Bolívia	S 17°41'29" W 63°38'96"	AMNH	102082
<i>Prodontocharax sp.</i>	Rio Amazonas	S -11,8025 W -71,4581	7	-
<i>Pseudocheiroidon arnoldi</i>	Rio Iglesias/Panamá	N 8,4231 W -78,0014	5	-
<i>Pseudocheiroidon terrabae</i>	Rio Salama Nuevo/Costa Rica	N 8,9043 W -83,4393	6	-
<i>Saccoderma melanostigma</i>	Venezuela	N 10°09'42.0" W 72°25'58.0"	27475	LBP6103
<i>Serrapinnus calliurus</i>	Aquidauana/MS	S 19°34'02.3" W 56°14'09.1"	25768	LBP3800
<i>Serrapinnus calliurus</i>	Aquidauana/MS	S 19°34'54.6" W 56°15'16.5"	22121	LBP3776
<i>Serrapinnus heterodon</i>	Rio Matipó/MG	S 20°18'09.3" W 42°20'04.6"	20305	LBP3441
<i>Serrapinnus heterodon</i>	Rio São Francisco/MG	S 17°08'54.9" W 43°49'32.3"	37551	LBP8104
<i>Serrapinnus kriegi</i>	Aquidauana/MS	S 19°34'17.3" W 56°14'44.8"	25764	LBP4738
<i>Serrapinnus microdon</i>	Rio Purus/AM	S 08°51'21.5" W 68°42'22.6"	17057	LBP2525
<i>Serrapinnus notomelas</i>	Bauru- Córrego Campo Novo/SP	S 22°20'27.1" W 48°56'05.0"	19890	LBP3861
<i>Serrapinnus notomelas</i>	Córrego Piriquito/SP	S 20°44'44.9" W 49°46'45.0"	18293	LBP3860
<i>Serrapinnus notomelas</i>	Rio Paraná/SP	S 22°46'41.5" W 53°19'21.3"	22401	LBP3857
<i>Spintherobolus ankoseion</i>	São Francisco do Sul/SC	S 26°17'35" W 48°35'21"	24957	LBP4725
<i>Spintherobolus broccae</i>	Bertioga/SP	S 23°46'16.2" W 46°00'37.2"	22558	LBP3916
<i>Spintherobolus leptoura</i>	Rio Ribeira de Iguape/SP	S 24°42'57.8" W 47°41'28.3"	36098	LBP7544

Tabela 2. Relação dos exemplares utilizados como grupo externo nas análises filogenéticas e seus respectivos dados sobre localidade de coleta.

Espécie	Localidade	Coordenadas	Número	Voucher
<i>Agoniates halecinus</i>	Laranjal do Jari/AP	S 00°34'03'' W 52°34'41''	26594	LBP5503
<i>Aphyocharax anisitsi</i>	Coxim/MS	S 18°25'42.5" W 54°50'02.8"	12660	LBP1470
<i>Aphyocharacidium sp</i>	Rio Negro/AM	N 00°05.610' W 66°49.034"	33167	LBP6875
<i>Astyanax mexicanus</i>	Aquário	-	24599	LBP4527
<i>Brycon insignis</i>	Rio Paraíba do Sul/SP	S 22°00' W 41°20'	16075	LBP2369
<i>Brycon petrosus</i>	Santa Rita Arriba/Panamá	N 09°19'26.2'' W 79°46'08.2"	18511	LBP2750
<i>Bryconops affinis</i>	Represa de Três Marias	S 18°13,661' W 45°14,857'	4168	LBP262
<i>Carlana eigenmanni</i>	Rio Pizote/Costa Rica	-	19864	LBP3299
<i>Chalceus epakros</i>	Rio Amazonas/PA	S 00°38'46'' W 52°30'33''	26504	LBP5443
<i>Charax leticiae</i>	Rio Paraguay/MS	S 18°25'42.5'' W 54°50'02.8''	12700	LBP1480
<i>Clupeacharax sp.</i>	Cáceres/MT	S 16°06'56' W 57°44'33'	26012	LBP5046
<i>Cynopotamus magdalenae</i>	Lago Maracaibo/Venezuela	N 09°38'53.8' W 72°34'56.4"	29515	LBP6132
<i>Diapoma sp</i>	Arroio dos Corrientes/RS	S 31°28'46.3" W 52°12'46.9"	21274	LBP3383
<i>Glandulocauda melanogenys</i>	Riacho Grande/SP	S 23°46'13.2'' W 46°18'39.6''	24538	LBP4507
<i>Gnatocharax sp</i>	Rio Negro/AM	S 00°53'18.6" W 62°40'36/1"	24494	LBP4496
<i>Hemibrycon sp</i>	Trinidad Tobago	N 10°41.320' W 61°19.499'	33168	LBP6847
<i>Iguanodectes sp.</i>	Igarapé Boiboí/AM	S 00°49'43.7'' W 62°49'59.8''	23840	LBP4266
<i>Phenacogaster sp</i>	Rio Paraníba/PI	S 09°09'51' W 45°51'15'	27299	LBP5582
<i>Piaractus mesopotamicus</i>	Caunesp/SP	-	23803	LBP4255
<i>Pseudocorynopoma heterandria</i>	Rio Fau/SP	S 24°12,441' W 47°28,616'	18570	LBP2862
<i>Stetaprion crenatum</i>	Mâncio Lima/AC	S 07°34'28.8' W 72°55'24.9"	22994	LBP4078
<i>Tetragonopterus argenteus</i>	Rio Negro/MT	S 19°34'33.7' W 56°14'49.5"	22029	LBP3758

3.2. Métodos

3.2.1. Isolamento de DNA genômico

O DNA genômico foi obtido a partir de amostras de fígado, músculo ou brânquias, utilizando-se kits de extração DNeasy® Blood & Tissue da Qiagen, seguindo o protocolo do próprio fabricante.

3.2.2. Amplificação e Sequenciamento dos Genes Mitocondriais (16S, COI e Citocromo b) e Nucleares (Sia e Trop)

Para amplificar as regiões do DNA mitocondrial (16S, COI e Citocromo b) e nuclear (Sia e Trop) estudadas foram realizadas reações de PCR com um volume final de 25,0µl, contendo: 0,4µl de dNTP (8mM), 2,5 µl de 10X "PCR Buffer" (Invitrogen), 0,5µl de cada primer (5µM), 0,2µl de *Taq DNA polymerase* (Invitrogen), 0,5 – 3,0µl (10 – 50ng) de DNA molde e água destilada estéril para completar os 25,0 µl. Os *primers* utilizados estão listados na Tabela 3.

Tabela 3. Relação dos *primers* utilizados para amplificação de parte dos genes mitocondriais e nucleares com amplificação por PCR única.

Gene	Identificação dos <i>Primers</i>	Sequência dos <i>primers</i>	Referência
Cyt b	L14841	5'- AAA TCA AAG CAT AAC ACT GAA GAT G -3'	Kocher <i>et al</i> (1989)
	H15915	5'- CCA ATT TGC ATG GAT GTC TTC TCG G -3'	Irwing <i>et al</i> (1991)
	Cytb08R2	5'- GCT TTG GGA GTT AGD GGT GGG AGT TAG AAT C -3'	Presente estudo
	Cytb -Novo	5'- GAC TTG AAA AAC CAY CGT TGT -3'	Presente estudo
16S rRNA	16Sa-L	5'- ACG CCT GTT TAT CAA AAA CAT - 3'	Palumbi (1996)
	16Sb-H	5'- CCG GTC TGA ACT CAG ATC ACG T - 3'	
Sia	T3b	5'- ATT AAC CCT CAC TAA AGT CGA GTG CCC CGT GTG YTT YGA YTA- 3'	Friesen et al. (1999)
	T7b	5'- AAT ACG ACT CAC TAT AGG AAG TGG AAG CCG AAG CAG SWY TGC ATC AT- 3'	
Trop	TropF	5'- GAG TTG GAT CGG GCT CAG GA GCG -3'	Friesen et al. (1999)
	TropR	5'- CGG TCA GCC TCT TCA GCA ATG TGC TT -3'	Friesen et al. (1999)

As reações de PCR seguiram as seguintes condições gerais: um ciclo inicial de desnaturação a 95°C por 180 segundos, seguido de 30 ciclos de 94°C por 30 segundos, 48-58°C por 60 segundos para anelamento dos *primers*, 72°C por 120 segundos, estendendo a cadeia e para finalizar, um ciclo a 72°C por 300 segundos. As reações de PCR foram realizadas em termocicladores Applied Biosystems Veriti 96 Well Thermal Cycler.

Os produtos foram aplicados em um gel de agarose 1,0%, utilizando *Blue Green Loading Dye I* (LGC Biotecnologia), e visualizados em um transluminador de luz ultravioleta, para verificação da qualidade e tamanho dos fragmentos amplificados. Os géis foram fotografados e digitalizados pelo programa da Kodak “Electrophoresis Documentation and Analysis System 120”. Os produtos da reação de PCR foram purificados usando a enzima ExoI/SAP.

Os produtos purificados foram utilizados como molde para as reações de sequenciamento (com volume final de 7,0µl) usando 0,7µl de ABI Prism BigDye Terminator Cycle Sequencing 3.0 Ready Reaction Kits (Applied Biosystems), junto com 0,7µl de um dos *primers* na concentração de 5,0µM e 1,5-2,8µl (50-200ng) do DNA purificado, sendo a reação completada com água para 7,0µl. Para a reação de PCR de sequenciamento foram utilizados os mesmos *primers*, *forward* separadamente do *reverse*, usados nas reações de amplificação padrão. As condições da PCR de sequenciamento foram: um ciclo inicial a 95°C por 120 segundos, seguido de 25 ciclos a 95°C por 45 segundos, 56°C por 30 segundos e 60°C por 120 segundos.

Depois da PCR de sequenciamento, as amostras foram purificadas e sequenciadas em um sequenciador automático ABI PRISM 3110 DNA Sequencer (Applied Biosystems).

3.2.3. Amplificação e Sequenciamento dos Genes Nucleares RAG1, RAG2, Ptr e Myh6

Para amplificar as outras regiões do DNA nuclear estudadas, Recombination activating gene 1 (RAG1), Recombination activating gene 2 (RAG2), si:ch211-105n9.1-like protein (Ptr) e Myosin, heavy chain 6, cardiac muscle, alpha (Myh6) foram realizadas reações de PCR com um volume final de 25,0µl, contendo: 0,4µl de dNTP (8mM), 2,5 µl de 10X “PCR Buffer” (Invitrogen), 0,25µl de cada primer (20µM), 0,2µl de *Taq DNA polymerase* (Invitrogen), 1,0 – 3,0µl de DNA molde e água destilada estéril para completar os 25,0µl. Os *primers* utilizados estão listados na Tabela 4.

Tabela 4: Relação dos *primers* utilizados para amplificação de parte dos genes nucleares.

Gene	Identificação dos <i>Primers</i>	Sequência dos <i>primers</i>	T°C	Referência
RAG1 1stPCR	2510F	5'- TGG CCA TCC GGG TMA ACA C - 3'	56/54°C	Li e Ortí (2007)
	4090R	5'- CTG AGT CCT TGT GAG CTT CCA TRA AYT T - 3'		Li e Ortí (2007)
RAG1 2ndPCR	2535F	5'- AGC CAG TAC CAT AAG ATG TA - 3'	56/54°C	Li e Ortí (2007)
	4078R	5'- TGA GCC TCC ATG AAC TTC TGA AGR TAY TT- 3'		Li e Ortí (2007)
RAG2 1stPCR	164F	5'- AGC TCA AGC TGC GYG CCA T -3'	58/56°C	Presente estudo
	RAG2-R6	5'- TGRTCCARGCAGAAGTACTTG -3'		Lovejoy e Collette (2001)
RAG2 2ndPCR	176R	5'- GYG CCA TCT CAT TCT CCA ACA -3'	58/56°C	Presente estudo
	Rag2Ri	5'-AGA ACA AAA GAT CAT TGC TGG TCG GG-3'		Presente estudo
Myh6 1stPCR	F329	5'- CCG CMT GGA TGA TCT ACA C - 3'	56/54°C	Li et al.(2007)
	A3R1	5'- ATT CTC ACC ACC ATC CAG TTG AA- 3'		Li et al.(2007)
Myh6 2ndPCR	A3F2	5'- GGA GAA TCA RTC KGT GCT CAT CA - 3'	56/54°C	Li et al.(2007)
	A3R2	5'- CTC ACC ACC ATC CAG TTG AAC AT - 3'		Li et al.(2007)
Ptr 1st PCR	F458	5' – AGA ATG GAT WAC CAA CAC YTA CG – 3'	56/54°C	Li et al.(2007)
	R1248	5'- TAA GGC ACA GGA TTG AGA TGC T -3'		Li et al.(2007)
Ptr 2nd PCR	F463	5'- GGA TAA CCA ACA CYT ACG TCA A -3'	56/54°C	Li et al.(2007)
	R1242	5'- ACA GGA TTG AGA TGC TGT CCA -3'		Li et al.(2007)

As reações de PCR seguiram dois ciclos de amplificação (Nested-PCR), um ciclo com o par de *primers* denominado 1stPCR e o segundo ciclo com o par denominado 2ndPCR. A primeira amplificação realizada para cada gene resultou em um produto de PCR que foi utilizado como molde nas reações com o segundo primer. Os ciclos de amplificação seguiram um padrão geral como descrito a seguir: um ciclo inicial de desnaturação por 60 segundos, seguido de 15 ciclos de 95°C por 45 segundos, a primeira temperatura de anelamento dos *primers* por 60 segundos como apresentado na Tabela 4 respectivamente, 72°C por 60 segundos, seguindo novamente com 15 ciclos de amplificação com 95°C de desnaturação por 45 segundos, a segunda temperatura de anelamento dos *primers* por 60 segundos, 72°C por 90 segundos para extensão da cadeia e para finalizar, um ciclo a 72°C por

300 segundos. As reações de PCR foram realizadas em termocicladores Applied Biosystems Veriti 96 Well Thermal Cycler.

Os produtos foram aplicados em um gel de agarose 1,0%, corados com brometo de etídio (2µl/100ml) e visualizados em um transluminador de luz ultravioleta, verificando a qualidade e tamanho dos fragmentos amplificados. Os géis de agarose foram fotografados e digitalizados pelo programa Quantity One 4.2.2 da BIORAD.

Os produtos das reações de PCR foram enviados para sequenciamento no Throughput Genomics Unit (HTGU) situado no Department of Genome Sciences, University of Washington, seguindo as recomendações da equipe.

3.2.4. Alinhamento das sequências e análises filogenéticas

Sequências individuais de cada espécie foram inicialmente analisadas com o software BioEdit 5.0.9 (Hall 1999) e uma sequência consenso foi obtida para cada segmento de DNA de cada espécie. Após isso, todas as sequências foram alinhadas usando o software Muscle (Edgar 2004). As sequências de DNA das regiões codificadoras de proteínas como citocromo *b*, RAG1, RAG2, Myh6, Ptr, foram alinhadas baseadas em sequências de amino ácidos, aplicando o código genético universal e mitocondrial no programa MacClade 4.0 (Maddison e Maddison 2000).

A possível saturação de substituições de nucleotídeos foi avaliada pelo programa DAMBE versão 4.0.65 (Xia e Xie 2001) plotando-se o número absoluto de transições (Ti) e transversões (Tv) contra os valores de distância genética estimada pelo modelo Kimura-2-parâmetros (Kimura 1980). A escolha do melhor modelo de distância genética foi realizada com o programa Modeltest 3.06 (Posada e Crandall 1998).

As análises filogenéticas foram efetuadas utilizando-se de métodos de máxima parcimônia como implementado nos programas Mega 4 (Tamura et al. 2007) e TNT (Golobof *et al.* 2006), máxima verossimilhança como implementados nos programas Paup*4.0b10 (Swofford 2002) e PHYML (Guindon e Gascuel 2003), e análise Bayesiana como implementados nos programas MrBayes 3.1 (Huelsenbeck et al. 2001). Seguindo as recomendações de Swofford et al. (1996), Nei e Kumar (2000) e Felsenstein (2004), uma vez obtidos os dados moleculares, foram construídas filogenias testando o maior número possível de variáveis, com o ordenamento ou não dos dados, inclusão ou não de *gaps*, pesando diferentemente ou não as transições e transversões e excluindo ou não regiões de difícil

alinhamento. Todas as filogenias obtidas foram testadas utilizando métodos estatísticos, como *bootstrap* (Felsenstein 1985). Ao final das análises, as filogenias finais foram elaboradas com o método de consenso por maioria (com corte em nível de 50%), conforme tem sido feito nos estudos utilizando dados moleculares. A discussão foi feita comparando todas as filogenias obtidas, tendo em vista principalmente a que se apresentou mais bem resolvida (com maior suporte estatístico) após a análise de todas as combinações de variáveis citadas acima.

As sequências obtidas e seu respectivo alinhamento estão apresentados no Apêndice.

4. RESULTADOS

Aos resultados obtidos no presente trabalho foram dados dois diferentes enfoques. Primeiramente, foram analisadas as relações entre os representantes de todas as subfamílias consideradas válidas para Characidae, dando uma principal atenção à posição filogenética da subfamília Cheirodontinae. Após essa primeira análise, foram analisadas as relações entre os gêneros e espécies pertencentes à subfamília Cheirodontinae.

As transições/transversões (Ti/Tv) foram plotadas versus a distância genética segundo o modelo de Kimura-2-parâmetros (Kimura, 1980) para cada gene individualmente, considerando como relações lineares, aquelas que possuíam o coeficiente de correlação linear (r) maior que 0,75, indicando que não houve saturação dos nucleotídeos.

As sequências dos genes foram analisadas sob uma variedade de modelos, dos mais simples (todos os caracteres escolhidos pesados igualmente) aos mais complexos (utilizando apenas caracteres mais conservados e diferentes esquemas de pesos de transições e transversões). Em alguns casos, regiões com dificuldade de alinhamento foram excluídas das análises. As análises filogenéticas resultaram em uma série de cladogramas que exprimem hipóteses de relacionamentos entre membros constituintes de Cheirodontinae.

4.1. Análise das relações entre as subfamílias representantes de Characidae

Foram utilizados nas análises, representantes de todas as subfamílias pertencentes à Characidae segundo Reis et al. (2003) e Weitzman et al. (2005). As espécies escolhidas foram: *Agoniatodes halecinus* (Agoniatinae), *Aphyocharax anisitsi* (Aphyocharacinae), *Brycon petrosus* (Bryconinae), *Carlana eigenmanni* (Rhoadsiinae), *Charax leticiae* (Characinae), *Clupeacharax* sp. (Clupeacharacinae), *Glandulocauda melanogenys* (Glandulocaudinae), *Iguanodectes* sp. (Iguanodectinae), *Piaractus mesopotamicus* (Serrasalminae), *Pseudocorynopoma heterandria* (Stevardiinae), *Stetaprion crenatum* (Stethaprioninae), *Tetragonopterus argenteus* (Tetragonopterinae) e mais três gêneros representativos de Cheirodontinae (*Cheirodon*, *Macropsobrycon* e *Heterocheirodon*). As amostras tiveram sequenciados os genes 16S, Citocromo *b*, *Sia*, *Trop*, *RAG1*, *RAG2*, *Ptr* e *Myh6* e suas análises foram realizadas com todos os genes em conjunto.

Após serem feitas as análises, foram retiradas as sequências do gene nuclear Ptr porque esse não apresentou uma boa resolução para a filogenia. Após o procedimento de alinhamento e correção manual, o alinhamento das sequências resultou em uma matriz com 6.801 caracteres dos quais 4.569 foram conservados, 2.193 foram variáveis e 1.403 foram informativos para as análises de parcimônia. A proporção transição/transversão (Ti/Tv) observada foi de 1,1. A composição média, em porcentagem, de bases para os genes estudados foi de 25,8% de adenina (A), 25,7% de citosina (C), 24,2% de guanina (G) e 24,3% de timina (T). A distância média entre as sequências foi de $d = 0,121 \pm 0,003$, segundo o modelo de Tamura-Nei (Tamura e Nei, 1993). Uma análise gráfica da relação entre as transições (Ti) e transversões (Tv) e a distância genética estimada pelo modelo Kimura-2-parâmetros (Kimura, 1980) indica que não há saturação nestes nucleotídeos (Figura 11).

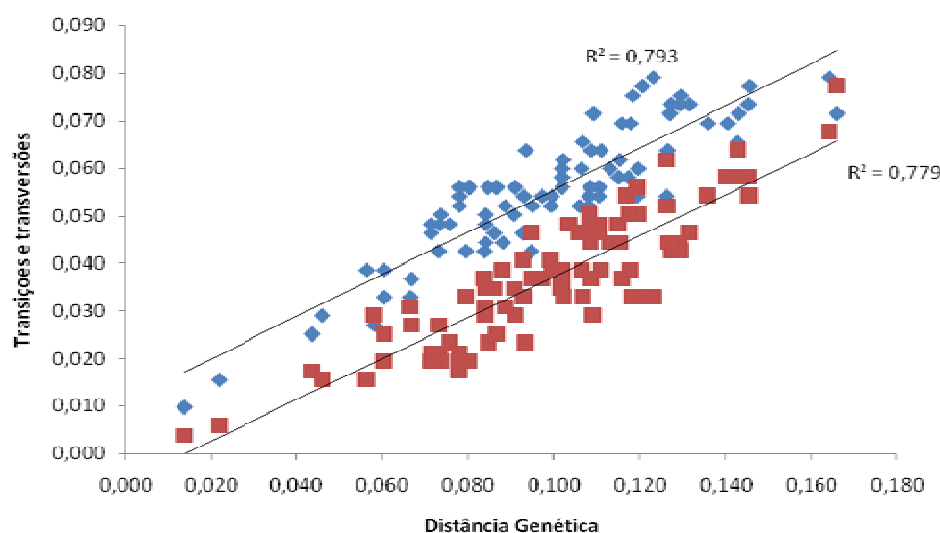


Figura 11. Frequência observada de transições (losangos) e transversões (quadrados) em relação à distância genética estimada pelo modelo Kimura-2-parâmetros.

4.1.1. Análise filogenética realizada pelo método de análise Bayesiana

As análises heurísticas, utilizando o método de análise Bayesiana, foram realizadas considerando todos os dados obtidos (6.801 pb) e considerando os *gaps* como quinta base (no caso do gene 16S por exemplo). A árvore de consenso obtida está representada na Figura 12. Nenhuma espécie foi considerada como grupo externo nas análises (árvore sem raiz). Uma árvore contendo apenas os nomes das subfamílias (Figura 13) foi gerada a partir da filogenia apresentada na Figura 12,

para que o entendimento das relações fosse facilitado. Nessa análise, os valores de suporte para a maioria dos nós internos foram maiores que 60%.

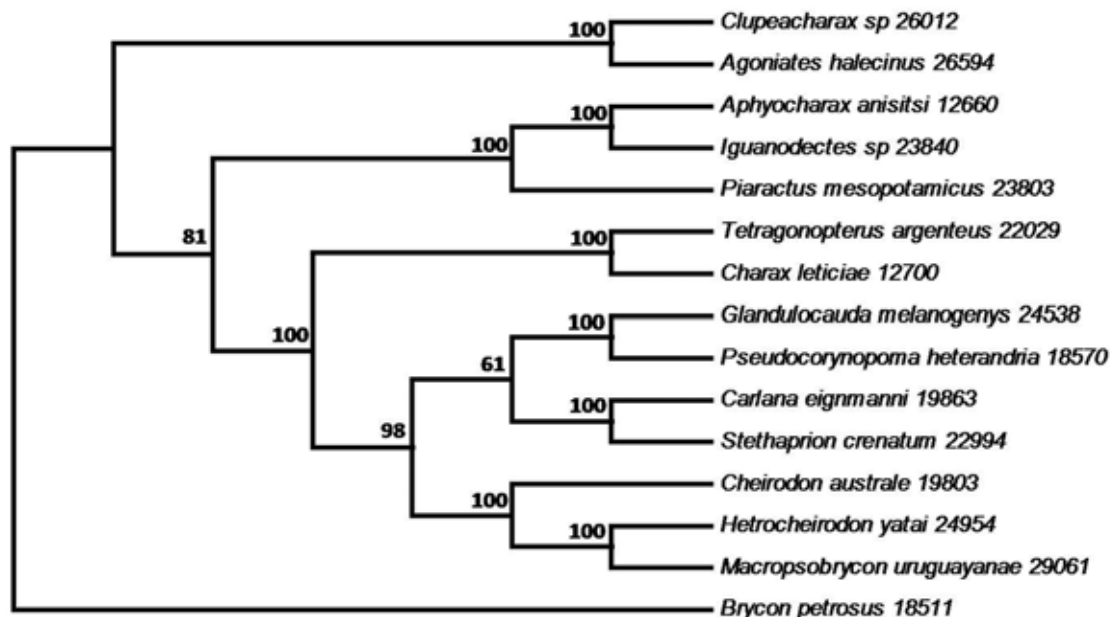


Figura 12. Árvore de consenso, com todos os genes em conjunto, por maioria entre 20.002 árvores, encontrada pelo método de análise Bayesiana. Os números apresentados representam valores das probabilidades *a priori* obtidos.

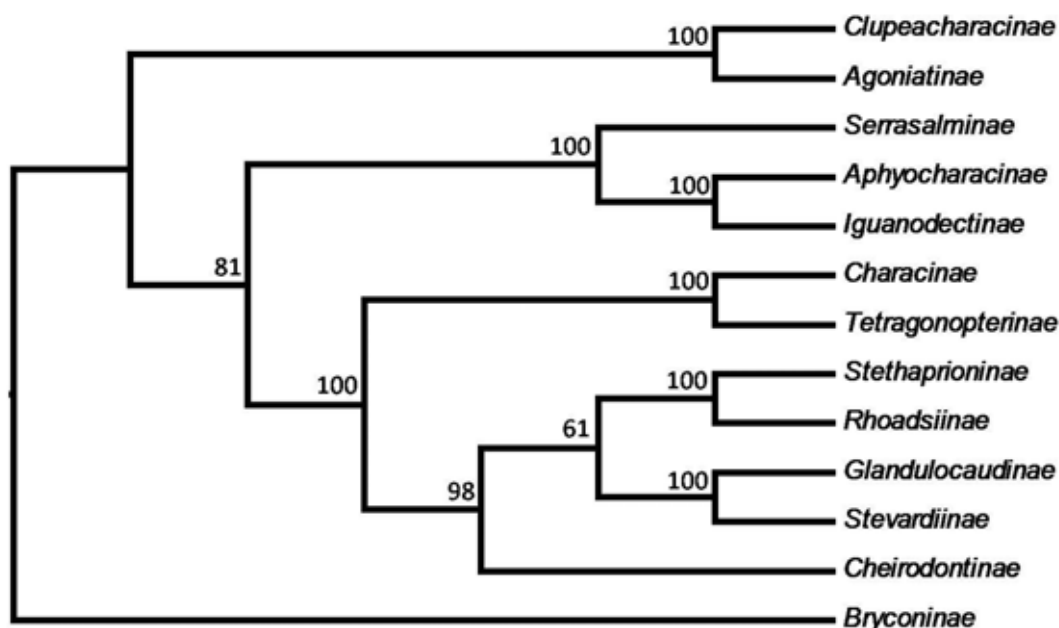


Figura 13. Árvore consenso por maioria somente com os nomes das subfamílias de Characidae. Árvore de consenso por maioria entre 20.002 árvores, encontrada pelo método de análise Bayesiana. Os números apresentados representam valores das probabilidades *a priori* obtidos.

4.2. Análise das relações entre os gêneros e espécies pertencentes à Cheirodontinae

Primeiramente, foram realizadas análises com os genes separadamente, e após isso, análises mais abrangentes, com todos os genes em conjunto. As análises em conjunto foram feitas para que também fossem excluídos casos de diferenças entre árvores de genes e árvores de espécies.

4.2.1. Análises baseadas no gene mitocondrial 16S rRNA

Foram obtidas sequências do gene mitocondrial 16S rRNA de 66 das 68 espécies listadas na Tabela 1 e 2. O tamanho das sequências do gene 16S rRNA variou de 488 pb em *Carlanna eigenmanni* a 590 pb na grande maioria das espécies, com um valor médio de 587,5 pb. Após o procedimento de alinhamento e correção manual, o alinhamento das sequências resultou em uma matriz com 592 caracteres dos quais 368 foram conservados, 224 foram variáveis e 154 foram informativos nas análises de parcimônia. A proporção transição/transversão (Ti/Tv) observada foi de 2,5. A composição média, em porcentagem, de bases para este gene foi de 31,5% de adenina (A), 23,5% de citosina (C), 21,9% de guanina (G) e 23,1% de timina (T). A distância média entre as sequências foi de $d = 0.070 \pm 0.006$, segundo o modelo de Tamura-Nei (Tamura e Nei, 1993). Uma análise gráfica da relação entre as transições (Ti) e transversões (Tv) e a distância genética estimada pelo modelo Kimura-2-parâmetros (Kimura, 1980) indica que não há saturação nestes nucleotídeos (Figura 14). A espécie *Brycon insignis* foi utilizado como grupo externo nas análises.

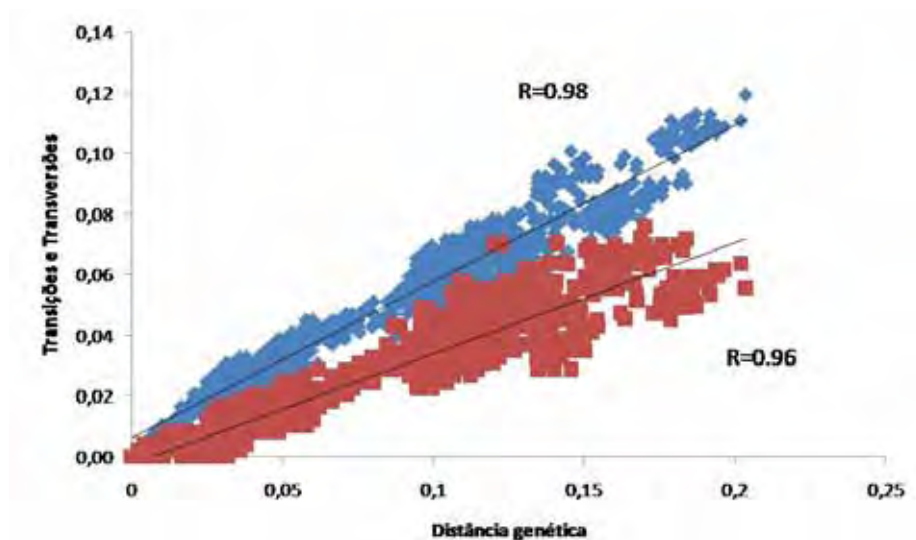


Figura 14. Frequência observada de transições (losangos) e transversões (quadrados) em relação à distância genética estimada pelo modelo Kimura-2-parâmetros.

4.2.1.1. Análise filogenética realizada pelo método de análise Bayesiana

As análises heurísticas, utilizando o método de análise Bayesiana, foram feitas considerando todos os animais cujas sequências de 16S rRNA foram obtidas, todos os dados obtidos (592 pb) e considerando os *gaps* como quinta base. O melhor modelo escolhido pelo Modeltest 3.7 foi o GTR+I+G com parâmetro gamma, selecionado pelo critério de informação Akaike (AIC). A árvore de consenso obtida está representada na Figura 15. *Brycon insignis* foi considerado como grupo externo nas análises.

Nessa análise, os valores de suporte para a maioria dos nós internos foram maiores que 50%, os mais baixos foram apenas em nós cujas espécies eram semelhantes, e discorda dos dados morfológicos e moleculares encontrados na literatura.

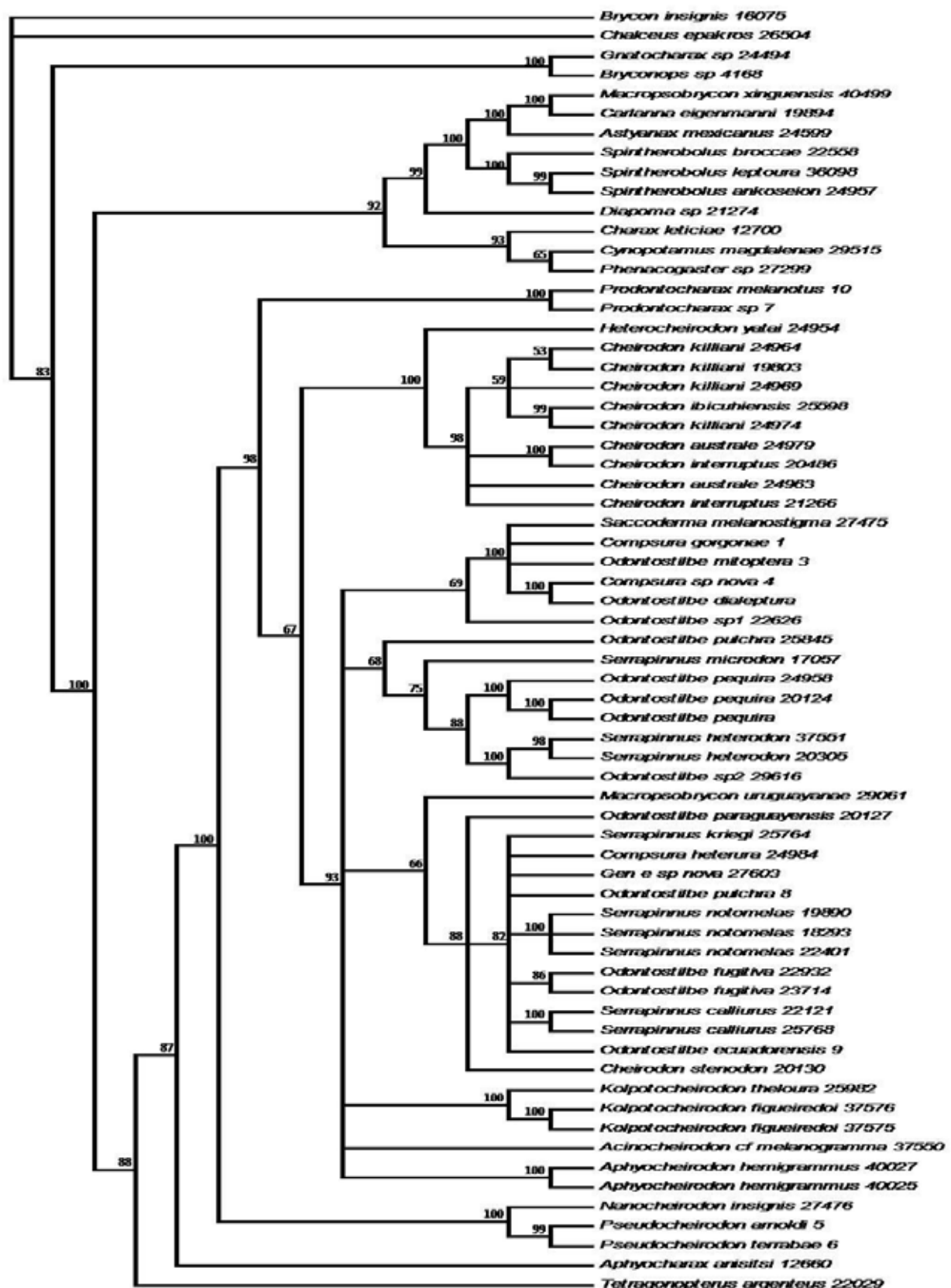


Figura 15. Árvore de consenso com o gene 16S rRNA por maioria (50%) entre 20.002 árvores, encontrada pelo método de análise bayesiana. Os números apresentados representam valores das probabilidades *a posteriori* obtidos. *Brycon insignis* foi utilizado como grupo externo.

4.2.1.2. Análise filogenética realizada pelo método Máxima Verossimilhança (ML)

As análises de Máxima Verossimilhança foram realizadas pelo programa PhyML 3.0 (Guindon e Gascuel 2003), com os dados sendo enviados pelo site <http://www.atgc-montpellier.fr/phyml>. O modelo de substituição foi o HKY (Hasegawa et al. 1985). As análises resultaram em uma filogenia consenso e os valores foram encontrados em 500 réplicas pelo método de *bootstrap*, cujos quais são mostrados na Figura 16.

Nessa análise, os valores de suporte para a maioria dos nós internos foram maiores que 50%, os mais baixos foram omitidos da filogenia, e os resultados discordam dos dados morfológicos e moleculares encontrados na literatura.

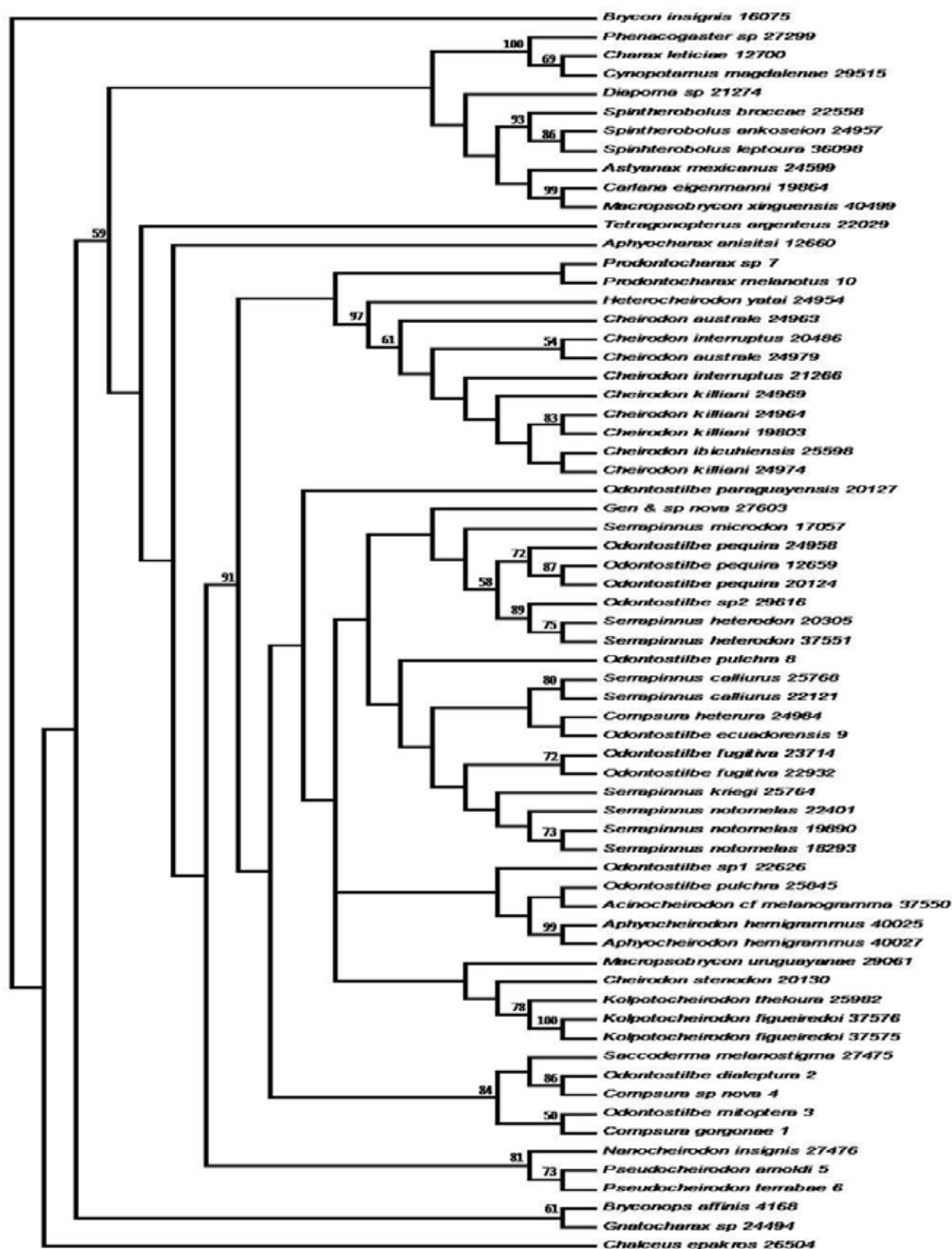


Figura 16. Árvore de consenso com o gene 16S rRNA por maioria (50%) de Máxima Verossimilhança. As análises foram realizadas com 500 réplicas e considerando a árvore de consenso resultante das árvores obtidas. *Brycon insignis* foi considerado com grupo externo.

4.2.2. Análises baseadas no gene mitocondrial Citocromo *b*

Foram obtidas sequências do gene mitocondrial Citocromo *b* de 67 das 68 espécies listadas na Tabela 1 e 2. O tamanho das sequências do gene Citocromo *b* variou de 808 pb em *Diapoma sp.* e 979 pb em mais de 50% das espécies, com um valor médio de 967,2 pb. Após o procedimento de alinhamento e correção manual, o alinhamento das seqüências resultou em uma matriz com 979 caracteres dos quais 374 foram conservados, 605 foram variáveis e 457 foram informativos nas análises de parcimônia. A proporção transição/transversão (Ti/Tv) observada foi de 0,9. A composição média, em porcentagem, de bases para este gene foi de 27,2% de adenina (A), 28,9% de citosina (C), 14,5% de guanina (G) e 29,4% de timina (T). A distância média entre as seqüências foi de $d = 0.180 \pm 0.009$, segundo o modelo de Tamura-Nei (Tamura e Nei, 1993). Uma análise gráfica da relação entre as transições (Ti) e transversões (Tv) e a distância genética estimada pelo modelo Kimura-2-parâmetros (Kimura, 1980) indica que não há saturação nestes nucleotídeos (Figura 17). A espécie *Brycon insignis* foi utilizado como grupo externo nas análises.

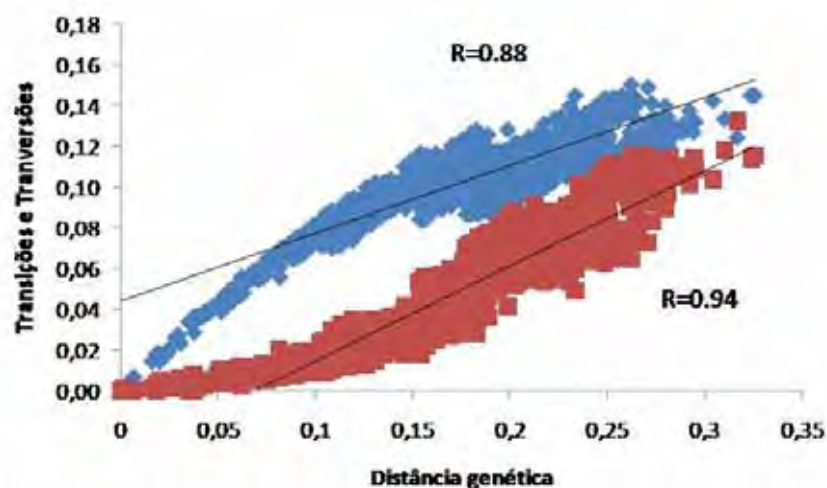


Figura 17. Frequência observada de transições (losangos) e transversões (quadrados) em relação à distância genética estimada pelo modelo Kimura-2-parâmetros.

4.2.2.1. Análise filogenética realizada pelo método de análise Bayesiana

As análises heurísticas, utilizando o método de análise Bayesiana, foram feitas considerando todos os animais cujas sequências de citocromo *b* foram obtidas, todos os dados obtidos (979 pb) e considerando os *gaps* como quinta base. O melhor modelo escolhido pelo Modeltest 3.7 foi o GTR+I+G com parâmetro gama, selecionado pelo critério de informação Akaike (AIC). A árvore de consenso obtida está representada na Figura 18. *Brycon insignis* foi considerado como grupo externo nas análises.

Nessa análise, os valores de suporte para a maioria dos nós internos foram maiores que 50%, e discorda dos dados morfológicos e moleculares encontrados na literatura.

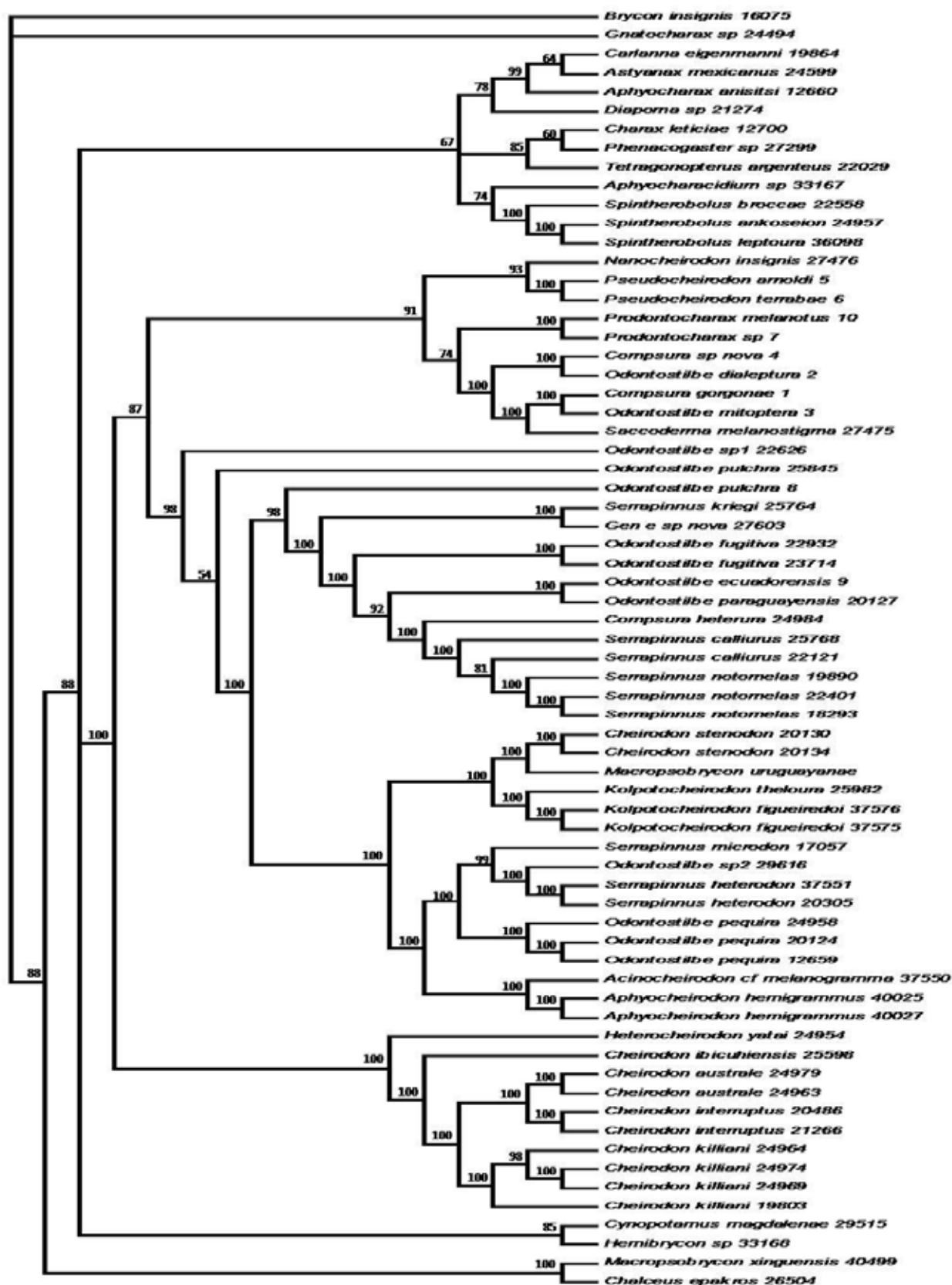


Figura 18. Árvore de consenso com Citocromo *b* por maioria (50%) entre 20.002 árvores, encontrada pelo método de análise bayesiana. Os números apresentados representam valores das probabilidades *a priori* obtidos. *Brycon insignis* foi utilizado como grupo externo.

4.2.2.2. Análise filogenética realizada pelo método Máxima Verossimilhança (ML)

As análises de Máxima Verossimilhança foram realizadas pelo programa PhyML 3.0 (Guindon e Gascuel 2003), com os dados sendo enviados pelo site <http://www.atgc-montpellier.fr/phyml>. O modelo de substituição foi o HKY (Hasegawa et al. 1985). As análises resultaram em uma filogenia consenso e os valores foram encontrados em 500 réplicas pelo método de *bootstrap*, cujos quais são mostrados na Figura 19.

Nessa análise, os valores de suporte para a maioria dos nós internos foram maiores que 50%, os mais baixos foram omitidos da filogenia, e os resultados discordam dos dados morfológicos e moleculares encontrados na literatura.

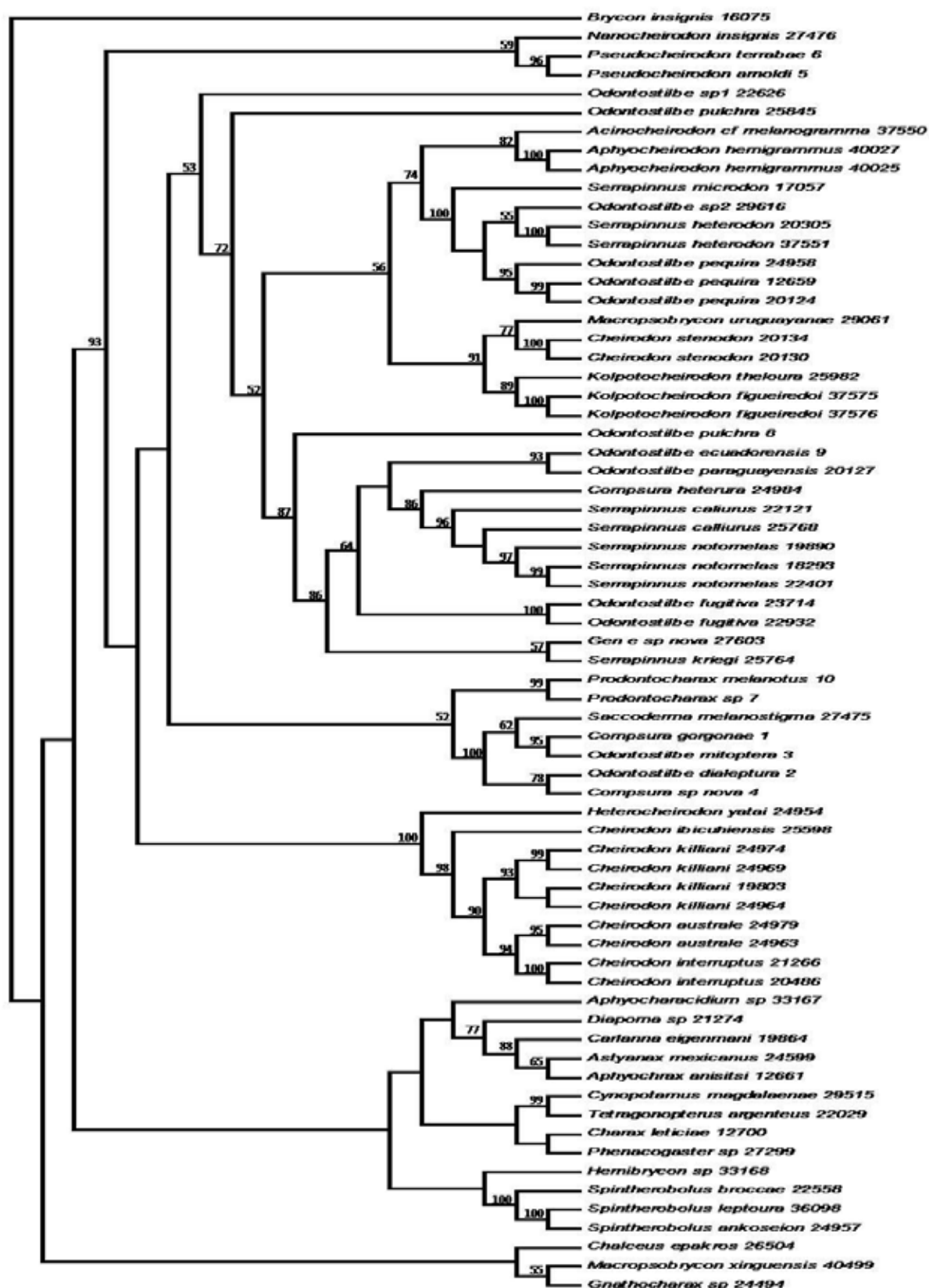


Figura 19. Árvore de consenso com citocromo *b* por maioria (50%) de Máxima Verossimilhança. As análises foram realizadas com 500 réplicas e considerando a árvore de consenso resultante das árvores obtidas. *Brycon insignis* foi considerado com grupo externo.

4.2.3. Análises baseadas no gene nuclear *Myh6* (Myosin, heavy chain 6, cardiac muscle, alpha)

Foram obtidas sequências do gene nuclear *Myh6* de 55 das 68 espécies listadas na Tabela 1 e 2. O tamanho das sequências do gene *Myh6* variou de 632 pb em *Brycon insignis* a 750 pb em 24 das espécies sequenciadas, com um valor médio de 706,9 pb. Esse gene possui diversas cópias diferentes, denominados psedogenes, que são comumente amplificados sem que seja notada a diferença, dificultando assim, a obtenção das sequências do gene “correto” de todos os exemplares utilizados no estudo. Após o procedimento de alinhamento e correção manual, o alinhamento das seqüências resultou em uma matriz com 750 caracteres dos quais 528 foram conservados, 222 foram variáveis e 150 foram informativos nas análises de parcimônia. A proporção transição/transversão (Ti/Tv) observada foi de 2,0. A composição média, em porcentagem, de bases para este gene foi de 30,2% de adenina (A), 22,1% de citosina (C), 23,7% de guanina (G) e 24,0% de timina (T). A distância média entre as seqüências foi de $d = 0.056 \pm 0.004$, segundo o modelo de Tamura-Nei (Tamura e Nei, 1993). Uma análise gráfica da relação entre as transições (Ti) e transversões (Tv) e a distância genética estimada pelo modelo Kimura-2-parâmetros (Kimura, 1980) indica que não há saturação nestes nucleotídeos (Figura 20). A espécie *Brycon insignis* foi utilizado como grupo externo nas análises.

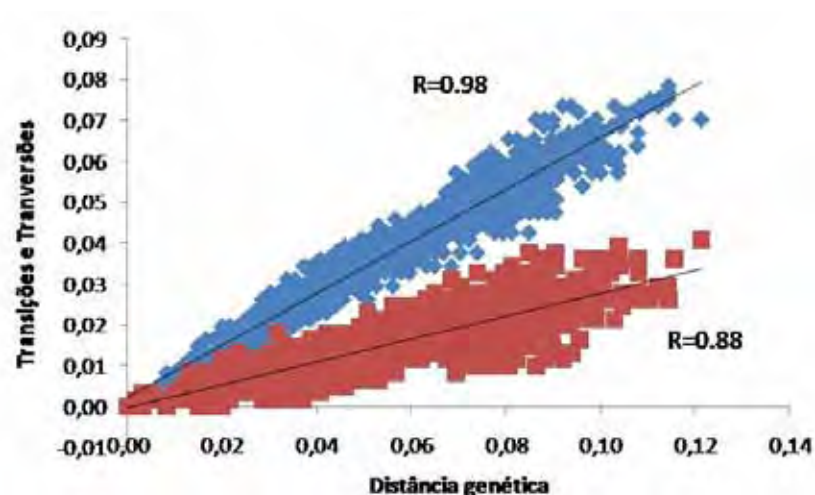


Figura 20. Frequência observada de transições (losangos) e transversões (quadrados) em relação à distância genética estimada pelo modelo Kimura-2-parâmetros.

4.2.3.1. Análise filogenética realizada pelo método de análise Bayesiana

As análises heurísticas, utilizando o método de análise Bayesiana, foram feitas considerando todos os animais cujas sequências de Myh6 foram obtidas, todos os dados obtidos (750 pb) e considerando os *gaps* como dados pertencentes às sequências. O melhor modelo escolhido pelo Modeltest 3.7 foi o GTR+I+G com parâmetro gama, selecionado pelo critério de informação Akaike (AIC). A árvore de consenso obtida está representada na Figura 21. *Brycon insignis* foi considerado como grupo externo nas análises.

Nessa análise, os valores de suporte para a maioria dos nós internos foram maiores que 50%, e discorda dos dados morfológicos e moleculares encontrados na literatura.

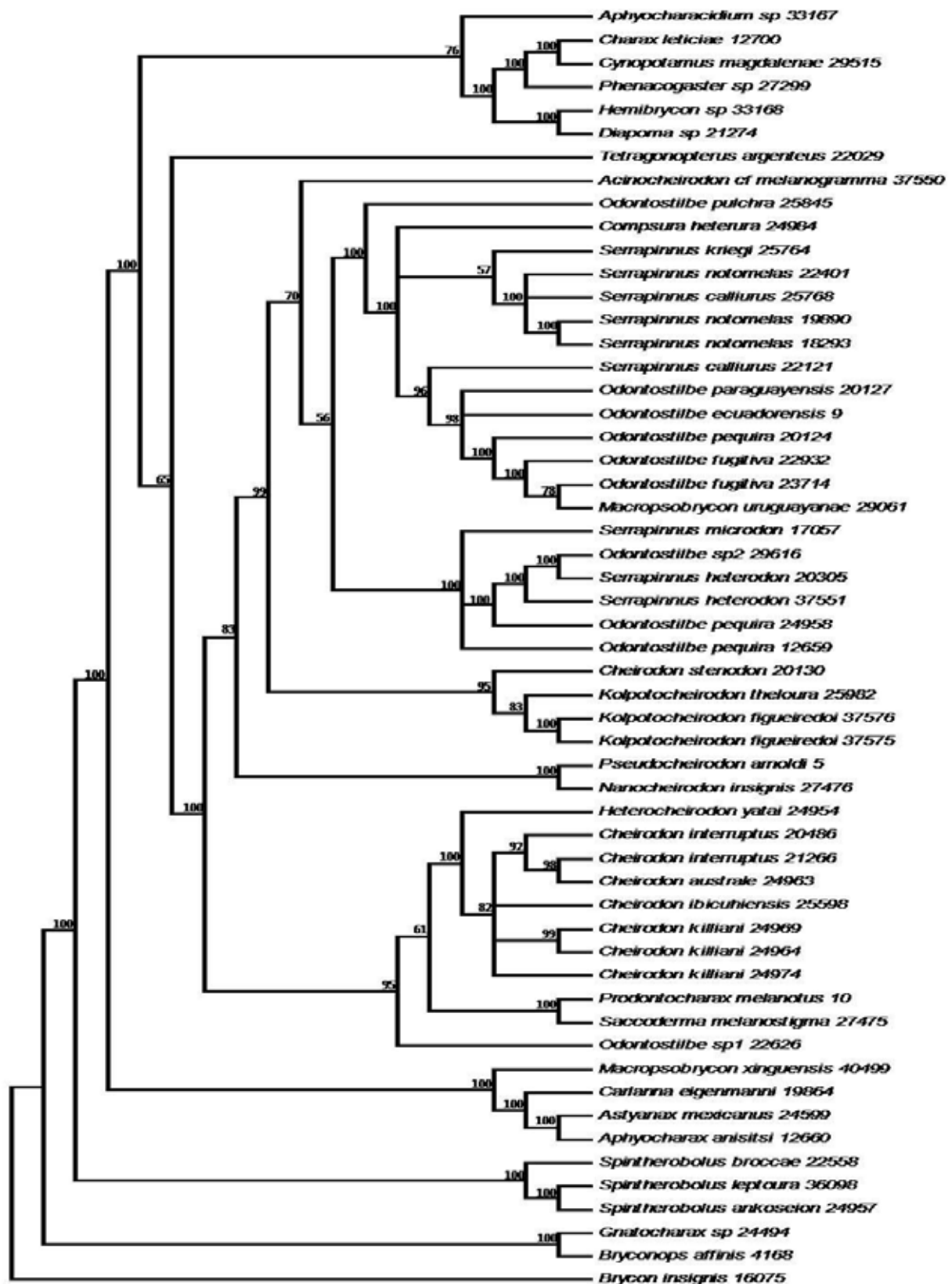


Figura 21. Árvore de consenso com Myh6 por maioria (50%) entre 20.002 árvores, encontrada pelo método de análise bayesiana. Os números apresentados representam valores das probabilidades *a priori* obtidos. *Brycon insignis* foi utilizado como grupo externo.

4.2.3.2. Análise filogenética realizada pelo método Máxima Verossimilhança (ML)

As análises de Máxima Verossimilhança foram realizadas pelo programa PhyML 3.0 (Guindon e Gascuel 2003), com os dados sendo enviados pelo site <http://www.atgc-montpellier.fr/phyml>. O modelo de substituição foi o HKY (Hasegawa et al. 1985). As análises resultaram em uma filogenia consenso e os valores foram encontrados em 500 réplicas pelo método de *bootstrap*, cujos quais são mostrados na Figura 22.

Nessa análise, os valores de suporte para a maioria dos nós internos foram maiores que 50%, os mais baixos foram omitidos da filogenia, e os resultados discordam dos dados morfológicos e moleculares encontrados na literatura.

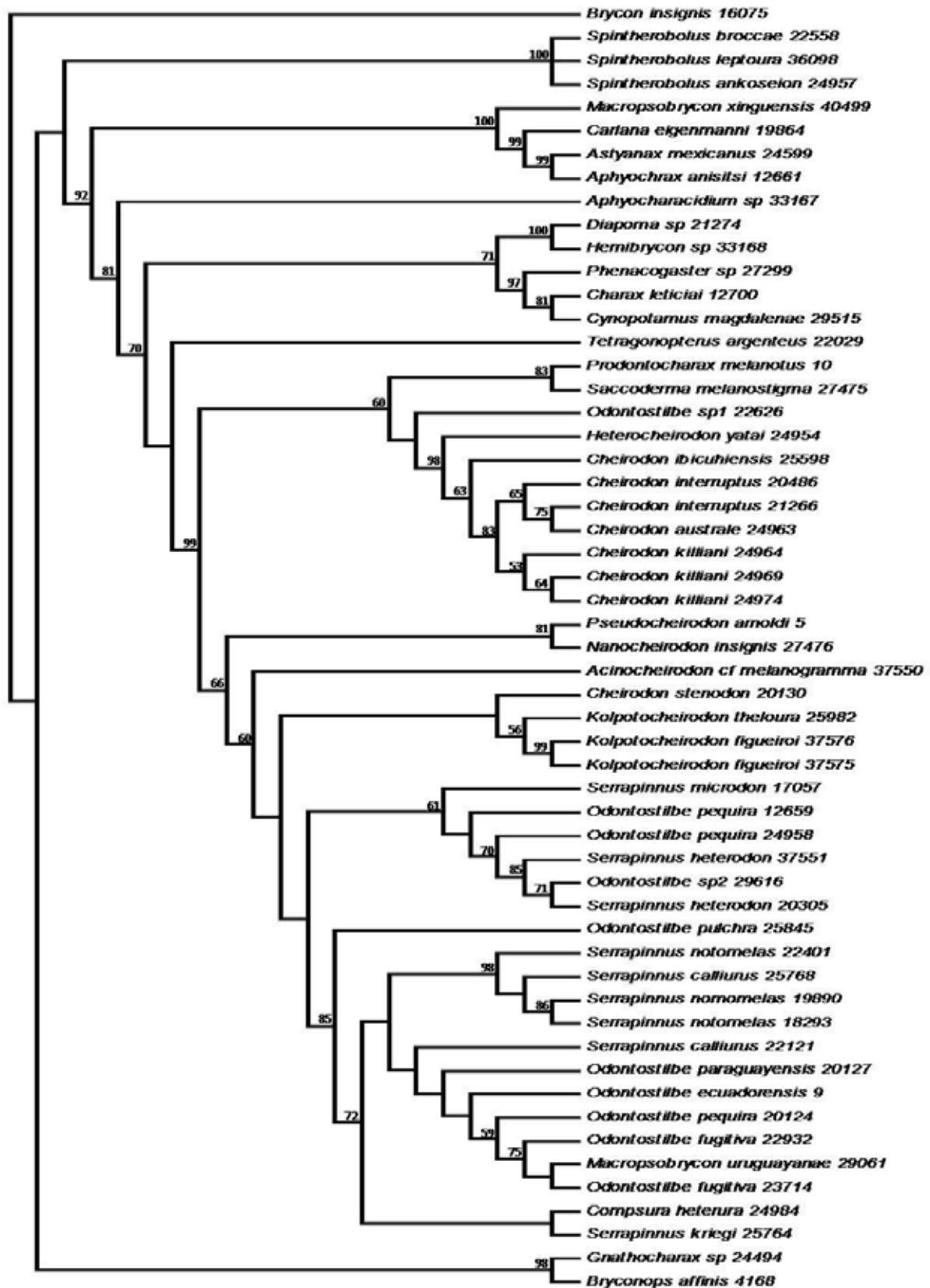


Figura 22. Árvore de consenso com Myh6 por maioria (50%) de Máxima Verossimilhança. As análises foram realizadas com 500 réplicas e considerando a árvore de consenso resultante das árvores obtidas. *Brycon insignis* foi considerado com grupo externo.

4.2.4. Análises baseadas no gene nuclear RAG1 (*Recombination activating gene 1*)

Foram obtidas sequências do gene nuclear RAG1 de 64 das 68 espécies listadas na Tabela 1 e 2. O tamanho das sequências do gene RAG1 variou de 1098 pb em *Phenacogaster sp* a 1437 pb em mais de 50% das espécies, com um valor médio de 1409,4 pb. Após o procedimento de alinhamento e correção manual, o alinhamento das seqüências resultou em uma matriz com 1437 caracteres dos quais 848 foram conservados, 589 foram variáveis e 382 foram informativos nas análises de parcimônia. A proporção transição/transversão (Ti/Tv) observada foi de 1,4. A composição média, em porcentagem, de bases para este gene foi de 24,6% de adenina (A), 25,2% de citosina (C), 28,3% de guanina (G) e 22,0% de timina (T). A distância média entre as seqüências foi de $d = 0.072 \pm 0.004$, segundo o modelo de Tamura-Nei (Tamura e Nei, 1993). Uma análise gráfica da relação entre as transições (Ti) e transversões (Tv) e a distância genética estimada pelo modelo Kimura-2-parâmetros (Kimura, 1980) indica que não há saturação nestes nucleotídeos (Figura 23). A espécie *Brycon insignis* foi utilizado como grupo externo nas análises.

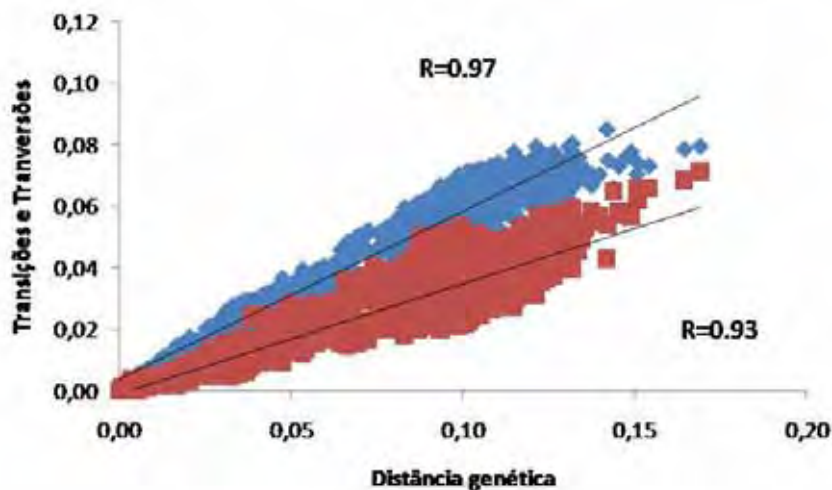


Figura 23. Frequência observada de transições (losangos) e transversões (quadrados) em relação à distância genética estimada pelo modelo Kimura-2-parâmetros.

4.2.4.1. Análise filogenética realizada pelo método de análise Bayesiana

As análises heurísticas, utilizando o método de análise Bayesiana, foram feitas considerando todos os animais cujas sequências de RAG1 foram obtidas, todos os dados obtidos (1.437 pb) e considerando os *gaps* como dados pertencentes às sequências. O melhor modelo escolhido pelo Modeltest 3.7 foi o GTR+I+G com parâmetro gama, selecionado pelo critério de informação Akaike (AIC). A árvore de consenso obtida está representada na Figura 24. *Brycon insignis* foi considerado como grupo externo nas análises.

Nessa análise, os valores de suporte para a maioria dos nós internos foram maiores que 50%, e discorda dos dados morfológicos e moleculares encontrados na literatura.

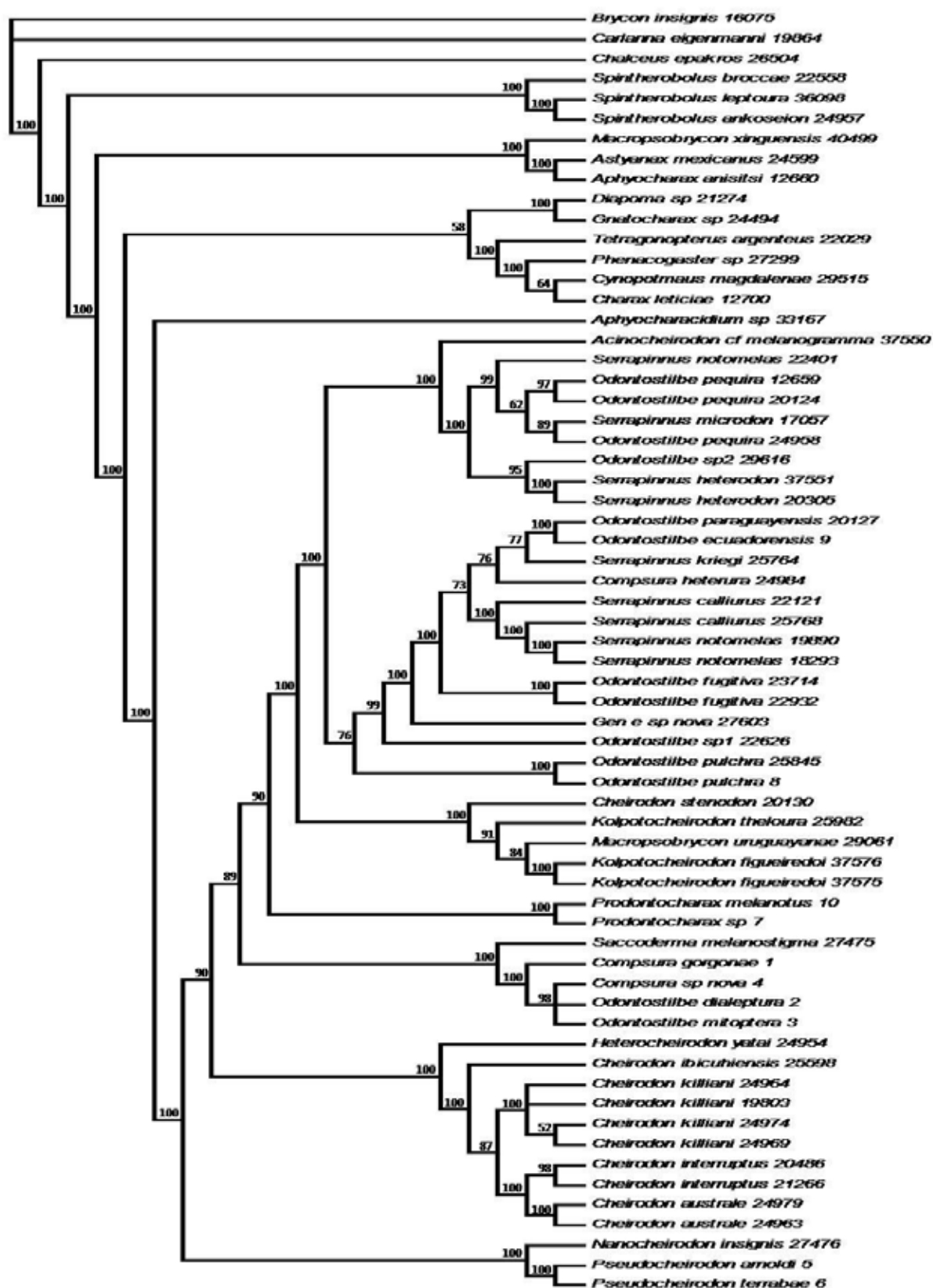


Figura 24. Árvore de consenso com RAG1 por maioria (50%) entre 20.002 árvores, encontrada pelo método de análise bayesiana. Os números apresentados representam valores das probabilidades *a priori* obtidos. *Brycon insignis* foi utilizado como grupo externo.

4.2.4.2. Análise filogenética realizada pelo método Máxima Verossimilhança (ML)

As análises de Máxima Verossimilhança foram realizadas pelo programa PhyML 3.0 (Guindon e Gascuel 2003), com os dados sendo enviados pelo site <http://www.atgc-montpellier.fr/phyml>. O modelo de substituição foi o HKY (Hasegawa et al. 1985). As análises resultaram em uma filogenia consenso e os valores foram encontrados em 500 réplicas pelo método de *bootstrap*, cujos quais são mostrados na Figura 25.

Nessa análise, os valores de suporte para a maioria dos nós internos foram maiores que 50%, os mais baixos foram omitidos da filogenia, e os resultados discordam dos dados morfológicos e moleculares encontrados na literatura.

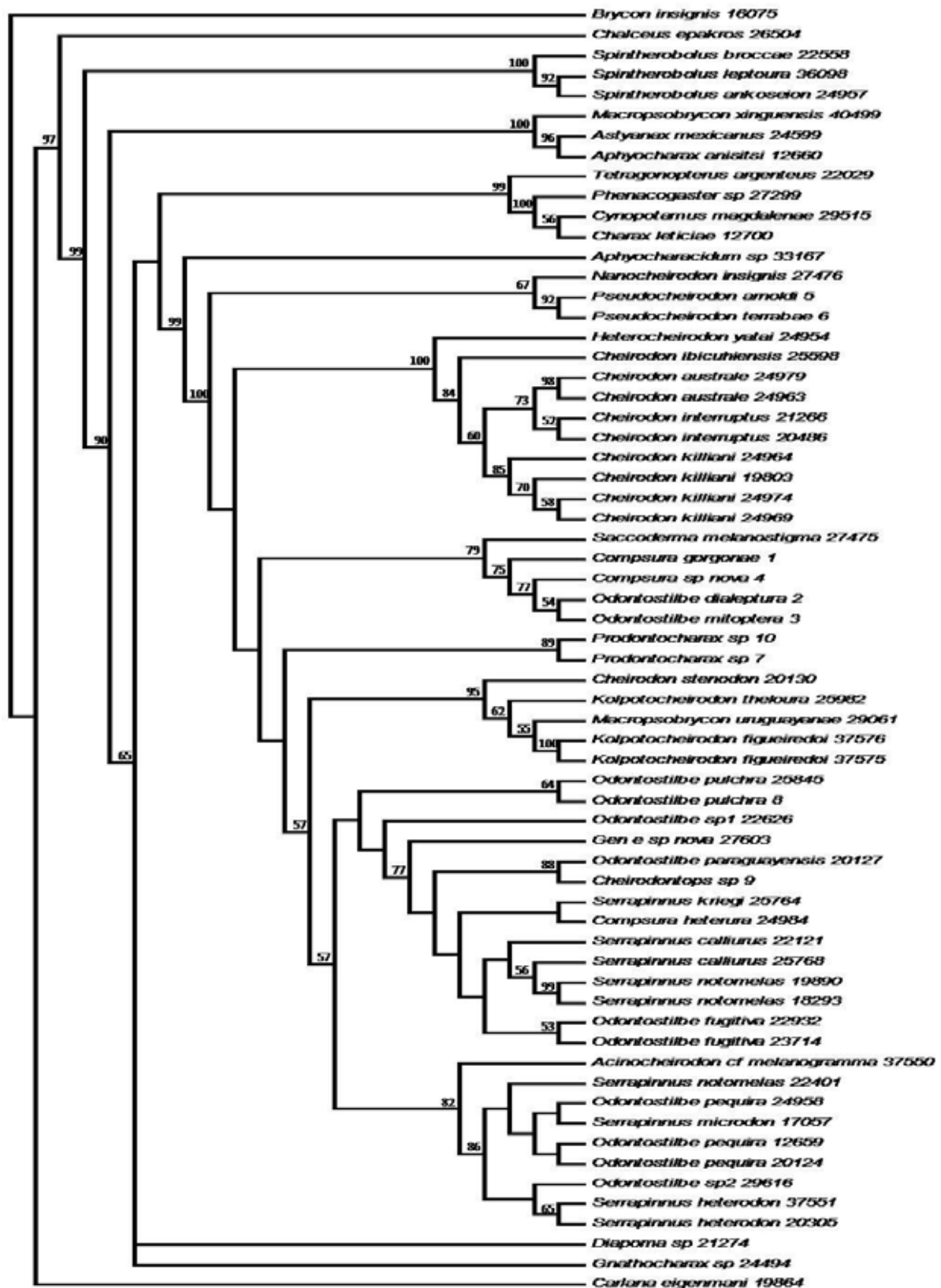


Figura 25. Árvore de consenso com RAG1 por maioria (50%) de Máxima Verossimilhança. As análises foram realizadas com 500 réplicas e considerando a árvore de consenso resultante das árvores obtidas. *Brycon insignis* foi considerado com grupo externo.

4.2.5. Análises baseadas no gene nuclear RAG2 (*Recombination activating gene 2*)

Foram obtidas sequências do gene nuclear RAG2 de 63 das 68 espécies listadas na Tabela 1 e 2. O tamanho das sequências do gene RAG2 variou de 1038 pb em *Chalceus epakros* a 1094 pb em mais de 50% das espécies, com um valor médio de 1085,0 pb. Após o procedimento de alinhamento e correção manual, o alinhamento das seqüências resultou em uma matriz com 1094 caracteres dos quais 660 foram conservados, 434 foram variáveis e 285 foram informativos nas análises de parcimônia. A proporção transição/transversão (Ti/Tv) observada foi de 1,7. A composição média, em porcentagem, de bases para este gene foi de 24,1% de adenina (A), 26,1% de citosina (C), 27,2% de guanina (G) e 22,6% de timina (T). A distância média entre as seqüências foi de $d = 0.064 \pm 0.004$, segundo o modelo de Tamura-Nei (Tamura e Nei, 1993). Uma análise gráfica da relação entre as transições (Ti) e transversões (Tv) e a distância genética estimada pelo modelo Kimura-2-parâmetros (Kimura, 1980) indica que não há saturação nestes nucleotídeos (Figura 26). A espécie *Brycon insignis* foi utilizado como grupo externo nas análises.

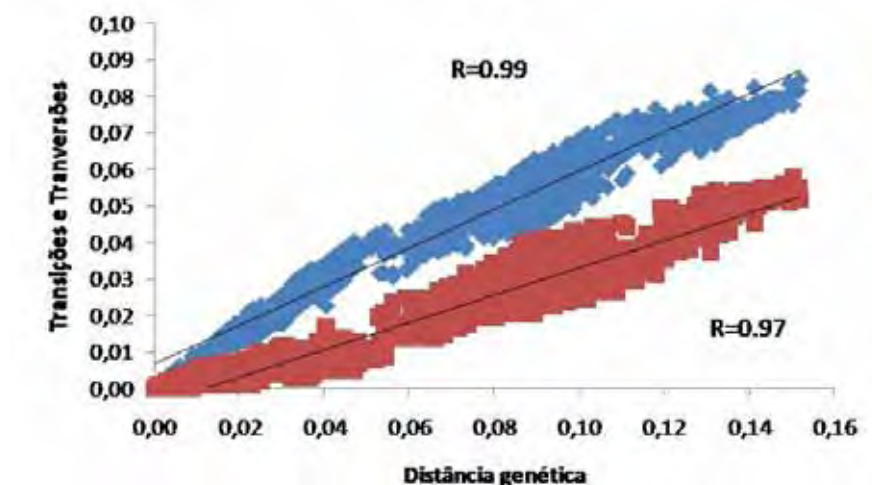


Figura 26. Frequência observada de transições (losangos) e transversões (quadrados) em relação à distância genética estimada pelo modelo Kimura-2-parâmetros.

4.2.5.1. Análise filogenética realizada pelo método de análise Bayesiana

As análises heurísticas, utilizando o método de análise Bayesiana, foram feitas considerando todos os animais cujas sequências de RAG2 foram obtidas, todos os dados obtidos (1.094 pb) e considerando os *gaps* como dados pertencentes às sequências. O melhor modelo escolhido pelo Modeltest 3.7 foi o GTR+I+G com parâmetro gama, selecionado pelo critério de informação Akaike (AIC). A árvore de consenso obtida está representada na Figura 27. *Brycon insignis* foi considerado como grupo externo nas análises.

Nessa análise, os valores de suporte para a maioria dos nós internos foram maiores que 50%, e discorda dos dados morfológicos e moleculares encontrados na literatura.

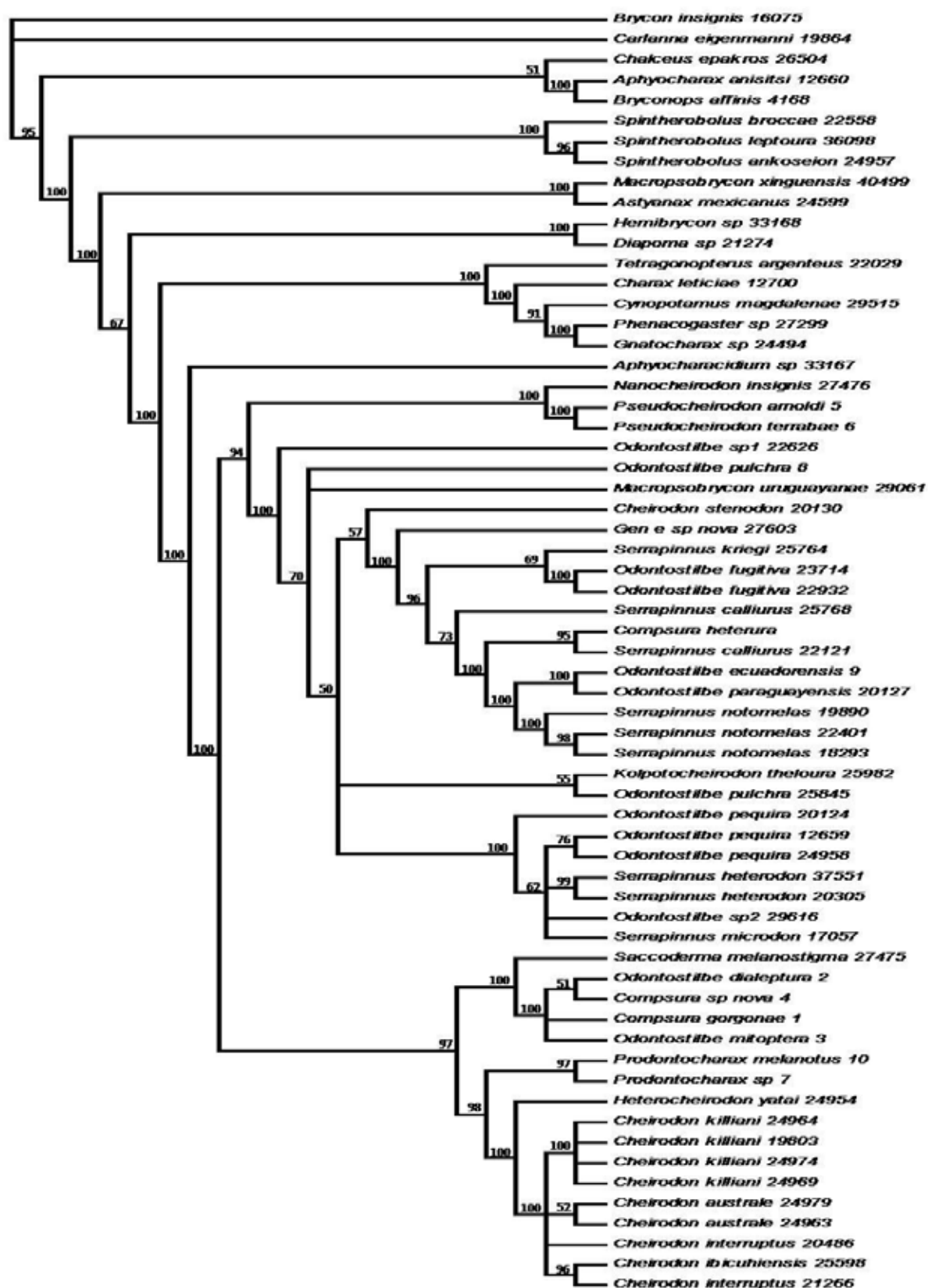


Figura 27. Árvore de consenso com RAG2 por maioria (50%) entre 20.002 árvores, encontrada pelo método de análise bayesiana. Os números apresentados representam valores das probabilidades *a priori* obtidos. *Brycon insignis* foi utilizado como grupo externo.

4.2.5.2. Análise filogenética realizada pelo método Máxima Verossimilhança (ML)

As análises de Máxima Verossimilhança foram realizadas pelo programa PhyML 3.0 (Guindon e Gascuel 2003), com os dados sendo enviados pelo site <http://www.atgc-montpellier.fr/phyml>. O modelo de substituição foi o HKY (Hasegawa et al. 1985). As análises resultaram em uma filogenia consenso e os valores foram encontrados em 500 réplicas pelo método de *bootstrap*, cujos quais são mostrados na Figura 28.

Nessa análise, os valores de suporte para a maioria dos nós internos foram maiores que 50%, os mais baixos foram omitidos da filogenia, e os resultados discordam dos dados morfológicos e moleculares encontrados na literatura.

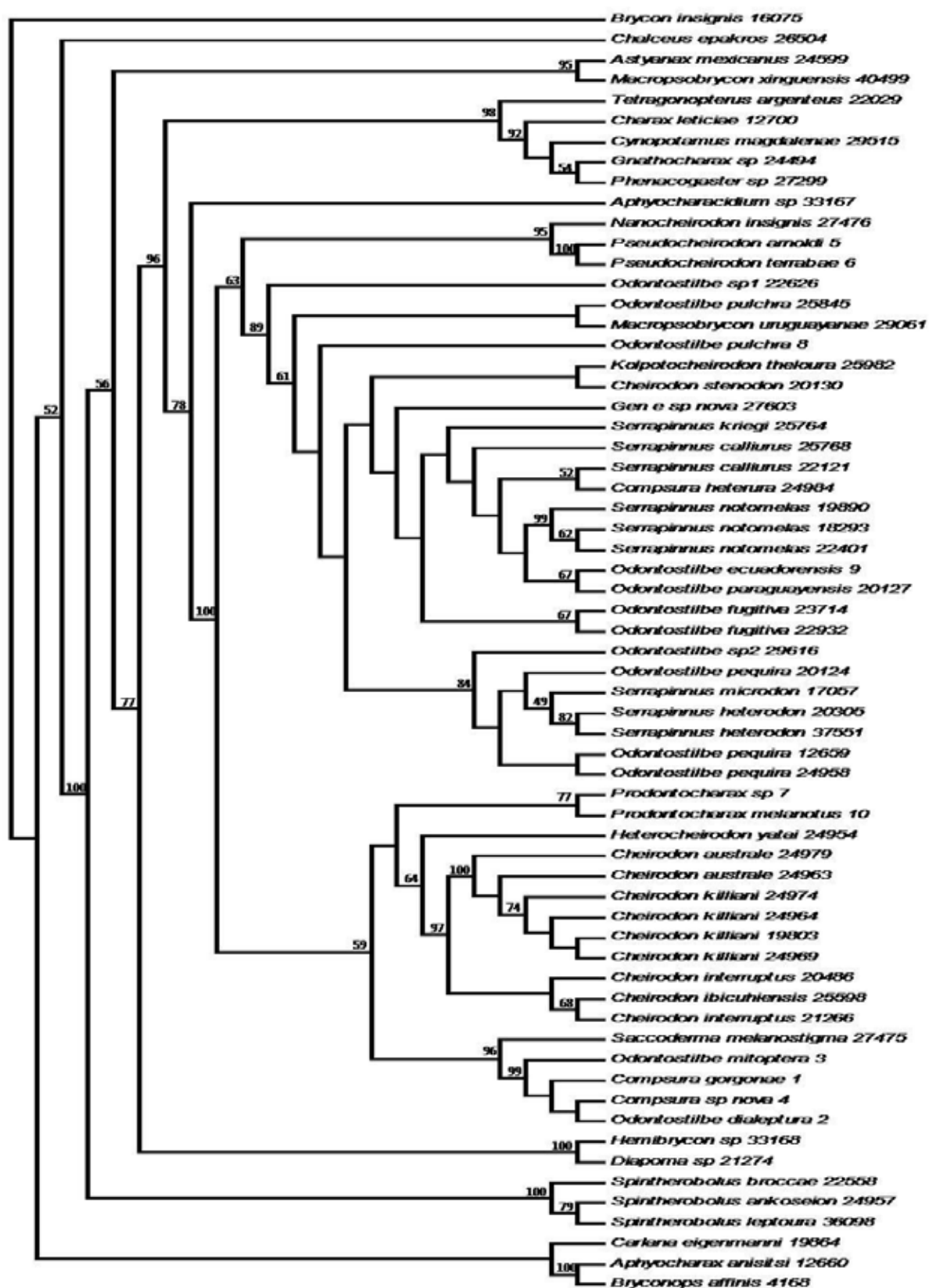


Figura 28. Árvore de consenso com RAG2 por maioria (50%) de Máxima Verossimilhança. As análises foram realizadas com 500 réplicas e considerando a árvore de consenso resultante das árvores obtidas. *Brycon insignis* foi considerado com grupo externo.

4.2.6. Análises baseadas no gene nuclear *Ptr* (*si:ch211-105n9.1-like protein*)

Foram obtidas sequências do gene nuclear *Ptr* de 50 das 68 espécies listadas na Tabela 1 e 2. O tamanho das sequências do gene *Ptr* variou de 702 pb em *Odontostilbe pequiri*, *O. fugitiva* e *Cheirodon killiani* a 1180 pb em mais de 20% das espécies, com um valor médio de 865,0 pb. Após o procedimento de alinhamento e correção manual, o alinhamento das seqüências resultou em uma matriz com 1180 caracteres dos quais 771 foram conservados, 409 foram variáveis e 209 foram informativos nas análises de parcimônia. A proporção transição/transversão (Ti/Tv) observada foi de 1,1. A composição média, em porcentagem, de bases para este gene foi de 25,5% de adenina (A), 24,9% de citosina (C), 20,8% de guanina (G) e 28,8% de timina (T). A distância média entre as seqüências foi de $d = 0.052 \pm 0.004$, segundo o modelo de Tamura-Nei (Tamura e Nei, 1993). Uma análise gráfica da relação entre as transições (Ti) e transversões (Tv) e a distância genética estimada pelo modelo Kimura-2-parâmetros (Kimura, 1980) indica que não há saturação nestes nucleotídeos (Figura 29). A espécie *Brycon insignis* foi utilizado como grupo externo nas análises. O que pode ser notado nos resultados com esse gene é que ele provavelmente possui os chamados “pseudo-genes”, sendo amplificados e sequenciados juntamente com o gene de interesse, dificultando depois o uso desses dados nas análises.

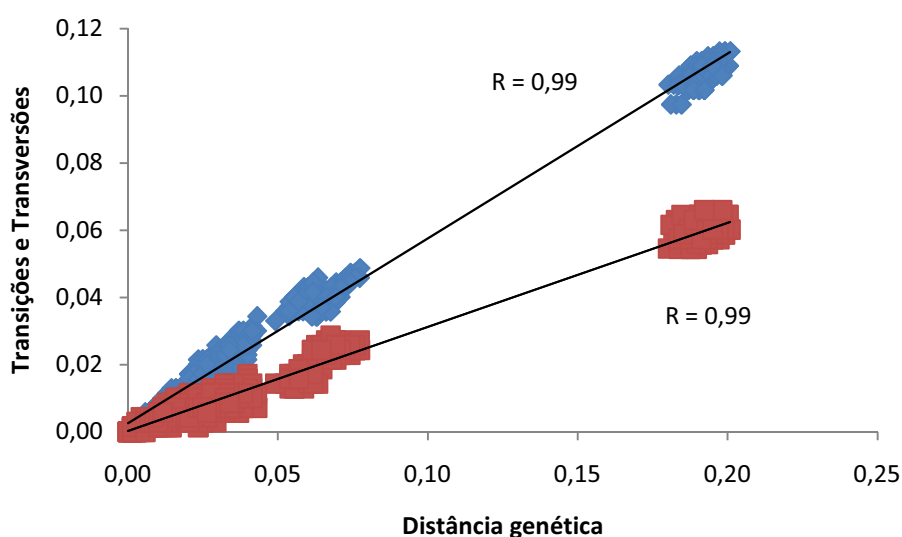


Figura 29. Frequência observada de transições (losangos) e transversões (quadrados) em relação à distância genética estimada pelo modelo Kimura-2-parâmetros.

4.2.6.1. Análise filogenética realizada pelo método de análise Bayesiana

As análises heurísticas, utilizando o método de análise Bayesiana, foram feitas considerando todos os animais cujas sequências de Ptr foram obtidas, todos os dados obtidos (1.180 pb) e considerando os *gaps* como dados pertencentes às sequências. O melhor modelo escolhido pelo Modeltest 3.7 foi o GTR+I+G com parâmetro gama, selecionado pelo critério de informação Akaike (AIC). A árvore de consenso obtida está representada na Figura 30. *Tetragonopterus argenteus* foi considerado como grupo externo nas análises por não terem sido sequenciados os demais exemplares utilizados nas análises dos outros genes.

Nessa análise, os valores de suporte para os nós internos foram maiores que 50%, e discorda dos dados morfológicos e moleculares encontrados na literatura.

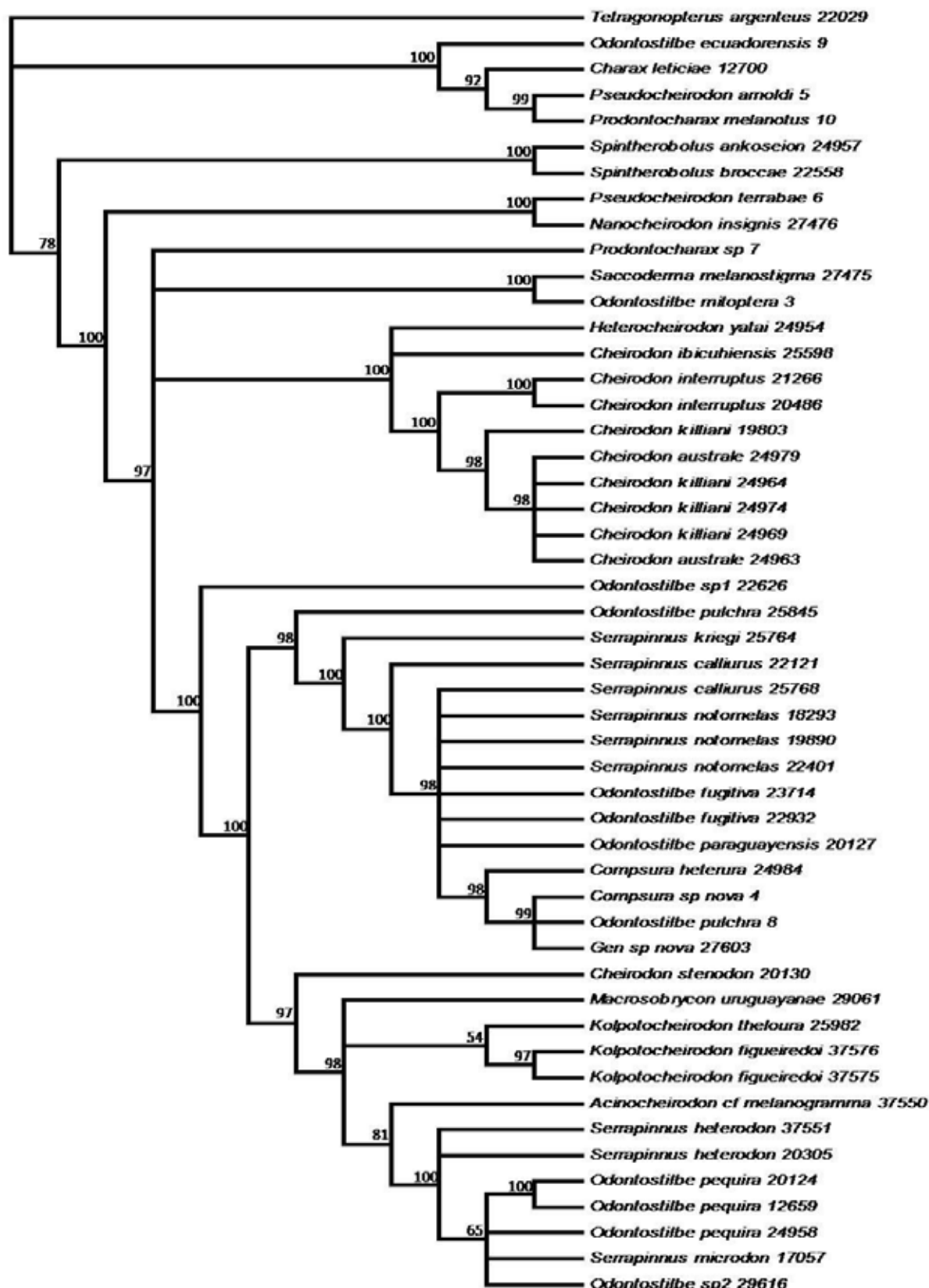


Figura 30. Árvore de consenso com Ptr por maioria (50%) entre 20.002 árvores, encontrada pelo método de análise bayesiana. Os números apresentados representam valores das probabilidades *a priori* obtidos. *Tetragonopterus argenteus* foi utilizado como grupo externo.

4.2.6.2. Análise filogenética realizada pelo método Máxima Verossimilhança (ML)

As análises de Máxima Verossimilhança foram realizadas pelo programa PhyML 3.0 (Guindon e Gascuel 2003), com os dados sendo enviados pelo site <http://www.atgc-montpellier.fr/phyml>. O modelo de substituição foi o HKY (Hasegawa et al. 1985). As análises resultaram em uma filogenia consenso e os valores foram encontrados em 500 réplicas pelo método de *bootstrap*, cujos quais são mostrados na Figura 31.

Nessa análise, os valores de suporte para a maioria dos nós internos foram menores que 50%, cujo qual foram omitidos da filogenia, e os resultados discordam dos dados morfológicos e moleculares encontrados na literatura e também da maior parte dos dados encontrados no presente trabalho.

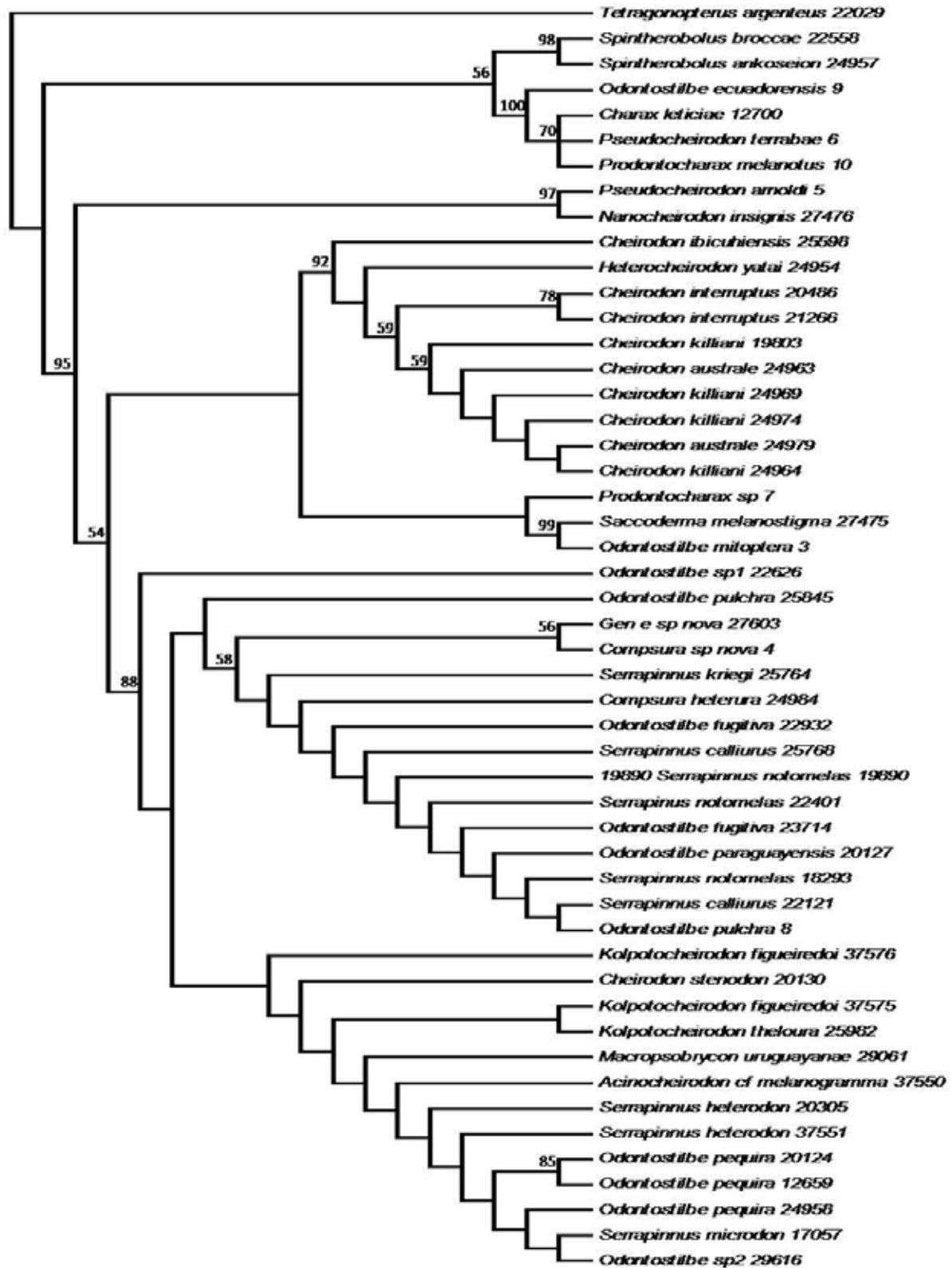


Figura 31. Árvore de consenso com Ptr por maioria (50%) de Máxima Verossimilhança. As análises foram realizadas com 500 réplicas e considerando a árvore de consenso resultante das árvores obtidas. *Tetragonopterus argenteus* foi considerado com grupo externo.

4.2.7. Análises baseadas nos genes mitocondriais e nucleares em conjunto (16S rRNA, Citocromo b, Myh6, RAG1 e Rag2)

Foram obtidas sequências dos genes mitocondriais 16S rRNA e citocromo b, e dos genes nucleares RAG1, RAG2 e Myh6 dos exemplares das espécies de Cheirodontinae apresentadas na Tabela 1 e 2. Após serem realizadas as análises, foram retiradas as sequências do gene nuclear Ptr porque esse não apresentou uma boa resolução para a filogenia. Após o procedimento de alinhamento e correção manual, o alinhamento das sequências resultou em uma matriz com 4852 caracteres dos quais 2778 foram conservados, 2074 foram variáveis e 1422 foram informativos nas análises de parcimônia. A proporção transição/transversão (Ti/Tv) observada foi de 1,3. A composição média, em porcentagem, de bases para estes genes foi de 26,6% de adenina (A), 25,6% de citosina (C), 23,6% de guanina (G) e 24,1% de timina (T). A distância média entre as sequências foi de $d = 0.092 \pm 0.002$, segundo o modelo de Tamura-Nei (Tamura e Nei, 1993). Uma análise gráfica da relação entre as transições (Ti) e transversões (Tv) e a distância genética estimada pelo modelo Kimura-2-parâmetros (Kimura, 1980) indica que não há saturação nestes nucleotídeos (Figura 32). A espécie *Brycon insignis* foi utilizado como grupo externo nas análises.

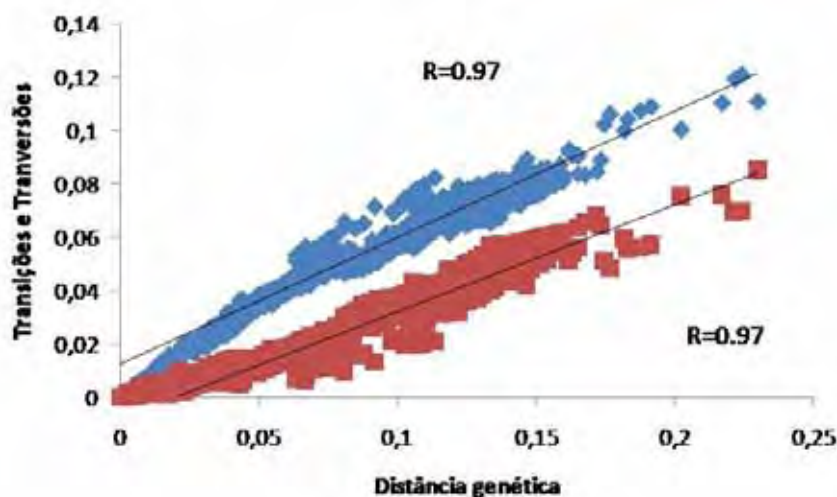


Figura 32. Frequência observada de transições (losangos) e transversões (quadrados) em relação à distância genética estimada pelo modelo Kimura-2-parâmetros.

4.2.7.1. Análise filogenética realizada pelo método de análise Bayesiana

As análises heurísticas, utilizando o método de análise Bayesiana, foram feitas considerando todos os animais cujas sequências foram obtidas, totalizando 4.852 pb, e considerando os *gaps* como dados pertencentes às sequências. O melhor modelo escolhido pelo Modeltest 3.7 foi o GTR+I+G com parâmetro gama, selecionado pelo critério de informação Akaike (AIC). A árvore de consenso obtida está representada na Figura 33. *Brycon insignis* foi considerado como grupo externo nas análises.

Nessa análise, os valores de suporte para a maioria dos nós internos foram maiores que 50%, e discorda dos dados morfológicos e moleculares encontrados na literatura. Os números nos clados foram utilizados para maior entendimento.

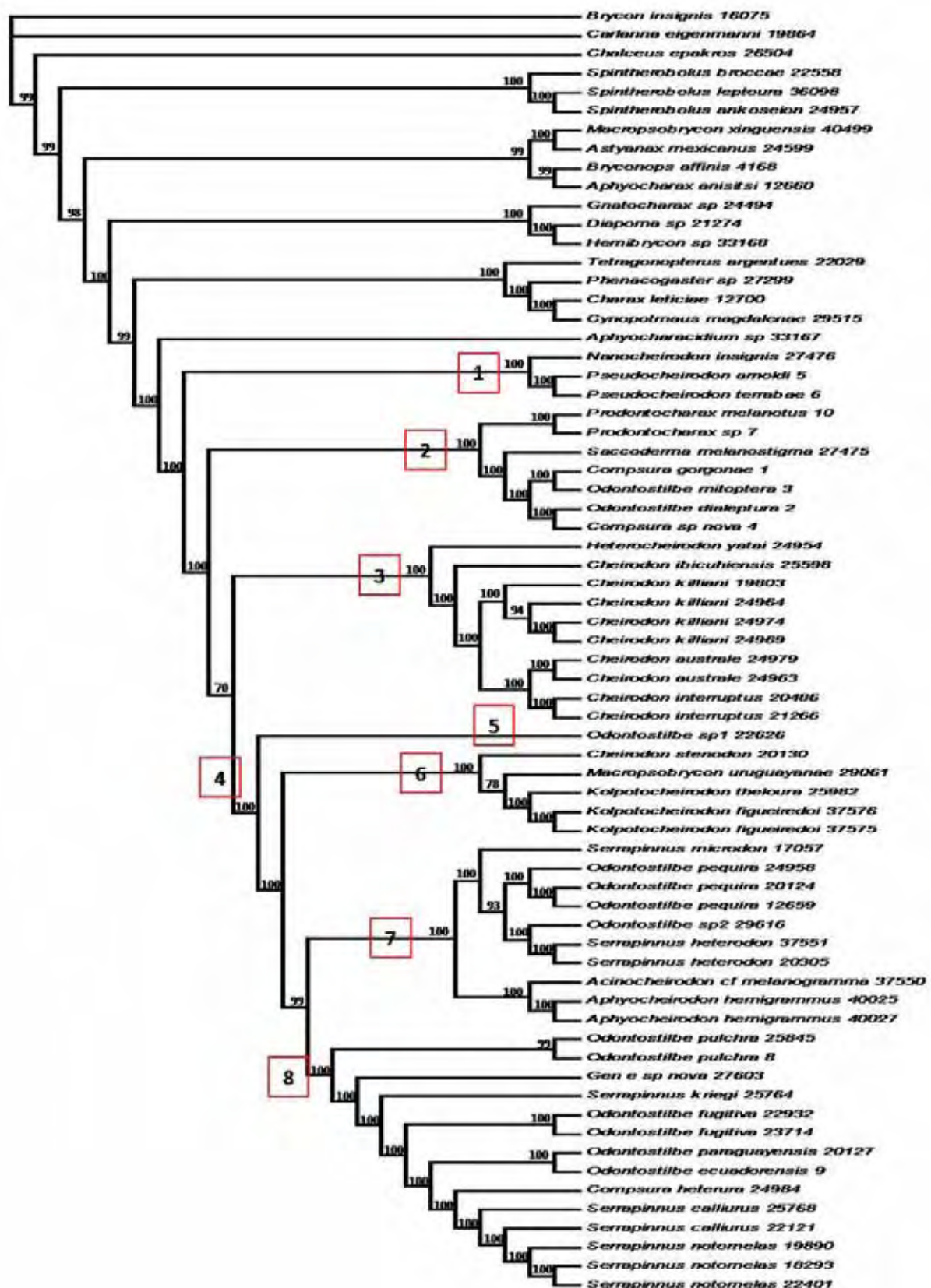


Figura 33. Árvore de consenso, utilizando todos os genes em conjunto, por maioria (50%) entre 20.002 árvores, encontrada pelo método de análise bayesiana. Os números apresentados representam valores das probabilidades *a priori* obtidos. *Brycon insignis* foi utilizado como grupo externo.

4.1.7.2. Análise filogenética realizada pelo método de Máxima Parcimônia (MP)

As análises heurísticas, utilizando o método de Máxima Parcimônia, foram feitas considerando todos as sequências obtidas, todos os dados obtidos (4.852 pb) e considerando os *gaps* como dados pertencentes às sequências. A árvore de consenso obtida está representada na Figura 34. *Brycon insignis* foi considerado como grupo externo em todas as análises.

Nessa análise, foi utilizado o programa TNT (Golobof et al. 2006). Os valores de suporte para quase todos os nós internos foram maiores que 50%, e discorda dos dados morfológicos e moleculares encontrados na literatura. A análise não foi bem resolutiva já que possui um grupo polifilético.

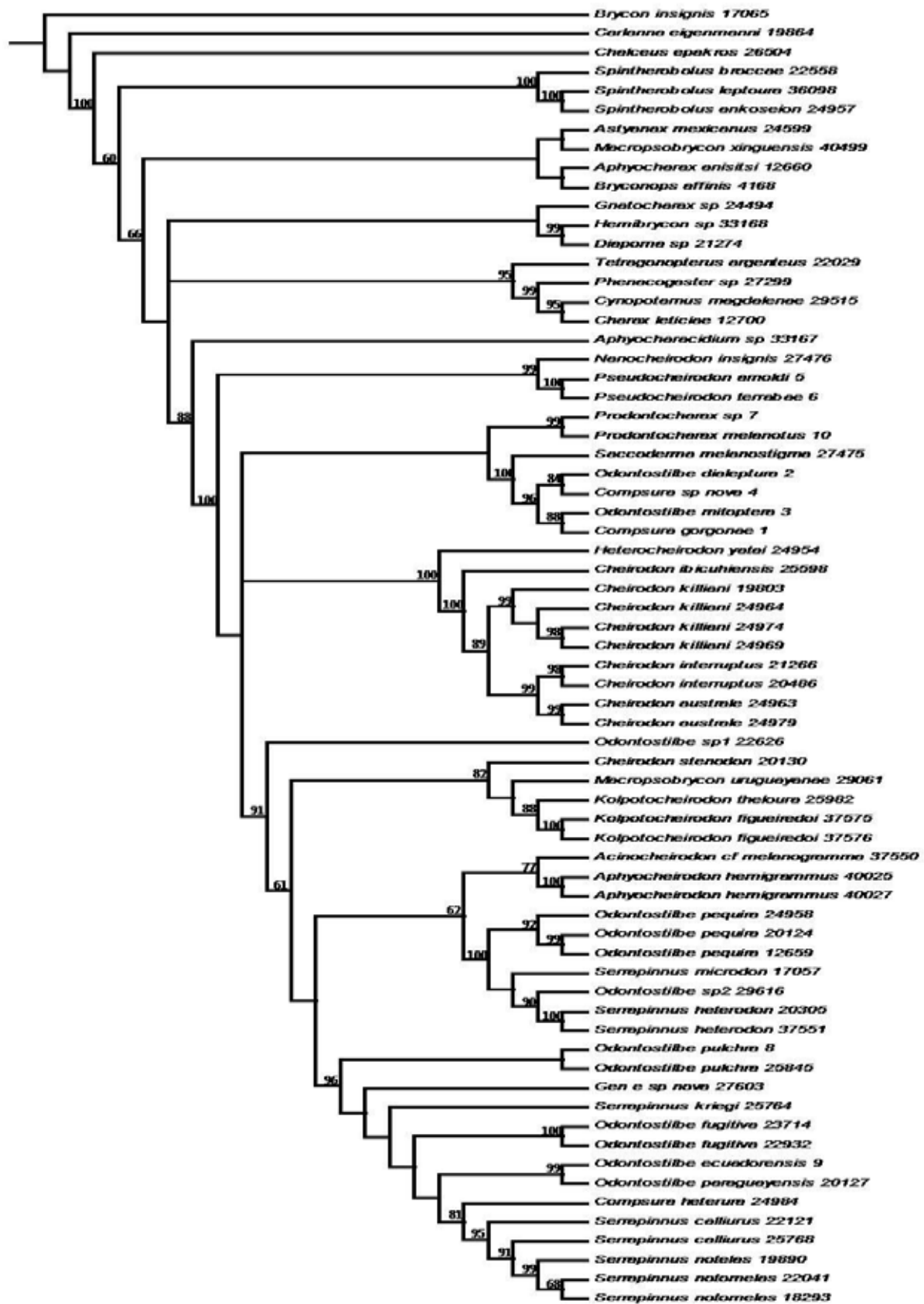


Figura 34. Árvore de consenso, utilizando todos os genes em conjunto, por maioria (50%) baseada no método de Máxima Parcimônia. As análises foram realizadas pelo programa TNT. Os valores apresentados são valores de *bootstrap*.

Com a utilização de vários genes, mitocondriais e nucleares, várias topologias discordantes foram encontradas. Isso destaca um impasse atual das filogenias moleculares, onde as árvores de espécies são muitas vezes diferentes das árvores de genes. Tal fato pode ocorrer quando o tempo de divergência entre as diferentes espécies é curto (Pamilo & Nei, 1988). Mas, com a obtenção das filogenias por diferentes tipos de análises, com genes analisados separadamente e em conjunto, foi possível a escolha da melhor resolução das relações entre os membros de Cheirodontinae.

A melhor filogenia encontrada foi a resultante da análise Bayesiana com todos os genes analisados em conjunto. Após isso, foram numerados os clados monofiléticos formados, para que fosse facilitado o entendimento na discussão. A discussão dos resultados foi baseada na filogenia representada na Figura 33. Abaixo estão listadas as espécies pertencentes à cada grupo e os clados numerados na árvore escolhida (Figura 33):

- (1). *Nanocheirodon insignis*, *Pseudocheirodon arnoldi* e *P. terrabae*;
- (2). *Prodontocharax melanotus*, *Prodontocharax* sp., *Saccoderma melanostigma*, *Compsura gorgonae*, *Odontostilbe mitoptera*, *Compsura* sp. nova, *Odontostilbe dialeptura*;
- (3). *Heterocheirodon yatai*, *Cheirodon ibicuhiensis*, *C. australe*, *C. killiani* e *C. interruptus*;
- (4). *Odontostilbe* sp.1 (clado 5) e os clados 6, 7 e 8;
- (5). *Odontostilbe* sp.1;
- (6). *Cheirodon stenodon*, *Macropsobrycon uruguayanae*, *Kolpotocheirodon theloura* e *K. figueiredoi*;
- (7). *Serrapinnus microdon*, *Odontostilbe pequirá*, *Odontostilbe* sp.2, *S. heterodon*, *Acinocheirodon* cf. *melanograma* e *Aphyocheirodon hemigrammus*;
- (8). *Odontostilbe pulchra*, *Genêro e espécie nova*, *Serrapinnus kriegi*, *Odontostilbe fugitiva*, *O. paraguayensis*, *O. ecuadorensis*, *Compsura heterura*, *S. calliurus* e *S. notomelas*.

5. DISCUSSÃO

5.1. Relação de Cheirodontinae com as demais subfamílias de Characidae

No presente estudo, foram analisadas espécies pertencentes à todas as subfamílias reconhecidas de Characidae e, com isso, foi possível testar as relações de Cheirodontinae com essas subfamílias. Estudos filogenéticos utilizando abordagens filogenéticas que incluem representantes da subfamília Cheirodontinae e outros caracídeos são ainda muito escassos e além disso, com exceção do trabalho de Malabarba e Weitzman (2003), em nenhum dos estudos estão inclusos representantes de todas as subfamílias de Characidae.

Os três gêneros da subfamília Cheirodontinae utilizados nas análises comparativas em Characidae (*Cheirodon australe*, *Heterocheirodon yatai*, *Macropsobrycon uruguayanae*) aparecem como grupo monofilético em todas as análises realizadas, corroborando o trabalho de Malabarba (1998), Calcagnotto et al. (2005), Mirande (2009) e Javonillo et al. (2010). Cheirodontinae forma o grupo irmão do clado onde estão alocados Stethaprioninae com Rhoadsiinae e Glandulocaudinae com Stevardiinae, com um alto suporte estatístico (Figura 13). Por outro lado, Characinae e Tetragonopterinae formam um clado irmão do clado maior onde está inserido Cheirodontinae. Em nenhum dos estudos citados anteriormente, usando caracteres moleculares ou morfológicos, Tetragonopterinae aparece como um grupo diretamente relacionado com Cheirodontinae, o que, juntamente com os dados obtidos no presente estudo, corrobora a hipótese de que Cheirodontinae e Tetragonopterinae não formam uma só subfamília, como anteriormente proposto por Weitzman e Vari (1988) e outros autores.

Glandulocaudinae, Stevardiinae e Cheirodontinae possuem espécies com inseminação (Malabarba 1998; Malabarba e Weitzman 1999; Weitzman et al. 2005; Burns et al. 2008; entre outros) e essa característica pode ter surgido de um ancestral comum, ou então, teve seu aparecimento independente nas subfamílias (Malabarba e Weitzman 1999; Weitzman et al. 2005). Em Cheirodontinae, as espécies inseminadoras foram reunidas na tribo Compsurini por Malabarba (1998). Adicionalmente, Burns et al. (1997) mostraram que haviam duas outras espécies inseminadoras: *Odontostilbe dialeptura* e *O. mitoptera*, que precisariam de uma nova classificação dentro de Cheirodontinae (Malabarba 1998). No presente trabalho, Glandulocaudinae e Stevardiinae aparecem como duas das subfamílias mais próximas de Cheirodontinae e, devido a esse fato, tal resultado sugere que a

hipótese citada por Malabarba e Weitzman (1999) de existir um ancestral com inseminação nesses táxons pode ser verdadeira. Em Ortí e Meyer (1997), Glandulocaudinae e Stevardiinae formam um grupo irmão do clado formado por Cheirodontinae e Characinae, resultado semelhante ao obtido no presente estudo. Em Calcagnotto et al. (2005), foram utilizadas algumas espécies pertencentes ao “Clado A” (onde muitas possuem inseminação) o que resultou em um grupo monofilético irmão do clado onde está inserido Cheirodontinae. Assim, levando em consideração a hipótese de que Glandulocaudinae, Stevardiinae e Cheirodontinae compartilharam um ancestral comum, o que pode ter ocorrido nesse caso é a perda dessa capacidade de inseminação na evolução de alguns cheirodontíneos, sendo, portanto, essa característica (ausência de inseminação) um caráter derivado em Cheirodontinae.

A família Characidae contém muitas espécies *incertae sedis* que não estão inseridas em nenhuma subfamília e, devido a esse fato, fazer estudos das relações de Cheirodontinae com outros membros pertencentes à Characidae quase sempre resulta apenas em suposições, se não forem incluídos ao menos uma grande parte dessas espécies *incertae sedis*. É necessário também, a utilização de várias espécies pertencentes às subfamílias reconhecidas, considerando que várias podem ser polifiléticas. No presente estudo, foram utilizados apenas uma espécie de cada subfamília, considerando que esse não era o foco principal deste estudo. Uma análise mais abrangente está sendo realizada com um grande número de exemplares da família Characidae para que sejam conhecidas não só as relações com Cheirodontinae, mas sim, as relações de uma grande parte dessa família tão importante em Characiformes e principalmente para o Brasil (nossos dados não apresentados).

5.2. Relação entre gêneros e espécies de Cheirodontinae

5.2.1. A inclusão e exclusão de espécies em Cheirodontinae

Nas nossas análises, incluindo todos os representantes de Cheirodontinae e representantes de diversas subfamílias e gêneros de Characidae, a espécie *Aphyocharacidium* sp. aparece como o grupo mais relacionado à Cheirodontinae (Figura 33). Esse resultado corrobora os achados de Mirande (2009), que já havia encontrado a mesma relação próxima de *Aphyocharacidium bolivianum* e os cheirodontíneos. *Aphyocharacidium* possui raios procorrentes salientes no

pedúnculo caudal, dentes tricúspides (Géry 1960a; Géry 1973; Miquelarena 1984; Malabarba 1998) e pseudotímpano, como em Cheirodontinae, o que pode corroborar, também com dados morfológicos, uma relação de maior parentesco das espécies. A espécie tipo de *Aphyocharacidium* (Géry 1960a) é *Odontostilbe melandetus* Eigenmann, 1912, e foi agrupada com os cheirodontíneos *Prodontocharax* e *Aphyocheirodon* por Géry (1960b). Essa classificação, sugerida por Géry (1960b), reflete o fato de que esse grupo possui muitas características em comum com Cheirodontinae. As relações de *Aphyocharacidium* não são bem conhecidas e assim, essa espécie foi considerada *incertae sedis* em Characidae na última revisão geral da família (Reis et al. 2003). Investigações mais detalhadas estão sendo realizadas, com um maior número de espécies pertencentes à Characidae, para que sejam conhecidas mais profundamente as relações de parentesco entre *Aphyocharacidium* e os outros caracídeos.

Em Characidae, algumas espécies foram alocadas para *incertae sedis* por não apresentarem características morfológicas diagnósticas de nenhuma subfamília (Reis et al. 2003). Dentre essas espécies, duas são conhecidas por nomes de gêneros pertencentes à Cheirodontinae: *Macropsobrycon xinguensis* Géry, 1973 e *Cheirodon stenodon* Eigenmann, 1915. No presente trabalho, foram realizadas análises incluindo essas duas espécies porque, apesar de não pertencerem à subfamília atualmente, fizeram parte dos cheirodontíneos em algum momento na história de sua classificação.

A espécie *Macropsobrycon xinguensis*, alocada para a lista dos *incertae sedis* em Characidae por Malabarba (2003), foi analisada no conjunto de dados de cheirodontíneos e, corroborando o trabalho de Malabarba (2003) e Javonillo et al. (2010), ela aparece como uma espécie não pertencente à Cheirodontinae. Os resultados sugerem que esta espécie seja irmã de *Astyanax mexicanus*, formando um clado com *Bryconops affinis* e *Aphyocharax anisitsi* (Figura 33). Por outro lado, devido aos poucos exemplares de Characidae utilizados como grupo externo nas análises aqui realizadas, também é possível que essa espécie esteja mais relacionada com algum grupo não amostrado de Characidae. Investigações mais detalhadas estão sendo realizadas, com um maior número de espécies pertencentes à Characidae, para que sejam conhecidas mais profundamente as relações de parentesco entre *M. xinguensis* e os outros caracídeos.

A espécie *Cheirodon stenodon*, anteriormente considerada pertencente à Cheirodontinae por Eigenmann (1915) e Géry (1977) e mais recentemente alocada como *incertae sedis* em Characidae por Malabarba (1998), apareceu aqui como

membro de Cheirodontinae em todas as árvores consenso produzidas (ex. Figura 33). *C. stenodon* possui vários caracteres compartilhados com Cheirodontinae como presença de pseudotímpano, uma fileira de dentes no pré-maxilar e ausência de mancha umeral, entre outras. Mas, por outro lado, difere quanto ao arranjo dos dentes no pré-maxilar, sendo que, em *C. stenodon*, o terceiro dente é tricuspidado, não pentacuspidado como os outros dentes e dirigido para frente. Em cheirodontíneos, os mesmos dentes possuem semelhança na forma e número de cúspides, perfeitamente alinhadas em um mesmo plano (Malabarba 1998). O aparecimento de um dente tricuspidado e desalinhado em meio aos outros pentacúspides em *C. stenodon* pode ser uma adaptação à algum tipo de alimentação ou pode estar relacionado ao aparecimento de diferentes tipos de dentes em outras espécies de Cheirodontinae. Como já foi discutido em Weitzman e Malabarba (1999), como acontece com muitos outros caracteres, a evolução convergente de características nos dentes frequentemente causa problemas em reconstruções filogenéticas, especialmente quando os dentes não são comparados e descritos em detalhes suficientes para detectar diferenças e similaridades, e acabam sendo usados para esse propósito sem o uso abundante de outros dados. Dando ênfase às presentes análises moleculares, sugere-se uma revisão morfológica de *C. stenodon*, para que essa espécie seja incluída novamente na subfamília, como um possível novo gênero.

O gênero *Spintherobolus* e suas espécies reconhecidas, *S. ankoseion*, *S. broccae*, *S. leptoura* e *S. papilliferus*, aparece como um grupo monofilético em análises morfológicas baseadas na presença de neuromastos papilares e sete outras características anatômicas (Sarraf 1997; Weitzman e Malabarba 1999). O monofiletismo deste gênero também foi corroborado nas nossas análises moleculares, onde apenas *S. papilliferus* não foi utilizado por não ter sido possível a obtenção de amostra de tecido dessa espécie. Nas relações internas do gênero, *S. ankoseion* e *S. leptoura* formam um grupo irmão de *S. broccae*, divergindo da literatura onde *S. ankoseion* é espécie irmã do grupo formado por *S. broccae* e *S. leptoura*; *S. papilliferus* aparece como a espécie irmã de todas as outras (Bühnheim et al. 2008). Na Figura 35, pode-se observar que a distribuição geográfica das espécies analisadas de *Spintherobolus* é congruente com a relação filogenética encontrada no presente trabalho.

Nas presentes análises de Cheirodontinae, os resultados sugerem que *Spintherobolus* não pertence à subfamília Cheirodontinae. O gênero *Spintherobolus* aparece como mais relacionado à outros caracídeos, como um clado monofilético,

não relacionado com nenhum outro Characidae mais intimamente (Figura 33). É interessante notar que os representantes desse gênero apresentam uma rede de tubérculos ou papilas sobre os ossos da face, caráter não observado em nenhum outro caracídeo (Malabarba 1994). Foi demonstrado por Weitzman e Malabarba (1999) que várias características de *Spintherobolus* são distintas das outras espécies da subfamília Cheirodontinae. Além de sua coloração ser nitidamente distinta dos cheirodontíneos (sendo composta por um padrão de séries de linhas na cabeça e corpo), *Spintherobolus* é o único gênero que possui dois pseudotímpanos (além do pseudotímpano entre a primeira e a segunda costela, a redução e ausência de musculatura à frente da primeira costela), ausência da nadadeira adiposa e dentes modificados para cônicos em vez de possuírem uma expansão distal comprimida (ver Weitzman e Malabarba 1999). Em todas as espécies do gênero, faltam a maioria dos canais latero-sensoriais e um complexo padrão de séries de neuromastos expostos são distribuídos na cabeça e corpo (Weitzman e Malabarba 1999). Como apontado por Sarraf (1997), órgãos similares são encontrados nas espécies de *Phenacogaster* e *Roeboides*. Essas espécies possuem padrões diferentes de distribuição dos neuromastos na cabeça e corpo, mas as estruturas possuem a mesma anatomia grosseira aparente e, às vezes, as mesmas características de coloração de *Spintherobolus*. Apesar disso, Weitzman e Malabarba (1999) e Sarraf (1997) discutem que esses padrões poderiam ser independentemente derivados em *Spintherobolus* de um lado e *Phenacogaster* e *Roeboides* de outro. No presente trabalho, uma das espécies utilizadas como grupo externo nas análises foi *Phenacogaster*, juntamente com *Cynopotamus* e *Charax* como representantes de Characinae (Figura 33), porém, *Spintherobolus* não apareceu relacionado à esse grupo. As espécies citadas formam um grupo monofilético com *Tetragonopterus* e esse clado é o grupo irmão mais próximo de Cheirodontinae (exceto *Aphyocharacidium* que é o gênero mais próximo como já discutido anteriormente). Considerando o grupo formado por *Spintherobolus*, essa característica dos neuromastos em Characinae pode ser derivada, e não como foi citado anteriormente (Weitzman e Malabarba 1999). O mesmo acontece para o tamanho dos olhos, que foi tido como derivado em *Spintherobolus* em relação aos cheirodontíneos (Weitzman e Malabarba 1999). Além das características que diferem *Spintherobolus* de Cheirodontinae citadas acima, há muitas outras na literatura (ver Weitzman e Malabarba 1999). Tais características morfológicas são, a nosso ver, fortes indícios de que esse gênero não pertence mesmo a Cheirodontinae, fato que pode ser reforçado também pela biogeografia do gênero, cujas três espécies analisadas aqui,

são apenas encontradas em rios litorâneos, diferindo dos outros cheirodontíneos (Figura 35). A quarta espécie, *S. papilliferus*, não analisada no presente estudo ocorre no Alto rio Tietê, onde pode ter surgido por eventos de captura de cabeceiras, comuns nos rios do alto da Serra do Mar (Ribeiro 2006). Como foi relatado acima para *Macropsobrycon xinguensis*, investigações mais detalhadas estão sendo realizadas, com um maior número de táxons, para que sejam conhecidas as relações de parentesco entre *Spintherobolus* e outros caracídeos.

5.2.2. Os gêneros, espécies e tribos de Cheirodontinae

Efetuada as inclusões e exclusões de gêneros e espécies dentro de Cheirodontinae, como discutido no item anterior, essa subfamília se torna monofilética. A monofilia de Cheirodontinae foi parcialmente corroborada nos estudos moleculares de Calcagnotto *et al.* (2005) e Javonillo *et al.* (2010), tendo em vista que o número de gêneros e espécies analisadas por esses autores foi bastante pequeno. Da mesma maneira, a monofilia de Cheirodontinae foi corroborada no amplo estudo morfológico de Mirande (2009), mas também esse autor utilizou apenas quatro gêneros de Cheirodontinae.

Malabarba (1998) investigou as relações entre os gêneros de Cheirodontinae, mas não realizou uma ampla comparação com os demais Characidae. Bührnheim (2006) utilizou várias espécies no grupo externo e encontrou que Cheirodontinae é monofilético após a inclusão de *Axelrodia lindeae*.

As análises gerais realizadas no presente estudo (Figura 33) resultaram em um padrão de relacionamento bastante diferente das hipóteses disponíveis na literatura para Cheirodontinae, desde as baseadas em dados morfológicos até em dados moleculares (Malabarba 1998; Calcagnotto *et al.* 2005; Bührnheim 2006; Mirande 2009; Javonillo *et al.* 2010).

Diversos gêneros pertencentes atualmente à Cheirodontinae (Malabarba 2003; Bührnheim *et al.* 2008) analisados no presente trabalho se mostraram polifiléticos ou parafiléticos (Figura 33).

Fink e Weitzman (1974), em uma análise de Cheirodontinae, consideraram os caracteres diagnósticos de *Odontostilbe* e *Pseudocheirodon* variáveis e não válidos para a definição de gêneros em Characidae. Ao contrário de *Odontostilbe*, que aparece polifilético nas nossas análises, e também nas análises de Bührnheim (2006), as duas espécies reconhecidas de *Pseudocheirodon* (*P. arnoldi* e *P. terrabae*)

aparecem altamente suportadas estatisticamente como um gênero monofilético (Figura 33).

As duas espécies reconhecidas de *Pseudocheirodon* (*P. arnoldi* e *P. terrabae*) formam um clado monofilético com o gênero monotípico *Nanocheirodon* (Figura 33 - clado 1), sendo estes dois gêneros, os gêneros irmãos de todos os outros cheirodontíneos. Os resultados encontrados aqui não corroboram os estudos morfológicos de Malabarba (1998), onde *Pseudocheirodon* é considerado como gênero *incertae sedis* em Cheirodontinae e *Nanocheirodon*, que possui *Cheirodon* como grupo irmão, pertencendo, portanto, à tribo Cheirodontini. *Pseudocheirodon* e *Nanocheirodon* são espécies trans-Andinas e Andinas (Panamá, Costa Rica e Venezuela), podendo estar separadas dos outros Cheirodontinae há milhares de anos pelo aparecimento da Cordilheira dos Andes.

Nas análises aqui realizadas, o clado 1 aparece como irmão de todos os outros e, em seguida, surge o clado 2 (Figura 33) onde estão todas as outras espécies trans-Andinas e Andinas pertencentes à parte noroeste da região Neotropical (*Prodontocharax melanotus*, *Prodontocharax* sp., *Saccoderma melanostigma*, *Compsura gorgonae*, *Compsura* sp. nov., *Odontostilbe dialeptura* e *O. mitoptera*). Este grupo, assim como o anterior, deve ter tido origem antes da formação da Cordilheira dos Andes. Muitos autores discutem a data correta do início do soerguimento da Cordilheira dos Andes, que pode ser de cerca de 60 m.a. (Gregory-Wodzicki 2000; Parra et al. 2009). Assim sendo, pode-se supor que a subfamília Cheirodontinae representa uma linhagem bastante antiga de peixes.

O gênero *Compsura* possui duas espécies reconhecidas, *C. heterura* e *C. gorgonae*. Essas duas espécies são encontradas em localidades e drenagens muito distantes. *C. heterura* é encontrada na América do Sul, nas bacias dos rios São Francisco e Parnaíba, sendo que estes representam drenagens do Atlântico e *C. gorgonae* é apenas encontrada na América Central, em drenagens do Pacífico (Malabarba 2003). No presente estudo, foi amostrada uma nova espécie de *Compsura* (*Compsura* sp. nov.), procedente do Rio Tabasará no Panamá, a qual aparece inserida no clado onde estão os outros exemplares da região trans-Andina (*O. dialeptura*, *O. mitoptera* e *Compsura gorgonae*). Mesmo formando um clado monofilético com *C. gorgonae*, a nova *Compsura* é mais relacionada à *Odontostilbe dialeptura* e *C. gorgonae* mais relacionada à *O. mitoptera*, não sendo clara a monofilia no gênero nem em espécies de localidades mais próximas. Considerando os dados obtidos no presente estudo, para que as relações dentre as espécies que compõe esse gênero sejam esclarecidas, sugere-se uma revisão do gênero

Compsura, utilizando os dados morfológicos juntamente com os moleculares. As relações de *O. mitoptera* e *O. dialeptura* serão discutidas mais adiante.

O gênero *Cheirodon* foi o mais especioso a apresentar monofiletismo em todas as análises realizadas. A distribuição de *Cheirodon* abrange as drenagens trans-andinas do Pacífico, no Chile, e as drenagens cis-andinas do Atlântico, no Brasil, Uruguai e Argentina. A distribuição desses cheirodontíneos compreende a área de distribuição mais meridional dos caracídeos sul-americanos, tanto a leste como a oeste da Cordilheira dos Andes, respectivamente no Chile e na Argentina. Segundo Malabarba (1994), não foram encontradas evidências que sustentem a hipótese de monofiletismo de dois grupos distintos entre as espécies pertencentes à *Cheirodon*, a leste e oeste dos Andes, o que foi corroborado nas presentes análises uma vez que *C. australe* (trans-andina) aparece como grupo irmão de *C. interruptus* (cis-andina) e estas espécies, mais *C. killiani* (trans-andina), aparecem como grupo irmão de *C. ibicuiensis* (cis-andina).

O gênero *Cheirodon*, além de ser monofilético, formou também um grupo monofilético com *Heterocheirodon yatai* (clado 3). *Heterocheirodon yatai* aparece como a espécie irmã de todas as espécies do gênero *Cheirodon*, diferente do que foi proposto por Malabarba (1998) e Bührnheim (2006). Como já foi discutido na literatura, as relações de *Heterocheirodon* dentro do grupo de gêneros pertencentes à tribo mencionada não são totalmente resolvidas (Malabarba e Bertaco 1999), o que deixa em aberto a resolução de suas relações. *C. ibicuiensis* é a espécie do gênero mais relacionada à *Heterocheirodon* nas presentes análises e as duas espécies ocorrem na bacia do Rio Uruguai (Brasil, Argentina e Uruguai), o que pode indicar uma relação bastante antiga (antes do surgimento do Andes). Além da simpatria, essas duas espécies compartilham a presença de dois a três ganchos de cada lado dos segmentos dos raios da nadadeira anal dos machos, o que não acontece nas outras espécies do gênero *Cheirodon* (Malabarba 1998). Logo após *H. yatai* e *C. ibicuiensis*, surge outro grupo contendo *C. killiani* como espécie irmã do clado formado por *C. interruptus* e *C. australe*, corroborando a hipótese de Campos (1982), onde foram encontradas as mesmas relações encontradas no presente trabalho. *C. interruptus* é encontrado na região sul do Brasil, Argentina, Uruguai e Chile, podendo ter sido introduzida neste último país (Malabarba 2003). A relação mais próxima de *C. interruptus* com *C. australe*, além de ser corroborada nesse trabalho, pode ser explicada também, pelo número semelhante (22-30) de raios procorrentes ventrais da nadadeira caudal (Malabarba 1998). A relação de *C. interruptus* com as outras espécies trans-andinas também pode indicar que *C.*

interruptus pode ter sido introduzido na região cis-andina e não o contrário como foi sugerido na literatura. Pode-se concluir, pela posição de *Heterocheirodon* e *C. ibicuihensis* nas filogenias, que essas linhagens são ainda mais antigas que as outras espécies de *Cheirodon*, e a separação das mesmas, com o soerguimento da Cordilheira dos Andes, foi simultânea ou anterior a origem das espécies trans-andinas.

A monofilia do clado 4 (Figura 33) foi bem suportada nas análises realizadas. Nesse clado, *Odontostilbe* sp.1 aparece como grupo irmão de todos os demais membros do clado. Essa espécie foi citada como '*Odontostilbe britskii*' por Malabarba (1994), porém, esse nome não está ainda disponível. Como *Odontostilbe* sp.1 aparece como único representante do clado 5 (Figura 33) esse animal deveria ser descrito como membro de um novo gênero.

Três outras linhagens monofiléticas foram observadas dentro do clado 4. O primeiro é o clado 6, formado por *Cheirodon stenodon* (já discutido acima), *Macropsobrycon uruguayanae*, *Kolpotocheirodon theloura* e *K. figueiredoi*.

Macropsobrycon uruguayanae é a única espécie válida de *Macropsobrycon* uma vez que *M. xinguensis* não é um Cheirodontinae, como discutido acima. *M. uruguayanae* possui dentes cônicos considerados como uma reversão dos dentes de Cheirodontinae por Malabarba (1994), como consequência da redução do número de cúspides nos dentes. Há diferenças nos dentes de *C. stenodon* e *Macropsobrycon*, que é uma característica marcante em Cheirodontinae, como também discutido aqui. Mas, além disso, não foi possível encontrar, nos dados morfológicos da literatura, caracteres que unam ou separem essas espécies. *M. uruguayanae* está distribuída em drenagens da Lagoa dos Patos e das bacias dos rios Uruguai e Tramandaí (Malabarba 2003) e *C. stenodon* é encontrada na bacia do rio Paraná. Ainda que atualmente essas drenagens sejam independentes, pode ter havido conexões das mesmas no passado, uma vez que representam cursos de água adjacentes.

O gênero *Kolpotocheirodon*, como descrito em Malabarba et al. (2004), aparece como monofilético em todas as análises realizadas e, de acordo com estes autores, existem claras características morfológicas que justificam a monofilia do gênero. Um dos caracteres mais marcantes e unicamente derivado é a forma das dobras de pele nas nadadeiras caudal e dorsal. A margem dessas dobras de pele é recortada em numerosas papilas dérmicas, formando órgãos semelhantes à um "abacaxi", que não estão presentes em nenhum outro cheirodontíneo. *K. theloura* é

encontrada no alto rio Paraná (próximo à Brasília) e *K. figueiredoi* na Chapada Diamantina (Bahia).

O monofiletismo do clado 7, fortemente sustentado em todas análises moleculares, pode ser confirmado também com caracteres morfológicos uma vez que todos os membros deste clado possuem uma morfologia dentária semelhante (Figura 36). Nessas espécies os dentes do dentário são bastante especializados, com três cúspides centrais igualmente desenvolvidas, formando uma borda de corte (Malabarba e Weitzman 1999).

O clado 7 é formado por duas linhagens monofiléticas. Uma delas é composta por *Acinocheiroduon cf. melanogramma* e *Aphyocheiroduon hemigrammus* (Figura 33). O gênero *Acinocheiroduon* possui apenas duas espécies reconhecidas: *A. melanogramma* (da bacia do Rio São Francisco) e *A. cf. melanogramma* (da bacia do rio Jequitinhonha) (Malabarba e Weitzman 1999). Nas análises aqui realizadas, a única espécie de *Acinocheiroduon* utilizada foi *Acinocheiroduon cf. melanogramma*, que aparece como irmã de *Aphyocheiroduon hemigrammus*. Mais estudos devem ser realizados para que sejam conhecidas as relações entre as duas espécies do gênero *Acinocheiroduon*.

O segundo grupo monofilético pertencente ao clado 7 é composto por *Odontostilbe pequiru*, *Serrapinnus heterodon*, *S. microdon* e uma nova espécie de *Odontostilbe* (*Odontostilbe sp.2*). Neste grupo, *Odontostilbe pequiru* não aparece relacionado a *Odontostilbe fugitiva*, contrariando o que havia sido proposto por Malabarba e Weitzman (1999). Eigenmann (1903) descreveu o gênero *Holoshesthes*, que tinha como espécie tipo *Chirodon pequiru*, descrita por Steindachner (1882). Assim, os presentes resultados corroboram a hipótese de que o gênero *Holoshesthes* é um gênero válido, devendo sair da sinonímia de *Odontostilbe*, como sugerido por Bührnheim (2006). Além disso, também a espécie hoje identificada como *Serrapinnus heterodon* foi inicialmente descrita no gênero *Holoshesthes* (Eigenmann 1915) e os presentes resultados corroboram essa hipótese inicial.

Nas análises de Bührnheim (2006), quando os caracteres morfológicos não foram pesados, *Acinocheiroduon melanogramma* aparece relacionado a *Odontostilbe pequiru*, como encontrado no presente estudo.

Ainda de acordo com Bührnheim (2006 p. 180) “though the 21 synapomorphies supporting the *Holoshesthes* clade are homoplastic, they identify a rather concise lineage of cheirodontines with profound modifications linked to feeding mechanisms, including dentition, gill rakers, and associated bones as the second infraorbital, and mesethmoid. Most of these characters appear

independently in *Serrapinnus heterodon*, *Serrapinnus microdon*, and *Acinocheiroduon melanogramma*. However, these species do not share with *Holoshesthes* the 14 synapomorphies of the Odontostilbini, otherwise having respectively the synapomorphies of the tribes Cheiroduontini (*Serrapinnus* species), and Compsurini (*A. melanogramma*)”.

Odontostilbe e *Serrapinnus* são os gêneros com a mais ampla distribuição e número de espécies em Cheiroduontinae e também, não se apresentaram monofiléticos nas análises moleculares. O gênero *Odontostilbe*, originalmente, foi definido com base na presença de uma linha lateral completa, *versus*, interrompida em *Cheiroduon*. O reconhecimento de *Odontostilbe* separadamente dos gêneros pertencentes às tribos Compsurini e Cheiroduontini é suportado pela falta de várias sinapomorfias diagnósticas dessas tribos e seus gêneros inclusos (essas sinapomorfias consistem de caracteres sexuais primários e secundários) (Bührnheim e Malabarba 2006). O gênero possui espécies distribuídas nas regiões trans e cis-andinas. Mesmo com a criação de uma nova tribo (Odontostilbini) e os estudos feitos com *Odontostilbe*, o gênero também não se mostrou monofilético em Bührnheim (2006), e apenas três linhagens monofiléticas, de posição incerta, puderam ser propostas em Odontostilbini. Duas das espécies, temporariamente referidas como *Odontostilbe*, *O. mitoptera* e *O. dialeptura*, as únicas trans-andinas do gênero, são espécies inseminadoras, o que é uma característica diagnóstica da tribo Compsurini (Malabarba e Weitzman 1999, 2000).

Em uma análise recente publicada por Bührnheim e Malabarba (2006), onde a espécie tipo de *Odontostilbe* (*O. fugitiva*) é redescrita e as espécies amazônicas são revistas, os autores reconhecem nove espécies válidas no gênero: *O. fugitiva*, *O. dierythura*, *O. microcephala*, *O. paraguayensis*, *O. pequirá*, *O. roloffii*, *O. ecuadorensis*, *O. nareuda* e *O. parecis* e citam a existência de outras dez espécies que devem fazer parte do gênero, incluindo oito novas espécies e as espécies *O. pulchra* (Gill, 1858) e *Cheiroduontops geayi* Schultz, 1944. Na presente análise, que incluiu apenas cinco das espécies citadas acima (*O. fugitiva*, *O. paraguayensis*, *O. pequirá*, *O. ecuadorensis* e *O. pulchra*) o grupo aparece totalmente polifilético (Figura 33), o que também foi observado em Bührnheim (2006) (Figura 6) em sua filogenia sem pesagem. Na filogenia de Bührnheim (2006) (Figura 5), com pesagem de caracteres, o gênero *Odontostilbe* aparece parafilético.

O gênero *Serrapinnus* foi descrito por Malabarba (1998), com base na presença de raios procorrentes ventrais e na curvatura do pedúnculo caudal do macho. *Serrapinnus* inclui espécies previamente referidas como *Cheiroduon*,

Odontostilbe ou *Holoshesthes*, encontradas nas bacias do rio Amazonas, rio São Francisco, rio da Prata e drenagens do nordeste do Brasil (Malabarba 1998). Sua distribuição em áreas distantes e as inúmeras características que um dia inseriram essas espécies em outros gêneros, reforçam a fragilidade do gênero proposto por Malabarba (1998).

Nos resultados encontrados aqui, o gênero *Serrapinnus* não mostrou-se monofilético (Figura 33). O clado 6 (Figura 33), fortemente sustentado nas análises moleculares, possui várias espécies dos gêneros *Serrapinnus* (*S. calliurus*, *S. kriegi*, *S. notomelas*), *Odontostilbe* (*O. paraguayensis*, *O. ecuadorensis*, *O. fugitiva*, *O. pulchra*), a espécie *Compsura heterura*, e um gênero e espécie nova.

Odontostilbe pulchra, o gênero e espécie nova (New gen. & sp. C – Malabarba 1998) e *Serrapinnus kriegi* aparecem como espécies irmãs das outras espécies desse clado. *Odontostilbe fugitiva* surge como a espécie mais próxima do clado formado pelos outros *Serrapinnus*, *Compsura heterura*, *O. ecuadorensis* e *O. paraguayensis*, sendo que estes dois últimos são espécies irmãs. Anteriormente à Malabarba (1998), as espécies atualmente reunidas em *Serrapinnus* eram referidas na literatura nos gêneros *Cheirodon*, *Odontostilbe* e *Holoshesthes*. Nas propostas de redefinição de *Cheirodon* (Uj 1987; Casciotta et al. 1992), todas essas espécies são removidas de *Cheirodon* e referidas em *Odontostilbe*, juntamente com outros Cheirodontinae, exceto *Holoshesthes heterodon*. Malabarba (1988) formula a hipótese de monofiletismo de um agrupamento em Cheirodontinae, que denomina “grupo calliura”, com base em caracteres derivados dos raios procorrentes ventrais da nadadeira caudal e raios da nadadeira anal, reunindo *C. calliurus*, *C. notomelas*, *C. kriegi*, *C. microdon* e *C. piaba* juntamente com *H. heterodon*. Este agrupamento, juntamente com espécies não mencionadas em Malabarba (1988), da bacia do rio Amazonas e rio Tocantins, é reunido no novo gênero *Serrapinnus* em Malabarba (1998), que descreve novas espécies e re-descreve *S. piaba*, *S. heterodon* e *S. micropterus*. Portanto, o agrupamento das espécies pertencentes ao gênero *Serrapinnus* juntamente com as de *Odontostilbe* nos clados 7 e 8, pode ser o resultado dessas espécies compartilharem caracteres em comum e, por isso, um dia terem sido consideradas pertencentes aos mesmos gêneros.

Segundo Malabarba (1994), *Serrapinnus calliurus* e *S. notomelas* (e mais duas espécies de *Serrapinnus* não analisadas aqui) são diagnosticadas pela presença de uma pequena aba na base da nadadeira caudal dos machos, formada pela expansão ventral dos três raios procorrentes ventrais mais posteriores nos machos. No presente estudo, as duas espécies citadas aparecem mais próximas nas análises

realizadas. *Serrapinnus kriegi* aparece mais distante das espécies citadas acima, mas esse fato pode ser explicado morfológicamente, pela presença de uma mancha escura na parede lateral do abdome junto à região anal, única nos cheirodontíneos, semelhante à observada em poecilídeos (Malabarba 1994). O novo gênero e espécie nova (ou New Genus and Species C, Malabarba 1998) apresenta a forma dos raios procorrentes da nadadeira ventral similar aquela encontrada em *Serrapinnus* (Malabarba 1998). Fato que pode suportar o agrupamento dessas espécies por caracteres morfológicos em um mesmo clado (clado 8).

Por outro lado, considerando a ampla monofilia dos clados 7 e 8, corrobora-se a hipótese de que *Odontostilbe* e *Holoshesthes* são mais relacionados entre si (Malabarba 1998; Bührnheim 2006).

Além de todos esses resultados encontrados, tudo indica que, uma análise futura de mais espécies de Cheirodontinae, principalmente dos gêneros *Cheirodontops* e *Amazonspinther* (não amostrados no presente estudo, será importante para um entendimento mais amplo das relações dentro dessa subfamília.

5.2.3. Classificação Proposta

Bührnheim (2006) discute que os estudos osteológicos em caracídeos com propósitos filogenéticos têm sido tradicionalmente problemáticos. Isso é usualmente relacionado à alta ocorrência de homoplasias, que podem ser encontradas entre espécies de diferentes linhagens, em todos os níveis de Characidae (Lucena 1993), como subfamílias ou gêneros (*Brycon*, Zanatta 2000; *Moenkhausia*, Benine 2004), ou mesmo em famílias relacionadas de Characiformes (Alestidae, Zanatta e Vari 2005). Em Bührnheim (2006), esse problema é exemplificado claramente ao longo da descrição de caracteres e discussão, onde vários caracteres que eram variáveis e potencialmente informativos para reconstruir a filogenia de Cheirodontinae são encontrados em estados equivalentes em outras linhagens monofiléticas reconhecidas de Characidae. Mesmo entre os cheirodontíneos, onde os caracteres utilizados em Bührnheim (2006) foram baseados em um profundo estudo da morfologia do crânio, os resultados revelaram que a maioria dos caracteres são altamente homoplásticos. A solução encontrada no referido trabalho foi dar pesos diferentes aos caracteres homoplásticos nas análises, resultando em uma melhor filogenia quando se reduziu o peso relativo desses caracteres na hipótese

final. Por outro lado o uso de pesagem de caracteres pode tornar os resultados bastante tendenciosos.

Com base nos resultados aqui obtidos, nota-se que Cheirodontinae não pode ser simplesmente dividida nas tribos existentes, Cheirodontini, Compsurini (Malabarba 1998) e Odontostilbini (Bührnheim 2006), primeiramente, devido ao o fato de que muitos dos gêneros não apresentam monofilia. Segundo Malabarba (1998), *Spintherobolus* pertence à tribo Cheirodontini juntamente com *Serrapinnus*, *Cheirodon*, *Heterocheirodon* e *Nanocheirodon*. No presente estudo, os gêneros pertencentes à tribo em questão, não formaram um grupo monofilético. Os gêneros pertencentes à tribo Compsurini também não formaram um grupo monofilético em nenhuma das análises aqui realizadas. Assim, é possível que os caracteres morfológicos diagnósticos das tribos, encontrados por Malabarba (1998) e Bührnheim (2006), podem ter surgido independentemente nas espécies da subfamília. Sugere-se assim uma revisão nestes dados morfológicos dos caracteres que unem esses gêneros em tribos, com a exclusão do gênero *Spintherobolus* e a inclusão de *Cheirodon stenodon*, além de outras mudanças citadas abaixo:

(1) No clado referido como 1, sugere-se que os gêneros continuem como o existente na literatura, *Nanocheirodon* e *Pseudocheirodon*, o primeiro com uma só espécie, *N. insignis*, e o segundo com duas espécies *P. terrabae* e *P. arnoldi*, sendo estes os gêneros mais antigos de Cheirodontinae.

(2) Para o clado referido como 2, que possui espécies trans-andinas e andinas (*Prodontocharax*, *Saccoderma*, *C. gorgonae*, *Compsura* sp. nov., *O. dialeptura* e *O. mitoptera*), sugere-se a manutenção dos gêneros *Prodontocharax*, *Saccoderma* e *Compsura*. O gênero *Compsura* deveria passar a incluir as espécies *C. gorgonae*, *Compsura* sp. nov., *C. mitoptera* e *C. dialeptura*.

(3) No clado formado por *Heterocheirodon* e *Cheirodon*, clado 3, sugere-se a manutenção dos gêneros separadamente.

(4) Para *Odontostilbe* sp.1, clado 5, sugere-se a descrição da espécie dentro de um novo gênero, sendo que esta é espécie irmã de todos os gêneros pertencentes aos clados 6, 7 e 8.

(5) Para o clado monofilético, referido como 6, sugere-se a mudança de gênero da espécie *Cheirodon stenodon*, como um gênero novo, e os gêneros *Kolpotocheirodon* e *Macropsobrycon* deveriam permanecer como gêneros válidos.

(6) No clado 7, *Holoshesthes* deveria sair da sinonímia de *Odontostilbe* e passar a incorporar novamente a espécie *S. heterodon* (*H. heterodon*) e as espécies *S. microdon* e *Odontostilbe* sp.2. Então, após uma mudança de gênero, as espécies

passariam a ser nomeadas *H. microdon* e *Holoshesthes sp. nov.*. *Aphyocheirodon* e *Acinocheirodon* continuam como gêneros válidos, fazendo parte de um mesmo clado monofilético com *Holoshesthes*.

(7) Para o clado 8, que possui algumas espécies de *Odontostilbe* e *Serrapinnus*, *Compsura heterura* e gênero e espécie nova (New gen & sp C – Malabarba 1998), sugere-se a nomeação de todas essas espécies do clado como pertencentes ao gênero *Odontostilbe*. Como já foi discutido, muitas dessas espécies já haviam pertencido ao gênero citado, além das outras que já fazem parte de *Odontostilbe*. Após a mudança de gênero, as espécies passariam a ser denominadas *Odontostilbe kriegi*, *O. heterura*, *O. calliurus* e *O. notomelas*, além da nova espécie *Odontostilbe sp. nov.* (“New gen & sp C”). Assim como foi feito em Bührnheim (2006), utilizando-se de uma posição conservadora, todas as espécies que formaram um clado monofilético juntamente com a espécie tipo do gênero (*O. fugitiva*), também foram alocadas em *Odontostilbe*.

Após as novas classificações sugeridas, baseando-se na árvore filogenética apresentada na Figura 33, Cheirodontinae mostra uma clara divisão em grupos monofiléticos, são eles: (1) grupo formado pelos gêneros trans-andinos: *Pseudocheirodon* e *Nanocheirodon* (clado 1); (2) grupo formado pelos gêneros trans-andinos e andino da região norte da América do Sul: *Saccoderma*, *Prodontocharax* e *Compsura* (clado 2); (3) grupo formado pelos gêneros pertencentes ao sul trans-andino e cis-Andino da América do Sul: *Cheirodon* e *Heterocheirodon* (clado 3); (4) grupo formado pelo novo gênero e espécie, que pode representar um novo gênero (clado 5); (5) grupo formado pelos gêneros *Macropsobrycon*, *Kolpotocheirodon* e novo gênero e espécie (clado 6); (6) grupo formado pelas espécies de *Holoshesthes*, *Aphyocheirodon* e *Acinocheirodon* (clado 7); (7) grupo formado por *Odontostilbe* (clado 8); (8) um grupo monofilético maior, o clado 4, que é composto pelos cladros 5, 6, 7 e 8.

Baseando-se nos resultados obtidos no presente estudo e visando um melhor entendimento da subfamília e suas espécies, sugere-se uma nova distribuição das tribos em Cheirodontinae, mantendo os nomes sugeridos por Géry (1960a), Malabarba (1998) e Bührnheim (2006), adicionando uma nova tribo, apenas realocando as espécies com suas novas nomeações propostas. As tribos estão apresentadas na filogenia da Figura 37 e a distribuição das espécies, por cladros, está apresentada na Figura 35.

Assim, apresenta-se a seguir, uma nova proposta de rearranjo das espécies nas tribos de Cheirodontinae:

TRIBO PSEUDOCHEIRODONTINI (nova tribo)

A tribo Pseudocheiroidontini, uma nova tribo aqui proposta, agrupa os gêneros *Pseudocheiroidon* e *Nanocheiroidon*, e são representadas por espécies trans-Andinas no norte da região Neotropical.

As espécies de Pseudocheiroidontini são reunidas em dois gêneros, listados a seguir, com as espécies nominais e sua classificação atual proposta, para quais forem necessárias:

ESPÉCIES NOMINAIS DE *Pseudocheiroidon* Meek e Hildebrand, 1916:

Nomenclatura anterior	Nomenclatura proposta
<i>Chirodon arnoldi</i> Boulenger, 1909	<i>Pseudocheiroidon arnoldi</i> Boulenger, 1909
<i>Pseudocheiroidon terrabae</i> Bussing, 1967	<i>Pseudocheiroidon terrabae</i> Bussing, 1967

ESPÉCIES NOMINAIS DE *Nanocheiroidon* Malabarba, 1998:

Nomenclatura anterior	Nomenclatura proposta
<i>Chirodon insignis</i> Steindachner, 1880	<i>Nanocheiroidon insignis</i> (Steindachner, 1880)

TRIBO COMPSURINI (Malabarba, 1998)

A tribo Compsurini, aqui proposta, agrupa os gêneros *Prodontocharax*, *Saccoderma* e *Compsura* e são representados pelas espécies trans-Andinas e Andinas da região norte da região Neotropical. Os caracteres diagnósticos empregados por Malabarba (1998) – caracteres unicamente derivados relacionados aos órgãos de contato (ganchos) e padrão de colorido da nadadeira anal dos machos – não são mais diagnósticos da tribo.

As espécies de Compsurini são reunidas em quatro gêneros, listados a seguir, com as espécies nominais e sua classificação atual proposta, para quais forem necessárias:

ESPÉCIES NOMINAIS DE *Prodontocharax* Eigenmann e Pearson, in Pearson, 1924:

Nomenclatura anterior	Nomenclatura proposta
<i>Prodontocharax melanotus</i> Pearson, 1924	<i>Prodontocharax melanotus</i> Pearson, 1924

ESPÉCIES NOMINAIS DE *Saccoderma* Schultz, 1944:

Nomenclatura anterior	Nomenclatura proposta
<i>Saccoderma melanostigma</i> Schultz, 1944	<i>Saccoderma melanostigma</i> Schultz, 1944

ESPÉCIES NOMINAIS DE *Compsura* Eigenmann, 1915:

Nomenclatura anterior	Nomenclatura proposta
<i>Cheirodon gorgonae</i> Evermann e Goldsborough, 1909	<i>Compsura gorgonae</i> (Evermann e Goldsborough, 1909)
<i>Compsura sp. nov.</i>	<i>Compsura sp. nov.</i>
<i>Odontostilbe mitoptera</i> (Fink e Weitzman, 1974)	<i>Compsura mitoptera</i> (Fink e Weitzman, 1974)
<i>Odontostilbe dialeptura</i> (Fink e Weitzman, 1974)	<i>Compsura dialeptura</i> (Fink e Weitzman, 1974)

TRIBO CHEIRODONTINI Géry, 1960

A tribo Cheirodontini, aqui proposta, agrupa os gêneros *Heterocheirodon* e *Cheirodon* e são representados pelas espécies trans e cis-andinas da região sul da América do Sul. Os caracteres diagnósticos empregados por Malabarba (1998) - caracteres relacionados ao dimorfismo sexual secundário observado nos raios procorrentes ventrais da nadadeira caudal e raios da nadadeira anal dos machos - não são mais diagnósticos da tribo. As espécies de Cheirodontini são reunidas em dois gêneros, listados a seguir, com as espécies nominais e sua classificação atual proposta, para quais forem necessárias:

ESPÉCIES NOMINAIS DE *Heterocheirodon* Malabarba, 1998:

Nomenclatura anterior	Nomenclatura proposta
<i>Odontostilbe yatai</i> Casciotta, Miquelarena e Protogino, 1992	<i>Heterocheirodon yatai</i> (Casciotta, Miquelarena e Protogino, 1992)

ESPÉCIES NOMINAIS DE *Cheirodon* Girard, 1855:

Nomenclatura anterior	Nomenclatura proposta
<i>Cheirodon ibicuhiensis</i> Eigenmann, 1915	<i>Cheirodon ibicuhiensis</i> Eigenmann, 1915
<i>Cheirodon australe</i> Eigenmann, 1927	<i>Cheirodon australe</i> Eigenmann, 1927
<i>Tetragonopterus interruptus</i> Jenyns, 1842	<i>Cheirodon interruptus</i> (Jenyns, 1842)
<i>Cheirodon killiani</i> Campos, 1982	<i>Cheirodon killiani</i> Campos, 1982

TRIBO ODONTOSTILBINI Bührnheim, 2006

A tribo Odontostilbini, aqui proposta, agrupa os gêneros *Odontostilbe*, *Holoshesthes*, *Macropsobrycon*, *Kolpotocheirodon*, *Aphyocheirodon*, *Acinocheirodon* e os novos gêneros e espécies e são representados pelas espécies presentes nas principais bacias da América do Sul. Os caracteres diagnósticos empregados por Bührnheim (2006) não são mais diagnósticos da tribo. As espécies de Cheirodontini

são reunidas em dois gêneros, listados a seguir, com as espécies nominais e sua classificação atual proposta, para quais forem necessárias:

ESPÉCIES NOMINAIS DE *Macropsobrycon* Eigenmann, 1915:

Nomenclatura anterior	Nomenclatura proposta
<i>Macropsobrycon uruguayanae</i> Eigenmann, 1915	<i>Macropsobrycon uruguayanae</i> Eigenmann, 1915

ESPÉCIES NOMINAIS DE *Holoshesthes* Eigenmann, 1903:

Nomenclatura anterior	Nomenclatura proposta
<i>Odontostilbe pequirá</i> (Steindachner, 1882)	<i>Holoshesthes pequirá</i> (Steindachner, 1882)
<i>Serrapinnus heterodon</i> (Eigenmann, 1915)	<i>Holoshesthes heterodon</i> Eigenmann, 1915
<i>Serrapinnus microdon</i> (Eigenmann, 1915)	<i>Holoshesthes microdon</i> (Eigenmann, 1915)
<i>Odontostilbe</i> sp.2	<i>Holoshesthes</i> sp. nov.

ESPÉCIES NOMINAIS DE *Aphyocheiroidon* Eigenmann, 1915:

Nomenclatura anterior	Nomenclatura proposta
<i>Aphyocheiroidon hemigrammus</i> Eigenmann, 1915	<i>Aphyocheiroidon hemigrammus</i> Eigenmann, 1915

ESPÉCIES NOMINAIS DE *Acinocheiroidon* Malabarba e Weitzman, 1999:

Nomenclatura anterior	Nomenclatura proposta
<i>Acinocheiroidon cf melanogramma</i> Malabarba e Weitzman, 1999	<i>Acinocheiroidon cf melanogramma</i> (Malabarba e Weitzman, 1999)

ESPÉCIES NOMINAIS DE *Kolpotocheiroidon* Malabarba e Weitzman, 2000:

Nomenclatura anterior	Nomenclatura proposta
<i>Kolpotocheiroidon theloura</i> Malabarba e Weitzman, 2000	<i>Kolpotocheiroidon theloura</i> Malabarba e Weitzman, 2000
<i>Kolpotocheiroidon figueiredoi</i> Malabarba, Lima e Weitzman, 2004	<i>Kolpotocheiroidon figueiredoi</i> Malabarba, Lima e Weitzman, 2004

ESPÉCIES NOMINAIS DE *Odontostilbe* Cope, 1870:

Nomenclatura anterior	Nomenclatura proposta
<i>Odontostilbe fugitiva</i> Cope, 1870	<i>Odontostilbe fugitiva</i> Cope, 1870
<i>Poecilurichthys pulcher</i> Gill, 1858	<i>Odontostilbe pulchra</i> (Gill, 1858)
<i>Odontostilbe paraguayensis</i> Eigenmann e Kennedy, 1903	<i>Odontostilbe paraguayensis</i> Eigenmann e Kennedy, 1903
<i>Odontostilbe ecuadorensis</i> Bührnheim, 2006	<i>Odontostilbe ecuadorensis</i> Bührnheim, 2006
<i>Serrapinnus kriegi</i> (Schindler, 1937)	<i>Odontostilbe kriegi</i> (Schindler, 1937)
<i>Serrapinnus calliurus</i> (Boulenger, 1900)	<i>Odontostilbe calliurus</i> (Boulenger, 1900)
<i>Serrapinnus notomelas</i> (Eigenmann, 1915)	<i>Odontostilbe notomelas</i> (Eigenmann, 1915)
<i>Compsura heterura</i> Eigenmann, 1915	<i>Odontostilbe heterura</i> (Eigenmann, 1915)

Odontostilbe sp.2 (New gen. & sp. C Malabarba, 1998)

Odontostilbe sp. nov.

ESPÉCIES NOMINAIS DE Novo gênero (*Odontostilbe britskii* – nova espécie proposta em Malabarba, 1994):

Nomenclatura anterior

Nomenclatura proposta

Odontostilbe sp.1 (Malabarba, 1994)

Novo gênero e espécie

ESPÉCIES NOMINAIS DO Segundo Novo gênero:

Nomenclatura anterior

Nomenclatura proposta

Cheirodon stenodon Eigenmann, 1915

Novo gênero e espécie

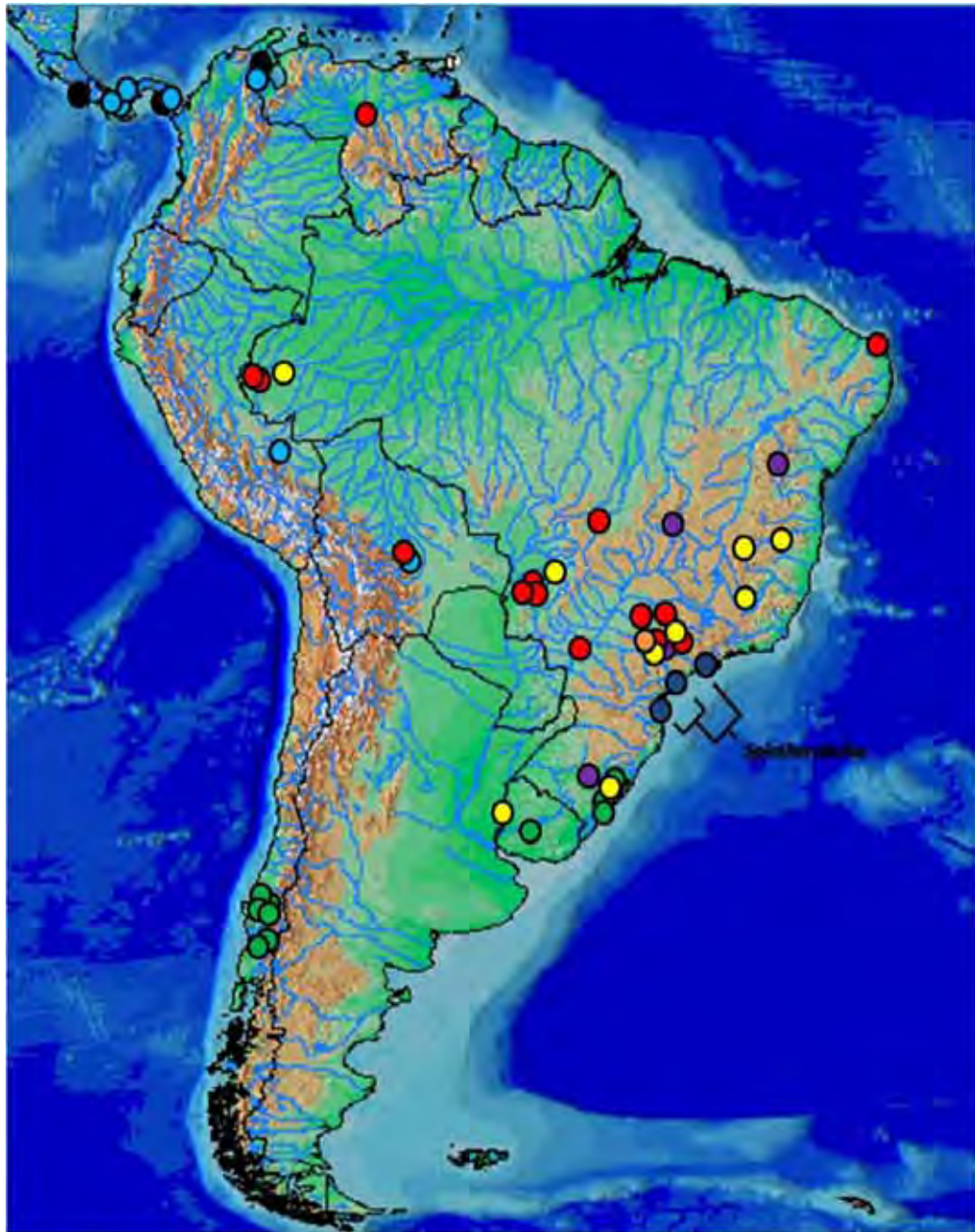


Figura 35. Distribuição das espécies de Cheirodontinae estudadas com as cores baseadas nos clados formados. O cladograma resumido mostra a localização biogeográfica das espécies de *Spintherobolus*.

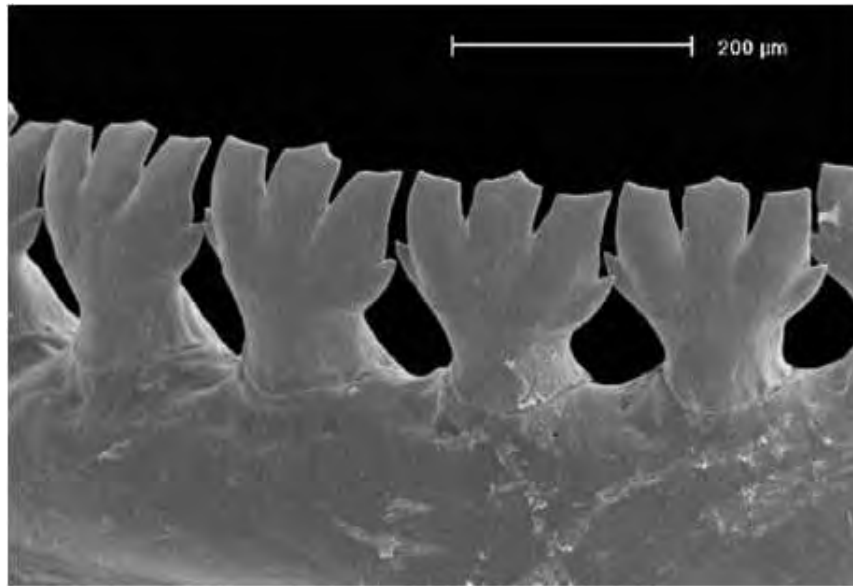


Figura 36. Dentes do dentário de *Aphyocheirodon hemigrammus* segundo Bührnheim (2006). Estes dentes possuem três cúspides centrais igualmente desenvolvidas formando uma borda de corte e são compartilhados por todas as espécies do clado 7.

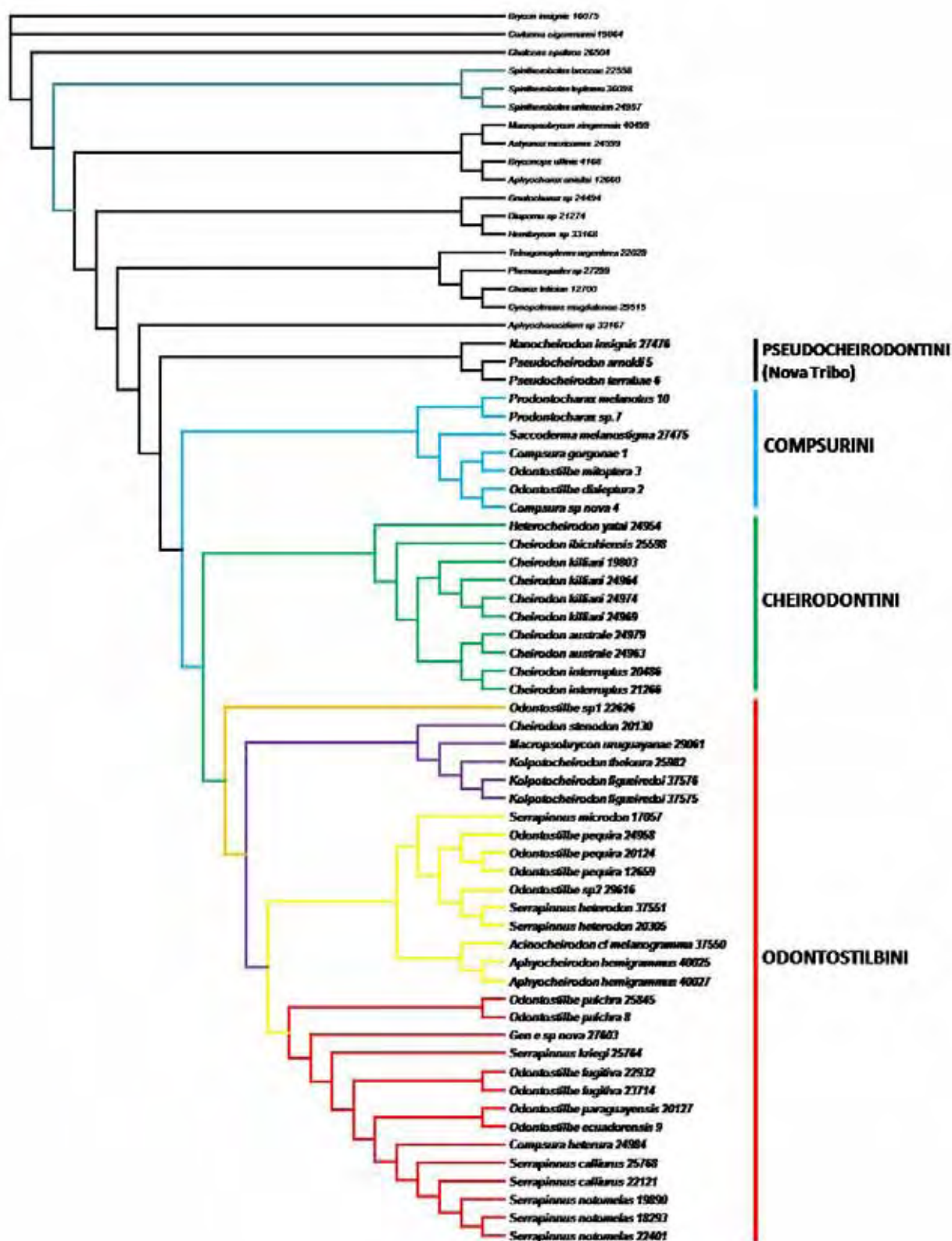


Figura 37. Identificação das tribos e espécies propostas como resultado do presente estudo. Os nomes propostos foram aplicados sobre a árvore de consenso apresentada na Figura 33.

6. CONCLUSÕES

Com base nos resultados obtidos no presente estudo pode-se concluir que:

1. Cheirodontinae forma um grupo irmão do clado onde estão relacionados Stethaprioninae com Rhoadsiinae e Glandulocaudinae com Stevardiinae. A análise de mais táxons representantes de Characidae é fundamental para um correto posicionamento de Cheirodontinae nessa família;
2. A espécie *Macropsobrycon xinguensis* não faz parte de Cheirodontinae, como já havia sido discutido na literatura;
3. O gênero *Spintherobolus* não pertence à Cheirodontinae;
4. *Cheirodon stenodon*, que era considerado *incertae sedis* em Characidae, é um táxon pertencente a essa subfamília;
5. Com as inclusões e exclusões de gêneros e espécies citadas acima (itens 2, 3 e 4) a subfamília Cheirodontinae torna-se monofilética;
6. As espécies trans-andinas e andinas são as mais antigas da subfamília;
7. *Cheirodon*, que possui espécies trans e cis-andinas, é o único gênero especioso que apresentou monofiletismo nas presentes análises, sendo este, grupo irmão de *Heterocheirodon*;
8. Diversos gêneros apareceram polifiléticos, principalmente *Odontostilbe*.
9. *Holoshesthes* deveria sair da sinonímia de *Odontostilbe*, passando a ser novamente um gênero válido em Cheirodontinae;
10. O clado formado por *Aphyocheirodon*, *Acinocheirodon*, *Odontostilbe pequiri* (= *Holoshesthes pequiri*), *Serrapinnus heterodon*, *S. microdon* e uma nova espécie de *Odontostilbe* (*Odontostilbe sp2*) pode ser confirmado também pela presença de caracteres morfológicos derivados;
11. *Macropsobrycon*, *Kolpotocheirodon* e *Cheirodon stenodon* formam um clado monofilético.
12. *Odontostilbe* forma um clado monofilético com as espécies antes pertencentes à *Serrapinnus*, uma espécie nova e *Compsura heterura*.

13. O clado monofilético que possui *O. pequirá* (= *Holoshesthes*) e o que possui *O. fugitiva*, também monofilético, formam um clado monofilético maior, reforçando a idéia de que *Holoshesthes* é mais relacionado à *Odontostilbe*;
14. Sugere-se uma revisão nos dados morfológicos dos caracteres que unem os gêneros de Cheirodontinae em tribos, com a exclusão do gênero *Spintherobolus* e a inclusão de *Cheirodon stenodon*.
15. Uma mudança na nomenclatura é proposta baseada nos clados monofiléticos formados. Assim, as tribos Cheirodontini, Compsurini e Odontostilbini são mantidas, com diferentes composições e uma nova tribo é sugerida (Pseudocheirodontini).
16. A análise futura de mais espécies de Cheirodontinae, principalmente dos gêneros *Cheirodontops* e *Amazonspinther* (não amostrados no presente estudo), será importante para um entendimento mais amplo das relações dentro dessa subfamília.

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8. Apêndice

Aqui estão apresentadas as sequências e o alinhamento utilizados no presente trabalho:

Brycon_insignis_16075	AAACATCGCCTCCCGCAA	AACCAAAGTATAAGGAGTCC	TACCTGCCCAATGACTATT	GTTCAACGGCCGCGGTATCT	TGACCGTGCTAAGGTAGCGC
Gnatocharax_sp_24494	AAACATCGCCTCCCGCAAG	CCTCTAGGTATGGGAGGTCT	TACCTGCCCAGTGACGACGA	GTTAAACGGCCGCGGTATCT	TGACCGTGCTAAGGTAGCGC
Macropsobrycon_xinguensis_40499	AAACATCGCCTCCTGCAAC	AATCAATGTATAAGAGGTCC	TACCTGCCCGGTGAC--TAA	GTTAAACGGCCGCGGTATCC	TGACCGTGCAAAAGGTAGCGC
Bryconops_affinis_4168	AAACATCGCCTCCCGCAA--	-ATCTAAGTATGGGAGGTCT	TACCTGCCCAGTGACA-TAA	GTTAAATGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Chalceus_epakros_26504	????CATCGCCTCCCGCAA	AACCAATATATGGGAGGTCT	TACCTGCCCAGTGACAATA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Aphyocharax_anisitsi_12660	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCT	TACCTGCCCAATGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Carlana_eigenmani_19864	????????????????????	????????????????????	????????????????????	????????????????????	????????????????TACGCGC
Astyanax_mexicanus_24599	AAACATCGCCTCCTGCAA	AATCAATGTATAAGAGGTCC	TACCTGCCCAGTGAT--TTA	ATTAACGGCCGCGGTATTT	TGACCGTGCAAAAGGTAGCGC
Spintherobolus_brocace_22558	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGAC--TAA	GTTAAACGGCCGCGGTATTT	TAAACGGCGCTAAGGTAGCGC
Spintherobolus_leptoura_36098	AAACATCGCCTCCTGCAA	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGAC--TAA	GTTAAACGGCCGCGGTATTT	TAAACGGCGCTAAGGTAGCGC
Spintherobolus_ankoseion_24957	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGAC--TAA	GTTAAACGGCCGCGGTATTT	TAAACGGCGCTAAGGTAGCGC
Charax_leticiae_12700	AAACATCGCCTCCTGCAA-	AATCAAAGTATA--GAGGTCT	TACCTGCCCAGTGACAATAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Diapoma_sp_21274	AAACATCGCCTCTTTGCGAG	AATCAAAGTATAAGGAGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTG-CTAAGGTAGCGC
Prodontocharax_melanotus_10	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Prodontocharax_sp_7	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Nanocheiroidon_insignis_27476	AAACATCGCCTCCTGCAA	AATCAAAGTATAAGAGGTATC	TACCTGCCCAGTGACG-TAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Pseudocheiroidon_arnoldi_5	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACA-TAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Pseudocheiroidon_terrabae_6	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACA-TAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Heterocheiroidon_yatai_24954	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACA-TAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Cheiroidon_killiani_24964	AAACATCGCCTCCTGCAA-	ATTCAAAGTATAAGAGATCC	TACCTGCCCAGTGATATTAA	GTTAATCGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Cheiroidon_australe_24979	AAACATCGCCTCCTGCAA-	AATCAAAATATAAGAGATCC	TACCTGCCCAGTGACTTAA	GTTAATCGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Cheiroidon_interruptu_20486	AAACATCGCCTCCTGCAA-	-ATCAAAATATAAGAGATCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Cheiroidon_killiani_19803	AAACATCGCCTCCTGCAA-	ATTCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Cheiroidon_killiani_24969	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Cheiroidon_australe_24963	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Cheiroidon_interruptus_21266	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Cheiroidon_ibicuhiensis_25598	AAACATCGCCTCCTGCAA-	-ATCAAAAGTATAAGAGGTCC	TACCTGCCCAGTGAC-TTAA	GTTAATCGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Cheiroidon_killiani_24974	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAATCGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Saccoderma_melanostigma_27475	AAACATCGCCTC-TGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Compura_gorgoniae_1	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Odontostilbe_mitoptera_3	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Compura_sp_nova_4	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Odontostilbe_dialepturus_2	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Odontostilbe_pulchra_25845	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACAATA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Odontostilbe_paraguayensis_20127	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGAC-TTAA	GTTAATCGGCCGCGGTATTT	TAAACCGTGCTAAGGTAGCGC
Odontostilbe_sp_22626	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Serrapinnus_microdon_17057	AAACATCGCCTCCTGCAA-	ATTCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACTTTAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCAAAAGGTAGCGC
Kolpotocheiroidon_theloura_25982	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGATATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Macropsobrycon_uruguayanae_29061	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Odontostilbe_pequira_24958	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGATATTAA	ATTAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Odontostilbe_pequira_20124	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGATATTAA	ATTAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Odontostilbe_pequira_12659	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGATATTAA	ATTAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Acinocheiroidon_cf_melanogrammus_37551	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Serrapinnus_heterodon_20305	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Odontostilbe_sp2_29616	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Kolpotocheiroidon_figueiredoi_37576	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
1Kolpotocheiroidon_figueiredoi_37575	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Serrapinnus_kriegi_25764	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAT	GTTAATCGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Compura_heterura_24984	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACA-TAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Gen_e_sp_nova_27603	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Acinocheiroidon_cf_melanogrammus_37550	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
1Aphyocheiroidon_hemigrammus_40027	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Aphyocheiroidon_hemigrammus_40025	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Tetragonopterus_argenteus_22029	AAACATCGCCTC-TGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGATATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Serrapinnus_notomelas_19890	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Serrapinnus_notomelas_18293	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGAC-TTAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Cheiroidon_stenodon_20130	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Serrapinnus_sp1_22401	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Odontostilbe_fugitiva_22932	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Cheiroidon_pulcher_8	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Odontostilbe_fugitiva_23714	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Serrapinnus_calliurus_22121	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Serrapinnus_calliurus_25768	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Odontostilbe_ecuadorensis_9	AAACATCGCCTCCTGCAA-	AATCAAAGTATAAGAGGTCC	TACCTGCCCAGTGACATTAT	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Cynopotamus_magdalenae_29515	AAACATCGCCTCCTGCTAA	AACCAAAGTATAAGAGGTCT	TACCTGCCCAGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC
Phenacogaster_sp_27299	AAACATCGCCTCCTGCAA	AATCAAAGTATAAGAGGTCC	TACCTGCCCGGTGACATTAA	GTTAAACGGCCGCGGTATTT	TGACCGTGCTAAGGTAGCGC

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Aphyocharacidium_sp_33167	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	AATCACTTGTCTTTTAAATG	AGGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CTTTTTCAGTCACTGAAAT	TGATCTGCCCCTGCAGAAAGC	
Gnatocharax_sp_24494	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGA	AACGAGGGCTTAACTGTCTC	CCTTATCTGGTCAATGAAAT	TGATCTGCCCCTGCAGAAAGC	
Macropsobrycon_xinguensis_40499	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGT	AACGAGGGCTTAACTGTCTC	CCCTCCCAATCAGTGAAT	TGATCTACCCCTGCAGAAAGC	
Bryconops_affinis_4168	AATCACTTGTCTTTTAAATG	AGGACCTGTATGAATGGTGG	AACGAGGACTTAACTGTCTC	ACTCTTCAAGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Chalceus_epakros_26504	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTAGGTCAGTGAAAT	TGATCTGCCCCTGCAGAAAGC	
Aphyocharax_anisitsi_12660	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CTTTTTCAGTCACTGAAAT	TGATCTGCCCCTGCAGAAAGC	
Carlana_eigenmani_19864	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGA	AACGAGGGCTTAACTGTCTC	CCTTTTCTAATCAGTTAAAT	TGATCCACCCCTGCAGAAAGC	
Astyanax_mexicanus_24599	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGA	AACGAGGGCTTAACTGTCTC	CCTTTTCTGATCAGTGAAAT	TGATCTACCCCTGCAGAAAGC	
Spintherobolus_brocceae_22558	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGA	AACGAGGGCTTAACTGTCTC	CCCTTTCAGGTCAGTGAAT	TGATCTACCCCTGCAGAAAGC	
Spintherobolus_leptoura_36098	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGA	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTACCCCTGCAGAAAGC	
Spintherobolus_ankoseion_24957	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGA	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTACCCCTGCAGAAAGC	
Charax_leticiae_12700	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGTCAATGAAAT	TGATCTGCCCCTGCAGAAAGC	
Diapoma_sp_21274	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Prodontocharax_melanotus_10	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Prodontocharax_sp_7	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Nanocheiroidon_insignis_27476	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCCTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Pseudocheiroidon_arnoldi_5	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Pseudocheiroidon_terrabae_6	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Heterocheiroidon_yatai_24954	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Cheiroidon_killiani_24964	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Cheiroidon_austriale_24979	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Cheiroidon_interruptu_20486	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Cheiroidon_killiani_19803	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Cheiroidon_killiani_24969	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Cheiroidon_austriale_24963	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Cheiroidon_interruptus_21266	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Cheiroidon_ibicuhiensis_25598	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Cheiroidon_killiani_24974	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Saccoderma_melanostigma_27475	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Compura_gorgoniae_1	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Odontostilbe_mitoptera_3	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Compura_sp_nova_4	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Odontostilbe_dialepturus_2	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Odontostilbe_pulchra_25845	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Odontostilbe_paraguayensis_20127	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Odontostilbe_sp1_22626	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Serrapinnus_microdon_17057	AATCACTTGTCTTTTAAATG	AAGACCGGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Kolpotocheiroidon_theloura_25982	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Macropsobrycon_uruguayanae_29061	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Odontostilbe_pequira_24958	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Odontostilbe_pequira_20124	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Odontostilbe_pequira_12659	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Acinocheiroidon_melanogrammus_37551	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Serrapinnus_heterodon_20305	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Odontostilbe_sp2_29616	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Kolpotocheiroidon_figueiredoi_37576	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
1Kolpotocheiroidon_figueiredoi_37575	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Serrapinnus_kriegi_25764	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Compura_heterura_24984	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Gen_e_sp_nova_27603	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Acinocheiroidon_cf_melanogrammus_37550	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
1Aphyocheiroidon_hemigrammus_40027	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Aphyocheiroidon_hemigrammus_40025	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Tetragonopterus_argenteus_22029	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Serrapinnus_notomelas_19890	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Serrapinnus_notomelas_18293	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Cheiroidon_stenodon_20130	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Serrapinnus_sp1_22401	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Odontostilbe_fugitiva_22932	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Cheiroidon_pulcher_8	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Odontostilbe_fugitiva_23714	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Serrapinnus_calliurus_23121	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Serrapinnus_calliurus_25768	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Odontostilbe_ecuadorensis_9	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Cynopotamus_magdaleneae_29515	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Phenacogaster_sp_27299	AATCACTTGTCTTTTAAATG	AAGACCTGTATGAATGGTGG	AACGAGGGCTTAACTGTCTC	CCTTTTTCAGGTCAGTGAAT	TGATCTGCCCCTGCAGAAAGC	
Aphyocharacidium_sp_33167	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	GGACATAAAATACAAGACG	AGAAGACCCCTTGGAGCTTA	AGACATACAGTCAACTGTGT	TAAAGTTCTAATCAAAAA--	AATTAACAAAAACA-ATAA	
Gnatocharax_sp_24494	GGGGATTATAGTACAAGACG	AGAAGACCCCTGGGAGCTTA	AGACAAAAGACCAACTGTAC	TTAAACCTCCTCCATAAGAG	GAAGGAACAAAAACA-GCAA	
Macropsobrycon_xinguensis_40499	GGGTATTAAATACAAGACG	AGAAGACCCCTTAGAGCTTA	AGACATATGATCAACTATGT	TAAGACCACTAA--TTAAG	AGATTAAACAAAAACA-GCAA	
Bryconops_affinis_4168	GGACATAAAAAATACAAGACG	AGAAGACCCCTTGGAGCTTA	AGATA-AAAGTCAACTGTGT	TATAAGTTTCAA-CTTAAAG	AGACCAACAAAAACA-GCCA	

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Chalceus_epakros_26504	GGGCATAAACATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGACATAAAGCCCAACTGTGT	CAAAAACCCCAATCAAAAAG	AAGCTAAACAAAACAGAAA
Aphyocharax_anisitsi_12660	GGACATATAAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATTAAGTCAAAATATGT	TAAGAATACACA--AAATGG	CAATAAAACATAATA-TCTA
Carlana_eigenmani_19864	GGGTATAAACTTACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGACATAAAATCAACTATGT	TAATTAACCCCTA-ATTAAG	GAA-TAAACAAAATAGCCAA
Astyanax_mexicanus_24599	GGGTATAAGAATACAAGACG	AGAAGACCCCTATGGAGCTTA	AGACACAAAATCAACTATGT	TAAAAACCCCTATTAAA-A	GAATAAAACAAAACA-GCAA
Spintherobolus_broccae_22558	GGGTATAACAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAGAATCAACTAAAT	TAAAGGCCCTAA-TAAAAAG	GACATAAAATAAATA-ATAA
Spintherobolus_leptoura_36098	GGGTATAACAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAGATTCAACTAAAT	TAAAGGCCCTAA-TAAAAAG	GGCATAAATAAATA-ATAA
Spintherobolus_ankoseion_24957	GGGTATAACAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAGATTCAACTAAAT	TAAAGGCCCTAA-TAAAAAG	AGCATAAATAAATA-ATAA
Charax_leticiae_12700	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGACATATGCCCAATTACGT	CAATAATCCCTCA-CGAACAG	GAGTAAACATAGTA-ACAA
Diapoma_sp_21274	GGACATAAAAAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGACACAAGATCAACTATGT	CAAAAACCCCTAA-TAAAAAG	ATATTTTAAACAAAATA-TTAA
Prodontocharax_melanotus_10	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAGAGTTAACCACAT	CAAAAGCCCTTA-TAAACAG	GAACTAAATAAATTTGTACAA
Prodontocharax_sp_7	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAGAGCTAACCCACAT	CAAAAGCCCTCA-TAAACAG	GAGCCAAACAAATGTACAA
Nanocheiroidon_insignis_27476	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAATTAAAT	CAATAGCCCTTA-CAAAACAG	GAACCAAAACAACTATACTT
Pseudocheiroidon_arnoldi_5	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAATTACAC	CAAAAACCCCTTA-CAAAACAG	GAGCCAAACAAATTTGTACTA
Pseudocheiroidon_terrabeae_6	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAATTACAC	CAAAAACCCCTTA-CAAAACAG	GGACCAACAAATTTGTATTA
Heterocheiroidon_yatai_24954	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAC	CAAAAACCCCTTA-CAAAACAG	GGACTAATCAAACTGTGCAC
Cheiroidon_killiani_24964	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTCA-CAAAACAG	GGACCAATCAAACTGTACATA
Cheiroidon_austriale_24974	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTCA-CAAAACAG	GGACCAATCAAACTGTACAA
Cheiroidon_interruptu_20486	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTCA-CAAAACAG	GGACCAATCAAACTGTACAA
Cheiroidon_killiani_19803	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTCA-CAAAACAG	GGACCAATCAAACTGTACAA
Cheiroidon_killiani_24969	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTCA-CAAAACAG	GGACCAATCAAACTGTACAA
Cheiroidon_austriale_24963	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTCA-CAAAACAG	GGACCAATCAAACTGTACAA
Cheiroidon_interruptus_21266	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTCA-CAAAACAG	GGACCAATCAAACTGTACAA
Cheiroidon_ibicuhiensis_25598	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTCA-CAAAACAG	GGACCAATCAAACTGTACAA
Cheiroidon_killiani_24974	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTCA-CAAAACAG	GGACCAATCAAACTGTACAA
Saccoderma_melanostigma_27475	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-CAAAACAG	GAGCTAAGCAAAATTTGTATTA
Compsura_gorgonae_1	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-CAAAATTTG	GAGCTAAGCAAAATTTGTATAA
Odontostilbe_mitoptera_3	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-CAAAATAG	GAGCTGAACAAATTTGTATAA
Compsura_sp_nova_4	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-CAAAATAG	GAACCAAAACAAATTTGTACAA
Odontostilbe_dialepturus_2	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-CAAAATAG	GAGCCAAACAAATTTGTATAA
Odontostilbe_pulchra_25845	GGACATTATAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAATTACAT	CAAAAGCCCTTA-TAAACAG	GTGCTAAGCAAAATTTGTACAA
Odontostilbe_paraguayensis_20127	GGACATAAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAATTACAT	CAAAAGCCCTTA-TAAACAA	GAACCAAAACAAATTTGTATAA
Odontostilbe_spl_22626	GGACATTATAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-CAACTAG	GAGGCCAAACAAATTTGTATAA
Serrapinnus_microdon_17057	GGACATTATAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-CAAAACAG	GAACCAAAACAAATTTGTATAA
Kolpotocheiroidon_theloura_25982	GGACATTATAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	TAAAGGCCCTCA-CAAAACAG	GGGCCAAACAAATTTGTATAA
Macropsobrycon_uruguayanae_29061	GGACATTAAAAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATACAAAGTCAACCACAT	CAAAAGCCCTTA-CAAAACAG	GAGCCAAACAAATTTGTATAA
Odontostilbe_pequirá_24958	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-CAAAACAG	GAACCAAAACAAATTTGTATAA
Odontostilbe_pequirá_20124	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-CAAAACAG	GAACCAAAACAAATTTGTATAA
Odontostilbe_pequirá_12659	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-CAAAACAG	GAACCAAAACAAATTTGTATAA
Acinocheiroidon_melanogrammus_37551	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACTACAC	CAAAAGCCCTCA-CAAAACAG	GAACCAAAACAAATTTGTATGA
Serrapinnus_heterodon_20305	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACTACAC	CAAAAGCCCTCA-CAAAACAG	GAACCAAAACAAATTTGTATGA
Odontostilbe_sp2_29616	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTCA-CAAAACAG	GAACCAAAACAAATTTGTATGA
Kolpotocheiroidon_figueiredoi_37576	GGACATTATAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATAAAAAGTCAACCACAT	CAATAGCCCCCA-CAAAACAG	GAGGCCAAACAAATTTGTATAA
1Kolpotocheiroidon_figueiredoi_37575	GGACATTATAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATAAAAAGTCAACCACAT	CAATAGCCCCCA-CAAAACAG	GAGGCCAAACAAATTTGTATAA
Serrapinnus_kriegi_25764	GGGCATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACTACAT	CAAAAGCCCTTA-TAAACAG	GAACCAAAATAAATTTGTATAA
Compsura_heterura_24984	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-TAAATAG	GAGCTAATAAATTTGTATAA
Gen_e_sp_nova_27603	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATACAAAGTCAACCACAT	TAAAGGCCCTTA-TAAACAG	GAGCAAAACAAATTTGTATAA
Acinocheiroidon_cf_melanogrammus_37550	GGACATTATAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-TAAACAG	GAACCAAAACAAATTTGTATAA
1Aphyochiroidon_hemigrammus_40027	GGACATTACAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTG-CAAAACAG	GAACCAAAACAAATTTGTATAA
Aphyochiroidon_hemigrammus_40025	GGACATTACAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTG-CAAAACAG	GAACCAAAACAAATTTGTATAA
Tetragonopterus_argenteus_22029	GGACATACATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGACATAAAGTCAACTATGT	CAAAAATCTCAA-CAAAATGA	GAATAAACAATAATA-ACAA
Serrapinnus_notomelas_19890	GGACATTATAATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATAAAAAGTCAACCACAT	CAAAAGCCCTTA-TAAACAG	GAACCAAAATAAATTTGTATAA
Serrapinnus_notomelas_18293	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATAAAAAGTCAACCACAT	CAAAAGCCCTCA-TAAACAG	GAACCAAAATAAATTTGTATAA
Cheiroidon_pulcher_8	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTCA-CAAAACAG	GAACCAAAATAAATTTGTATAA
Serrapinnus_spl_22401	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATAAAAAGTCAACCACAT	CAAAAGCCCTTA-TAAACAG	GAACCAAAATAAATTTGTATAA
Odontostilbe_fugitiva_22932	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	TAAAGGCCCTTA-TAAACAG	GAACCAAAATAAATTTGTATAA
Cheiroidon_pulcher_8	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTGA-CAAAACAG	GAACCAAAATAAATTTGTATAA
Odontostilbe_fugitiva_23714	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	TAAAGGCCCTTA-TAAACAG	GAACCAAAATAAATTTGTATAA
Serrapinnus_calliurus_22121	GGACATTACTATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-TAAATAG	GAACCAAAATAAATTTGTATAA
Serrapinnus_calliurus_25768	GGACATTACTATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-TAAATAG	GAACCAAAATAAATTTGTATAA
Odontostilbe_ecuadorensis_9	GGACATTATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATATAAAGTCAACCACAT	CAAAAGCCCTTA-TAAATAG	GAACCAAAATAAATTTGTATAA
Cynopotamus_magdalenae_29515	GGACATTGAATATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGATACAAGGCCAATCTATGT	CAAAAATCCCTA-TAAAAAG	GAATAAACAATAATA-ATAA
Phenacogaster_sp_27299	GGACATAAGCATACAAGACG	AGAAGACCCCTTTGGAGCTTA	AGACATAAAGGCCAATCTATGT	CAAAAGTCTCTA-TAAAAAG	GAACTAACAATAATA-CTAA
Aphyocharacidium_sp_33167	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	CTGACTCCCGTCTTCGGTTG	GGGCGACCGGGGGGAAAAA	AAAGCCCCACGTAGAATGG	GACACTCCCTAAAACCAAGA	GAAACATCTCTAAGTCACAG
Gnatocharax_sp_24494	CTGGCCCAAGTCTTCGGTTG	GGGCGACCGTGGGGGAAAAA	AAAGCCCCCATGTAGAGTGG	AATT-TTCTTAAAACCAAGA	GGTACTCTCTAAGTCCACAG
Macropsobrycon_xinguensis_40499	CTGATTTAAGTCTTCGATTG	GGGCGATCGCGGGGAAAAA	AAATCCCCCATGTAGAATAA	GATA-ATCTTTAAACTACGA	AGCACACTCTAAGCCACAG
Bryconops_affinis_4168	CTGGCCAAAATCTTCGGTTG	GGGCGACCGGGGGGAAAAA	AAACCCCCCATGTGGACCGG	GAAITTTTCTTAAAACCAAGA	GGGACACCTCTAAGCCACAG
Chalceus_epakros_26504	CTGGCTGACGCTCTTCGGTTG	GGGCGACCGGGGGTAAAAA	AAAACCCCCACGTGGGAATGG	GAAAACCTCTTAATACCAAGA	GAGACATCTCTAAGTCCACAG
Aphyocharax_anisitsi_12660	CTGATCTACATCTTCGGTTG	GGGCGACCGTGGGG-AAAGA	AAAACCCCTATGTGGGAAAG	GCT--ACCTTAAAACCAAGA	GGTACACCTCTAAGTCCACAG
Carlana_eigenmani_19864	CTGATTGTATCTTCGGTTG	GGGCGACCATGGGAGAAAAA	AAATCCCCCATGTGGGAATGG	GAAACTTCTTAAAACCAAGA	GGCACACCTCTAAGCCACAG
Astyanax_mexicanus_24599	CTGATTAGCGTCTTCGGTTG	GGGCGACCAACGGGGGAAAAA	CAATCCCCCACGTGGGAACGG	GATTACTCTTAAAACCATGA	GGGACACCTCTAAGTCCACAG
Spintherobolus_broccae_22558	CTGTTTCAAAATCTTCGGTTG	GGGCGACCAACGGGGGAAAAA	AAATCCCCCACGTAGAATGG	GTTT-AACTTAAAACCAAGA	GGGACACCTCTAAGTCCACAG
Spintherobolus_leptoura_36098	CTGATTCAAATCTTCGGTTG	GGGCGACCAACGGGGGAAAAA	CAATCCCCCACGTAGAATGG	GTTT-AACTTAAAACCAAGA	GGGACACCTCTAAGTCCACAG
Spintherobolus_ankoseion_24957	CTGATTCAAATCTTCGGTTG	GGGCGACCAACGGGGGAAAAA	AAATCCCCCACGTAGAATGG	GTTT-AACTTAAAACCAAGA	GGGACACCTCTAAGTCCACAG

Charax_leticiae_12700	CTGACCTACGTTCTTCGGTTG	GGGCGACCAACGGGGGATAA	CAAGCCCCACGTGGACTGG	GGC--AACCTAAACACCGA	GGGACACCTCTAAGTCACAG
Diapoma_sp_21274	CTGATCAAAGTCTTCGGTTG	GGGCGACCAACGGGGGAAAA	AAAGCCCCCATGTGGAATGG	GATAAAAACCTAAACACCGA	GGGACACCTCTAAGTCACAG
Prodontocharax_melanotus_10	CTAACTCACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTATTACCCAAAACACCGA	GAGACATCTCTAAGTCACAG
Prodontocharax_sp_7	CTAGCTCACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTATTACCCAAAACACCGA	GAGACATCTCTAAGTCACAG
Nanocheiroidon_insignis_27476	CTGACCCACATCTTCGGTTG	GGGCGACCGTGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGCAACAG
Pseudocheiroidon_arnoldi_5	CTGACCCGATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATGGAATGG	GTTTAAACCTAAACACCGA	GAGACATCTCTAAGCAACAG
Pseudocheiroidon_terrabrae_6	CTGACCCACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATGGAATGG	GTTTAAACCTAAACACCGA	GAGACATCTCTAAGCAACAG
Heterocheiroidon_yatai_24954	CTGACCTTCATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	TAAACCCCCACATAGAATGG	GTTTAAACCCAAAACCGCGA	GAGACATCTCCAAGTCACAG
Cheiroidon_killiani_24964	CTGACCTTCATCTTCGGTTG	GGGCGACCGCGGGGTATAAC	AAAACCCCCACATAGAATGG	GTTTAAACCCGAGAACCGCGA	GAGACATCTCCAAGTCACAG
Cheiroidon_australe_24979	CTGACCTTCATCTTCGGTTG	GGGCGACCGCGGGGTATAAC	AAAACCCCCACATAGAATGG	GTTTAAACCCAAAACCGCGA	GAGACATCTCCAAGTCACAG
Cheiroidon_killiani_19803	CTGACCTTCATCTTCGGTTG	GGGCGACCGCGGGGTATAAC	AAAACCCCCACATAGAATGG	GTTTAAACCCGAGAACCGCGA	GAGACATCTCCAAGTCACAG
Cheiroidon_killiani_24969	CTGACCTTCATCTTCGGTTG	GGGCGACCGCGGGGTATAAC	AAAACCCCCACATAGAATGG	GTTTAAACCCGAGAACCGCGA	GAGACATCTCCAAGTCACAG
Cheiroidon_australe_24963	CTGACCTTCATCTTCGGTTG	GGGCGACCGCGGGGTATAAC	AAAACCCCCACATAGAATGG	GTTTAAACCCAAAACCGCGA	GAGACATCTCCAAGTCACAG
Cheiroidon_interruptus_21266	CTGACCTTCATCTTCGGTTG	GGGCGACCGCGGGGTATAAC	AAAACCCCCACATAGAATGG	GTTTAAACCCAAAACCGCGA	GAGACATCTCCAAGTCACAG
Cheiroidon_ibicuhiensis_25598	CTGACCTTCATCTTCGGTTG	GGGCGACCGCGGGGTATAAC	AAAACCCCCACATAGAATGG	GTTTAAACCCGAGAACCGCGA	GAGACATCTCCAAGTCACAG
Cheiroidon_killiani_24974	CTGACCTTCATCTTCGGTTG	GGGCGACCGCGGGGTATAAC	AAAACCCCCACATAGAATGG	GTTTAAACCCGAGAACCGCGA	GAGACATCTCCAAGTCACAG
Saccoderma_melanostigma_27475	CTGACTCACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACATCTCTAAGCCACAG
Compsura_gorgonae_1	CTGACTCACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACATCTCTAAGCCACAG
Odontostilbe_mitoptera_3	CTGACTCACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACATCTCTAAGCCACAG
Compsura_sp_nova_4	CTGACTCACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AGAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	AAGACATTTCTAAGCCACAG
Odontostilbe_dialepturus_2	CTGACTCACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	AAGACATTTCTAAGCCACAG
Odontostilbe_pulchra_25845	CTGACCTTCATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GGAACACCTCTAAGTCACAG
Odontostilbe_paraguayensis_20127	CTGACCTCACATCTTCGGTTG	GGGCGACCAACGGGGTAAATAC	AAAACCCCCACATAGAATGG	GTTTAAACCTAAAGCACCGA	GGGACACCTCTAAGTCACAG
Odontostilbe_spl_22626	CTGACTTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Serrapinnus_microdon_17057	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GGAACACCTCTAAGTCACAG
Kolpotocheiroidon_theloura_25982	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAAGCCCGA	GAGACACCTCTAAGTCACAG
Macropsobrycon_uruguayanae_29061	CTGACCCATATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Odontostilbe_pequiri_24958	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GGAACACCTCTAAGTCACAG
Odontostilbe_pequiri_20124	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Odontostilbe_pequiri_12659	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GGAACACCTCTAAGTCACAG
Acinocheiroidon_melanogrammus_37551	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GGAACACCTCTAAGTCACAG
Serrapinnus_heterodon_20305	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GGAACACCTCTAAGTCACAG
Odontostilbe_sp2_29616	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GGAACACCTCTAAGTCACAG
Kolpotocheiroidon_figueiredoi_37576	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
1Kolpotocheiroidon_figueiredoi_37575	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Serrapinnus_kriegi_25764	CTGACCTACATTTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACATCTCTAAGTCACAG
Compsura_heterura_24984	CTGACCTTAATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTCAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Gen_e_sp_nova_27603	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Acinocheiroidon_cf_melanogrammus_37550	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACATCTCTAAGTCACAG
1Aphyocheiroidon_hemigrammus_40027	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCCAAGTCACAG
Aphyocheiroidon_hemigrammus_40025	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCCAAGTCACAG
Tetragonopterus_argenteus_22029	CTGACCAAGCTCTTCGGTTG	GGGCGACCGCGGGGGAAAA	CAAGCCCCCATGTGGAATGG	GTTTAAACCTAAACACCGA	GAGACATCTCCAAGTCACAG
Serrapinnus_notomelas_19890	CTGACCCACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Serrapinnus_notomelas_18293	CTGACCCACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Cheiroidon_stenodon_20130	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Serrapinnus_spl_22401	CTGACCCACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Odontostilbe_fugitiva_22932	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Cheiroidon_pulcher_8	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACATCTCTAAGTCACAG
Odontostilbe_fugitiva_23714	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Serrapinnus_calliurus_22121	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Serrapinnus_calliurus_25768	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACACCTCTAAGTCACAG
Odontostilbe_ecuadorensis_9	CTGACCTACATCTTCGGTTG	GGGCGACCGCGGGGTAAAA	AAAACCCCCACATAGAATGG	GTTTAAACCTAAACACCGA	GAGACATCTCTAAGTCACAG
Cynopotamus_magdalenae_29515	CTGACCAACGCTCTTCGGTTG	GGGCGACCAACGGGGGAAAA	AAAGCCCCCATGTAGATTGG	GAT-AAACCTAAACCTACGA	GGGACACCTCTAAGTCACAG
Phenacogaster_sp_27299	CTGACCAACGCTCTTCGGTTG	GGGCGACCGCGGGGGAAAA	AAAGCCCCCATGTGATTGG	GAT-AAACCTAAACCTACGA	GGGACACCTCTAAGTCACAG
Aphyocharacidium_sp_33167	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	AACCTCTGACTAAAAGATCC	GGC-TCATGCCGATCGACGA	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGCCCGTATCAACAAGGGGG
Gnatocharax_sp_24494	AACATCTGACTTAGAGATCC	GGCAATTAGCGATCAACGG	ACCAAGTTACCCCAGGGATA	ACAGCGCAATCCCTCCAAG	AGCCCATATCGACAAGGGGG
Macropsobrycon_xinguensis_40499	AACCTCTGACCCAAAGATCC	GATATTTAAACGATCAACGG	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCGAG	AGTCCATATCAACAAGGGGG
Bryconops_affinis_4168	AACATCTGACCTAAGGATCC	GGCAACAAGCGATCAACGA	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTCCATATCGACAAGGGGG
Chalceus_epakros_26504	AACATCTGACCAAAATGATCC	GGCCCATAGCGATCAACGG	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTCCATATCGACAAGGGGG
Aphyocharax_anisitsi_12660	AAATTCTGACCTAGAGATCC	GGCCATAGCGGATCAACGG	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGCCCATATCGAGAGGGGG
Carlana_eigenmani_19864	AACCTCTGACCATAAGATCC	GGCTTCTAGCCGATCAACGA	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTCCATATCGAG-AGGGGG
Astyanax_mexicanus_24599	AACCTCTGACCAAAATGATCC	GGTAAATAACCGATCAACGA	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTTCATATCGACAAGGGGG
Spintherobolus_brocae_22558	AACATCTGACCAATAGATCC	GGCAATAGCGGATCAACGA	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTTCATATCGACAAGGGGG
Spintherobolus_leptoura_36098	AACATCTGACCAATAGATCC	GGCAGATAGCGGATCAACGA	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTTCATATCGACAAGGGGG
Spintherobolus_leptoura_36098	AACATCTGACCAATAGATCC	GGCAGATAGCGGATCAACGA	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTTCATATCGACAAGGGGG
Charax_leticiae_12700	AAAATCTGACCAAAAGATCC	GGCAACCTGCCGATCAACGA	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTCCATATCGACAAGGGGG
Diapoma_sp_21274	AACATCTGACCAAAAGATCC	GGCACAAGCCGATCAACGA	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTCCATATCGACAAGGGGG
Prodontocharax_melanotus_10	AACCTCTGACTAAAAGATCC	GGCTATTAGCCGATCAACGG	ACTAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTCCATATCGACAAGGGGG
Prodontocharax_sp_7	AACCTCTGACTAAAAGATCC	GGCA-ATAGCGGATCAACGG	ACTAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTCCATATCGACAAGGGGG
Nanocheiroidon_insignis_27476	AACCTCTGACTAAAAGATCC	GGTACTTAAACGATCAACGG	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGCCCATATCGACAAGGGGG
Pseudocheiroidon_arnoldi_5	AACCTCTGACTAAAAGATCC	GGCACTTAGCCGATCAACGG	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTCCATATCGACAAGGGGG
Pseudocheiroidon_terrabrae_6	AACCTCTGACTAAAAGATCC	GGCACTTAGCCGATCAACGG	ACCAAGTTACCCTAGGGATA	ACAGCGCAATCCCTCCAAG	AGTCCATATCGACAAGGGGG

Apêndice

Heterocheirodon_yatai_24954	AACCTTCTGACTAAAAAGATCC	GGCATTAAAGCCGATCAACGG	ACCAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Cheirodon_killiani_24964	AACCTTCTGACTAAAAAGATCC	GGCACTAAGCCGATCAACGG	ACCAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Cheirodon_australe_24979	AACCTTCTGACTAAAAAGATCC	GGCACTAAGCCGATCAACGG	ACCAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Cheirodon_interruptu20486	AACCTTCTGACTAAAAAGATCC	GGCACTAAGCCGATCAACGG	ACCAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Cheirodon_killiani_19803	AACCTTCTGACTAAAAAGATCC	GGCACTAAGCCGATCAACGG	ACCAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Cheirodon_killiani_24969	AACCTTCTGACTAAAAAGATCC	GGCA-CAAGCCGATCAACGG	ACCAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Cheirodon_australe_24963	AACCTTCTGACTAAAAAGATCC	GGCA-CAAGCCGATCAACGG	ACCAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Cheirodon_interruptus_21266	AACCTTCTGACTAAAAAGATCC	GGCA-CAAGCCGATCAACGG	ACCAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Cheirodon_ibicuhiensis_25598	AACCTTCTGACTAAAAAGATCC	GGCACTAAGCCGATCAACGG	ACCAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Cheirodon_killiani_24974	AACCTTCTGACTAAAAAGATCC	GGCACTAAGCCGATCAACGG	ACCAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Saccoderma_melanostigma_27475	AACCTTCTGACTAAAAAGATCC	GGTATATAAACCGATCAACGA	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Compsura_gorgonae_1	AACCTTCTGACTAAAAAGATCC	GGCATAAAGCCGATCAACGA	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Odontostilbe_mitoptera_3	AACCTTCTGACTAAAAAGATCC	GGCATAAAGCCGATCAACGA	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Compsura_sp_nova_4	AACCTTCTGACTAAAAAGATCC	GGCATAAAGCCGATCAACGA	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Odontostilbe_dialepturus_2	AACCTTCTGACTAAAAAGATCC	GGCATAAAGCCGATCAACGA	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Odontostilbe_pulchra_25845	AACCTTCTGACTAAAAAGATCC	GGCA-TAAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Odontostilbe_paraguayensis_20127	AACCTTCTGACTAAAAAGATCC	GGCATTTAAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Odontostilbe_spl_22626	AACCTTCTGACTAAAAAGATCC	GGCATTTAAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Serrapinnus_microdon_17057	AACCTTCTGACTAAAAAGATCC	GGCATTCTAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Kolpotocheirodon_theloura_25982	AACATCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Macropsobrycon_uruguayanae_29061	AACATCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Odontostilbe_pequirá_24958	AACCTTCTGACTAAAAAGATCC	GGCATTTAAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Odontostilbe_pequirá_20124	AACCTTCTGACTAAAAAGATCC	GGCGTTTAAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Odontostilbe_pequirá_12659	AACCTTCTGACTAAAAAGATCC	GGCGTTTAAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Acinocheirodon_melanogrammus_37551	AACCTTCTGACTAAAAAGATCC	GGCGTCTAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Serrapinnus_heterodon_20305	AACCTTCTGACTAAAAAGATCC	GGCGTCTAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Odontostilbe_sp2_29616	AACCTTCTGACTAAAAAGATCC	GGCGTCTAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Kolpotocheirodon_figueiredoi_37576	AACATCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
1Kolpotocheirodon_figueiredoi_37575	AACATCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Serrapinnus_kriegi_25764	AACCTTCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Compsura_heterura_24984	AACCTTCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Gen_e_sp_nova_27603	AACCTTCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Acinocheirodon_cf_melanogrammus_37550	AACCTTCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
1Aphyocheirodon_hemigrammus_40027	AATTTCCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Aphyocheirodon_hemigrammus_40025	AATTTCCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Tetragonopterus_argenteus_22029	AATTTCCTGACTAAAAAGATCC	GGCAACTTCAGCCGATCAACGG	ACCAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTTCATATCGACAAGGGGG
Serrapinnus_notomelas_19890	AATTTCCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Serrapinnus_notomelas_18293	AACCTTCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Cheirodon_stenodon_20130	AACATCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Serrapinnus_sp1_22401	AACCTTCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Odontostilbe_fugitiva_22932	AACCTTCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Cheirodon_pulcher_8	AACCTTCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Odontostilbe_fugitiva_23714	AACCTTCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Serrapinnus_calliurus_22121	AACCTTCTGACTAAAAAGATCC	GGCACTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Serrapinnus_calliurus_25768	AACCTTCTGACTAAAAAGATCC	GGCACTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Odontostilbe_ecuadorensis_9	AACCTTCTGACTAAAAAGATCC	GGCATTTCAGCCGATCAACGG	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Cynopotamus_magdalena_29515	AACATCTGACTAAAAAGATCC	GGCCTACAGCCGATCAACGA	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTTCATATCGACAAGGGGG
Phenacogaster_sp_27299	AAAACTGACCAAAAGATCC	GGCATACATCCGATCAACGA	ACTAAGTTACCCCTAGGGATA	ACAGCGCAATCCCCCTCCAAG	AGTCCATATCGACAAGGGGG
Aphyocharacidium_sp_33167	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACAC
Gnatocharax_sp_24494	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Macropsobrycon_xinguensis_40499	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGA??TCCCTC
Bryconops_affinis_4168	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGA????????
Chalceus_epakros_26504	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGACG??TACACCTC
Aphyocharax_anisitsi_12660	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGA????????
Carlana_eigenmani_19864	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGT?????TACACTTC
Astyanax_mexicanus_24599	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACTTC
Spintherobolus_broccae_22558	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACGTC
Spintherobolus_leptoura_36098	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Spintherobolus_ankoseion_24957	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACGTC
Charax_leticiae_12700	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGA????????
Diapoma_sp_21274	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGA????????
Prodontocharax_melanotus_10	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGA????????
Prodontocharax_sp_7	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Nanocheirodon_insignis_27476	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Pseudocheirodon_arnoldi_5	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Pseudocheirodon_terrabae_6	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATCCTCCTC
Heterocheirodon_yatai_24954	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Cheirodon_killiani_24964	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Cheirodon_australe_24979	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Cheirodon_interruptu20486	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Cheirodon_killiani_19803	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Cheirodon_killiani_24969	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Cheirodon_australe_24963	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC

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Cheirodon_interruptus_21266	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Cheirodon_ibicuihensis_25598	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Cheirodon_killiani_24974	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	AACGTGATCTGATACACCTC
Saccoderma_melanostigma_27475	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Compsura_gorgonae_1	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Odontostilbe_mitoptera_3	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATATACCTC
Compsura_sp_nova_4	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Odontostilbe_dialepturus_2	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Odontostilbe_pulchra_25845	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATATACATC
Odontostilbe_paraguayensis_20127	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Odontostilbe_sp_122626	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATATACATC
Serrapinnus_microdon_17057	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Kolpotocheiroidon_theloura_25982	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATATACATC
Macropsobrycon_uruguayanae_29061	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Odontostilbe_pequirá_24958	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGA???????
Odontostilbe_pequirá_20124	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Odontostilbe_pequirá_12659	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Acinocheiroidon_melanogrammus_37551	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Serrapinnus_heterodon_20305	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATATCCCTC
Odontostilbe_sp2_29616	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Kolpotocheiroidon_figueiredoi_23576	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATATACCTC
1Kolpotocheiroidon_figueiredoi_37575	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATATACATC
Serrapinnus_kriegi_25764	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Compsura_heterura_24984	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Gen_e_sp_nova_27603	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Acinocheiroidon_cf_melanogrammus_37550	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
1Aphyocheiroidon_hemigrammus_40027	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Aphyocheiroidon_hemigrammus_40025	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Tetragonopterus_argenteus_22029	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCAGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Serrapinnus_notomelas_19890	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Serrapinnus_notomelas_18293	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Cheirodon_stenodon_20130	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATATACATC
Serrapinnus_sp_12401	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Odontostilbe_fugitiva_22932	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACTCATC
Cheirodon_pulcher_8	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGACACTCCCC
Odontostilbe_fugitiva_23714	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACCCCTC
Serrapinnus_calliurus_22121	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Serrapinnus_calliurus_25768	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Odontostilbe_ecuadorensis_9	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACATC
Cynopotamus_magdaleneae_29515	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AGCCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACTTC
Phenacogaster_sp_27299	TTTACGACCTCGATGTTGGA	TCAGGACATCCTAATGGTGC	AACCGCTATTAAGGGTTCGT	TTGTTCAACGATTAAAGTCC	TACGTGATCTGATACACCTC
Aphyocharacidium_sp_33167	????????????????????	????????????????????	????????????????????	????????????????????	????????????TACACCTA
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????TACACCTA
Brycon_insignis_16075	?GAAATCTACACGCTTTT	CATCCGTAAACCATATCACC	CGAGACGTAATACGGATG	AATTCTTCGAACTTACAGT	CCAACGGAGCCTCATTTCTC
Gnatocharax_sp_24494	AGATATCTCGACGCTTTT	CTTCAGTAGCCCATCATCTG	CGCAGCTAAATACGGCTG	AATTATTCGAAACGCACATG	CCAACGGGCTCTCATTTCTC
Macropsobrycon_xinguensis_40499	GCACATCTCCACGCTTCT	CTTCAGTTGCCACATCTGC	CGAGACGTGAACACGGATG	AACAATCCGAAACATACAGC	CTAATGGAGCTTCATTCTTC
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalcus_epakros_26504	CGACATCTCCACGCTTTT	CATCAGTAGTCACATCTGC	CGAGACGTAACACAGGCTG	ACTTATCCGAAATATACATG	CCAACGGGCTCATTTTTC
Aphyocharax_anisitsi_12660	????????????????????	??CTGTGGCCCATCATCTGT	CGAGACGTAACACGGATG	AGTTATCCGAAACATACATG	CTAACGGAGCATCATTTCTT
Carlana_eigenmanni_19864	TGATATTCTCTAGCTTTT	CCTCTGTGGCCCATCATCTGT	CGAGATGTAACACAGGCTG	AATTATTCGAAACATACATG	CCAATGGGCTCATTTTTC
Astyanax_mexicanus_24599	TGATATTTCACAGCTTTT	CTTCGCTAGCCCATATCTGT	CGAGATGTAATACGGATG	AATCATCCGAAATATACATG	CTAACGGAGCATCATTTCTC
Spintherobolus_broccae_22558	AGATATTTCACAGCCTTCT	CATCCGTAAACATATCAGC	CGAGATGTAACATATGGTTG	AATTATCCGAAATATACATG	CCAACGGGCTCATTTCTT
Spintherobolus_leptoura_36098	AGATATCTCCACAGCCTTCT	CATCCGTATACATATTTGC	CGAGATGTAACACAGGTTG	AGTCATCCGAAATATACATG	CCAACGGAGCTCATTTCTT
Spintherobolus_ankoseion_24957	AGACATCTCCACGCTTCT	CATCCGTATACATATTTGC	CGAGATGTAACACAGGTTG	AATCATCCGAAATATACATG	CCAACGGAGCCTCATTTCTT
Charax_leticiae_12700	????????????????????	????????????????????	????????????????????	????????TCGAAACAGCATG	CCAACGGGCTCATTTCTT
Diapoma_sp_21274	????????????????????	????????????????????	????????????????????	AGGAATTCGTAACTCCATG	CCAATGGAGCATCATTTTTC
Prodontocharax_melanotus_10	????????????????????	????????????????????	????????????????????	????????????????????	????????????TCTTTCTC
Prodontocharax_sp_7	CGATATCTCTACACTTTT	CCTCTGTAGAGTCATATGC	CGAGATGTAACACAGGCTG	AATTATCCGAAACATACAGC	CCAACGGGCTCATTTTTC
Nanocheiroidon_insignis_27476	CGACATCTCTACAGCTTTT	CCGCTGTAGCACATATTTGC	CGAGACGTAATCATGGCTG	AATTATTCGAAACTTACATG	CAGACGGGCTCGTTTCTTC
Pseudocheiroidon_arnoldi_5	CGACATCTCCACAGCCTTT	CTTCGCTAGCCCATATCTGC	CGAGACGTAACACAGGCTG	AATTATCCGAAACATACAGC	CCAACGGAGCTCATTTCTC
Pseudocheiroidon_terrabae_6	CGACATCTCCACAGCCTTT	CTTCGCTAGCACATCTGC	CTCGATGTAAGCACAGCTG	AATGATCTGAAACATACAGC	CCAACGGAGCTCATTTCTC
Heterocheiroidon_yatai_24954	CGACATCTCCACAGCCTTT	CTTCTGTAGCCATATCTGC	CGAGACGTAACACAGGCTG	AATTATCCGAAACATACAGC	CCAATGGGCTCATTTCTC
Cheirodon_killiani_24964	CGACATCTCCACAGCCTTT	CTTCTGTAGCACATATCTGC	CGAGACGTAACACAGGCTG	AATTATCCGAAACATACAGC	CTAATGGGCTCATTTCTC
Cheirodon_australe_24979	CGACATCTCCACAGCCTTT	CCTCTGTAGGCTCATATGC	CGAGACGTAACACAGGCTG	AATTATCCGAATCATACTG	CTAATGGGCTCATTTCTC
Cheirodon_interruptu20486	CGACATCTCCACAGCCTTT	CCTCTGTAGCACATATCTGC	CGAGACGTAACACAGGCTG	AATTATCCGAAACATACAGC	CTAATGGGCTCATTTCTC
Cheirodon_killiani_19803	CGACATCTCCACAGCCTTT	CCTCTGTAGCACATATCTGC	CGAGACGTAACACAGGCTG	AATTATCCGAAACATACAGC	CCAATGGGCTCATTTCTC
Cheirodon_killiani_24969	CGACATCTCCACAGCCTTT	CCTCTGTAGCACATATCTGC	CGAGACGTAACACAGGCTG	AATTATCCGAAACATACAGC	CTAATGGGCTCATTTCTC
Cheirodon_australe_24963	CGACATCTCCACAGCCTTT	CCTCTGTAGCACATATCTGC	CGAGACGTAACACAGGCTG	AATTATCCGAAACATACAGC	CTAATGGGCTCATTTCTC
Cheirodon_interruptus_21266	CGACATCTCCACAGCCTTT	CCTCTGTAGCACATATCTGC	CGAGACGTAACACAGGCTG	AATTATCCGAAACATACAGC	CTAATGGGCTCATTTCTC
Cheirodon_ibicuihensis_25598	CGACATCTCCACAGCCTTT	CCTCTGTAGCACATATCTGC	CGAGACGTAACACAGGCTG	AATTATCCGAGCATACAGC	CTAATGGGCTGTCTCTGC
Cheirodon_killiani_24974	CGACATCTCCACAGCCTTT	CCTCTGTAGCACATATCTGC	CGAGACGTAACACAGGCTG	AATTATCCGAAACATACAGC	CTAATGGGCTCATTTCTC
Saccoderma_melanostigma_27475	CGACATCTCCACAGCTTCT	CTTCGCTAGCACACATCTGC	CGAGACGTAACCATGGCTG	AATAATCCGAAACATACAGC	CCAACGGAGCTCATTTTTC
Compsura_gorgonae_1	CGACATCTCTACAGCTTTT	CCTCCGTAGCACACATCTGC	CGAGACGTAAGTCATGGCTG	AATAATCCGAAACATACATG	CCAACGGAGCCTCATTTTTC
Odontostilbe_mitoptera_3	CGATATCTCCACAGCTTTT	CCTCCGTAGCACACATCTGC	CGAGACGTAACCATGGCTG	AATAATCCGAAACATACAGC	CCAACGGAGCTCATTTTTC
Compsura_sp_nova_4	CGACATCTCCACAGCTTCT	CCTCCGTAGCACACATCTGC	CGAGACGTAACCATGGCTG	AATAATCCGAAACATACAGC	CCAACGGAGCCTCATTTTTC

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Odontostilbe_dialepturus_2	CGACATCTCCACAGCTTTT	CCTCCGTAGCACACATATGG	CGAGACGTATACCATGGCTG	AATACACCGAAACATCAGCG	CCAACGGAGCCTCATTTTTC
Odontostilbe_pulchra_25845	TGACATCTCCACAGCATTTT	CTTCCGTAGCACATATTTGC	CGAGACGTCAACCACGGCTG	AATTATCCGAAATATACACG	CCAACGGAGCCTCATTTTTC
Odontostilbe_paraguayensis_20127	TGAAATCTCCACAGCATTTT	CTTCCGTAGCACATATCTGC	CGAGATGTAATCACGGTTG	AATTATCCGAAACATGCACG	CCAACGGGGCCTCATTTCTTC
Odontostilbe_spl_22626	CGACATCTCCACAGCCTTCT	CTTCTGTTGCACATATCTGC	CGAGATGTAACCACATGGCTG	AATTATCCGAAATATTATCA	CCAACGGAGCCTCATTTCTTC
Serrapinnus_microdon_17057	CGACATTTCTACAGCATTTCT	CTTCCGTAAACACATATCTGC	CGAGATGTAACCACGGTTG	AATTATCCGAAACATACATG	CCAACCGAGCCTCATTTCTTC
Kolpotocheirodon_theloura_25982	CGACATCTCCACAGCATTTCT	CTTCCGTAGCACACATCTGT	CGAGATGTAACCACGGCTG	AATTATCCGAAACATACACG	CCAACGGAGCCTCTTTTTTC
Macropsobrycon_uruguayanae_29061	CGAAATCTCTACAGCCTTCT	CTTCCGTAGCACACATCTGC	CGAGATGTAACCACGGCTG	AATTATCCGAAATATGCACG	CCAACGGAGCCTCTTTTTTC
Odontostilbe_pequira_24958	????????????????????	?????????????????ATCTGC	CGAGATGTAACCACGGTTG	AATTATCCGAAACATACACG	CCAACGGAGCCTCATTTCTTC
Odontostilbe_pequira_20124	CGACATCTCCACAGCATTTT	CTTCCGTAGCACACATCTGC	CGAGATGTAACCACGGTTG	AATTATCCGAAATATACATG	CCAACGGAGCCTCATTTCTTC
Odontostilbe_pequira_12659	CGACATCTCCACAGCATTTT	CTTCCGTAGCACACATCTGC	CGAGATGTAACCACGGTTG	AATTATCCGAAATATACATG	CCAACGGAGCCTCATTTCTTC
Acinocheirodon_melanogrammus_37551	CGACATCTCTACAGCATTTT	CTTCCGTAGCACATATTTGC	CGAGATGTAACCACGGTTG	AATCATCCGAAACATACATG	CCAACGGAGCCTCATTTCTTC
Serrapinnus_heterodon_20305	AGACATCTCTACACATTTT	CTTCCGTAGAACATATATGC	CGAGATGTAACCACGGTTG	AATCATCCGAAACATACATG	CCAACGGAGCCTCATTTCTTC
Odontostilbe_sp2_29616	CGACATCTCTACAGCATTTT	CTTCCGTAGCACATATCTGC	CGAGATGTAACCACGGTTG	AATTATCCGAAATATACATG	CCAACGGAGCCTCATTTCTTC
Kolpotocheirodon_figueiredoi_37576	CGAAATCTCCACAGCATTTT	CTTCCGTAGCACACATCTGT	CGAGATGTAACCACGGCTG	AATTATCCGAAACATGCATG	CCAACGGAGCCTCTTCTTTT
1Kolpotocheirodon_figueiredoi_37575	AGATATCTCCACAGCATTTT	CTTCCGTAGCACACATCTGT	CGAGATGTAACCACGGCTG	AATTATCCGAAACATGCATG	CCAACGGAGCCTCTTCTTTT
Serrapinnus_kriegi_25764	CGACATCTCCACAGCATTTCT	CTTCCGTAGCACACATCTGC	CGAGATGTTAATCAGCGTTG	AATTATCCGAAACATACACG	CCAACGGGGCTCATTTCTTC
Compsura_heterura_24984	CGACATCTCCACAGCATTTCT	CTTCCGTAGCACATATTTGC	CGAGATGTAATCAGCGTTG	AATTATCCGAAATATACACG	CCAACGGAGCCTCATTTCTTC
Gen_e_sp_nova_27603	CGACATCTCCACAGCATTTT	CTTCTGTAGCACATATCTGC	CGAGATGTTAACCACGGTTG	AATTATCCGAAACATGCACG	CCAACGGAGCCTCATTTCTTC
Acinocheirodon_cf_melanogrammus_37550	AGAAATCTCCACAGCATTTCT	CTTCTGTAGCACACATCTGC	CGAGATGTTAACCACGGCTG	AATTATCCGAAATATACACG	CCAACGGAGCCTCATTTTTC
1Aphyocheirodon_hemigrammus_40027	CGACATCTCTACAGCATTTCT	CTTCCGTAGCACACATCTGC	CGAGATGTTAACCACGGTTG	AATTATCCGAAACATGCACG	CCAACGGGGCCTCATTTTTTC
Aphyocheirodon_hemigrammus_40025	CGACATCTCTACAGCATTTCT	CTTCCGTAGCACACATCTGC	CGAGATGTTAACCACGGTTG	AATTATCCGAAACATGCACG	CCAACGGGGCCTCATTTTTTC
Tetragonopterus_argenteus_22029	AGACATCTCAACAGCCTTCT	CCTCAGTTGTCACACATCTGC	CGAGACGTAACCCGAGATG	AGCCATTCCGAAATATTATG	CCAACGGAGCCTCATTTCTTC
Serrapinnus_notomelas_19890	CGACATCTCCACAGCATTTCT	CATTCTGTAGCACACAGCTGC	CGAGATGTAACCACGGTTG	AATTATCCGAAACATGCACG	CCAACGGAGCCTCATTTCTTC
Serrapinnus_notomelas_18293	CGACATCTCCACAGCATTTCT	CTTCCGTAGCACACATCTGC	CGAGATGTAACCACGGTTG	AATTATCCGAAACATGCACG	CCAACGGAGCCTCATTTCTTC
Cheirodon_stenodon_20130	CGACATCTCTACAGCCTTCT	CTTCCGTAGCACACATCTGC	CGAGACGTAACCCACGGTTG	AATTATCCGAAACATGCACG	CCAACGGGGCCTCATTTCTTC
Serrapinnus_spl_22401	AGACATCTCCACAGCATTTCT	CTTCCGTAAACACATCTGC	CGAGATGTAACCACGGTTG	AATTATCCGAAACATGCACG	CCAACGGAGCCTCATTTCTTC
Odontostilbe_fugitiva_22932	CGACTTCTCCTCTGCCTTCT	CTTCCGTAGCGCGCTCTGC	CGATACGATCACTACGGCTG	AATCATCCGAAACATGCACG	CCAACGGGGCCTCATTTCTTC
Cheirodon_pulcher_8	CGCAATCTCCACAGCATTTCT	CTTCCGTAGCACACATCTGC	CGAGATGTTAACCACGGTTG	AATTATCCGAAATATGCACG	CCAACGGAGCTCATTTCTTC
Odontostilbe_fugitiva_23714	CGACATCTCCACACCATTTCT	CTTCCGTAGCACACATCTGC	CGAGATGTTAACCACGGCTG	AATTATCCGAAACATGCACG	CCAACGGGGCCTCATTTCTTC
Serrapinnus_calliurus_22121	CGACATCTCCACAGCATTTCT	CTTCCGTAGCACACATCTGC	CGAGATGTAATCAGCGTTG	AATTATCCGAAACATGCACG	CCAACGGAGCCTCATTTCTTC
Serrapinnus_calliurus_25768	CGACATCTCCACAGCATTTCT	CTTCCGTAGCACACATCTGC	CGAGATGTAATCAGCGTTG	AATTATCCGAAACATGCACG	CCAACGGAGCCTCATTTCTTC
Odontostilbe_ecuadorensis_9	CGGCATCTCCATACCATTTCT	CATTCTGCAACGATGTGCAC	GAGCATGTAACTCATGGCTG	AATTATCCGAAACATGCACG	CCAACGGAGCCTCATTTCTTC
Cynopotamus_magdalenae_29515	CGACATCTCCACAGCCTTCT	CTTCCGTAGCCGATATATGT	CGAGATGTAATCATGGATG	AATTATCCGAAATATGCACG	CCAACGGAGCCTCATTTCTTC
Phenacogaster_sp_27299	AGATATCTCTACAGCCTTCT	CCTCTGTAGCCCATATCTGC	CGAGACGTCAACTACGGATG	AATTATCCGAAATATACATG	CTAACGGGGCCTCATTTCTTC
Aphyocharacidium_sp_33167	AGATATTTCTACAGCTTTCT	CATCCGTAGCCCATATTTGT	CGGGATGTAATACGGGTG	AGTCATTCCGAAATATACATG	CTAACGGAGCCTCATTTCTTC
Hemibrycon_sp_33168	GGAGGGTCTCCACAGCTTTT	CCTCCGAAGCCGAAATCTGC	CGAGATGTTAACTACGGATG	AGTTATCCGAAACATGCACG	CCAATGGAGCATCATTTCTTC
Brycon_insignis_16075	TTTATCTGCCTTTATCTACA	CGTTGGCCGAGGATTATACT	ACGGATCATACGTGTACATA	AAACATGAAATGTCCGAGT	CGTACTTCTACTCTCGGTAA
Gnatopoma_24494	TTTATTTGTATCTATTTC	TATTTGGTCGAGGACTATATT	ATGGCTCCTACTTATATATA	GAACATGAAACATTGGAGT	AATTCTTCTCTCTAGTAA
Macropsobrycon_xinguensis_40499	TTTATCTGCATCTACCTACA	CATCGGACGAGGGCTCTACT	ACGGGCTCCTACTCTACAAA	GAACATGAAACATCTGAGT	AATCTCTACTACTAGTAA
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	TTTATCTGTATTTACCTCCA	CATCGGCCGAGGCTTTACT	ATGGCTCTTACTTATATATA	GAACATGAAACATTGGAGT	AGTCTCTTTACTATTATTA
Aphyocharax_anisitsi_12660	TTTATCTGCATTTACCTACA	CATCGGCCGAGGCTCTATT	ATGGATCCTATCTTTATATA	GAACATGAAATATCGGCTG	CGTCTCTCTCTCTAGTGA
Carlana_eigenmani_19864	TTTATCTGTATTTACATACA	CATTGGCCGAGGCTTACT	ACGGGCTCCTACTTATATA	GAACATGAAACATTGGTGT	AATTCTTTTTTACTAGTGA
Astyanax_mexicanus_24599	TTTATCTGTATTTACCTCCA	TATTTGGCCGAGGCTTTACT	ACGGCTCTTACTGTATATA	GAGACATGAAACATTGGTGT	TATTTCTCTCTCTAGTGA
Spintherobolus_broccae_22558	TTTATTTGTATCTACTTCCA	CATCGGTGAGGACTTATAT	ATGGTCTTACTTATATATA	GAGACATGAAATATTGGTGT	AGTCTCTCTCTCTGGTAA
Spintherobolus_leptoura_36098	TTTATTTGTATTTACTTCCA	CATCGGTGAGGCTTATAT	ATGGCTCTTACTTATATA	GAGACATGAAATATCGGTGT	AGTCTCTCTCTCTGGTAA
Spintherobolus_ankoseion_24957	TTTATTTGTATTTACTTCCA	CATCGGTGAGGCTTATAT	ATGGCTCTTACTTATATA	GAGACATGAAATATCGGTGT	AATTTCTCTCTCTGGTAA
Charax_leticiae_12700	TTTATTTGCATTTACCTCCA	CATCGGCCGAGGCTTTACT	ATGGCTCATACTTTTACAAA	GAACATGAAACATTGGGCTG	AATTTCTTCTTACTAGTGA
Diapoma_sp_21274	TTTATTTGCATTTATTTTCCA	CATTGGCCGAGGCTTTACT	ACGGCTCTTACTTTTACAAA	GAACATGAAACATTGGTGT	AGTCTTCTTCTTCTGTAA
Prodontocharax_melanotus_10	TTTATCTGCATTTATTTCCA	TATTTGGCCGATGGCTTACT	ATGGCTCCTACTGTACAAA	GAACATGAAACATTGGTGT	AGTACTTCTCTCTAGTAA
Prodontocharax_sp_7	TTTATCTGCATTTATTTCCA	CATTGGCCGAGGCTTTACT	ACGGCTCCTACTGTACAAA	GAACATGAAACATTGGTGT	AGTACTTCTCTCTAGTAA
Nanocheirodon_insignis_27476	TTTATTTGTATTTACTCCCA	CATTGGCCGAGGCTTTACT	ATGGATCCTATTTATATA	GAACATGAAACATTGGTGT	AATCTCTCTCTCTAGTAA
Pseudocheirodon_arnoldi_5	TTTATTAGCATTTATTTCCA	CATTGGTGGAGGCTTTACT	ACGGTCTCTACTTATACAA	GAACATGAAATATTGGAGT	AGTACTTCTCTCTAGTAA
Pseudocheirodon_terraba_6	TTTATTGCAATTTATTTCCA	CATTGGCCGAGGCTTTACT	ACGGTCTACTTATACAAA	GAACATGAAATATTGGAGT	AGTACTTCTCTCTAGTAA
Heterocheirodon_yatai_24954	TACATCTGTATTTACTTCCA	CATCGGCCGAGGCTTTACT	ATGGCTCATACTTATATA	GAACATGAAACATTGGTGT	AATCTCTCTCTTTAGTAA
Cheirodon_killiani_24964	TTTATCTGTATCTATTTTCCA	CATCGGCCGAGGCTTTACT	ATGGATCCTACTTATATA	GAACATGAAACGTTGGTGT	AGTACTACTCTTTTAAACAA
Cheirodon_australe_24979	TTTATCTGTATCTATTTTCCA	TATTTGGCCGAGGCTTTACT	ATGGCTCCTACTTATATA	GAACATGAAACGTTGGTGT	AGTACTACTCTTTTAAACAA
Cheirodon_australe_22558	TTTATCTGTATCTATTTTCCA	TATTTGGCCGAGGCTTTACT	ATGGCTCCTACTTATATA	GAACATGAAACGTTGGTGT	AGTACTACTCTTTTAAACAA
Cheirodon_killiani_19803	TTTATCTGTATCTATTTTCCA	CATCGGCCGAGGCTTTACT	ATGGCTCCTACTTATATA	GAACATGAAACGTTGGTGT	AGTACTACTCTTTTAAACAA
Cheirodon_killiani_24969	TTTATCTGTATCTATTTTCCA	CATCGGCCGAGGCTTTACT	ATGGCTCCTACTTATATA	GAACATGAAACGTTGGTGT	AGTACTACTCTTTTAAACAA
Cheirodon_australe_24963	TTTATCTGTATCTATTTTCCA	TATTTGGCCGAGGCTTTACT	ATGGCTCCTACTTATATA	GAACATGAAACGTTGGTGT	AGTACTACTCTTTTAAACAA
Cheirodon_interruptus_21266	TTTATCTGTATCTATTTTCCA	TATTTGGCCGAGGCTTTACT	ATGGCTCCTACTTATATA	GAACATGAAACGTTGGTGT	AGTACTACTCTTTTAAACAA
Cheirodon_ibicuhiensis_25598	TTTATCTGTATTTATTTTCCA	CATCGGCCGAGGCTTTACT	ATGGCTCCTACTTATATA	GAACATGAAACATTGGTGT	AGTACTACTCTTTTAAACAA
Cheirodon_killiani_24974	TTTATCTGTATCTATTTTCCA	CATCGGCCGAGGCTTTACT	ATGGCTCCTACTTATATA	GAACATGAAACGTTGGTGT	AGTACTACTCTTTTAAACAA
Saccoderma_melanostigma_27475	TTTATTTGTATTTACTTCCA	CATTGGCCGAGGCTTTACT	ATGGCTCATACTCTACAAA	GAACATGAAACATTGGTGT	AGTCTCTCTCTCTGGTAA
Compsura_gorgonae_1	TTTATTTGTATTTACTTCCA	CATTGGCCGAGGCTTTACT	ACGGCTCATACTCTACAAA	GAACATGAAACATTGGTGT	AGTACTTCTCTCTCGTAA
Odontostilbe_mitoptera_3	TTTATTTGTATTTACTTCCA	CATTGGCCGAGGCTTTACT	ACGGCTCATACTCTACAAA	GAACATGAAACATTGGTGT	AGTACTTCTCTCTAGTAA
Compsura_sp_nova_4	TTTATTTGTATTTACTTCCA	CATTGGCCGAGGCTTTACT	ACGGCTCATACTCTACAAA	GAACATGAAACATTGGTGT	AGTACTTCTCTCTAGTAA
Odontostilbe_dialepturus_2	TTTATCTGTATCTACTTCCA	TATTTGGCCGAGGCTTTACT	ACGGCTCATACTCTACAAA	GAACATGAAACATTGGTGT	AGTACTTCTCTCTAGTAA
Odontostilbe_pulchra_25845	TTTATTTGCATTTACTTCCA	CATTGGACGAGGCTTTACT	ACGGCTCTTATCTATATA	GAGACATGAAATATTGGCGT	AGTACTACTCTCTTAGTAA
Odontostilbe_paraguayensis_20127	TTTATTTGCATTTATTTCCA	CATTGGTCGAGGCTTTACT	ATGGCTCTTACTTTTACAAA	GAACATGAAACATTGGCGT	AGTACTACTCTTATTAGTAA
Odontostilbe_spl_22626	TTTATTTGTATTTACTTCCA	CATTGGCCGAGGCTTTACT	ACGGCTCTTACTTATATA	GAACATGAAACATTGGCGT	AGTACTCTCTCTCTAGTAA
Serrapinnus_microdon_17057	TTTATTTGGATTTATTTTCCA	TATTTGGCCCAAGCCTTTACT	ACGGCTCATACTTATATA	GAACATGAAATATTAGTAT	AATACTACTTCTCTTAGTAA
Kolpotocheirodon_theloura_25982	TTTATCTGCATTTATTTTCCA	CATTGGTCGAGGCTTTACT	ATGGTCTCATACTTATATA	GAACATGAAACATTGGCGT	AGTACTACTCTCTTAGTGA
Macropsobrycon_uruguayanae_29061	TTTATTTGTATTTATTTTCCA	CATCGGTGAGGCTTACT	ACGGCTCATACTGTACAAA	GAACATGAAATATTGGCGT	AGTACTCTCTCTTAGTAA

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Odontostilbe_pequirá_24958	TTTATTTCGATTACTTCCA	TATGGTCGAGGCCCTTTACT	ATGGTTCCTACCTTTATATAA	GAACATGAAATATTGGTGT	AGTACTACTTCTATTAGTTA
Odontostilbe_pequirá_20124	TTTATTTCGATTACTTCCA	TATGGTCGAGGCCCTTTACT	ATGGTTCCTACCTTTACAAA	GAACATGAAATATTGGTGT	AGTACTACTCCTATTAGTTA
Odontostilbe_pequirá_12659	TTTATTTCGATTACTTCCA	TATGGTCGAGGCCCTTTACT	ATGGTTCCTACCTTTATATAA	GAACATGAAATATTGGTGT	AGTACTACTTCTATTAGTTA
Acinocheiroidon_melanogrammus_37551	TTTATTTCGATTACTTCCA	CATTGGTCGAGGCCCTTTACT	ATGGCTCCTACCTATATATAA	GAACATGAAATATTGGTGT	AGTACTACTTCTATTAGTTA
Serrapinnus_heterodon_20305	TTTATTTCGATTACTTCCA	CATTGGTCGAGGCCCTTTACT	ATGGCTCCTACCTATATATAA	GAACATGAAATATTGGTGT	AGTACTACTTCTATTAGTTA
Odontostilbe_sp2_29616	TTTATTTCGATTACTTCCA	CATCGGTCGAGGCCCTTTACT	ATGGTTCCTACCTATATATAA	GAACATGAAATATTGGTGT	TGTACTACTTCTACTAGTTA
Kolpotocheiroidon_figueiredoi_37576	TTTATCTGCATTATTTTCCA	CATTGGCCGAGGCCCTTTACT	ACGGCTCATACCTATACAAA	GAACATGAAACATTGGTGT	AATCCTACTCCTATTAGTAA
1Kolpotocheiroidon_figueiredoi_37575	TTTATCTGCATTATTTTCCA	CATTGGCCGAGGCCCTTTACT	ACGGCTCATACCTATACAAA	GAACATGAAACATTGGTGT	AATCCTACTCCTATTAGTAA
Serrapinnus_kriegi_25764	TTTATCTGCATTATTTTCCA	CATTGGTCGAGGCCCTTTACT	ACGGCTCCTACCTTTACAAA	GAACATGAAATATTGGTGT	AGTACTACTTCTCTTAGTAA
Compsura_heterura_24984	TTTATCTGCATTACTTCCA	CATCGGTCGGGGCCTCTACT	ATGGCTCTTACCTTTATATAA	GAGACATGAAATATCGGCGT	AGTATTACTCCTCTTAGTAA
Gen_e_sp_nova_27603	TTTATTTCGATCTATTTTCCA	CATTGGTCGAGGCCCTTTACT	ACGGATCTTACCTCTACAAA	GAACATGAAACATTGGTGT	AGTACTACTTCTCTTAGTAA
Acinocheiroidon_cf_melanogrammus_37550	TTTATTTCGATCTATTTTCCA	CATTGGTCGAGGCCCTTTACT	ATGGTTCCTACCTATATATAA	GAACATGAAACATTGGTGT	AGTACTACTTCTCTTAGTAA
1Aphyocheiroidon_hemigrammus_40027	TTTATTTCGATCTATTTTCCA	CATTGGTCGAGGCCCTTTACT	ATGGCTCCTACCTATATATAA	GAACATGAAATATTGGCGT	AGTACTACTTCTCTTAGTAA
Aphyocheiroidon_hemigrammus_40025	TTTATTTCGATCTATTTTCCA	CATTGGTCGAGGCCCTTTACT	ATGGCTCCTACCTATATATAA	GAACATGAAATATTGGCGT	AGTACTACTTCTCTTAGTAA
Tetragonopterus_argenteus_22029	TTTATCTGTCTTATTCTTCCA	CATTGGCCGAGGCCCTCTACT	ACGGCTCTTATGTTTACATA	GAACATGAAACATTGGTGT	AATCCTATTCTTTTAGTAA
Serrapinnus_notomelas_19890	TTTATTTCGATTACTTCCA	CATTGGTCGAGGCCCTTTACT	ATGGCTCCTACCTTTACAAA	GAACATGAAATATTGGCGT	AGTACTACTCCTCTTAGTAA
Serrapinnus_notomelas_18293	TTTATTTCGATTACTTCCA	CATTGGTCGAGGCCCTCTACT	ATGGCTCCTACCTCTACAAA	GAACATGAAATATTGGCGT	AGTACTACTTCTCTTAGTAA
Cheiroidon_stenodon_20130	TTTATTTCGATTACTTCCA	TATTGGCCGAGGCCCTTTACT	ACGGCTCATACCTATATATAA	GAACATGAAATATTGGCGT	AGTATTACTTCTCTTAGTAA
Serrapinnus_spl_22401	TTTATTTCGATTACTTCCA	CATTGGTCGAGGCCCTCTACT	ATGGCTCCTACCTTTACAAA	GAACATGAAATATTGGCGT	AGTACTACTTCTCTTAGTAA
Odontostilbe_fugitiva_22932	TTTATTTCGATTACTTCCA	CATTGGTCGAGGCCCTTTACT	ATGGCTCCTACCTTTACAAA	GAACATGAAATATTGGCGT	AGTACTACTTCTCTTAGTAA
Cheiroidon_pulcher_8	TTTATTTCGATTACTTCCA	CATTGGTCGAGGCCCTTTACT	ATGGCTCCTACCTATATATAA	GAACATGAAATATTGGCGT	AGTACTACTTCTCTTAGTAA
Odontostilbe_fugitiva_23714	TTTATTTCGATTACTTCCA	CATTGGTCGAGGCCCTTTACT	ATGGCTCCTACCTTTACAA	GAACATGAAATATTGGCGT	AGTACTACTTCTCTTAGTAA
Serrapinnus_calliurus_22121	TTTATTTCGATTACTTCCA	CATTGGTCGAGGCCCTCTACT	ATGGCTCCTACCTTTACAAA	GAACATGAAATATTGGCGT	AGTACTACTTCTCTTAGTAA
Serrapinnus_calliurus_25768	TTTATTTCGATTACTTCCA	CATTGGTCGAGGCCCTCTACT	ATGGCTCCTACCTCTACAAA	GAACATGAAATATTGGCGT	AGTACTACTTCTCTTAGTAA
Odontostilbe_ecuadorensis_9	TTTATTTCGATTACTTCCA	CATTGGTCGAGGCCCTTACT	ATGGCTCCTACCTTTACAAA	GAACATGAAATATCGGCGT	AGTACTACTTCTCTTAGTAA
Cynopotamus_magdaleneae_29515	TTTATTTCGATTACTTCCA	CATTGGCCGAGGCCCTTTACT	ATGGCTCATACGCTATATATA	GAACATGAAATATTGGTGT	CGTCTATTATTACTAGTAA
Phenacogaster_sp_27299	TTTATCTGTATTACTTCCA	CATCGGCCGAGGCCCTTTACT	ACGGCTCCTACCTGTATATAA	GAACATGAAATATTGGAGT	TATTCTTCTCTTTTAGTAA
Aphyocharacidium_sp_33167	TTTATTTCGATTACTTCCA	TGTGGCCGAGGCCCTTTACT	ACGGATCCTTCTTTATATAA	GAACATGAAATATTGGTGT	GATTCTTCTCTTAGTAA
Hemibrycon_sp_33168	TTTATCTGCATTATTTTCCA	CATTGGCCGAGGCCCTTACT	ATGGCTCCTACCTCTACAAA	GAACATGAAACATCGGCGT	AGTACTGTTACTTCTAGTAA
Brycon_insignis_16075	TAGCAACCGCATTCTGAGGG	TATGTTTTACCATTGGGGACA	AATATCTTTCTGAGGTGCCA	CAGTAATTACCAACCTCTTA	TCAGCTATTCTTATGTGCG
Gnatocharax_sp_24494	TAATAACCGCATTCTGCGGC	TACGTCTTACCATGAGGACA	AATATCTTTCTGAGGGGCCA	CCGTATTACCAAACTCTCT	TCTCGTGTCCATATGTTGG
Macropsobrycon_xinguensis_40493	TAATAACCGCATTCTGAGGA	TACGTCTCTCCCTGAGGACA	AATATCTTTCTGAGGGGGCC	CCGTGATCAGAAAACACTCT	TCCGCATCCCTCTATGAGG
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	TAATAACTGCATTCTGAGGC	TATGTCCTACCATGAGGACA	AATATCATTTCTGAGGGGCCA	CCGTAAATCAGAACTCTCT	TCAGCTGTCCCATACGATAGG
Aphyocharax_anisitsi_12660	TAATAACCGCATTCTGCGGC	TATGTCCTACCATGAGGGACA	AATGTCCTTTTCTGAGGTGCCA	CAGTAATTACGAACTCTCT	TCCCGCGTCCCTCATACATAGG
Carlana_eigenmanni_19864	TAATAACCGCATTCTGTGGA	TATGTCCTTCCATGAGGACA	AATATCTTTCTGAGGGGCTA	CAGTAATTACAAACCTCTCT	TCTCGAGTCTCTTATATGTTG
Astyanax_mexicanus_24599	TAATAACTGCATTCTGTGGC	TATGTCCTCCCATGAGGACA	AATATCTTTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCTCGAGTCCCTATATAGG
Spintherobolus_brocceae_22558	TAATAACTGCATTCTGTGGGT	TATGTCCTCCCTGAGGACA	AATATCTTCTGAGGTGCTA	CTGTAATTACCAACCTCTCT	TCCCGAGTCCCATATATAGG
Spintherobolus_leptoura_36098	TAATAACTGCATTCTGTGGGT	TATGTCCTCCCATGAGGACA	AATATCTTCTGAGGGGCTA	CTGTAATTACCAACCTCTCT	TCCCGAGTCCCTATATAGG
Spintherobolus_ankoseion_24957	TAATAACTGCATTCTGTGGGT	TATGTCCTCCCATGAGGACA	AATATCTTCTGAGGGGCTA	CTGTAATTACCAACCTCTCT	TCCCGAGTCCCTATATAGG
Charax_leticiae_12700	TAATAACTGCATTCTGAGGT	TATGTCCTTACCTGAGGACA	AATATCTTCTGAGGGGCTA	CAGTAATTACCAACCTCTCT	TCTCGAGTCCCTTATGTTGG
Diapoma_sp_21274	TAATAACCGCATTCTGAGGC	TACGTCTTCCATGAGGGACA	AATATCTTTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCTCGAGTCCCTATATAGG
Prodontocharax_melanotus_10	TAATAACTGCATTCTGTGGGT	TATGTCCTCCCTGAGGACA	AATATCTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCCCGAGTACCTCATATAGG
Prodontocharax_sp_7	TAATAACTGCATTCTGTGGGT	TATGTCCTCCCTGAGGACA	AATATCTTCTGAGGGGCCA	CAGTAATTACCAATCTCTCT	TCCCGAGTACCTCATATAGG
Nanocheiroidon_insignis_24776	TAATAACTGCATTCTGTGGC	TATGTCCTCCCTGAGGACA	AATATCTTCTGAGGTGCTA	CAGTAATTACCAACCTCTCT	TCTCGAGTCCCTATATAGG
Pseudocheiroidon_arnoldi_5	TAATAACTGCATTCTGTAGGC	TATGTCCTTCCCTGAGGACA	AATATCTTTTCTGAGGAGCAA	CAGTAATTACCAACCTCTCT	TCTCGAGTCCCTCATATAGG
Pseudocheiroidon_terrabeae_6	TAATAACTGCATTCTGTAGGC	TACGTCTTCCCTGAGGACA	AATATCTTTTCTGAGGGGCCA	CAGTAATTACCAACCTCTCT	TCTCGAGTCCCTCATATAGG
Heterocheiroidon_yatai_27292	TAATAACCGCATTCTGTAGGC	TATGTCCTTCCCTGAGGACA	AATATCTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCTCGAGTACCTCATATAGG
Cheiroidon_killiani_24964	TAATAACCGCATTCTGTAGGC	TACGTCTTCCCTGAGGACA	AATATCTTCTGAGGGGCCA	CAGTAATTACCAACCTCTCT	TCCCGAGTACCTCATATAGG
Cheiroidon_australe_24979	TAATAACCGCATTCTGTAGGC	TACGTCTTCCCTGAGGACA	AATATCTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCCCGAGTCCCTATATAGG
Cheiroidon_interruptu_20486	TAATAACCGCATTCTGTGGGC	TACGTCTTCCCTGGGGACA	AATATCTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCCCGAGTACCTCATATAGG
Cheiroidon_killiani_19803	TAATAACCGCATTCTGTGGGC	TACGTCTTCCCTGAGGACA	AATATCTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCCCGAGTCCCTCATATAGG
Cheiroidon_killiani_24969	TAATAACCGCATTCTGTGGGC	TACGTCTTCCCTGAGGACA	AATATCTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCCCGAGTACCTCATATAGG
Cheiroidon_australe_24963	TAATAACCGCATTCTGTAGGC	TACGTCTTCCCTGAGGACA	AATATCTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCCCGAGTCCCTATATAGG
Cheiroidon_interruptus_21266	TAATAACCGCATTCTGTGGGC	TACGTCTTCCCTGGGGACA	AATATCTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCCCGAGTCCCTATATAGG
Cheiroidon_ibicuhiensis_25598	TGATAACCGCATTCTGTAGGC	TACGTCTTCCCTGAGGACA	AATATCTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCTCGAGTACCTCATATAGG
Cheiroidon_killiani_24974	TAATAACCGCATTCTGTGGGC	TACGTCTTCCCTGAGGACA	AATATCTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCCCGAGTACCTCATATAGG
Saccoderma_melanostigma_27475	TAATAACTGCATTCTGTGGC	TATGTCCTCCCATGAGGACA	AATATCTTTTCTGAGGTGCCA	CAGTAATTACCAACCTCTCT	TCCCGAGTACCTATATAGG
Compsura_gorgonae_1	TAATAACTGCATTCTGTGGC	TATGTCCTCCCATGAGGACA	AATATCTTTTCTGAGGTGCCA	CAGTAATTACCAATCTCTCT	TCCCGAGTCCCTATATAGG
Odontostilbe_mitoptera_3	TAATAACTGCATTCTGTGGC	TATGTCCTCCCATGAGGACA	AATATCTTTTCTGAGGTGCCA	CAGTAATTACCAATCTCTCT	TCCCGAGTACCTATATAGG
Compsura_sp_nova_4	TAATAACTGCATTCTGTGGC	TATGTCCTCCCATGAGGACA	AATATCTTTTCTGAGGTGCCA	CAGTAATTACCAATCTCTCT	TCCCGAGTCCCTATATAGG
Odontostilbe_dialepturus_2	TAATAACTGCATTCTGTGGC	TATGTCCTCCCATGAGGACA	AATATCTTTTCTGAGGTGCCA	CAGTAATTACCAATCTCTCT	TCCCGAGTACCTATATAGG
Odontostilbe_pulchra_25845	TATGACTGCATTCTGTAGGC	TATGTCCTCCCTGAGGACA	AATATCTTCTGAGGTGCTA	CAGTAATTACCAATCTCTCT	TCCCGAGTCCCTCATATAGG
Odontostilbe_paraguayensis_20127	TAATAACTGCATTCTGTGGGT	TACGTCTTCCCTGAGGACA	AATATCATTTCTGAGGTGCTA	CAGTAATTACCAATCTCTCT	TCCCGAGTCCCTATATAGG
Odontostilbe_spl_22626	TAATAACTGCATTCTGTGGC	TACGTCTTCCCATGAGGACA	AATATCTTCTGAGGTGCCA	CAGTAATTACCAACCTCTTA	TCCCGAGTACCTATATAGG
Serrapinnus_microdon_17057	TAATAACTGCATTCTGTAGGC	TATGTCCTCCCTGAGGACA	AATATCTTTTCTGAGGGGCCA	CAGTAATTACCAATCTCTCT	TCCCGAGTACCTCATATAGG
Kolpotocheiroidon_theloura_25982	TAATAACTGCATTCTGTAGGC	TACGTCTTCCCTGAGGACA	AATATCTTCTGAGGTGCTA	CAGTAATTACCAACCTCTCT	TCCCGGTCCTCTATATAGG
Macropsobrycon_uruguayanae_29061	TAATAACTGCATTCTGTGGGC	TACGTCTTCCCTGAGGACA	AATATCTTCTGAGGTGCTA	CAGTAATTACCAACCTCTCT	TCCCGAGTCCCTATATAGG
Odontostilbe_pequirá_24958	TATGACTGCATTCTGTAGGC	TATGTCCTCCCTGAGGACA	AATATCTTTTCTGAGGGGCCA	CAGTAATTACCAATCTCTCT	TCCCGAGTCCCTCATATAGG
Odontostilbe_pequirá_20124	TAATAACTGCATTCTGTAGGC	TATGTCCTCCCTGAGGACA	AATATCTTTTCTGAGGGGCCA	CAGTAATTACCAATCTCTCT	TCCCGAGTCCCTATATAGG
Odontostilbe_pequirá_12659	TAATAACTGCATTCTGTAGGC	TATGTCCTCCCTGAGGACA	AATATCTTTTCTGAGGGGCCA	CAGTAATTACCAATCTCTCT	TCCCGAGTCCCTATATAGG
Acinocheiroidon_melanogrammus_37551	TAATAACTGCATTCTGTAGGC	TATGTCCTCCCTGAGGACA	AATATCTTTTCTGAGGGGCCA	CAGTAATTACCAATCTCTCT	TCCCGAGTCCCTATATAGG
Serrapinnus_heterodon_20305	TAATAACTGCATTCTGTAGGC	TATGTCCTCCCTGAGGACA	AATATCTTTTCTGAGGGGCCA	CAGTAATTACCAATCTCTCT	TCCCGAGTCCCTATATAGG
Odontostilbe_sp2_29616	TAATAACGACATTCTGTGGGC	TATGTCCTCCCTGAGGACA	AATATCTTTTCTGAGGGGCCA	CAGTAATTACCAACCTCTCT	TCCCGAGTCCCTACGTGGG
Kolpotocheiroidon_figueiredoi_37576	TAATAACTGCATTCTGTAGGC	TACGTCTTCCCTGAGGACA	AATATCTTCTGAGGTGCTA	CAGTAATTACCAACCTCTCT	TCCCGAGTCCCTATATAGG

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Kolpotocheirodon_figueiredoi_37575	TAATAACTGCATTGCTAGGC	TACGTCTCCCTGAGGACA	AATATCCTTCTGAGGTGCTA	CAGTAATTACAAACCTTCTT	TCCGCAGTCCCTTATATAGG
Serrapinnus_kriegi_25764	TAATAACCGCATTGTAGGA	TACGTCTCCCTGAGGACA	GATATCCTTCTGAGGTGCCA	CAGTAATTACAAACCTTCTT	TCCGCAGTCCCTTACATAGG
Compsura_heterura_24984	TAATAACCGCATTGCTAGGC	TACGTCTCCCTGAGGACA	GATATCATTCTGAGGTGCCA	CAGTAATTACAAACCTTCTC	TCCGCAGTTCCTTATATAGG
Gen_e_sp_nova_27603	TAATGACTGCATTCTGGGCG	TACGTCTCCCTGAGGACA	AATATCCTTCTGAGGTGCTA	CAGTAATTACAAACCTTCTC	TCCGCAGTACCTTATATAGG
Acinocheirodon_cf_melanogrammus_37550	TAATAACTGCATTGTAGGA	TACGTCTCCCTGAGGACA	AATGTCTTCTGGGGGGCCA	CAGTAATTACAAACCTTCTC	TCCGCAGTTCCTTACATAGG
1Aphyocheirodon_hemigrammus_40027	TGATAACTGCATTGTGGGC	TACGTCTCCCTGAGGACA	AATATCCTTCTGAGGTGCCA	CAGTAATTACAAACCTTCTC	TCCGCAGTCCCTTATATAGG
Aphyocheirodon_hemigrammus_40025	TGATAACTGCATTGTGGGC	TACGTCTCCCTGAGGACA	AATATCCTTCTGAGGTGCCA	CAGTAATTACAAACCTTCTC	TCCGCAGTCCCTTATATAGG
Tetragonopterus_argenteus_22029	TAATAACCGCATTCTGGGCG	TATGTATTACCATGAGGACA	AATATCCTTCTGAGGTGCCA	CAGTAATTACAAATCTCCTA	TCCGCAGTCCCTACGTAGG
Serrapinnus_notomelas_19890	TAATAACCGCATTCTGAGGC	TACGTCTCCCTGAGGACA	AATATCATTCTGAGGTGCTA	CAGTAATTACAAACCTGCTC	TCCGCAGTTCCTTATATAGG
Serrapinnus_notomelas_18293	TAATAACCGCATTCTGAGGC	TACGTCTCCCTGAGGACA	AATATCATTCTGAGGTGCTA	CAGTAATTACAAACCTGCTC	TCCGCAGTTCCTTATATAGG
Cheirodon_stenodon_20130	TGATAACTGCATTCTAGGA	TACGTCTCCCTGAGGACA	GATATCCTTTGAGGTGCCA	CAGTAATTACAAACCTTCTC	TCCGCAGTCCCTATATAGG
Serrapinnus_spl_22401	TAATAACCGCATTCTGAGGC	TACGTCTCCCTGAGGACA	AATATCATTCTGAGGTGCTA	CAGTAATTACAAACCTGCTC	TCCGCAGTTCCTTATATAGG
Odontostilbe_fugitiva_22932	TAATAACCGCATTGTAGGT	TACGTCTCCCTGAGGACA	AATATCATTCTGAGGTGCTA	CAGTAATTACAAACCTTCTA	TCCGCAGTTCCTTATATAGG
Cheirodon_pulcher_8	TGATAACTGCATTCTAGGT	TACGTCTCCCTGAGGACA	AATATCCTTCTGAGGTGCCA	CAGTAATTACAAACCTTCTC	TCCGCAGTTCCTTATATAGG
Odontostilbe_fugitiva_23714	TAATAACCGCATTGTAGGT	TATGTCTCCCTGAGGACA	AATATCATTCTGAGGTGCTA	CAGTAATTACAAACCTTCTA	TCCGCAGTCCCTTATATAGG
Serrapinnus_calliurus_22121	TAATAACCGCATTCTGAGGT	TACGTCTCCCTGAGGACA	AATATCATTCTGAGGTGCTA	CAGTAATTACAAACCTGCTC	TCCGCAGTTCCTTATATAGG
Serrapinnus_spl_23168	TAATAACCGCATTCTGAGGT	TACGTCTCCCTGAGGACA	AATATCATTCTGAGGTGCTA	CAGTAATTACAAACCTGCTC	TCCGCAGTTCCTTATATAGG
Odontostilbe_ecuadorensis_9	TAATAACTGCATTCTGGGT	TACGTCTCCCTGAGGACA	AATATCATTCTGAGGTGCTA	CAGTAATTACAAATCTTCTC	TCTGCAGTCCCTACATAGG
Cynopotamus_magdaleneae_29515	TAATAACTGCATTCTAGGC	TATGTCTCCCTGAGGACA	AATATCTTTCTGAGGTGCTA	CAGTAATTACAAACCTTCTC	TCCGCAGTCCCTACATCGG
Phenacogaster_sp_27299	TAATAACTGCATTCTAGGC	TACGTCTCCCTGAGGACA	AATATCCTTCTGAGGTGCCA	CAGTAATTACAAACCTTCTC	TCCGCAGTTCCTTATGAGG
Aphyocheirodon_sp_33167	TAATAACCGCATTCTGCGCG	TACGTCTCCCTGAGGACA	AATATCATTCTGAGGTGCCA	CAGTAATTACAAATTTACTT	TCCGCAGTTCCTTATGAGG
Hemibrycon_sp_33168	TAATAACTGCATTCTGGGT	TACGTCTCCCTGAGGACA	AATATCCTTCTGAGGTGCCA	CAGTAATTACAAACCTTCTT	TCCGCAGTACCGTACATAGG
Brycon_insignis_16075	AGACCAACTCAGTCGATGAG	TATGAGGTGGCTTCTCCGTA	GACCACGCAACTCTCACCG	ATTCTTTGCCTTCCACTTCA	TTTTACCTTTTCTAATTGTA
Gnatocharax_sp_24494	AGACATGCTTGTGCAATGAA	TTTGAGGGGGGATTCTCTGTA	GACAACGCCACACTCACCG	ATTCTTTGCCTTTCATTTCG	TACTGCCATTACTATTGTA
Macropsobrycon_xinguensis_40499	AGAGCGCCTAATCCAATGAA	TTTGAGGAGGGTTCTCCATG	GACAACGCAACCTTAACAG	ATTCTTCGCCTTCCACTTCC	TACTGCCCTTTGCAATCGTA
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	AGACATACTAGTACAATGAA	TCTGAGGAGGCTTTCCGTT	GATAACGCAACCTTAACAG	ATTCTTTGCATTCCACTTTC	TACTGCCATTGCAATCGTA
Aphyocharax_anisitsi_12660	GTGCGCACTAGTACAATGAA	TCTGAGGCGGCTTCTCTGT	GACAATGCAACCTTAACAG	ATTCTTTGCCTTCCACTTTC	TCTTTCCATTGTAAATTGTA
Carlana_eigenmanni_19864	GGGTATTTAGTGCAAGTGAA	TTTGAGGGGGGTTTCCGTT	GATAACGCAACCTTAACAG	ATTCTTTGCCTTCCACTTTC	TCTTCCCATTTGTATTGTA
Astyanax_mexicanus_24599	AGATGCACCTAGTACAATGAA	TTTGAGGCGGCTTCTCCGTT	GACAATGCCACCTTAACAG	ATTCTTTGCCTTCCACTTTC	TCTTCCGCTTCGTATTATC
Spintherobolus_brocae_22558	AGATATACTAGTTCAATGAA	TTTGAGGGGGGTTTCTGTA	GATAACGCTACTCTAACAG	ATTCTTTGCCTTCCACTTTC	TTTTACCATTTAATTGTA
Spintherobolus_leptoura_36098	AGACATACTAGTTCAATGAA	TTTGAGGGGGGTTTCTGTA	GATAACGCTACTTTGACAG	ATTCTTTGCCTTCCACTTTC	TTTTACCATTTAATTGTA
Spintherobolus_ankoseion_24957	AGACATGCTAGTTCAATGAA	TTTGAGGGGGGTTTCTGTA	GATAACGCTACTTTGACAG	ATTCTTTGCCTTCCACTTTC	TTTTACCATTTAATTGTA
Charax_leticiae_12700	AGACACATTAGTACAATGAA	TTTGAGGGGGGTTTCTGTA	GACAATGCAACCTTGAACG	ATTCTTCGCTTCCACTTTC	TCTTCCATTGCGGTAGTA
Diapoma_sp_21274	AGATGCACCTAGTACAATGAA	TTTGAGGGGGGTTTCTGTT	GACAACGCAACTCTAACAG	ATTCTTCGCTTCCACTTTC	TCTTCCATTGCGGTAGTA
Prodontocharax_melanotus_10	AGAGCGCACTAGTCCAATGAA	TTTGAGGGCGGATTTCCGTA	GATAATGCAACTCTAACCG	ATTCTTCGCTTCCACTTTC	TACTTCCATTATTAATTGTA
Prodontocharax_sp_7	AGATGCACCTAGTCCAATGAA	TCTGAGGGGGGTTTCCGTA	GATAATGCAACCTTAACCG	GTCTTCGCTTCCACTTTC	TACTTCCATTGTAATTGTA
Nanocheirodon_insignis_27476	AGATATATAGTACAGCGAA	TCTGAGGGGGGTTTCTGTA	GACAATGCAACCTTAACCG	ATTCTTTGCCTTCCACTTTC	TACTGCCATTGTAAATTGTA
Pseudocheirodon_arnoldi_5	AGATGCACCTAGTACAATGAA	TTTGAGGTGGTTTTCCGTA	GATAATGCAACCTTAACCG	ATTCTTCGCTTCCACTTTC	TACTTCCATTGTAAATTGTA
Pseudocheirodon_terrabeae_6	AGAGCGCACTAGTACAATGAA	TTTGAGGTGGTTTTCCGTA	GATAATGCAACCTTAACCG	ATTCTTTGCCTTCCACTTTC	TATTCCCATTTGTAATTGTA
Heterocheirodon_yatai_24954	AGAGCGCACTAGTACAATGAA	TCTGAGGTGGTTTTCTGTA	GATAACGCAACCTTAACCG	ATTCTTCGCTTCCACTTTC	TATTCCCATTCGTATCGTA
Cheirodon_killiani_24964	AGATGCATTAGTACAATGAA	TTTGAGGTGGTTTTCTGTA	GACAATGCAACCTTAACCG	ATTCTTTGCATTCCACTTTC	TATTCCCATTTGTAATTGTA
Cheirodon_australe_24979	AGATGCATTAGTACAATGAA	TTTGAGGTGGTTTTCTGTA	GACAATGCAACCTTAACCG	ATTCTTTGCATTCCACTTTC	TATTCCCATTTGTAATTGTA
Cheirodon_interruptu20486	AGATGCATTAGTACAATGAA	TTTGAGGTGGTTTTCTGTA	GACAATGCAACCTTAACCG	ATTCTTTGCATTCCACTTTC	TATTCCCATTTGTAATTGTA
Cheirodon_killiani_19803	AGATGCATTAGTACAATGAA	TTTGAGGTGGTTTTCTGTA	GACAATGCAACCTTAACCG	ATTCTTTGCATTCCACTTTC	TATTCCCATTTGTAATTGTA
Cheirodon_killiani_24969	AGATGCATTAGTACAATGAA	TTTGAGGTGGTTTTCTGTA	GACAATGCAACCTTAACCG	ATTCTTTGCATTCCACTTTC	TATTCCCATTTGTAATTGTA
Cheirodon_australe_24963	AGATGCATTAGTACAATGAA	TTTGAGGTGGTTTTCTGTA	GACAATGCAACCTTAACCG	ATTCTTTGCATTCCACTTTC	TATTCCCATTTGTAATTGTA
Cheirodon_interruptu_21266	AGATGCATTAGTACAATGAA	TTTGAGGTGGTTTTCTGTA	GACAATGCAACCTTAACCG	ATTCTTTGCATTCCACTTTC	TATTCCCATTTGTAATTGTA
Cheirodon_ibicuhiensis_25598	GGATGCATTAGTACAATGAA	TTTGAGGTGGTTTTCTGTA	GACAATGCAACCTTAACCG	ATTCTTTGCATTCCACTTTC	TATTCCCATTTGTAATTGTA
Cheirodon_killiani_24974	AGATGCATTAGTACAATGAA	TTTGAGGTGGTTTTCTGTA	GACAATGCAACCTTAACCG	ATTCTTTGCATTCCACTTTC	TATTCCCATTTGTAATTGTA
Saccoderma_melanostigma_27475	CGATGCACCTAGTCCAATGAA	TCTGAGGTGGATTCTCTGTA	GATAATGCAACTCTAACCG	ATTCTTCGCTTCCACTTTC	TACTTCCATTGTTGGTAGTA
Compsura_gorgonae_1	CAATGCACCTAGTCCAATGAA	TTTGAGGGGGGTTTCCGTA	GATAATGCAACTCTAACCG	ATTCTTCGCTTCCACTTTC	TACTTCCATTGTTAGTAGTA
Odontostilbe_mitoptera_3	CAATGCACCTAGTCCAATGAA	TTTGAGGGGGGATTCTCCGTA	GATAATGCAACTCTAACCG	ATTCTTCGCTTCCACTTTC	TACTTCCATTGTTAGTAGTA
Compsura_sp_nova_4	CGATGCACCTAGTCCAATGAA	TTTGAGGTGGATTCTCCGTA	GACAATGCAACTCTAACCG	ATTCTTCGCTTCCACTTTC	TACTTCCATTGTTGGTAGTA
Odontostilbe_dialepturus_2	CAATGCACCTAGTCCAATGAA	TTTGAGGGCGGATTCTCCGTA	GACAATGCAACTCTAACCG	ATTCTTCGCTTCCACTTTC	TACTTCCATTGTTAGTAGTA
Odontostilbe_pulchra_25845	AGACATACTAGTCCAATGAA	TCTGAGGGGGGTTTCTCTGTA	GATAATGCAACCTTCAACCG	ATTCTTCGCTTCCACTTTC	TCTTCCCATTTGTAATTGTA
Odontostilbe_paraguayensis_20127	AGATGCACCTAGTACAATGAA	TCTGAGGGCGGTTCTCTGTA	GACAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TATTCCCATTTGTAATTGTA
Odontostilbe_spl_22626	AGAGCGCATTAGTCCAATGAA	TTTGAGGGCGGTTCTCTGTA	GACAATGCAACCTTCAACCG	ATTCTTCGCTTCCACTTTC	TACTTCCCATTCGTAATCATT
Serrapinnus_microdon_17057	AGAGCGCATTAGTCCAATGAA	TCTGGGTGGATTCTCCGTA	GATAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TGCTTCCCATTCGTAATTGTA
Kolpotocheirodon_theloura_25982	AGATGCATTAGTTCAATGAA	TCTGAGGTGGCTTCTCTGTA	GACAATGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TATTTCCATTCGTAATTGTA
Macropsobrycon_uruguayanae_29061	AGAGCGCACTAGTTCAATGAA	TTTGAGGGGGGTTTCTCTGTA	GACAATGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TATTTCCATTCGTAATTGTA
Odontostilbe_pequira_24958	AGAGCGCACTAGTCCAATGAA	TCTGAGGGCGGATTCTCCGTA	GATAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TACTTCCCATTCGTAATTGTA
Odontostilbe_pequira_20124	AGAGCGCACTAGTCCAATGAA	TCTGAGGGCGGATTCTCCGTA	GATAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TACTTCCCATTCGTAATTGTA
Odontostilbe_pequira_12659	AGAGCGCACTAGTCCAATGAA	TCTGAGGGCGGATTCTCCGTA	GATAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TACTTCCCATTCGTAATTGTA
Acinocheirodon_melanogrammus_37551	AGAGCGCACTAGTCCAATGAA	TCTGAGGTGGGTTTCTCCGTA	GATAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TACTTCCCATTCGTAATTGTA
Serrapinnus_heterodon_20305	AGAGCGCACTAGTCCAATGAA	TCTGAGGTGGGTTTCTCCGTA	GATAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TACTTCCCATTCGTAATTGTA
Odontostilbe_sp2_29616	GGAGCGCACTAGTCCAATGAA	TCTGAGGGGGGTTTCTCCGTA	GATAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TACTTCCCATTCGTAATTGTA
Kolpotocheirodon_figueiredoi_37576	AGATGCATTAGTTCAATGAA	TCTGAGGGCGGTTCTCTGTA	GACAATGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TATTTCCATTCGTAATTGTA
1Kolpotocheirodon_figueiredoi_37575	AGATGCATTAGTTCAATGAA	TCTGAGGGCGGTTCTCTGTA	GACAATGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TATTTCCATTCGTAATTGTA
Serrapinnus_kriegi_25764	AGATGCACCTAGTACAATGAA	TCTGAGGGCGGTTCTCTGTA	GATAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TGTTTCCCATTTGTAATTGTA
Compsura_heterura_24984	AGAGCGCACTAGTACAATGAA	TCTGAGGTGGCTTCTCTGTA	GACAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TATTTCCATTCGTAATTGTA
Gen_e_sp_nova_27603	AGAGCGCATTAGTACAATGAA	TCTGAGGTGGTTTCTCTGTT	GACAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TGTTTCCCATTCGTAATTGTA
Acinocheirodon_cf_melanogrammus_37550	AGATGCACCTAGTTCAATGAA	TCTGAGGGCGGTTCTCTGTA	GATAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TATTTCCATTCGTAATTGTA
1Aphyocheirodon_hemigrammus_40027	AGATGCACCTAGTCCAATGAA	TCTGAGGTGGCTTCTCCGTA	GACAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TATTTCCATTCGTAATTGTA
Aphyocheirodon_hemigrammus_40025	AGATGCACCTAGTCCAATGAA	TCTGAGGTGGCTTCTCCGTA	GACAACGCAACCTTCAACCG	ATTCTTTGCCTTCCACTTTC	TATTTCCATTCGTAATTGTA

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Tetragonopterus_argenteus_22029	AGATACCCCTAGTACAATGAA	CTGTAGGGGGGGTTTTCTGTA	GACTGCCCAACCCCTCACAG	ATTTTTTGCCTTCCACTTCC	TCCTACCATTTCGACAGTAGTA
Serrapinnus_notomelas_19890	AGATGCACTAGTACAATGAA	CTGTGGGTGGCTTCTCTGTA	GATAACGCAACCCCTCACCG	ATTCTTTGCCTTCCACTTCC	TATTCCCATTTCGTTATTGTA
Serrapinnus_notomelas_18293	AGATGCACTAGTACAATGAA	CTGTAGGTGGCTTCTCTGTA	GATAACGCAACCCCTCACCG	ATTCTTTGCCTTCCACTTCC	TATTCCCATTTCGTTATTGTA
Cheirodon_stenodon_20130	AGACGCACTAGTTCAATGAA	TTTGGGGCGGCTTCTCTGTA	GACAATGCAACCCCTCACCG	ATTCTTGCCTTCCACTTCC	TATTTCCATTTCGTAATTGTA
Serrapinnus_spl_22401	AGATGCACTAGTACAATGAA	CTGTAGGTGGCTTCTCTGTA	GATAACGCAACCCCTCACCG	ATTCTTTGCCTTCCACTTCC	TATTCCCATTTCGTTATTGTA
Odontostilbe_fugitiva_22932	AGATGCACTAGTACAATGAA	CTGTAGGTGGTTTCTCTGTA	GACAACGCAACCCCTCACCG	ATTCTTTGCCTTCCACTTCC	TATTCCCATTTCGTTATTGTA
Cheirodon_pulcher_8	GGATGCACTAGTACAGTGAA	TTTGAGGCGGGTCTCCGTA	GATAATGCAACCCCTCACCG	ATTCTTTGCCTTCCACTTCC	TATTCCCATTTCGTTATTGTA
Odontostilbe_fugitiva_23714	AGATGCACTAGTACAATGAA	CTGTAGGTGGTTTCTCTGTA	GACAACGCAACCCCTCACCG	ATTCTTTGCCTTCCACTTCC	TATTCCCATTTCGTTATTGTA
Serrapinnus_calliurus_22121	AGATGCACTAGTACAATGAA	CTGTAGGTGGCTTCTCTGTA	GATAACGCAACCCCTCACCG	ATTCTTTGCCTTCCACTTCC	TATTCCCATTTCGTTATTGTA
Serrapinnus_calliurus_25768	AGATGCACTAGTACAATGAA	CTGTAGGTGGCTTCTCTGTA	GACAACGCAACCCCTCACCG	ATTCTTTGCCTTCCACTTCC	TATTCCCATTTCGTTATTGTA
Odontostilbe_ecuadorensis_9	AGATGCACTAGTACAATGAA	CTGTAGGTGGCTTCTCTGTA	GACAACGCAACCCCTCACCG	ATTCTTTGCCTTCCACTTCC	TATTCCCATTTCGTTATTGTA
Cynopotamus_magdaleneae_29515	AGATGTGCTAGTGCAATGAA	TTTGAGGAGGATTCTCTGTA	GACAATGCAACCCCTCACAG	ATTCTTTGCTTTCACCTTCC	TTCTCCCCCTTCGCAATTGTA
Phenacogaster_sp_27299	AGATGCATTAGTACAGTGAA	CTGTAGGGGGTTTTCTCTGTA	GATAACGCAACCCCTAACAG	ATTCTTTGCCTTCCATTTC	TCCTCCCTTTTCGGCGTAGTA
Aphyocharacidium_sp_33167	AGATGCACTAGTTCCAATGAA	TTTGAGGAGGATTTTCCGTT	GATAACGCAACCCCTAACCG	ATTTTTGCCTTCCACTTCC	TACTCCCATTCGGCATTGTA
Hemibrycon_sp_33168	AGATGCACTAGTTCCAATGAA	CTGTAGGAGGGTTTTCTGTA	GACAATGCCACACTAACAG	ATTTTTTGCCTTCCACTTCC	TCCTACCATTTCGCAATGTA
Brycon_insignis_16075	GCAGCTACTGCAGTACACGC	CCTTTTCTCCATGAAACAG	GATCCAACAACCCAGCTGGA	TTAAACTCAGACACAGACAA	AATCTCCTTCCACCCCTACT
Gnatoccharax_sp_24494	GCAGCAACCCCTGCT?CATGC	CTGTGTTTCTCCATGAAACAG	GGTCAAATAATCCAGCCGG	CTAAACTCAAACGCTGACAA	AATCTCCTTCCACCCCTACT
Macropsobrycon_xinguensis_40499	GCAGCTAC?ACCCTCCATGC	CCTATTCTCCACGAAACAG	GGTCAAACAACCCCTACAGGA	CTAAACTCAAACGCGACAGAA	AATCTCATTCCACCCCTACT
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	GCAGCAACCGATC?ACATGC	CCTATTCTTCAACGAAACAG	GCTCAAATAAOCCTAGTCGA	CTAAACTCAGACGCGACAGAA	AATTCACCTTCCACCCCTACT
Aphyocharax_anisitsi_12660	GCAGCAACCCCTCCTCATGC	CTCTCTCTCGACGAAACAG	GCTCAAATAACCCAGCCGG	CTAAACTCGGACTCAGATAA	AATCTCCTTCCACCCCTACT
Carlana_eigenmani_19864	GGGGTAAACCTCCTTCATGC	CTCTTTTCTCCACGAAACAG	GTTCAAACAACCCAGCCGG	TTAAACTCAGACACAGACAA	AATTTCTTCCACCCCTACT
Astyanax_mexicanus_24599	GCAGCAACCCCTCCTCATGC	CTCTTTTCTTCAACGAAACAG	GTTCAAACAACCCAGCCGG	TTAAACTCGGACTCAGATAA	AATTCACCTTCCACCCCTACT
Spintherobolus_brocceae_22558	GCAGCAACCCGTGTTACACGC	CTGTGTTTCTCATGAAACAG	GCTCAAACAATCCACCCGG	TTAAACTCAGATGCTGACAA	AATTTCTTCCACCCCTACT
Spintherobolus_leptoura_36098	GCAGCAACCGTGTACACGC	CTGTGTTTCTCATGAAACAG	GTTCAAATAACCCACCCGG	TTAAACTCAGATGCCGACAA	AATCTCCTTCCACCCCTACT
Spintherobolus_ankoseion_24957	GCAGCAACCGTATTACACGC	CTGTGTTTCTCATGAAACAG	GTTCAAATAACCCACCCGG	TTAAACTCAGATGCCGACAA	AATCTCCTTCCACCCCTACT
Charax_leticiae_12700	GCAGCAACTCTCTCGATGC	TTTATTCTTACATGAAACAG	GCTCAAACAATCTGTTGG	CTAAATTCAGACACAGATAA	AATCTCCTTCCACCCCTACT
Diapoma_sp_21274	GCAGCAACCCCTTCTACACGC	CCTTTTTCTCATGAAACAG	GCTCAAATAACCCAGCCGG	TTAAACTCAGACTCAGACAA	AATCTCCTTCCACCCCTACT
Prodontoccharax_melanotus_10	GCAGCAACTATTCTACACGC	CTCTCTCTTCAACGAAACAG	GCTCAAATAACCCACCCGG	ATCAACTCAGACGCGACAGAA	AATCTCCTTCCACCCCTACT
Prodontoccharax_sp_7	GGCGCAACCATCTTACATGC	CTCTCTTCTTACATGAAACAG	GCTCAAACAACCCACCCGG	ATCAACTCAGACGCGACAGAA	ATCTCCTTCCACCCCTACT
Nanocheirodon_insignis_27476	GCAGCAACTATTATTATGC	CATCTCTCTCCACGAAACAG	GCTCAAACAACCCATGGA	CTTAACCTCAGCGAGATAA	AATTTTCATTCCACCCCTACT
Pseudocheirodon_arnoldi_5	GCAGCAACCATCTTACACGC	CTCTCTTCTTCAACGAAACAG	GCTCAAATAACCCACCCGG	CTTAACCTCAGATGCAGATAA	AATCTCCTTCCACCCCTACT
Pseudocheirodon_terrabae_6	GCAGCAACCGTCTTACACGC	CTCTCTCTCCACGAAACAG	GCTCAAATAACCCACCCGG	CTTAACCTCAGACGCGAGATAA	AATCTCCTTCCACCCCTACT
Heterocheirodon_yatai_24954	GCAGCAACCATCTTACACGC	CTCTCTCTTACATGAAACAG	GCTCAAACAACCCACCCGG	ATTAACCTCAGATGCAGATAA	AATCTCCTTCCACCCCTACT
Cheirodon_killiani_24964	GCAGCAACCATCTTACACGC	CTCTCTCTCGACGAAACAG	GCTCAAACAACCCACCCGG	ATCAACTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Cheirodon_australe_24979	GCAGCAACTATTCTACACGC	CTCTCTCTCGACGAAACAG	GCTCAAACAACCCACCCGG	ATTAACCTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Cheirodon_interruptu20486	GCAGCAACTATCTGACACGC	CTCTCTCTTCAACGAAACAG	GCTCAAACAACCCACCCGG	ATTAACCTCAGACGCGAGATAA	AATCTCCTTCCACCCCTACT
Cheirodon_killiani_19803	GCAGCAACCATCTTACACGC	CTCTCTCTCGACGAAACAG	GCTCAAACAACCCACCCGG	ATCAACTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Cheirodon_killiani_24969	GCAGCAACCATCTTACACGC	CTCTCTCTCGACGAAACAG	GCTCAAACAACCCACCCGG	ATTAACCTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Cheirodon_australe_24963	GCAGCAACTATTCTACACGC	CTCTCTCTTCAACGAAACAG	GCTCAAACAACCCACCCGG	ATTAACCTCAGACGCGAGATAA	AATCTCCTTCCACCCCTACT
Cheirodon_interruptus_21266	GCAGCAACTATCTGACACGC	CTCTCTCTTCAACGAAACAG	GCTCAAACAACCCACCCGG	ATTAACCTCAGACGCGAGATAA	AATCTCCTTCCACCCCTACT
Cheirodon_ibicuihensis_25598	GCAGCAACCATCTTACACGC	CTCTCTCTTCAACGAAACAG	GCTCAAACAACCCACCCGG	ATCAACTCAGACGCGAGATAA	AATCTCCTTCCACCCCTACT
Cheirodon_killiani_24974	GCAGCAACCATCTTACACGC	CTCTCTCTCGACGAAACAG	GCTCAAACAACCCACCCGG	ATTAACCTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Saccoderma_melanostigma_21745	GCAGCAACTATTCTACACGC	CCTTTTCTTCAACGAAACAG	GTTCAAACAACCCACCCGG	CTCAACTCGGATGCAGACAA	AATCTCCTTCCACCCCTACT
Compura_gorgoneae_1	GCAGCAACTATCTGACACGC	CTCTCTCTTCAACGAAACAG	GTTCAAACAACCCCTAGGA	CTTAACCTCGGACGCGACAGAA	AATCTCCTTCCACCCCTACT
Odontostilbe_mitoptera_3	GCAGCAACTATCTGACACGC	CCTTTTCTCGACGAAACAG	GTTCAAACAACCCACTGGA	CTTAACCTCGGACGCGACAGAA	AATCTCCTTCCACCCCTACT
Compura_sp_nova_4	GCAGCAACTATCTGACACGC	CCTTTTCTTCAATGAAACAG	GTTCAAACAACCCACCCGG	CTCAACTCGGACGCGACAGAA	AATCTCCTTCCACCCCTACT
Odontostilbe_dialepturus_2	GCAGCAACTATCTGACACGC	CTTTTCTCTACATGAAACAG	GTTCAAACAACCCACCCGG	CTCAATTCGGACGCGACAGAA	AATCTCCTTCCACCCCTACT
Odontostilbe_pulchra_25845	GCAGCCACCATTCTACACGC	CTTATTCTTCCACGAAACAG	GCTCAAACAACCCACCCGG	CTTAACCTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Odontostilbe_paraguayensis_20127	GCAGCAACTATTTTACATGC	CCTATTCTTCAACGAAACAG	GCTCAAATAACCCACCCGG	ATTAACCTCAGACGCGAGATAA	AATCTCCTTCCACCCCTACT
Odontostilbe_spl_22626	GCAGCAACCATTTTACATGC	CTCTTCTCTGATGAAACAG	GCTCAAACAACCCACCGGA	ATCAACTCAGATGCAGATAA	AATCTCATTCCACCCCTACT
Serrapinnus_microdon_17057	GCAGCAACTATTCTACATGC	CCTATTCTTCAACGAAACAG	GCTCAAATAACCCACCCGG	ATCAACTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Kolpotocheirodon_theloura_25982	GCAGCAACCATCTTACACGC	CTGTGTTTCAACGAAACAG	GCTCAAATAACCCACCCGG	ATCAATTCAGACGCGAGACAA	AATTTCTTCCACCCCTACT
Macropsobrycon_uruguayanae_29061	GCAGCAACCATCTTACACGC	CCTATTCTTCAACGAAACAG	GCTCAAATAACCCACCCGG	ATTAATTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Odontostilbe_pequira_24958	GCAGCAACCATCTTACATGC	CCTATTCTTCAACGAAACAG	GTTCAAATAACCCAGCCGG	ATTAACCTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Odontostilbe_pequira_20124	GCAGCAACTATCTTACACGC	CCTATTTTTCATGAAACAG	GTTCAAATAACCCAGCCGG	ATTAATTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Odontostilbe_pequira_12659	GCAGCAACTATCTTACACGC	CCTATTTTTCATGAAACAG	GTTCAAATAACCCAGCCGG	ATTAATTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Acinocheirodon_melanogrammus_37551	GCAGCAACCATCTTACATGC	CCTATTTTTCACGAAACAG	GTTCAAATAACCCACCCGG	ATTAACCTCAGACGCGAGACAA	AATTTCTTCCACCCCTACT
Serrapinnus_heterodon_20305	GCAGCAACCATCTTACATGC	CCTATTTTTCACGAAACAG	GTTCAAATAACCCACCCGG	ATTAACCTCAGACGCGAGACAA	AATTTCTTCCACCCCTACT
Odontostilbe_sp2_29616	GCAGCAACCATTTTACATGC	CCTATTTTTCACGAAACAG	GTTCAAATAACCCAGCCGG	ATTAACCTCAGACGCGAGACAA	AATTTCTTCCACCCCTACT
Kolpotocheirodon_figueiredoi_37575	GCAGCAACCATCTTACACGC	CCTATTTTTCACGAAACAG	GCTCAAATAACCCACTGGA	ATTAATTCAGACGCGAGACAA	AATTTCTTCCACCCCTACT
Serrapinnus_spl_25764	GCAGCAACTATCTTACATGC	CCTATTCTTCAACGAAACAG	GCTCAAACAACCCACCCGG	ATTAACCTCAGACGCGAGACAA	AATCTCTTTTCACTCCCTACT
Compura_heterura_24984	GCAGCAACTATTTTACATGC	CCTATTCTTCAACGAAACAG	GCTCAAATAACCCACCCGG	ATTAACCTCAGACGCGAGACAA	AATTTCTTCCACCCCTACT
Gen_e_sp_nova_27603	GCAGCAACTATTCTACACGC	CCTATTTTTCACGAGACGG	GCTCAAACAACCCACCCGG	ATCAACTCAGACGCGAGACAA	AATTTCTTCCACCCCTACT
Acinocheirodon_cf_melanogrammus_37550	GCAGCAACCATCTTACACGC	CTTATTTTTCACGAAACAG	GCTCAAACAACCCACCCGG	ATTAACCTCAGACGCGAGACAA	AATTTCTTCCACCCCTACT
1Aphyocheirodon_hemigrammus_40027	GCAGCAACTATCTTACACGC	CCTATTTTTCACGAAACAG	GCTCAAACAACCCACTGGA	ATTAACCTCAGACGCGAGACAA	AATTTCTTCCACCCCTACT
Aphyocheirodon_hemigrammus_40025	GCAGCAACTATCTTACACGC	CCTATTTTTCACGAAACAG	GCTCAAACAACCCACTGGA	ATTAACCTCAGACGCGAGACAA	AATTTCTTCCACCCCTACT
Tetragonopterus_argenteus_22029	GCAGCAACCCCTATTACATGC	AGTATTTTTCACGAAACAG	GCTCAAACAACCCACTCGG	CTAAATTCAGATGCCGACAA	AATCCCTTCCACCCCTACT
Serrapinnus_notomelas_19890	GCAGCAACTATTCTACATGC	CTGTGTTCTACAGAAACAG	GCTCAAATAACCCACCCGG	ATTAACCTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Serrapinnus_notomelas_18293	GCAGCAACTATTCTACATGC	CCTGTCTTCAACGAAACAG	GCTCAAATAACCCACCCGG	ATTAACCTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Cheirodon_stenodon_20130	GCAGCAACCATCTTACACGC	CCTATTTTTCATGAAACAG	GCTCAAACAATCCACAGGG	ATCAATTCAGACGCGAGACAA	AATTTCTTCCACCCCTACT
Serrapinnus_spl_22401	GCAGCAACTATTCTACATGC	CTGTGTTCTACAGAAACAG	GCTCAAATAACCCACCCGG	ATTAACCTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Odontostilbe_fugitiva_22932	GCAGCAACTATTCTACATGC	CCTATTCTTCAACGAAACAG	GCTCAAATAACCCACCCGG	ATTAACCTCAGACGCGAGATAA	AATTTCTTCCACCCCTACT
Cheirodon_pulcher_8	GCAGCAACCATCTTACATGC	CTTATTCTTCAACGAAACAG	GCTCAAATAACCCACCCGG	ATTAATTCAGACGCGAGACAA	AATTTCTTCCACCCCTACT

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Odontostilbe_fugitiva_23714	GCAGCAACTATTTTACATGC	CCTATTCTTACACGAAACAG	GCTCAAATAACCCAAACCGGA	ATTAACCTCAGACGCAGACAA	AATTTCTTTCCACCCCTACT
Serrapinnus_calliurus_22121	GCAGCAACTATTCTACATGC	CCTGTTCTTACACGAAACTG	GCTCAAATAACCCAAACCGGG	ATTAACCTCAGACGCAGACAA	AATTTCTTTCCACCCCTACT
Serrapinnus_calliurus_25768	GCAGCAACTATTTTACATGC	CCTGTTCTTACACGAAACCG	GCTCAAATAACCCAAACCGGG	ATTAACCTCAGACGCAGACAA	AATTTCTTTCCACCCCTACT
Odontostilbe_ecuadorensis_9	GCAGCAACTATTTTACATGC	CCTATTCTTACACGAAACAG	GCTCAAATAACCCAAACCGGG	ATCAACTCAGACGCAGACAA	AATCTCTTTCCACCCCTACT
Cynopotamus_magdalenae_29515	GCAGTAACCTATTATCATGC	TTTATTCTTACACGAAACAG	GCTCAAATAACCCCAATTGGC	CTAAACTCAGACTCTGACAA	AATTTCTTTCCACCCCTACT
Phenacogaster_sp_27299	GCAGCAACCTCTCTTACATGC	TCTGTTTCTCAGGAAACAG	GCTCAAATAACCCCTGCTGGG	CTAAATTCAGACGCAGACAA	AATTTCTTTCCACCCCTACT
Aphyocharacidium_sp_33167	GCCGCCACTCT?TTACACGC	CCTATTCTTCTATGAAACAG	GCTCAAACAACCCCAACAGGC	CTCAACTCAGACGCAGACAA	AATCTCTTTCCACCCCTACT
Hemibrycon_sp_33168	GCAGCAACCAATTCTACACGC	CCTCTTCTCTCATGAAACAG	GCTCAAACAACCCAGCAGGT	TTAAACTCAGACGCAGACAA	AATTTCTTTCCACCCCTACT
Brycon_insignis_16075	TCTCATATAAAGACCTCTCT	GGATTCTCGGCTCTCTCAC	CGCACTCGCATCACTAGCTT	TATTTTCCCCAAATCTCTTA	GGTGATCCAGACAACTTCAC
Gnatocharax_sp_24494	TCTCATATAAGGATGTCTCT	GGGTTTCATTGCCCTCTTAAC	AGGACTAGCATCCCTTGCCC	TATTTACCCCAACCTCTTA	GGGAGCCAGAAAACCTTCAC
Macropsobrycon_xinguensis_40499	TCTCCTACAAGACCTCTTG	GGCTTCATAGTGCTCTTGCG	AGCCTTAATAGCCCTAGCCC	TGTTCAACCCCAAACCTGCTC	GGAGACCCAGAGAACTTCAC
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	TCTCATACAAGACATCTTA	GGATTGTATTCTACTAAT	AGCGTAGTATCACTAGCCC	TATTTTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTCAC
Aphyocharax_anisitsi_12660	TTTCTTATAAAGACCTTCTT	GGCTTCATAATTTTACTCAC	CGCACTCGCATCACTAGCCC	TATTTCTCCCCTAATCTCTTA	GGAGATCCAGAAAACCTTCAC
Carlana_eigenmani_19864	TCTCTTACAAGACCTCTCT	GGCTTTATTATTATCTTTAC	CTTACTCACCTCACTAGCTT	TATTTTCCCCTAACCTCTTA	GGAGATCCAGAAAACCTTCAC
Astyanax_mexicanus_24599	TTTCTTATAAAGACCTCTTA	GGTTTATAATCATACTATAC	TGCATTAACATCGTTAGCCC	TATTTCTCCCCAACCTCTTA	GGAGACCCAGAAAACCTTCAC
Spintherobolus_brocceae_22558	TCTCCTATAAGGACCTGCTG	GGCTTCGTAGTCTTAATTAC	AACACTTGCATCCCTAGCTT	TATTTCTCCCCAACCTTGTTA	GGGAGCCCGGAAAAATTTTAC
Spintherobolus_leptoura_36098	TCTCCTATAAGGATCTCTG	GGCTTCGTAACTCTTAATTAC	AACGCTTGCATCCCTAGCCT	TATTTCTCCCCAACCTTATTA	GGGAGCCCGGAAAAATTTTAC
Spintherobolus_ankoseion_24957	TCTCCTATAAAGATCTCTCT	GGCTTCGTAACTCTTAATTAC	AACGCTTGCATCCCTAGCCT	TATTTCTCCCCAACCTTATTA	GGGAGCCCGGAAAAATTTTAC
Charax_leticiae_12700	TTTCTTATAAAGATCTCTCT	GGATTATTATTATGCTAAT	AGCACTTACGTCCTTAGCCC	TATTTTCCCCGAATCTCTTA	GGGAGCCCGAAGAACTTCAC
Diapoma_sp_21274	TCTCCTATAAAGACCTCTCT	GGATTGTAACTCTTAATCAC	AATACTTGCATCCCTAGCCC	TCTTTTCCCCTAACCTGCTA	GGAGACCCAGAAAACCTTCAC
Prodontocharax_melanotus_10	TTTTCATATAAAGACCTTCTT	GGCTTCGTTGTATGCTTAC	AACACTAGCATCCCTAGCCT	TATTTTCCCCAAACCTCTTA	GGAGATCCAGAAAATTTTAC
Prodontocharax_sp_7	TCTCATACAAGACCTCTCTT	GGCTTTGTTGTAGTACTTAC	AACACTAGCATCCCTAGCCC	TATTTCTCCCCGAATCTCTTA	GGAGACCCAGAAAACCTTCAC
Nanocheiroidon_insignis_27476	TTTTCATACAAGACCTTACTC	GGCTTTGTAATCTATACTTAC	AACACAGGCATCCCTAGCTT	TATTTTCTCTCAACCTTTTA	GGTGACCCAGAAAACCTTCAC
Pseudocheiroidon_arnoldi_5	TTTTCATATAAAGACCTTCTC	GGCTTTGTGTAATACTACTAC	AACATTAGCATCCCTTAGCCC	TATTTCTCCCCAAATCTCTTA	GGGAGCCAGAAAACCTTCAC
Pseudocheiroidon_terrabae_6	TTTTCATATAAAGACCTTCTC	GGTTTGTGTAATACTACTAC	AACATTAGCATCCCTTAGCCC	TATTTCTCCCCAACCTCTTA	GGGAGCCAGAAAACCTTCAC
Heterocheiroidon_yatai_24954	TCTCATACAAGACCTCTCTT	GGCTTTGTGATTATAATTAC	AACACTAGCATCCCTAGCCC	TATTTTCCACCAACCTCTTA	GGTGACCCAGAAAACCTTCAC
Cheiroidon_killiani_24964	TCTCATACAAGACCTCTCTT	GGCTTTGTGTTATACTACTAC	AACACTAGCATCCCTAGCCC	TATTTTCCACCAACCTTATTA	GGTGATCCGAGCAATTTAC
Cheiroidon_killiani_24979	TCTCATACAAGACCTCTCTT	GGCTTTGTAGTACTACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCACCAACCTTATTA	GGTGACCCAGAAAACCTTCAC
Cheiroidon_interruptu20486	TCTCATACAAGACCTCTCTT	GGCTTTGTAGTTATACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCACCAACCTTATTA	GGTGACCCAGACAACCTTCAC
Cheiroidon_killiani_19803	TCTCATACAAGACCTCTCTT	GGCTTCGTAGTTATACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCACCAACCTTATTA	GGTGATCCGAGCAATTTAC
Cheiroidon_killiani_24969	TCTCATACAAGACCTCTCTT	GGCTTTGTAGTTATACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCACCAACCTTATTA	GGTGATCCGAGCAATTTAC
Cheiroidon_australe_24963	TCTCATACAAGACCTCTCTT	GGCTTTGTAGTACTACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCACCAACCTTATTA	GGTGACCCAGATAACTTCAC
Cheiroidon_australe_24963	TCTCATACAAGACCTCTCTT	GGCTTTGTAGTACTACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCACCAACCTTATTA	GGTGACCCAGATAACTTCAC
Cheiroidon_interruptus_21266	TCTCATACAAGACCTCTCTT	GGCTTTGTAGTTATACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCACCAACCTTATTA	GGTGACCCAGACAACCTTCAC
Cheiroidon_ibicuhiensis_25598	TCTCATACAAGACCTCTCTT	GGCTTTGTAGTTATACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCACCAACCTTATTA	GGTGACCCAGACAACCTTCAC
Cheiroidon_killiani_24974	TCTCATACAAGACCTCTCTT	GGCTTTGTAGTTATACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCGCAACCTTGTTA	GGTGATCCGAGCAATTTAC
Saccoderma_melanostigma_27475	TCTCATACAAGACCTACTCT	GGCTTCGTAGTAATACTTAC	GACACTAGCATCCCTAGCCC	TATTTCTCCCCAAACCTTTTA	GGTGACCCAGAAAACCTTCAC
Compsura_gorgonae_1	TCTCATACAAGACCTACTCT	GGCTTCGTAGTAATACTTAC	AACACTGGCATCCCTAGCCC	TATTTCTCCCCAAACCTTTTA	GGGAGCCAGAAAATTTTAC
Odontostilbe_mitoptera_3	TCTCATACAAGACCTACTCT	GGCTTCGTAGTAATACTTAC	AACACTGGCATCCCTAGCCC	TATTTCTCCCCAAACCTTTTA	GGGAGCCAGAAAACCTTCAC
Compsura_sp_nova_4	TTTTCATATAAAGACCTACTC	GGCTTCGTAGTAATACTTAC	AACACTAGCATCCCTAGCCC	TATTTCTCCCCAAACCTTCTA	GGTGACCCAGAAAACCTTCAC
Odontostilbe_dialepturus_2	TTTTCATATAAAGACCTACTCT	GGCTTTGTAGTAATACTTAC	AACACTAGCATCCCTAGCCC	TATTTCTCCCCAAACCTTCTA	GGTGACCCAGAAAACCTTCAC
Odontostilbe_dialepturus_2	TTTTCATATAAAGACCTACTCT	GGCTTCGTAGTAATACTTAC	AACACTAGCATCATTAGCCC	TATTTTCCCCAAACCTTCTA	GGGATCCAGAAAACCTTCAC
Odontostilbe_paraguayensis_20127	TCTCATATAAAGACCTTCTT	GGCTTCGTAGTAATACTTAC	AACACTAGCATCATTAGCCC	TATTTTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTAC
Odontostilbe_sp1_22626	TTTTCATATAAAGACCTTCTT	GGCTTCGTAGTAATACTTAC	AACACTGGCATCCCTAGCCT	TATTTCTCCCCAAACCTCTTA	GGAGACCCAGAAAATTTAC
Serrapinnus_microdon_17057	TCTCATACAAGACCTCTCTT	GGCTTTGTAGTACTACTCAC	AACATTAGCATCCCTGGCCT	TATTTCTCCCCAAACCTTTTA	GGGAGCCAGAAAACCTTCAC
Kolpotocheiroidon_theloura_25982	TTTTCATACAAGACCTTCTC	GGTTTGTAGTTATACTGAC	AACACTAGCATCCCTAGCCC	TATTTTCCCCAAACCTCTTA	GGGAGCCAGAAAACCTTCAC
Macropsobrycon_uruguayanae_29061	TTTTCATATAAAGACCTTCTC	GGCTTCGTAGTTATACTTAC	AACACTAGCATCCCTAGCCC	TATTTCTCCCCAAACCTCTTA	GGAGATCCAGAAAACCTTCAC
Odontostilbe_pequira_24958	TTTTCATACAAGACCTTCTT	GGCTTCGTAGTAATACTTAC	AACACTAGCATCCCTAGGCC	TATTTCTCCCCAAACCTTCTA	GGAGACCCAGAAAACCTTCAC
Odontostilbe_pequira_20124	TTTTCATATAAAGACCTTCTT	GGTTTGTAGTAATACTACTAC	AACACTAGCATCCCTAGGCC	TATTTCTCCCCAAACCTTTTA	GGAGACCCAGAAAACCTTCAC
Odontostilbe_pequira_12659	TTTTCATATAAAGACCTTCTT	GGTTTGTAGTAATACTACTAC	AACACTAGCATCCCTAGGCC	TATTTCTCCCCAAACCTTTTA	GGAGACCCAGAAAACCTTCAC
Acinocheiroidon_melanogrammus_37551	TTTTCATACAAGACCTTCTT	GGTTTCGTAGTAATACTACTAC	AACACTAGCATCCCTGCCT	TATTTCTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTCAC
Serrapinnus_microdon_20305	TTTTCATACAAGACCTTCTT	GGTTTCGTAGTAATACTACTAC	AACACTAGCATCCCTGCCT	TATTTCTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTCAC
Odontostilbe_sp2_29616	TTTTCATATAAAGATCTTCTT	GGTTTGTAGTAATACTACTAC	AACACTAGCATCCCTGGCC	TATTTCTCCCCAAATCTCTTA	GGAGATCCAGAAAACCTTCAC
Kolpotocheiroidon_figueiredoi_37576	TCTCATACAAGACCTTCTTA	GGTTTGTAAATTATATTGAC	AACACTAGCATCCCTAGCCT	TATTTTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTCAC
1Kolpotocheiroidon_figueiredoi_37575	TCTCATACAAGACCTTCTTA	GGTTTGTAAATTATATTGAC	AACACTAGCATCCCTAGCCT	TATTTTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTCAC
Serrapinnus_kriegi_25764	TCTCATACAAGACCTCTCTT	GGCTTCGTGGTGAATTAATAC	AACACTAGCATCCCTAGCCC	TATTTTCCCCAAACCTTCTA	GGAGACCCAGAAAACCTTAC
Compsura_heterura_24984	TCTCATATAAAGACCTTCTT	GGCTTCGTAGTAATACTACTAC	AACACTAGCATCCCTTAACCC	TATTTTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTCAC
Gen_e_sp_nova_27603	TCTCATACAAGACCTTCTT	GGGTTTCGTAGTAATACTACTAC	AACACTGGCATCCCTGGCCC	TGTTTTCACCAACCTCTCTA	GGAGACCCAGAAAACCTTAC
Acinocheiroidon_cf_melanogrammus_37550	TTTTCATACAAGACCTTCTT	GGCTTCGTAGTAATACTTAC	AACACTAGCATCCCTAGCCT	TATTTTCTCCAAACCTCTTA	GGAGACCCAGAAAACCTTCAC
1Aphyocheiroidon_hemigrammus_40027	TTTTCATACAAGACCTTCTT	GGTTTGTAGTGATACTTAC	AACACTAGGCTCCCTGGCCC	TATTTTCCCCAAACCTCTTA	GGGAGCCAGAAAACCTTCAC
Aphyocheiroidon_hemigrammus_40025	TTTTCATACAAGACCTTCTT	GGTTTGTAGTGATACTTAC	AACACTAGGCTCCCTGGCCC	TATTTTCCCCAAACCTCTTA	GGGAGCCAGAAAACCTTCAC
Tetragonopterus_argenteus_22029	TCTCCTACAAGACCTCTCTA	GGAGTCCTACTGTTATTATAC	AGCACTTATATCTCTAGCTA	TATTTTATCCAAACCTACTA	GGAGATCCAGAAAACCTTCAC
Serrapinnus_notomelas_19890	TCTCATATAAAGACCTTCTT	GGCTTCGTAGTAATACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCCCAAACCTCTAG	GGAGACCCAGAAAACCTTAC
Serrapinnus_notomelas_18293	TCTCATATAAAGACCTTCTT	GGCTTCGTAGTAATACTTAC	AACACTGGCATCCCTAGCCC	TATTTTCCCCAAACCTCTCTA	GGAGACCCAGAAAACCTTAC
Cheiroidon_stenodon_20130	TTTTCATACAAGACCTTCTC	GGTTTCGTAAATTATACTACTAC	CACACTAGCAGCCTAGCCT	TATTTTCCCCAAACCTCTTA	GGGAGCCAGAAAACCTTCAC
Serrapinnus_sp1_22401	TCTCATATAAAGACCTTCTT	GGCTTCGTAGTAATACTTAC	AACACTGGCATCCCTAGCCC	TATTTTCCCCAAACCTCTCTA	GGAGACCCAGAAAACCTTAC
Odontostilbe_fugitiva_22932	TCTCATATAAAGACCTCTCT	GGCTTCGTAGTAATACTTAC	AACACTAGCATCATTAGCTT	TATTTTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTAC
Cheiroidon_pulcher_8	TCTCATATAAAGACCTTCTC	GGCTTCGTAGTGATACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTAC
Odontostilbe_fugitiva_23714	TCTCATATAAAGACCTCTCT	GGCTTCGTAGTAATACTTAC	AACACTAGCATCATTAGCTT	TATTTTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTAC
Serrapinnus_calliurus_22121	TCTCATATAAAGACCTTCTT	GGCTTCGTAGTAATACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTAC
Serrapinnus_calliurus_25768	TCTCATATAAAGACCTTCTT	GGCTTCGTAGTAATACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTAC
Odontostilbe_ecuadorensis_9	TCTCATATAAAGACCTTCTT	GGCTTCGTAGTAATACTTAC	AACACTAGCATCCCTAGCCC	TATTTTCCCCAAACCTCTTA	GGAGACCCAGAAAACCTTAC
Cynopotamus_magdalenae_29515	TCTCCTATAAAGACCTTCTT	GGCTTCACAAATTATATTAGT	ATTACTTACATCCCTAGCCT	TATTTCTCCCCTAATCTCTTA	GGGAGCCAGAAAACCTTCAC
Phenacogaster_sp_27299	TCTCCTACAAGATCTCTCT	GGCTTCGTATTAATACTTAC	AGCACTTTCATCCCTAGCCC	TATTTCTCCCCAAATCTCTTA	GGTGACCCAGAAAACCTTCAC
Aphyocharacidium_sp_33167	TTTTCATATAAAGACCTTCTT	GGATTGTAAATTTTACTTAC	AATACTTGCATCTTAGCCC	TGTTTTCGCCAAACCTCTTA	GGTGACCCAGAAAATTTTAC

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Hemibrycon_sp_33168	TCTCCTATAAAGACCTTCTT	GGGTTTGTGGTAATACTAAC	CGCACTCGCATCTTTGGCCC	TATTTTCCCCGAATCTTCTA	GGTGACCCAGAAAATTCAC
Brycon_insignis_16075	CCCCGCCAACCCCATGGTCA	CACCAACCCACATTAACCA	GAATGATATTTCTATTTCG	CTACGCCATTTTACGATCAG	TCCCAAAACAACTAGGAGGG
Gnatocharax_sp_24494	CCCCGCTAATCCACTAGTAA	CACCCCCACACATTAACCT	GAATGATATTTCTTTTTCG	CTACGCTATTTCCGATCCA	TCCCTAACAACTAGGAGGA
Macropsobrycon_xinguensis_40499	CCCAGCCAAACCCCTAGTCC	CACCCCCACACATTAAGCCA	GAATGAAATTTCTTTTTCG	TTACGCCATTTCTACGCTCA	TCCCAACAACTAGGCGGA
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	CCCTGCTAACCCCTTAGTTA	CTCCCCCACACATTAAGCCA	GAGTGGTACTTCCTATTTCG	CTACGCCATCCTACGATCAA	TTCCAAACAACTAGGAGGA
Aphyocharax_anisitsi_12660	ACCCGCCAACCCACTTGTGA	CACCCCTCACATTAACCC	GAATGATACTTTCTATTTCG	CTACGCCATCTTACGATCCA	TCCCAATAAATAGGTGGA
Carlana_eigenmani_19864	CCCCGCCAACCCCTTGTGA	CACCACCTCATATTAACCA	GAATGATATTTCTGTTTCG	CTATGCTATTTTACGGTGCTA	TTCCAAACAACTAGGCGGT
Astyanax_mexicanus_24599	ACCCGCCAACCCACTTGTGA	CACCACCCCATATCAACCA	GAATGATACTTCCTATTTCG	CTACGCTATTTTACGATCCA	TCCCAATAAATAGGTGGA
Spintherobolus_broccae_22558	ACCTGCCAACCCACTCGTTA	CACCACCATATTAACCC	GAATGGTATTTCTATTTCG	CTACGCCATCTCCGGTCAA	TTCCAAATAAATAGGCGGA
Spintherobolus_leptoura_36098	ACCTGCCAACCCCTCGTTA	CACCACCATATTAACCC	GAATGGTATTTCTATTTCG	CTACGCCATCCTCCGGTCAA	TTCCAAATAAATAGGCGGG
Spintherobolus_ankoseion_24957	ACCTGCCAACCCCTCGTTA	CACCACCATATCAACCC	GAATGGTATTTCTATTTCG	CTACGCCATCTCCGGTCAA	TTCCAAATAAATAGGCGGG
Charax_leticiae_12700	TCACGCCAACCCACTCGTCA	CCCCCCTCACATTAACCA	GAATGATACTTCCTATTTCG	CTACGCCATCTTACGATCCA	TTCGATAAATAGGAGGA
Diapoma_sp_21274	CCCCGCCAACCCACTAGTTA	CACCACCCCATATTAACCT	GAATGATACTTTCTTTTTCG	TTACGCTATCCTTCGATCCA	TCCCAATAAATAGGGGGG
Prodontocharax_melanotus_10	CCCCGCCAACCCACTAGTTA	CACCCCCACACATTAACCT	GAATGATACTTCTTATTTCG	CTACGCCATCCTACGGTCCA	TCCCAATAAATAGGCGGA
Prodontocharax_sp_7	CCCCGCTAATCCGCTAGTTA	CACCCCTCATATCAACCC	GAATGGTATTTCTATTTCG	CTACGCCATCCTACGGTCCA	TTCCAAATAAATAGGCGGA
Nanocheiroidon_insignis_27476	CCCCGCCAACCCCTAGTCA	CACCCCCACACATTAACCA	GAATGATACTTTCTATTTCG	TTACGCTATTTCTCGATCAA	TCCCAATAAATAGGCGGG
Pseudocheiroidon_arnoldi_5	CCCCGCCAACCCACTAGTCA	CACCCCCACATATTAACCT	GAATGATACTTCTTATTTCG	TTACGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGA
Pseudocheiroidon_terrabae_6	TCCCGCCAACCCATTAGTCA	CACCCCCACATATTAAGCT	GAGTGATACTTCCTATTTCG	TTACGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGA
Heterocheiroidon_yatai_24954	CCCGCGCTAACCCATTAGTTA	CACCCCCACACATTAAGCT	GAATGATACTTCTTATTTCG	CTACGCCATCCTACGATCCA	TTCCAAACAACTAGGAGGA
Cheiroidon_killiani_24964	CCCCGCCAACCCCTTAGTTA	CGCCCCCACACATTAACCT	GAGTGGTACTTCCTATTTCG	CTACGCCATCCTACGATCCA	TTCCAAACAACTAGGAGGA
Cheiroidon_australe_24979	CCCTGCCAACCCCTTAGTTA	CACCCCCACACATTAACCT	GAATGGTACTTCCTATTTCG	CTACGCCATTTCTACGATCCA	TCCCAACAACTAGGGGGA
Cheiroidon_interruptu20486	CCCTGCCAACCCCTTAGTTA	CACCCCCACACATTAAGCT	GAGTGGTACTTCCTATTTCG	CTACGCCATTTCTACGATCTA	TTCCAAACAACTAGGAGGA
Cheiroidon_killiani_19803	CCCCGCCAACCCCTTAGTTA	CACCCCCACACATTAACCT	GAATGGTACTTCCTGTTTCG	CTACGCCATCCTACGATCCA	TTCCAAACAACTAGGAGGA
Cheiroidon_killiani_24969	CCCCGCCAACCCCTTAGTCA	CACCCCCACACATTAACCT	GAGTGGTACTTCCTATTTCG	CTACGCCATCCTACGATCCA	TTCCAAACAACTAGGAGGA
Cheiroidon_australe_24963	CCCTGCCAACCCCTTAGTTA	CACCCCCACACATTAACCT	GAATGGTACTTCCTATTTCG	CTACGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGA
Cheiroidon_interruptus_21266	CCCTGCCAACCCCTTAGTTA	CACCCCCACACATTAACCT	GAGTGGTACTTCCTGTTTCG	CTACGCCATTTCTACGATCCA	TCCCAACAACTAGGGGGA
Cheiroidon_ibicuihiensis_25598	CCCTGCTAACCCCTTAGTCA	CACCCCCACACATTAACCT	GAATGATACTTCCTATTTCG	CTACGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGA
Cheiroidon_killiani_24974	CCCCGCCAACCCCTTAGTCA	CACCCCCACACATTAACCT	GAGTGATACTTCCTATTTCG	CTACGCCATCCTACGATCCA	TTCCAAACAACTAGGAGGA
Saccoderma_melanostigma_27475	CCCCGCCAACCCATTAGTCA	CACCTCCACACATCAACCC	GAATGATACTTTTATTTCG	CTACGCCATCTTACGATCTA	TTCCAAATAAATAGGAGGA
Campsura_gorgoniae_1	CCCCGCCAACCCATTAACTA	CACCTCCGACATTAAGCC	GAATGATACTTTTATTTCG	CTACGCCATTTTACGGTCCA	TTCCAAACAAATAGGAGGA
Odontostilbe_mitoptera_3	CCCCGCCAACCCATTAGTCA	CACCTCCACATTAACCC	GAATGATACTTTTATTTCG	CTACGCCATTTTACGGTCCA	TTCCAAACAACTAGGAGGA
Campsura_sp_nova_4	CCCCGCCAACCCATTAGTCA	CACCCCCACATATTAACCC	GAATGATACTTTTATTTCG	CTACGCCATTTTACGGTCCA	TTCCAAACAAATAGGAGGA
Odontostilbe_dialepturus_2	CCCCGCCAACCCATTAGTCA	CACCCCCACACATTAACCC	GAATGATACTTTTATTTCG	CTACGCCATTTTACGGTCCA	TTCCAAACAAATAGGAGGA
Odontostilbe_pulchra_25845	TCTGCTAACCCGCTAGTTA	CACCCCCACATATTAACCC	GAATGATACTTCCTATTTCG	CTACGCCATTTCTACGATCTA	TTCCAAACAACTTGGAGGA
Odontostilbe_paraguayensis_20127	CCCCGCCAACCCATTAGTTA	CACCCCCACACATTAACCT	GAATGATACTTCCTATTTCG	CTATGCGATCCTCGGATCTA	TTCCAAACAACTAGGAGGG
Odontostilbe_spl_22626	CCCCGCCAACCCATTAGTCA	CACCCCTCACATTAACCT	GAGTGATACTTCCTATTTCG	CTACGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGG
Serrapinnus_microdon_17057	CCCTGCTAATCCTCTAGTCA	CACCACCATATTAACCT	GAATGATACTTCTTATTTCG	CTACGCTATTTCTACGATCTA	TTCCAAACAACTAGGAGGA
Kolpotocheiroidon_theloura_25982	CCCCGCCAACCCACTAGTTA	CACCCCCACACATTAACCT	GAATGATACTTCCTATTTCG	CTACGCCATCCTCGGATCTA	TTCCAAACAACTAGGAGGA
Macropsobrycon_uruguayanae_29061	CCCCGCTAACCCCTTAGTCA	CACCCCCACATATTAACCT	GAATGATACTTTCTATTTCG	CTACGCCATCCTCGGATCTA	TTCCAAATAAATAGGAGGA
Odontostilbe_pequira_24958	CCCCGCTAATCCTCTAGTCA	CACCCCCACATATTAACCT	GAATGATACTTCTTATTTCG	CTACGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGA
Odontostilbe_pequira_20124	CCCCGCTAATCCTCTAGTCA	CACCCCCACATATTAACCT	GAGTGATACTTCTTATTTCG	CTACGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGA
Odontostilbe_pequira_12659	CCCCGCTAATCCTCTAGTCA	CACCCCCACATATTAACCT	GAGTGATACTTCTTATTTCG	CTACGCTATCCTACGATCTA	TTCCAAACAACTAGGAGGA
Acinocheiroidon_melanogrammus_37551	CCCCGCTAACCCCTTAGTCA	CACCCCCACACATTAAGCT	GAGTGATACTTCTTATTTCG	CTATGCTATCCTACGATCTA	TTCCAAACAACTAGGAGGG
Serrapinnus_heterodon_20305	CCCCGCTAACCCCTTAGTCA	CACCCCCACACATTAAGCT	GAGTGATACTTCTTATTTCG	CTATGCTATCCTACGATCTA	TTCCAAACAACTAGGAGGG
Odontostilbe_sp2_29616	CCCCGCTAATCCTCTAGTCA	CACCCCCACATATTAAGCT	GAATGATACTTCTTATTTCG	CTATGCTATCCTACGATCTA	TTCCAAACAACTAGGAGGG
Kolpotocheiroidon_figueiredoi_37576	CCCCGCTAACCCACTAGTTA	CACCCCCACACATTAACCT	GAATGATACTTCTTATTTCG	CTACGCCATTTCTACGATCTA	TTCCAAATAAATAGGAGGG
1Kolpotocheiroidon_figueiredoi_37575	CCCCGCTAACCCACTAGTTA	CACCCCCACATATTAACCT	GAATGATACTTCTTATTTCG	CTACGCCATCCTACGATCTA	TTCCAAATAAATAGGAGGA
Serrapinnus_kriegi_25764	CCCCGCCAACCCACTAGTCA	CACCCCCACACATTAACCT	GAGTGATACTTCCTATTTCG	TTACGCTATCCTACGATCCA	TCCCAACAACTAGGAGGA
Campsura_heterura_24984	CCCCGCCAACCCATTAGTTA	CACCCCCACACATCAACCT	GAATGATACTTCTATTTCG	CTACGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGA
Gen_e_sp_nova_27603	CCCCGCCAACCCACTAGTCA	CACCCCCACACATTAACCT	GAGTGATACTTCCTATTTCG	TTACGCCATTTCTACGATCCA	TCCCAACAACTTGGAGGA
Acinocheiroidon_cf_melanogrammus_37550	CCCCGCCAACCCACTAGTTA	CACCCCCACACATTAACCT	GAATGATACTTCTTATTTCG	CTACGCCATCCTACGATCTA	TTCCAAACAACTTGGGGGG
1Aphyocheiroidon_hemigrammus_40027	CCCCGCCAACCCACTAGTTA	CACCCCCACACATTAACCT	GAGTGATACTTCTTATTTCG	CTACGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGG
Aphyocheiroidon_hemigrammus_40025	CCCCGCCAACCCACTAGTTA	CACCCCCACACATTAACCT	GAGTGATACTTCTTATTTCG	CTACGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGG
Tetragonopterus_argenteus_22029	TCCCGGCCAACCCCTCTGTAA	CTCCCCCACACATCAACCA	GAATGATACTTCCTATTTCG	TTATGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGG
Serrapinnus_notomelas_19890	CCCCGCCAACCCACTAGTTA	CACCCCGGCACATTAACCT	GAGTGATACTTCCTATTTCG	CTATGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGA
Serrapinnus_notomelas_18293	CCCCGCCAACCCACTAGTTA	CACCCCGGCACATTAACCT	GAGTGATACTTCCTATTTCG	CTATGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGA
Cheiroidon_stenodon_20130	CCCCGCCAACCCACTAGTCA	CACCCCCACATATTAAGCT	GAATGATACTTCCTATTTCG	CTACGCCATCCTCGGATCTA	TTCCAAATAAATAGGAGGG
Serrapinnus_spl_22401	CCCCGCCAACCCACTAGTTA	CACCCCGGCACATTAACCT	GAGTGATACTTCCTATTTCG	CTATGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGA
Odontostilbe_fugitiva_22932	CCCCGCCAACCCATTAGTCA	CACCCCCACACATCAAACT	GAATGATACTTCCTATTTCG	CTATGCCATCCTCGGGTCTA	TTCCAAACAACTAGGAGGG
Cheiroidon_pulcher_8	CCCCGCCAACCCACTAGTTA	CACCCCGGCATATTAACCT	GAATGATACTTCCTATTTCG	CTACGCCATCCTCGGATCTA	TTCCAAACAACTAGGAGGG
Odontostilbe_fugitiva_23714	CCCCGCCAACCCATTAGTCA	CACCCCCACACATCAAACT	GAATGATACTTCCTATTTCG	CTATGCCATCCTACGGTCTA	TTCCAAACAACTAGGAGGA
Serrapinnus_calliurus_22121	CCCCGCCAACCCACTAGTTA	CACCCCGGCACATTAACCT	GAGTGATACTTCTTATTTCG	CTATGCCATCCTACGATCTA	TTCCAAACAACTAGGAGGA
Serrapinnus_calliurus_25768	CCCCGCCAACCCATTAGTTA	CACCCCGGCACATTAACCT	GAGTGATACTTCCTATTTCG	CTATGCCATCCTACGGTCTA	TTCCAAACAACTAGGAGGA
Odontostilbe_ecuadorensis_9	CCCCGCCAACCCATTAGTTA	CACCCCGGCACATTAACCT	GAATGATACTTCCTATTTCG	CTATGCCATCCTCGGATCTA	TTCCAAACAACTAGGAGGA
Cynopotamus_magdaleneae_29515	TCTGCTAACCCACTTGTAA	CTCCCCCTCACATTAACCA	GAATGATACTTCCTATTTCG	CTATGCTATCCTACGATCTA	TCCCAACAAATAGGAGGA
Phenacogaster_sp_27299	CCCCGCCAACCCACTTGTGA	CACCTCCCCACATTAACCA	GAATGATACTTCCTATTTCG	CTACGCCATCCTACGATCTA	TTCCAAATAAATGGGAGGA
Aphyocharacidium_sp_33167	CCCCGCTAATCCATTAGTTA	CACCCCTCATATTAACCT	GAGTGGTACTTCCTATTTCG	CTACGCTATTTCTCGGTCCTA	TTCCAAATAAATAGGAGGT
Hemibrycon_sp_33168	CCCCGCTAACCCACTTGTCA	CACCCCCACACATTAACCC	GAATGGTATTTCTATTTCG	CTACGCCATCCTCGGATCTA	TCCCAACAACTAGGCGGA
Brycon_insignis_16075	GTCTTAGCTTTACTAGCTTC	AATCCTAATCCTAATAGTAG	TACCCATACTACACATCC	AAACAACAAGGCCTCACATT	CCGACCTATCTCCCAATTCC
Gnatocharax_sp_24494	GATTAGCCTTACTATTCTTC	CATCTTAGTCTTAATACTAG	TCCCTCTCTTACACCTCA	AAGCAGCAAGGCCTAACATT	CCGACCAATCTTCCAAATCC
Macropsobrycon_xinguensis_40499	GTACTCGCCTCCTCTTCTTC	AATCCTAGTCTCTATATTAG	TCCCACTCCACACACCTCA	AAGCAACAAGGACATATCTT	CGGTCCCTCTCCCAACTCC
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	GTCTAGCCCTACTATTCTTC	AATCCTCATCTCTATATTAG	TTCCAATATTGCACCTCA	AAACAAAAAGCCCTTACCTT	CCGGCCCTCTCGCAACTCC

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Aphyocharax_anisitsi_12660	GTTCCTAGCACTTCTATTCTC	CATCTTAGTACTTATACTAG	TGCTCTTCTTTCATACATCT	AAACAACAAGGCTCAACATT	CCGACCCCTTAACCAATTCT
Carlana_eigenmani_19864	GTTTTAGCACTTTTATTCTC	TATCCTAGTACTCATATTA	TCCCTCTCTTCACACATCA	AAACAACAAGGCTTACATT	CCGGCCCTTACTCAATTCC
Astyanax_mexicanus_24599	GTTCCTGGCTCTCTTATTTC	AATTCTAGTACTTATGTAG	TACCCCTCTCTCACACATCC	AAACAACAAGGCTTACATT	CCGACCCCTTAACTCAATTCC
Spintherobolus_brocceae_22558	GTCTAGCACTACTATTCTC	TATTCTTGACTTATACTGG	TTCCTTTACTTCACACATCT	AAACAACAAGGCTTAACATT	CCGACCAATTACCCAATTCC
Spintherobolus_leptoura_36098	GTCCGGGCACTACTATTTTC	TATTCTCGTCTCATATTGG	TCCCTTTACTTCACACATCT	AAACAACAAGGCTTAACATT	CCGACCAATTACCCAATTCC
Spintherobolus_ankoseion_24957	GTCTGGCACTACTATTCTC	TATTCTCGTCTCATATTGG	TCCCTTTACTTCACACATCT	AAACAACAAGGCTTAACATT	CCGACCGATTACTCAATTCC
Charax_leticiae_12700	GTGTTAGCCTTACTATTTTC	AATTTTAGTACTAATACTAG	TACCCCTTCTCCACACATCT	AAGCTCCAAGGCTTAACATT	TCGCCCAATCGCCCAATTTA
Diapoma_sp_21274	GTCTAGCACTTTTGTTCTC	AATCTTGATTAAATACTAG	TCCCTTACTCCATACATCA	AAACAACAAGGCTCAACGTT	CCGCCCCCTAACACAAATCC
Prodontocharax_melanotus_10	GTCTAGCACTTCTATTCTC	CATCCTAGTCTTAATACTGG	TTCCTTACTCCACACGTCC	AAACAACAAGGCTTAACATT	CCGACCCATTACTCAACTCT
Prodontocharax_sp_7	GTCTAGCACTTCTATTTC	TATTCTAGTCTTAATACTGG	TTCCTTACTCCACACATCT	AAACAACAAGGCTTACATT	CCGACCCATCACCCAACCTC
Nanocheiroidon_insignis_27476	GTCTAGCACTTTTATTTC	TATTCTAGTACTTATGCTTA	TCCCTTCTTTCACACATCT	AAACAACAAGTTTAAACATT	CCGACCCCTCACTCAACTGC
Pseudocheiroidon_arnoldi_5	GTCTGGGCTCTTATTCTC	CATTCTGGTCTCATACTGG	TTCCTTCTTTCACACATCT	AAACAACAAGGCTTAACATT	CCGACCTATCACTCAGCTAC
Pseudocheiroidon_terrabae_6	GTCTAGCACTCCTATTCTC	CATTCTAGTCTCATACTGG	TTCCTTCTTTCACACATCT	AAACAACAAGGCTTAACATT	TCGACCCGTCACTCATCTCC
Heterocheiroidon_yatai_24954	GACTAGCACTTCTATTTC	CATTCTAGTCTTAATGCTTG	TCCCTTCTTTCACACATCA	AAACAACAAGGCTTAAACATT	CCGACCTCTTACCCAATCC
Cheiroidon_killiani_24964	GACTAGCACTTCTGTTTTC	CATTCTAGTCTTAATGCTTG	TTCCTTCTTTCACACATCA	AAGCAACGAGGCTTGACATT	CCGACCCCTCACCCAATCC
Cheiroidon_australe_24979	GACTAGCACTTCTATTTC	TATGCTAGTCTTAATGCTTG	TTCCTTCTTTCACACATCG	AAGCAACGAGGCTTGACATT	CCGACCCCTCACCCAATCTC
Cheiroidon_interruptu20486	GACTAGCACTTCTATTTC	TATTCTAGTCTTAATGCTTG	TTCCTTCTTTCACACATCA	AAGCAACGAGGCTTGACATT	CCGACCCCTCACCCAATCC
Cheiroidon_killiani_19803	GACTAGCACTTCTGTTTTC	TATTCTAGTCTTAATGCTTG	TTCCTTCTTTCACACATCA	AAACAACAAGGCTTGACATT	CCGACCCCTCACCCAATCC
Cheiroidon_killiani_24969	GACTAGCACTTCTGTTTTC	CATTCTAGTCTTAATGCTTG	TCCCTTCTTTCACACATCA	AAGCAACGAGGCTTGACATT	CCGACCCCTTACCCAATCTC
Cheiroidon_australe_24963	GACTAGCACTTCTATTTC	TATTCTAGTCTTAATGCTTG	TTCCTTCTTTCACACATCG	AAGCAACGAGGCTTGACATT	CCGACCCCTCACCCAATCTC
Cheiroidon_interruptus_21266	GACTAGCACTTCTATTTC	TATTCTAGTCTTAATGCTTG	TTCCTTCTTTCACACATCA	AAGCAACGAGGCTTGACATT	CCGACCCCTCACCCAATCTC
Cheiroidon_ibicuhiensis_25598	GACTAGCACTTCTATTCTC	TATTCTAGTCTTAATGCTTG	TCCCTTCTTTCACACATCA	AAACAACAAGGCTTAAACATT	CCGCCCCCTCACCCAATCC
Cheiroidon_killiani_24974	GACTAGCACTTCTGTTTTC	CATTCTAGTCTTAATGCTTG	TTCCTTCTTTCACACATCA	AAGCAACGAGGCTTGACATT	CCGACCCCTCACCCAATCTC
Saccoderma_melanostigma_27475	GATTAGCACTGTTTTCTC	CATTCTGGTCTTATACTGG	TCCCTTCTTTCACACATCT	AAACAACAAGGCTTGACATT	CCGACCCATTACTCAATTTC
Compsura_gorgoneae_1	GATTAGCACTACTTTTTCTC	CATCCTAGTCTCATACTGG	TTCCTTCTTTCACACATCT	AAACAACAAGGCTTGACATT	CCGACCCATTACTCAATTTC
Odontostilbe_mitoptera_3	GATTAGCACTGTTTTCTC	CATTCTGGTCTTATACTGG	TCCCTTCTTTCACACATCT	AAACAACAAGGCTTGACATT	CCGGCCCATTTACTCAATTTC
Compsura_sp_nova_4	GATTAGCACTGTTTTCTC	CATTCTGGTCTTATACTGG	TCCCTTCTTTCACACATCT	AAACAACAAGGCTTGACATT	CCGACCCATTACTCAATTTC
Odontostilbe_dialepturus_2	GATTAGCACTGTTTTCTC	CATTCTGGTCTTATACTGG	TCCCTTCTTTCACACATCT	AAACAACAAGGCTTGACATT	CCGACCCATTACTCAATTTC
Odontostilbe_pulchra_25845	GTCTAGCACTCCTCTCTC	CATTCTAGTCTCATACTGG	TTCCTTCTTTCACACATCT	AAACAACAAGGCTTAAACATT	CCGGCTTATTACTCAATTTC
Odontostilbe_paraguayensis_20127	GTCTAGCACTCCTATTCTC	TATCCTAGTCTTATACTGG	TTCCTTCTTTCACACATCT	AAACAACAAGGCTTAAACATT	CCGACCTATTACTCAATTCT
Odontostilbe_sp_22626	GTCTAGCACTCCTATTCTC	TATCCTTGACTTATACTGG	TCCCTTCTTTCACACATCC	AAACAACAAGGCTTAACATT	CCGACCTCTTACCCAATTTT
Serrapinnus_microdon_17057	GACTAGCACTCCTATTCTC	TATTCTAGTACTTATACTGG	TTCCTTCTTTCACACATCC	AAGCAACAAGGCTTCAACATT	CCGACCCCTCACCCAATTC
Kolpotocheiroidon_theloura_25982	GTCTGGCACTTTTATTTC	CATCCTAGTCTTATACTGG	TTCCTTCTTTCACACATCT	AAACAACAAGGCTTCAACATT	TCGACCTATTACTCAATTTC
Macropsobrycon_uruguayanae_29061	GTCTGGCACTTCTATTCTC	CATCCTAGTCTTATACTGG	TTCCTTCTTTCACATACCC	AAACAACAAGGCTTCAACATT	CCGACCTGTTACTCAATTCT
Odontostilbe_pequira_24958	GACTAGCACTCCTGTTTTC	TATTCTAGTACTTATACTGG	TTCCTTCTTTCACACATCC	AAACAACAAGGCTTCAACATT	CCGGCCCTTACCCAATTC
Odontostilbe_pequira_20124	GACTAGCACTCCTATTTC	TATTCTAGTACTTATACTGG	TTCCTTCTTTCACACATCT	AAACAACAAGGCTTGACATT	CCGGCCCTTACCCAATTC
Odontostilbe_pequira_12659	GACTAGCACTCCTATTTC	CATCCTAGTACTTATACTGG	TTCCTTCTTTCACACATCC	AAACAACAAGGCTTGACATT	CCGGCCCTTACCCAATTC
Acinocheiroidon_melanogrammus_37551	GACTAGCACTCCTATTTC	TATCCTAGTACTTATACTGG	TTCCTTCTTTCACACATCT	AAACAACAAGGCTTCAACATT	CCGACCTTATACCCAATTC
Serrapinnus_heterodon_20305	GACTAGCACTCCTATTTC	TATCCTAGTACTTATACTGG	TTCCTTCTTTCACACATCT	AAACAACAAGGCTTCAACATT	CCGACCTTATACCCAATTC
Odontostilbe_sp_29616	GACTAGCACTCCTATTTC	CATCCTAGTACTTATACTGG	TTCCTTCTTTCACATCCTC	AAACAACAAGGCTTCAACATT	CCGACCTTACTCCAATTC
Kolpotocheiroidon_figueiredoi_37576	GTCTGGCACTCCTATTCTC	CATCCTAGTCTTATACTGG	TTCCTTCTTTCACACATCA	AAACAACAAGGCTTCAACATT	CCGACCTATTACCCAATTC
1Kolpotocheiroidon_figueiredoi_37575	GTCTGGCACTCCTATTTC	CATCCTAGTCTTATACTGG	TTCCTTCTTTCACACATCA	AAACAACAAGGCTTACATT	CCGACCTATTACCCAATTC
Serrapinnus_sp_nova_4	GTCTGGCACTCCTATTCTC	TATTCTAGTCTTATACTGG	TTCCTTCTTTCACACATCT	AAACAACAAGGCTTCAACATT	CCGACCTATTACTCAATTTC
Compsura_heterura_24984	GTCTAGCACTCCTATTTC	TATTCTAGTCTCATACTGG	TCCCTTCTTTCACACATCC	AAACAACAAGGCTTCAACATT	CCGACCCATTACTCAATTTC
Gen_e_sp_nova_27603	GTCTAGCACTCCTATTTC	TATTCTAGTCTTATACTGG	TCCCTTCTTTCACACATCC	AAACAACAAGGCTTACATT	CCGACCTATTACTCAATTTC
Acinocheiroidon_cf_melanogrammus_37550	GTCTGGCACTCCTATTTC	CATTCTAGTACTTATACTGG	TTCCTTCTTTCACACATCT	AAACAACAAGGCTTCAACATT	CCGCTCTTATACCCAATTC
1Aphyocheiroidon_hemigrammus_40027	GTCTGGCACTCCTATTTC	CATTCTAGTCTTATACTGG	TTCCTTCTTTCACATGCT	AAACAACAAGGCTTACATT	CCGACCTATTACCCAATTC
Aphyocheiroidon_hemigrammus_40025	GTCTGGCACTCCTATTTC	CATTCTAGTCTTATACTGG	TTCCTTCTTTCACATGCT	AAACAACAAGGCTTACATT	CCGACCTATTACCCAATTC
Tetragonopterus_argenteus_22029	TCCTAGCACTACTCTTTTC	GATTCTTACTCTCATACTAG	TCCCACTACTTTCACACATC	AAACAACAAGGCTTAAACATT	CCGACCCATTACCCAATTC
Serrapinnus_notomelas_19890	GACTAGCACTCCTATTTC	TATTCTAGTCTTATACTGG	TCCCTTCTTTCACACATCC	AAACAACAAGGCTTCAACATT	CCGACCCCTCACTCAGCTCC
Serrapinnus_notomelas_18293	GACTAGCACTCCTATTTC	TATTCTAGTCTTATACTGG	TCCCTTCTTTCACACATCC	AAACAACAAGGCTTGACATT	CCGACCCCTCACTCAGTCC
Cheiroidon_stenodon_20130	GTCTGGCACTCTATTTC	CATTCTGGTCTTATACTGG	TCCCTTCTTTCACATCCTC	AAACAACAAGGCTTCAACATT	CCGACCCATCACCCAATTC
Serrapinnus_sp_22401	GACTAGCACTCCTATTTC	TATTCTAGTCTTATACTGG	TCCCTTCTTTCACACATCC	AAACAACAAGGCTTGACATT	CCGACCCCTCACTCAGTCC
Odontostilbe_fugitiva_22932	GTCTAGCACTTCTATTTC	TATTCTAGTCTTATACTGG	TCCCTTCTTTCACACATCC	AAACAACAAGGCTTCAACATT	CCGACCTATCACTCAATTCC
Cheiroidon_pulcher_8	GACTAGCACTCCTGTTCTC	TATCCTGGTCTTATACTGG	TCCCTTCTTTCACACATCC	AAACAACAAGGCTTACATT	CCGACCCATTACTCAGTTC
Odontostilbe_fugitiva_23714	GTCTAGCACTTCTATTTC	TATTCTAGTCTTATACTGG	TCCCTTCTTTCACACATCC	AAACAACAAGGCTTCAACATT	CCGACCTATCACTCAATTCC
Serrapinnus_calliurus_22121	GACTAGCACTCCTATTTC	TATTCTAGTCTTATACTGG	TCCCTTCTTTCACACATCC	AAACAACAAGGCTTCAACATT	CCGACCCATCACTCAATTCC
Serrapinnus_calliurus_25768	GACTAGCACTCCTATTTC	TATCCTAGTCTTATACTGG	TTCCTTCTTTCACACATCC	AAACAACAAGGCTTCAACATT	CCGACCCATCACTCAGTTC
Odontostilbe_ecuadorensis_9	GTCTAGCACTTCTATTCTC	TATCCTAGTCTTATACTGG	TCCCTTCTTTCACACATCT	AAACAACAAGGCTTACATT	CCGACCTATTACTCAATTTC
Cynopotamus_magdalena_29515	GTCTTAGCCCTACTCTCTC	AATCCTAATTTTAAATACTAG	TACCTTACTTTCATACCTCC	AAATGCAAGGCTTAACATT	CCGACCTATTGCCAATTC
Phenacogaster_sp_27299	GTCTAGCACTACTATTCTC	CATCCTTGACTTATACTAG	TCCCTTCTTTCACACATCT	AAACAACAAGGCTTGACATT	CCGACCTATCGCCCAATTC
Aphyocharacidium_sp_33167	GTCTAGCACTACTATTCTC	AATCCTCATCTTATAATTAG	TTCCTTACTACACACATCA	AAACAACAAGGCTTAAACATT	CCGGCCCTTGCCCAATTC
Hemibrycon_sp_33168	GTCTGGGCTTACTATTCTC	CATCCTAGTCTCATACTAG	TCCCTTACTCCACACATCA	AAACAACAAGGCTTAACCTA	CCGACCCATCGCCCAATTC
Brycon_insignis_16075	TATTTTGATTATTAGTCGCA	GACGTGCAATCCTAACATG	AATTGGAGGTATACCTGCAG	AGCCCCCTTTATCGCCATC	GGCTTAGCAGCTTCCACCTT
Gnatocara_sp_24494	TATTTGAAACCTAGTCGCA	GACGTATTTATTTTAAACATG	AATTGGAGGTATACCAAGTTG	AACACCCATTCAATTATTAT	GGCCAAGTAGCATCCGCTCT
Macropsobrycon_xinguensis_40499	TATTTGGGCCCTAATCGCA	GACATCTTTATCTCAACATG	AATTGGAGGAATGCCCGTAG	AACACCCATTATTTGCCATC	GGCAAAATCCCTCAGCTCT
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	TATTTGGGCACTAGTTGCA	GACGTAGCAATCTGACATG	AATTGGAGGATACCAAGTAG	AACACCCATTCAATTATCATC	GGCCAAATGGCTCCGTACT
Aphyocharax_anisitsi_12660	TATTTGAGCTCTAGTCGCA	GACGTATTAATCTTACATG	AATTGGAGGATACCTGTTG	AGCACCATTATTTATTATT	GGCCAAATGGCATCCGCTCT
Carlana_eigenmani_19864	TATTTGAACTTAAATGCT	GATGTGTTTATCTCACATG	AATTGGAGGAATACCAAGTTG	AACACCCCTTCAATTATTAT	GGCCAAATGGCTCCATCTT
Astyanax_mexicanus_24599	TATTTGAGCCTAGTTGCA	GACGTATTTATCTCACATG	AATTGGAGGAATACCAAGTTG	AACACCCATTATTTATTATG	GGTCAAAATGGCTCCGCTCT
Spintherobolus_brocceae_22558	TATTTGAACTTAGTTGCC	GACGTGATTAATCTACATG	AATCGGGGATGCTGTGAG	AACACCCCTTCAATTGTTATC	GGCCAAATGGCTCTGTCTCT
Spintherobolus_leptoura_36098	TATTTGAACTTAGTTGCC	GACGTGGCAATCTAACATG	AATCGGGGATGCTGTGAG	AACACCCCTTCAATTATCATC	GGCCAAATGGCTCTGTCTCT
Spintherobolus_ankoseion_24957	TATTTGAACTTAGTTGCC	GACGTGGCAATCTAACATG	AATCGGGGATGCTGTGAG	AACACCCCTTCAATTATCATC	GGTCAAAATGGCTCTGTCTCT
Charax_leticiae_12700	TATTTGAACTTAGTTGCA	GACGTAAATCTTAAACATG	AATTGGGGATACCCGTAG	AACACCCATTGTTATTATT	GGGCAAAATGCATCAATCTCT

Diapoma_sp_21274	TATTTCTGAACCTGGTTGCA	GACGTAATTATTTTAAACATG	AATCGGAGGAATACCCAGTGC	AACACCC????????????	????????????????????
Prodontocharax_melanotus_10	TATTTCTGAATCTAGTAGCA	GACGTACTAATCTTACATG	AATTGGGGGTATACCCGTAG	AACACCCCTTTTATTATTAT	GGCCAGATCGCTCTCGTCTC
Prodontocharax_sp_7	TATTTTGAATCTAGTAGCA	GACGTACTTATCTCACATG	AATTGGGGGATACCCGTAG	AACACCCCTTCATCATCATC	GGCCAAATCGCTTCGGTCTC
Nanocheirodon_insignis_27476	TATTTCTGAATTTTAGTAGCA	GACGTAATAATTTTAACTTG	AATTGGCGGAATACCCGTAG	AACACCCATTCAATTATCGTT	GGCCAAATGGCTCCACTTCC
Pseudocheirodon_arnoldi_5	TATTTTGAATCTAGTAGCA	GACGTAGTAGTCTTAACATG	AATTGGGGGTATACCCAGTAG	AACACCCCTTCATTATTATT	GGCCAAATCGCATCTGTCTC
Pseudocheirodon_terrabaie_6	AATTTTGTAGCTCTAGTAGCA	GACGTAAGACGCTTAACATG	AATCGAGGATATGACTAGAG	ACACCCCTTCAACCAATAAT	GGCCCAATTGCATTGTCTC
Heterocheirodon_yatai_24954	TATTTTGAGCACTAGAAGCA	GACGTAATAATCTCTACATG	AATTGGAGGAATACCCGTAG	AGCACCCCTTTATTATTATT	GGACAAATCGCTCCGTCTC
Cheirodon_killiani_24964	TATTTTGAGCACTAGTGGA	GACGTAATAATCTTACGTG	AATTGGGGGAATACCCGTAG	AACACCCCTTTGTTATTATT	GGGCAAGTCGCTCCGTCTC
Cheirodon_australe_24979	TATTTTGAGCACTAGTGGA	GACGTAATAATCTTACATG	AATTGGGGGAATACCCGTAG	AACACCCCTTTGTTATTATT	GGACAAATCGCTCCGTCTC
Cheirodon_interruptu_20486	TATTTTGAGCACTAGTGGA	GACGTAATAATCTTACATG	AATTGGGGGAATACCCGTAG	AACACCCCTTTGTTATTATT	GGACAAATCGCTCCGTCTC
Cheirodon_killiani_19803	TATTTTGAGCACTAGTGGA	GACGTAATAATCTTACATG	AATTGGGGGAATACCCGTAG	AACACCCCTTTGTTATTATT	GGACAAATCGCTCCGTCTC
Cheirodon_killiani_24969	TATTTTGAGCACTAGTGGA	GACGTAATAATCTTACATG	AATTGGGGGAATACCCGTAG	AACACCCCTTTGTTATTATT	GGGCAAGTCGCTCCGTCTC
Cheirodon_australe_24963	TATTTTGAGCACTAGTGGA	GACGTAATAATCTTACATG	AATTGGGGGAATACCCGTAG	AACACCCCTTTGTTATTATT	GGACAAATCGCTCCGTCTC
Cheirodon_interruptu_21266	TATTTTGAGCACTAGTGGA	GACGTAATAATCTTACATG	AATTGGGGGAATACCTGTAG	AACACCCCTTTGTTATTATT	GGACAAATCGCTCCGTCTC
Cheirodon_ibicuhiensis_25598	TATTTTGAGCACTAGTGGA	GACGTAATAATCTTACATG	AATCGGGGAATACCCGTAG	AGCACCCCTTTGTTATCAT	GGACAAATCGCTCCGTCTC
Cheirodon_killiani_24974	TATTTTGAGCACTAGTGGA	GACGTAATAATCTTACATG	AATTGGGGGAATACCCGTAG	AACACCCCTTTGTTATTATT	GGGCAAGTCGCTCCGTCTC
Saccoderma_melanostigma_27475	TATTTTGAGTCTCTGTAGCA	GACGTAATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACACCCCTTTATTATTATC	GGCCAAATCGCTCCGTCTC
Compsura_gorgonae_1	TATTTTGAGTCTCTGTAGCA	GACGTAATAATCTTACATG	AATTGGAGGAATACCTGTAG	AACATCCCTTTATTATCATT	GGCCGAGTCGCATCTGTACA
Odontostilbe_mitoptera_3	TATTTTGAGTCTCTGTAGCC	GACGTAATAATCTTACATG	AATTGGGGGAATACCCGTAG	AACACCCCTTTATTATCATC	GGCCAAATCGCTCTGTCTC
Compsura_sp_nova_4	TATTTTGAGTCTCTGTAGCA	GACGTATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACACCCCTTTATTATTATT	GGCCAAATCGCTTCCATCTC
Odontostilbe_dialepturus_2	TGTTTTGAGTCTCTGTAGCA	GACGTAATAATCTTACATG	AATCGGAGGAATACCCGTAG	AACACCCCTTTATTATCATC	GGCCGAAATCGCTCTGTCTC
Odontostilbe_pulchra_25845	TATTTGCGCCCTAGTAGCA	GACGTAATAATCTCACATG	AATTGGCGGAATACCTGTAG	AACACCCATTATCATCATC	GGCCAAATCGCTCCGTCTC
Odontostilbe_paraguayensis_20127	TATTTTGGGCCCTAGTAGCA	GACGTAATAATCTTACATG	AATCGGAGGAATACCCGTAG	AACACCCCTTCATTATTATT	GGTCAAAATCGCTCCGTCTC
Odontostilbe_spl_22626	TATTTGAGCCTTTAGTAGCA	GACGTATGATCTTACATG	AATCGCGGGAATACCCGTAG	AACACCCCTTTGTTATTATT	GGCCAAATCGCTCTGTCTC
Serrapinnus_microdon_17057	TATTTGAGCCTTTAGTGGA	GACGTAATAATCTTACATG	AATCGGAGGAATACCCGTAG	AACACCCCTTCATTATTATT	GGCCAAATCGCTCTGTCTC
Kolpotocheirodon_theloura_25982	TATTTGAGCCTCTAGTAGCA	GACGTAATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACATCCCTTTATCATTATT	GGCCAAATCGCTCTGTCTC
Macropsobrycon_uruguayanae_29061	TATTTGAGCCTTTAGTAGCA	GACGTATAATCTTACATG	AATTGGAGGAATACCCGTAG	AGCATCCCTTTATTATTATT	GGCCAAATCGCTCCGTCTC
Odontostilbe_pequira_24958	TATTTGAGCCTTTAGTAGCA	GACGTGATAATCTTACATG	AATCGGAGGAATACCCGTAG	AACATCCCTTTATTATTATT	GGCCAAATCGCTCTGTCTC
Odontostilbe_pequira_20124	TATTTGAGCCTTTAGTAGCA	GACGTGATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACATCCCTTCATTATTATT	GGCCAAATCGCTCTGTCTC
Odontostilbe_pequira_12659	TATTTGAGCCTTTAGTAGCA	GACGTGATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACATCCCTTCATTATTATT	GGCCAAATCGCTCTGTCTC
Acinocheirodon_melanogrammus_37551	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACATCCCTTTATTATTATT	GGCCAAATCGCTCTGTCTC
Serrapinnus_heterodon_20305	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACATCCCTTTATTATTATT	GGCCAAATCGCTCTGTCTC
Odontostilbe_spl_229616	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACACCCCTTCATTATTATT	GGCCAAATCGCTCTGTCTC
Kolpotocheirodon_figueiredoi_37576	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACATCCCTTCATTATTATT	GGCCAAATCGCTTCCATCTC
1Kolpotocheirodon_figueiredoi_37575	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACATG	GATTGGAGGAATACCCGTAG	AACATCCCTTCATTATTATT	GGCCAAATCGCTTCCATCTC
Serrapinnus_kriegi_25764	TATTTGAGCCTTTAGTAGCA	GACGTGATAATCTTACATG	AATCGGAGGAATACCCGTAG	AGCACCCCTTCATCATTATT	GGCCAAATCGCTCCGTCTC
Compsura_heterura_24984	TGTTTTGAGCCCTGGTAGCA	GACGTAATAATCTTACATG	AATCGGAGGAATGCCCCTAG	AACACCCCTTCATTATTATT	GGCCAAATCGCTCCGTCTC
Gen_e_sp_nova_27603	TATTTGAGCCCTAGTAGCA	GACGTAATAATCTTACATG	AATCGGAGGAATACCTGTAG	AACACCCCTTCATTATTATT	GGCCAAATCGCTCCGTCTC
Acinocheirodon_cf_melanogrammus_37550	TATTTGAGCCTTTAGTAGCA	GACGTAATGATCTTACATG	AATTGGAGGAATGCCCCTAG	AACATCCCTTCATCATTATT	GGCCAAATCGCTCTGTCTC
1Aphyocheirodon_hemigrammus_40027	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACATCCCTTCATCATTATT	GGCCAAATCGCTCTGTCTC
Aphyocheirodon_hemigrammus_40025	TATTTGAGCCTTTAGTAGCA	GACGTAATGATCTTACATG	AATTGGAGGAATACCCGTAG	AACATCCCTTCATCATTATT	GGCCAAATCGCTCTGTCTC
Tetragonopterus_argenteus_22029	TATTTGAGCCTTTAGTGGA	GACGTATAATCTTAAACATG	AATCGGAGGAATACCCGTAG	AACATCCCTTTATTATTATT	GGAC????????????????
Serrapinnus_notomelas_19890	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACGTG	AATCGGAGGAATACCCGTAG	AACACCCCTTCATTATTATT	GGCCAAATCGCTCCGTCTC
Serrapinnus_notomelas_18293	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACGTG	AATCGGAGGAATACCCGTAG	AACACCCCTTCATTATTATT	GGCCGAAATCGCTCCGTCTC
Cheirodon_stenodon_20130	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACACCCCTTCATTATTATT	GGTCAAAATCGCTCCATCTC
Serrapinnus_spl_22401	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACGTG	AATCGGAGGAATACCCGTAG	AACACCCCTTCATTATTATT	GGCCAAATCGCTCCGTCTC
Odontostilbe_fugitiva_22932	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACATG	AATCGGAGGAATACCCGTAG	AACACCCCTTCATTATTATT	GGCCAAATCGCTCCGTCTC
Cheirodon_pulcher_3714	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACACCCCTTCATCATTATT	GGCCAAATCGCTCCGTCTC
Odontostilbe_fugitiva_23714	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACATG	AATCGGAGGAATACCCGTAG	AACACCCCTTCATTATTATT	GGCCAAATCGCTCCGTCTC
Serrapinnus_calliurus_22121	TATTTGAGCCTTTAGTGGA	GACGTAATAATCTTACATG	AATCGGAGGAATACCCGTAG	AACACCCCTTTATTATTATT	GGCCAAATCGCTCCGTCTC
Serrapinnus_calliurus_25768	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACATG	AATCGGAGGAATACCCGTAG	AACACCCCTTCATTATTATT	GGCCAAATCGCTCCGTCTC
Odontostilbe_ecuadorensis_9	TATTTGAGCCTTTAGTAGCA	GACGTAATAATCTTACATG	AATCGGAGGAATACCCGTAG	AACACCCCTTCATTATTATT	GGCCAAATATCTCCGTCTC
Cynopotamus_magdalena_29515	TATTTGAACTAGTAGTGCA	GACGTAATAATCTTACATG	AATCGGAGGAATACCCGTAG	AGCACCCATTATTATTATT	G????????????????????
Phenacogaster_sp_27299	TATTTGAACTAATGTGCA	GACGTAATAATCTTACATG	AATTGGAGGAATACCCGTAG	AACATCCATTATTATTATC	GGCCAAATCGCTTCAATCTC
Aphyocharacidium_sp_33167	TCTTTTGAGTGTTAGTGCA	GACGTACTTATTTTAAACATG	AATTGGAGGCATACCCGTAG	AACCCCTTTTGTATTATT	GGCCAAATCGCTTCCATCTC
Hemibrycon_sp_33168	TATTTTGAACTAGTAGTGCA	GACGTAATAATCTTAAACATG	AATTGGAGGCATGCCCCTAG	AGCACCCCTTCATTATTATT	GG??????????????????
Brycon_insignis_16075	TTATTTACATATTCTCTCG	T????????????????????	????????????????????	????????????????????	????????????????????
Gnatocharax_sp_24494	ATACCTTTGCGCTTTTCTCTCA	TTCTCAACCCCTAGCTGCG	TGACTAGAAAACAACTACCT	CAACCGGCCCTACCAAGAGG	GTTATCCAGTATTTGCAAG
Macropsobrycon_xinguensis_40499	CTACTTCGCCCTATTCTCTAA	TCCTCAACCCCTCCCGCGC	CGACTAGAAAATAAATCTCT	CAACTGATCTACCAAGAGAG	GTTATCCAGTATTTGCAAG
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????ACCAAGAGAG	GTTATCCAGTATTTGCAAG
Chalcus_epakros_26504	ATACTTCGCATTCTCTCTAA	TCCTCAACCCCTAGCGGCG	TGACTAGAAAATAAATCACT	CAACTGATCTCT????????	????????????????????
Aphyocharax_anisitsi_12660	ATA??TGGAGCTCCCTCTTA	CCCCCACCCCTAGGCCACC	TT?CTTGAAAACAGAAAGATC	GGAGGTTTCCAAACCAAGAGAG	GTTATCCAGTATTTGCAAG
Carlana_eigenmani_19864	CTACTTTTCAATTTTCTCTCG	TCCTCAACCCCTAGCTGCG	TTAGTAGAAAACAAA?????	????????????ACCAAGAGAG	GTTATCCAGTATTTGCAAG
Astyanax_mexicanus_24599	TATTTTCAATTTTCTCTCTCA	TCCTTAACCCCTAGCGGCG	CTTGAGAAAACAAAATTTCT	CAA????????ACCAAGAGAG	GTTATCCAGTATTTGCAAG
Spintherobolus_broccae_22558	TTACTTTGCATTATTCTGTCG	TCCTCAACCCCTAGCTGCG	TCAGTAGAAAATTAATAAT	CAACTGATGCTACCAAGAGAG	GTTATCCAGTATTTGCAAG
Spintherobolus_leptoura_36098	TTACTTTACATTATTCTCTCG	TCCTTAATCCCTAGCTGCG	TTATAGAAAATAAATTAAT	CAACTGATCTACCAAGAGAG	GTTATCCAGTATTTGCAAG
Spintherobolus_ankoseion_24957	TTACTTTACATTATTCTCTCG	TCCTCAACCCCTAGCTGCG	TTAGTAGAAAATAAATTAAT	CAACTGATCTACCAAGAGAG	GTTATCCAGTATTTGCAAG
Charax_leticiae_12700	TATTTTGCAGTCTTCTCTTA	TTCTCAACCCCTAATTTGGA	TTACTAGAGATAATTCCTCT	T????????????ACCAAGAGAG	GTTATCCAGTATTTGCAAG
Diapoma_sp_21274	????????????????????	????????????????????	????????????????????	????????????ACCAAGAGAG	GTTATCCAGTATTTGCAAG
Prodontocharax_melanotus_10	TTACTTCGCGATTTCTCTTG	TCGCCCAACCTTCAGCGCGC	TGGGCAGAAAACAAAACACT	CAGCTGATCTTACCAAGAGAG	GTTATCCAGTATTTGCAAG
Prodontocharax_sp_7	TTACTTCGCGATTTCTCTTA	TCCTTAACCCCTAGCTGCG	TGAGCAGCGCAAAAAGACT	CAACTGATCTT????????	????????????????????
Nanocheirodon_insignis_27476	TATCTTTAAATCTTCTCTTA	TCCTTAACCCCTTAGCGGGA	TGGGTAGAAAACCAAGACACT	TAATCGATCTTACCAAGAGAG	GTTATCCAGTATTTGCAAG
Pseudocheirodon_arnoldi_5	CTACTTCGCGATTTCTCTTA	TCCTTAACCCCTAGCTGCG	TGAGCAGAAAATAAAACACT	CAACTGATCTTACCAAGAGAG	GTTATCCAGTATTTGCAAG
Pseudocheirodon_terrabaie_6	TTACTTTTCAAGTCTTCTCTTA	TCCTTAACCCCTAGCGGCG	AGGGCAGGAAA?AAAAACCT	CAACTGATCTT????????	????????????????????
Heterocheirodon_yatai_24954	ATACTTCGCGATTTCTCTTA	TCCTCAACCCCTAATCGGT	TGAGCAGAAAACAAAACACT	TAATCGATCTTACCAAGAGAG	GTTATCCAGTATTTGCAAG

Cheirodon_killiani_24964	TTACTTTACAGTATTTCCTG	TTCTCAACCCCTTAATTGGC	TGAGCAGAAAAACAAACACT	TAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Cheirodon_australe_24979	GTACTTTGCAGTATTATTG	TTCTAACCCCTTAATTGGC	TGAGCAGAAAAACAAACACT	TAAGTGATCTTTACCAAGAGA	????????????????????
Cheirodon_interruptu20486	TTACTTTGCAGTATTTCCTG	TTCTCAACCCCTTAATTGGC	TGAGCAGAAAAACAAACACT	TAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Cheirodon_killiani_19803	TTACTTTACAGTATTTCCTG	TTCTCAACCCCTTAATTGGC	TGAGCAGAAAAACAAACACT	TAAGTGATCTTTACCAAGAGA	????????????????????
Cheirodon_killiani_24969	TTACTTTACAGTATTTCCTG	TTCTCAACCCCTTAATTGGC	TGAGCAGAAAAACAAACACT	TAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Cheirodon_australe_24963	TTACTTTGCAGTATTTCCTG	TTCTCAACCCCTTAATTGGC	TGAGCAGAAAAACAAACACT	TAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Cheirodon_interruptus_21266	TTACTTTGCAGTATTTCCTG	TTCTCAACCCCTTAATTGGC	TGAGCAGAAAAACAAACACT	TAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Cheirodon_ibicuhiensis_25598	TTACTTTGCAGTATTTCCTG	TTCTCAACCCCTTAATTGGC	TGAGCAGAAAAACAAACACT	TAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Cheirodon_killiani_24974	TTACTTTGCAGTATTTCCTG	TTCTCAACCCCTTAATTGGC	TGAGCAGAAAAACAAACACT	TAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Saccoderma_melanostigma_27475	CTACTTTGCAGTGTTCCTCG	TCCTCAACCCCTTAGCTGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Compsura_gorgonae_1	CTACTTTGCAGTGTTCCTG	TCCTCAACCCCTTAGCTGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	????????????????????
Odontostilbe_mitoptera_3	CTACTTTGCAGTGTTCCTCG	TCCTCAACCCCTTAGCTGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	????????????????????
Compsura_sp_nova_4	TTATTTTGCAGTGTTCCTCG	TCCTCAACCCCTTAGCTGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	????????????????????
Odontostilbe_dialepturus_2	TTACTTTGCAGTGTTCCTCG	TCCTTAACCCCTTAGCTGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	????????????????????
Odontostilbe_pulchra_25845	TTACTTTGCCCTATTCTCTCA	TTCTAAACCCCTTAGCCGGT	TGGGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Odontostilbe_paraguayensis_20127	TTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Odontostilbe_spl_22626	TTACTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Serrapinnus_microdon_17057	TTACTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Kolpotocheirodon_theloura_25982	TTACTTTACAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Macropsobrycon_uruguayanae_29061	TTACTTTGCGGTATTTCCTG	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Odontostilbe_melanogrammus_24958	TTACTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Odontostilbe_pequira_20124	TTACTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Odontostilbe_pequira_12659	TTACTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Acinocheirodon_melanogrammus_27551	TTACTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Serrapinnus_heterodon_20305	TTACTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Odontostilbe_sp2_29616	TTACTTTGCGGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Kolpotocheirodon_figueiredoi_37576	TTACTTTGCGGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	TAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
1Kolpotocheirodon_figueiredoi_37575	TTACTTTGCGGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Serrapinnus_kruegi_25974	CTACTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Compsura_heterura_24984	TTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Gen_e_sp_nova_27603	CTATTTTGCAGTCTTCCTTG	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	????????????????????
Acinocheirodon_cf_melanogrammus_37550	TTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
1Aphyocheirodon_hemigrammus_40027	TTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	????????????????????
Aphyocheirodon_hemigrammus_40025	TTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	????????????????????
Tetragonopterus_argenteus_22029	????????????????????	????????????????????	????????????????????	????????????ACCAAGAGA	GTTATCCAGTATTTCGCAAG
Serrapinnus_notomelas_19890	CTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Serrapinnus_calliurus_22121	CTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Cheirodon_stenodon_20130	CTACTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCTGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Serrapinnus_spl_22401	CTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Odontostilbe_fugitiva_22932	TTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCTGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Cheirodon_pulcher_8	TTACTTTGCGGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	????????????????????
Odontostilbe_fugitiva_23714	TTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCTGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Serrapinnus_notomelas_18293	CTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Serrapinnus_calliurus_25768	CTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Odontostilbe_ecuadorensis_915	TTATTTTGCAGTATTCTCTA	TTCTAAACCCCTTAGCCGGC	TGAGCAGAAAAACAAACACT	CAAGTGATCTTTACCAAGAGA	GTTATCCAGTATTTCGCAAG
Cynopotamus_magdalenae_29515	????????????????????	????????????????????	????????????????????	????????????CCCAAGAGA	GTTATCCAGTATTTCGCAAG
Phenacogaster_sp_27299	TTACTTTGCAGTCTTCCTCA	TTCTCAACCTCTAGCTGGC	CTACTAGAGAACCACTCACT	TAAATGACATACCAAGAGA	GTTATCCAGTATTTCGCGAG
Aphyocharacidium_sp_33167	CTACTTTGCAGTCTTCCTAG	TTCTTAACCACTTAGCTGGC	TTAGCTGAAATAA??????	????????????ACCAAGAGA	GTTATCCAGTATTTCGCAAG
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????ACCAAGAGA	GTTATCCAGTATTTCGCAAG
Brycon_insignis_16075	????????????????????	????????AAGAAGGCTCA	AACAAGGGCACCTTGAGGA	CCAAATCATGGAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Gnatocharax_sp_24494	TATTGCAGCTGCTGGAGGAT	CTGCTGGCAAGAAGGACTCA	AACAAGGGCACCTTGAGGA	CCAAATCATCCAGGCTTAATC	CTGCATTTGAGGCTTTTGGG
Macropsobrycon_xinguensis_40499	TATTGCAGCTGCTGGAGGAT	CTTCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGAGGA	CCAAATCATCCAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Bryconops_affinis_4168	TATTGCAGCTGCTGGAGGAT	CTGCTGGCAAGAAGGACTCA	AACAAGGGCACCTTGAGGA	CCAAATCATCCAGGCTTAATC	CAGCACTTTGAGGCTTTTGGC
Chalceus_epakros_26504	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocharax_anisitsi_12660	TATTGCAGCTGCTGGAGGAT	CTTCTGGCAAGAAGGATGCA	AACAAGGGCACCTTGAGGA	TCAAATCATCCAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Carlana_eigenmani_19864	TATTGCAGCTGCTGGAGGAT	CTTCTGTCAAGAAGGATGCA	AACAAGGGCACCTTGAGGA	TCAAATCATCCAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Astyanax_mexicanus_24599	TATTGCAGCTGCTGGAGGAT	CATCTGGCAAGAAGGATGCA	AACAAGGGCACCTTGAGGA	TCAAATCATCCAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Spintherobolus_brocae_22558	TATTGCAGCTGCTGGAGGAT	CTTCTGTCAAGAAGGACTCA	AACAAGGGCACCTTGAGGA	TCAAATCATTCAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Spintherobolus_leptoura_36098	TATTGCAGCTGCTGGAGGAT	CTTCTGTCAAGAAGGACTCA	AACAAGGGCACCTTGAGGA	CCAAATCATCCAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Spintherobolus_ankoseion_24957	TATTGCAGCTGCTGGAGGAT	CTTCTGTCAAGAAGGACTCA	AACAAGGGCACCTTGAGGA	CCAAATCATCCAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Charax_leticiae_12700	TATTGCAGCTGCTGGAGGAT	CTTCTGGCAAGAAGGACACA	AACAAGGGCACCTTGAGGA	TCAAATCATCCAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Diapoma_sp_21274	TATTGCAGCTGCTGGAGGAT	CTTCTAGCAAGAAGGACACA	AGCAAGGGCACCTTGAGGA	TCAAATCATCCAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Prodontocharax_melanotus_10	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACACA	AACAAGGGCACCTTGAGGA	TCAAATCATCCAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Prodontocharax_sp_7	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Nanocheirodon_insignis_27476	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGAGGA	TCAAATCATCCAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Pseudocheirodon_arnoldi_5	TATCGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGAGGA	TCAAATCATCCAGGCTTAATC	CAGCACTTTGAGGCTTTTGGC
Pseudocheirodon_terrabrae_6	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Heterocheirodon_yatai_24954	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGAGGA	TCAAATCATCCAGGCTTAATC	CTGCTTTGAGGCTTTTGGC
Cheirodon_killiani_24964	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGAGGA	TCAAATCATACAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Cheirodon_australe_24979	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheirodon_interruptu20486	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCG	AACAAGGGCACCTTGAGGA	TCAAATCATACAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Cheirodon_killiani_19803	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheirodon_killiani_24969	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGATGCA	AACAAGGGCACCTTGAGGA	TCAAATCATACAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Cheirodon_australe_24963	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGAGGA	TCAAATCATACAGGCTTAATC	CTGCATTTGAGGCTTTTGGC
Cheirodon_interruptus_21266	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGAGGA	TCAAATCATACAGGCTTAATC	CTGCATTTGAGGCTTTTGGC

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Cheirodon_ibicuihensis_25598	TATTGCCGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACTCA	AACAAGGGCACCTTGGAGGA	TCAAATCATACAGGCTAATC	CTGCATTGGAGGCTTTGGC
Cheirodon_killiani_24974	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATACAGGCTAATC	CTGCATTGGAGGCTTTGGC
Saccoderma_melanostigma_27475	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATACAGGCTAATC	CTGCATTGGAGGCTTTGGC
Compsura_gorgonae_1	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_mitoptera_3	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Compsura_sp_nova_4	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_dialepturus_2	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_pulchra_25845	TATCGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Odontostilbe_paraguayensis_20127	TATCGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACTCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCCTTGGAGGCTTTGGC
Odontostilbe_spl_22626	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAATC	CTGCATTGGAGGCTTTGGC
Serrapinnus_microdon_17057	CATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTGGAGGCTTTGGC
Kolpotocheirodon_theloura_25982	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Macropsobrycon_uruguayanae_29061	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCTCTTGGAGGCTTTGGC
Odontostilbe_pequirá_24958	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAATC	CTGCATTGGAGGCTTTGGC
Odontostilbe_pequirá_20124	CATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTGGAGGCTTTGGC
Odontostilbe_pequirá_12659	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTGGAGGCTTTGGC
Acinocheirodon_melanogrammus_37551	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGATGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTGGAGGCTTTGGC
Serrapinnus_heterodon_20305	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGATGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAATC	CTGCATTGGAGGCTTTGGC
Odontostilbe_sp2_29616	CATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAATC	CTGCATTGGAGGCTTTGGC
Kolpotocheirodon_figueiredoi_37576	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
1Kolpotocheirodon_figueiredoi_37575	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Serrapinnus_kriegi_25764	TATCGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Compsura_heterura_24984	CATCGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Gen_e_sp_nova_27603	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Acinocheirodon_cf_melanogrammus_37550	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTGGAGGCTTTGGC
1Aphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	TATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACACA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAATC	CTGCATTGGAGGCTTTGGC
Serrapinnus_notomelas_19890	CATCGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Serrapinnus_notomelas_18293	CATCGCAGCTGCTGGAGGAT	CGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Cheirodon_stenodon_20130	TATTGCTGCTGCTGGAGGAT	CTGCTGTCAAAAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Serrapinnus_spl_22401	CATCGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Odontostilbe_fugitiva_22932	CATCGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Cheirodon_pulcher_8	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_fugitiva_23714	CATTGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Serrapinnus_calliurus_22121	TATCGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCCTTAGAGGCTTTGGC
Serrapinnus_calliurus_25768	CATCGCAGCTGCTGGAGGAT	CTGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Odontostilbe_ecuadorensis_9	TATCGCAGCTGCTGGAGGAT	CGCTGTCAAGAAGGACGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAACC	CTGCATTAGAGGCTTTGGC
Cynopotamus_magdalenae_29515	TATTGCAGCTGCTGGAGGAT	CTTCTGTCAAGAAGGACACA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAATC	CTGCATTAGAGGCTTTGGC
Phenacogaster_sp_27299	TATTGCAGCTGCTGGAGGAT	CTTCTGGCAAGAAGGACAGC	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAATC	CTGCATTAGAGGCTTTGGC
Aphyocharacidium_sp_33167	TATTGCAGCTGCTGGAGGAT	CTTCTGGCAAGAAGGATGCA	AACAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAATC	CTGCATTAGAGGCTTTGGC
Hemibrycon_sp_33168	TATTGCAGCTGCTGGAGGAT	CTTCTAGCAAGAAGGACACA	AGCAAGGGCACCTTGGAGGA	TCAAATCATCCAGGCTAATC	CTGCATTAGAGGCTTTGGC
Brycon_insignis_16075	AATGCCAAAACAATAAGAAA	TGACAACCTCGTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGTAACCT	TTCTTCAGCTGACATTGAAA
Gnatocharax_sp_24494	AATGCCAAAACACTAAGAAA	TGACAACCTCGTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGTGGTAAGCT	TTCTTCAGCTGACATTGAAA
Macropsobrycon_xinguensis_40499	AATGCCAAAACAGTAAGAAA	TGACAACCTCCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATTGAAA
Bryconops_affinis_4168	AATGCCAAAACATTAAGAAA	TGACAACCTCCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGTGGTAACCT	TTCTTCAGCTGACATTGAAA
Chalceus_epakros_26504	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocharax_anisitsi_12650	AACGCCAAAACAGTAAGAAA	TGACAACCTCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATTGAAA
Carlana_eigenmani_19864	AACGCCAAAACAGTAAGAAA	TGATAACTCCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATTGAAA
Astyanax_mexicanus_24599	AACGCCAAAACAGTAAGAAA	TGACAACCTCCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATTGAAA
Spintherobolus_brocaceae_22558	AATGCCAAAACACTAAGAAA	TGACAACCTCGTCTCGTTTTG	GGAAGTTTATCCGATTTCAT	TTTGGAAACAACCGGCAAACT	TTCTTCAGCTGACATTGAAA
Spintherobolus_leptoura_36098	AATGCCAAAACACTACGAAA	TGACAACCTCGTCTCGTTTTG	GGAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Spintherobolus_ankoseion_24957	AATGCCAAAACACTACGAAA	TGACAACCTCGTCTCGTTTTG	GGAAGTTTATCCGATTTCAT	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATTGAAA
Charax_leticia_12700	AACGCCAAAACGTGAAGAAA	TGACAACCTCCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATTGAAA
Diapoma_sp_21274	AACGCCAAAACCTTAAGAAA	CGACAACCTCGTCTCGTTTTG	GGAAGTTTATCCGATTTCAT	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCAGACATTGAAA
Prodontocharax_melanotus_10	AACGCCAAAACGGCAAGAAA	TGACAACCTCATCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Prodontocharax_sp_7	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Nanocheirodon_insignis_27476	AATGCCAAAACGGTGAGAAA	TGACAACCTCATCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGTAACCT	TTCTTCAGCTGACATTGAAA
Pseudocheirodon_arnoldi_5	AATGCCAAAACGGTGAGAAA	TGACAACCTCATCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Pseudocheirodon_terrabae_6	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Heterocheirodon_yatai_24954	AATGCCAAAACGGCAAGAAA	TGACAACCTCATCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Cheirodon_killiani_24964	AATGCCAAAACGGCAAGAAA	TGACAACCTCCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Cheirodon_australe_24979	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheirodon_interruptu_20486	AATGCCAAAACGGCAAGAAA	TGACAACCTCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Cheirodon_killiani_19803	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheirodon_killiani_24969	AATGCCAAAACGGCAAGAAA	TGACAACCTCCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Cheirodon_australe_24963	AATGCCAAAACGGCAAGAAA	TGACAACCTCCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Cheirodon_interruptu_21266	AATGCCAAAACGGCAAGAAA	TGACAACCTCCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Cheirodon_ibicuihensis_25598	AATGCCAAAACGGCAAGAAA	TGACAACCTCCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Cheirodon_killiani_24974	AATGCCAAAACGGCAAGAAA	TGACAACCTCCTCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Saccoderma_melanostigma_27475	AATGCCAAAACGGCAAGAAA	TGACAACCTCATCTCGTTTTG	GAAAGTTTATCCGATTTCAT	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Compsura_gorgonae_1	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_mitoptera_3	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Compsura_sp_nova_4	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_dialepturus_2	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????

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Odontostilbe_pulchra_25845	AATGCCAAAACGGTGAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCGACATCGAAA
Odontostilbe_paraguayensis_20127	AATGCCAAAACGGTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Odontostilbe_spl_22626	AATGCCAAAACCGTGAAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATTGAAA
Serrapinnus_microdon_17057	AATGCCAAAACGTTGAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGATATCGAAA
Kolpotocheiroidon_theloura_25982	AATGCCAAAACATTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Macropsobrycon_uruguayanae_29061	AATGCCAAAACGCTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Odontostilbe_pequira_24958	AATGCCAAAACGTTGAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Odontostilbe_pequira_20124	AATGCCAAAACGGTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Odontostilbe_pequira_12659	AATGCCAAAACGGTGAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATTGAAA
Acinocheiroidon_melanogrammus_37551	AATGCCAAAACGGTGAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Serrapinnus_heterodon_20305	AATGCCAAAACGGTGAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Odontostilbe_sp2_29616	AATGCCAAAACGGTGAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATCGAAA
Kolpotocheiroidon_figueiredoi_37576	AATGCCAAAACGTTGAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
1Kolpotocheiroidon_figueiredoi_37575	AATGCCAAAACGTTGAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Serrapinnus_kriegi_25764	AATGCCAAAACGGTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	GTCTTCAGCTGACATCGAAA
Compsura_heterura_24984	AATGCCAAAACGGTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	GTCTTCAGCTGACATCGAAA
Gen_e_sp_nova_27603	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Acinocheiroidon_cf_melanogrammus_37550	AATGCCAAAACGGTGAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	AATGCCAAAACGTTAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATCGAAA
Serrapinnus_notomelas_19890	AATGCCAAAACGGTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Serrapinnus_notomelas_18293	AATGCCAAAACGGTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Cheiroidon_stenodon_20130	AATGCCAAAACGGCGAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATCGAAA
Serrapinnus_spl_22401	AATGCCAAAACGGTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Odontostilbe_fugitiva_22932	AATGCCAAAACGCTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Cheiroidon_pulcher_8	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_fugitiva_23714	AATGCCAAAACGCTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Serrapinnus_calliurus_22121	AATGCCAAAACGGTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	CTCTTCAGCGACATCGAAA
Serrapinnus_calliurus_25768	AATGCCAAAACGGTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Odontostilbe_ecuadorensis_9	AATGCCAAAACGGTGAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGCGGCAAACT	TTCTTCAGCTGACATCGAAA
Cynopotamus_magdalenae_29515	AACGCCAAAACGTGAAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATTGAAA
Phenacogaster_sp_22929	AATGCCAAAACGTGAAGAAA	TGCAACTCGTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATCGAAA
Aphyocharacidium_sp_33167	AATGCCAAAACGTGAAGAAA	TGCAACTCTTCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCTGACATTGAAA
Hemibrycon_sp_33168	AACGCCAAAACTTAAGAAA	TGCAACTCATCTCGTTTCG	GAAAGTTTATCCGGATTAC	TTTGGAAACAAGTGGCAAACT	TTCTTCAGCGACATCGAAA
Brycon_insignis_16075	CGTATCTGCTGAAAAAGTCA	CGTGTGACCTTTACAGTAAA	AGCAGAAAGGAACTACCACA	TCTTTTTCCAGATATTATCC	AATGCAAAAGCCAGAGCTGCT
Gnatocharax_sp_24494	CATACCTCCTGGAAAAGTCA	CGTGTGACCTTTACAGTAAA	ATCTGAAAGGAACTACCACA	TCTTTTTCCAGATATTATCC	AATGCAAAAGCCAGAGCTGCT
Macropsobrycon_xinguensis_40499	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTCTTCCAGATCTTATCC	AATGCCAAGCCAGAGCTGCT
Bryconops_affinis_4168	CATACCTGTTGGAAAAGTCA	CGTGTGACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATATTATCC	AATGCAAAAGCCAGAGCTGCT
Chalceus_epakros_26504	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocharax_anisitsi_12660	CATATCTGCTGAAAAAGTCC	CGAGTTACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGCCAAGCCAGAGCTGCT
Carlana_eigenmani_19864	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AGTGCCAAGCCAGAGCTGCT
Astyanax_mexicanus_24599	CATATCTGCTGAAAAAGTCC	CGAGTTACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTCTTCCAGATCTTATCC	AATGCCAAGCCAGAGCTGCT
Spintherobolus_brocceae_22558	CATATCTGCTGGAGAAGTCA	CGCGTTACCTTTACAGTAAA	ATCTGAAAGGAACTACCATA	TCTTTTTCCAGATATTATCC	AATGCAAAAGCCAGAGCTGCT
Spintherobolus_leptoura_36098	CATATCTGCTGGAGAAGTCA	CGCGTTACCTTTACAGTAAA	ATCTGAAAGGAACTACCATA	TCTTTTTCCAGATATTATCC	AATGCAAAAGCCAGAGCTGCT
Spintherobolus_ankoseion_24957	CATATCTGCTGGAGAAGTCA	CGCGTTACCTTTACAGTAAA	ATCTGAAAGGAACTACCATA	TCTTTTTCCAGATATTATCC	AATGCAAAAGCCAGAGCTGCT
Charax_leticiae_12700	CGTATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	AGCAGAAAGGAACTACCACA	TCTTTTTCCAGATATTATCC	AATGCAAAAGCCAGAGCTGCT
Diapoma_sp_21274	CGTATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	ATCAGAAAGGAACTACCAG	TCTTTTTCCAAATATTATCC	AATGCAAAAGCCAGAGCTGCT
Prodontocharax_melanotus_10	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Prodontocharax_sp_7	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Nanocheiroidon_insignis_27476	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATATTATCC	AATGCAAAAGCCAGAGCTGCT
Pseudocheiroidon_arnoldi_5	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATATTATCC	AATGCAAAAGCCAGAGCTGCT
Pseudocheiroidon_terrabae_6	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Heterocheiroidon_yatai_24954	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	GGCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCT	AATGTAAGCCAGAGCTGCT
Cheiroidon_killiani_24964	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	GGCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGTAAGCCAGAGCTGCT
Cheiroidon_australe_24979	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheiroidon_interruptus_20486	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	GGAAGAAAGGAACTACCACA	TCTTTTTCCATATCTTATCC	AATGTAAGCCAGAGCTGCT
Cheiroidon_killiani_24963	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheiroidon_killiani_24969	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	GGCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGTAAGCCAGAGCTGCT
Cheiroidon_australe_24963	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	GGCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGTAAGCCAGAGCTGCT
Cheiroidon_interruptus_21266	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	GGCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGTAAGCCAGAGCTGCT
Cheiroidon_ibicuhiensis_25598	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	GGCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGTAAGCCAGAGCTGCT
Cheiroidon_killiani_24974	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	GGCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGTAAGCCAGAGCTGCT
Saccoderma_melanostigma_27475	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	GGCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AGTGCAAGCCAGAGCTGCT
Compsura_gorgoneae_1	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_mitoptera_3	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Compsura_sp_nova_4	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_dialepturus_2	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_pulchra_25845	CATATCTGCTGAAAAAGTCC	CGTGTGACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Odontostilbe_paraguayensis_20127	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Odontostilbe_spl_22626	CATATCTGCTGAAAAAGTCC	CGCGTTACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Serrapinnus_microdon_17057	CATATCTGCTGAAAAAGTCC	CGCGTTACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Kolpotocheiroidon_theloura_25982	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Macropsobrycon_uruguayanae_29061	CATATCTGCTGAAAAAGTCC	CGTGTGACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Odontostilbe_pequira_24958	CATATCTGCTGAAAAAGTCC	CGTGTACCTTTACAGTAAA	ATCAGAAAGGAACTACCACA	TCTTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT

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Odontostilbe_pequira_20124	CATATCTGCTGGAAAAGTCC	CGTGTACACCTTTACAGTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Odontostilbe_pequira_12659	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTCCAGCTGAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Acinocheirodon_melanogrammus_37514	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTGAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Serrapinnus_heterodon_20305	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTCCAGCTGAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Odontostilbe_sp2_29616	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTCCAGCTGAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Kolpotocheirodon_figueiredoi_37576	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCT	AATGCAAAAGCCAGAGCTGCT
1Kolpotocheirodon_figueiredoi_37575	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCT	AATGCAAAAGCCAGAGCTGCT
Serrapinnus_kriegi_25764	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTGAA	GTCAGAAAGAAACTACCACA	TTTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Compsura_heterura_24984	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Gen_e_sp_nova_27603	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Acinocheirodon_cf_melanogrammus_37550	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
1Aphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	CATATCTGCTGGAAAAGTCC	CGAGTTACCTTTACAGCTAAA	ATCAGAAAGAAACTACCACA	TCTTTTCCAGATATTATCC	AATGCAAAAGCCAGAGCTGCT
Serrapinnus_notomelas_19890	CATATCTGCTGGAAAAGTCT	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Serrapinnus_notomelas_18293	CATATCTGCTGGAAAAGTCT	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Cheirodon_stenodon_20130	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCT	AATGCAAAAGCCAGAGCTGCT
Serrapinnus_spl_22401	CATATCTGCTGGAAAAGTCT	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Odontostilbe_fugitiva_22932	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Cheirodon_pulcher_8	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_fugitiva_23714	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Serrapinnus_calliurus_22121	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Serrapinnus_calliurus_25768	CATATCTGCTGGAAAAGTCT	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Odontostilbe_ecuadorensis_9	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTAAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATCTTATCC	AATGCAAAAGCCAGAGCTGCT
Cynopotamus_magdaleneae_29515	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTAAA	AGCTGAAAGAAACTACCACA	TCTTTTCCAGATATTATCC	AATGCAAAAGCCAGAGCTGCT
Phenacogaster_sp_27299	CATATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTAAA	ATCAGAAAGAAACTACCACA	TCTTTTCCAGATATTATCC	AGTGCAAAAGCCAGAGCTGCT
Aphyocharacidium_sp_33167	CATATCTGCTGGAAAAGTCC	CGCGTTACCTTTACAGCTTAA	GTCAGAAAGAAACTACCACA	TCTTTTCCAGATATTATCC	AATGCAAAAGCCAGAGCTGCT
Hemibrycon_sp_33168	CGTATCTGCTGGAAAAGTCC	CGTGTACCTTTACAGCTAAA	ATCAGAAAGAAACTATCACA	TCTTTTCCAAATATTATCC	AATGCAAAAGCCAGAGCTCTCT
Brycon_insignis_16075	GGATATGCTGCTGATTACAA	ACAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Gnatoccharax_sp_24494	GGATATGCTGTTGATTACAA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGTGAGGAGTGTGTTGCC
Macropobrycon_xinguensis_40499	GGATATGCTGCTGATTACAA	ATAATCCCTATGATTACTCG	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGTTAGGCC
Bryconops_affinis_41168	GGATATGCTGTTGATAACCA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGTGAGGAGCTGTTAGGCC
Chalceus_epakros_26504	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocharax_anisitsi_12660	GGATATGCTTCTGATTACAA	ACAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGTTAGGCC
Carlana_eigenmani_19864	GGATATGCTGCTGATTACAA	ATAACCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGTTAGGCC
Astyanax_mexicanus_24599	GGATATGCTTCTGATTACAA	ACAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGTGTGTTAGCC
Spintherobolus_brocceae_22558	GGATATGCTGCTGATTACAA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACCGTGTCCAGCATCAATG	ACAGTGAGGAGCTGCAAGGCC
Spintherobolus_leptoura_36098	GGATATGCTGCTGATTACAA	ACAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACCGTGTCCAGCATCAATG	ACAGTGAGGAGCTGCAAGGCC
Spintherobolus_ankoseion_24957	GGATATGCTGCTGATTACAA	ACAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACCGTGTCCAGCATCAATG	ACAGTGAGGAGCTGCAAGGCC
Charax_leticiae_12700	GGATATGCTGTTGATTACAA	ATAATCCCTACGATTACTGT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACAGCGAGGAGCTGCTAGGCC
Diapoma_sp_21274	GGACATGCTGTTGATTACAA	ATAATCCCTACGACTACTCG	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Prodontocharax_melanotus_10	GGACATGCTGTTGATTACGA	ATAACCCCTATGATTACTCA	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGTGAGGAGCTGCTAGGCC
Prodontocharax_sp_7	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Nanocheirodon_insignis_27476	GGACATGCTGTTGATTACGA	ACAACCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCAAGGCC
Pseudocheirodon_arnoldi_5	GGACATGCTGTTGATTACGA	ATAACCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCAAGGCC
Pseudocheirodon_terrabrae_6	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Heterocheirodon_yatai_24954	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Cheirodon_killiani_24964	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Cheirodon_australe_24979	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheirodon_interruptu_20486	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Cheirodon_killiani_19803	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheirodon_killiani_24969	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Cheirodon_australe_24963	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Cheirodon_interruptus_21266	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Cheirodon_ibicuhiensis_25598	GGACATGCTGTTGATTACGA	ATAATCCCTATGACTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Cheirodon_killiani_24974	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Saccolodermis_melanostigma_27475	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCA	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGTGAGGAGCTGCTAGGCC
Compsura_gorgonae_1	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_mitoptera_3	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Compsura_sp_nova_4	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_killiani_24964	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_pulchra_25845	GGACATGCTGTTGATTACCA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCAAGGCC
Odontostilbe_paraguayensis_20127	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACAGCGAGGAGCTGCTAGGCC
Odontostilbe_sp1_22626	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Serrapinnus_microdon_17057	GGACATGCTGTTGATTACGA	ATAACCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Kolpotocheirodon_theloura_25982	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Macropobrycon_uruguayanae_29061	GGACATGCTGTTGATTACGA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACAGTGAGGAGCTACTGGCC
Odontostilbe_pequira_24958	GGACATGCTGTTGATTACGA	ATAACCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Odontostilbe_pequira_20124	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACAGCGAGGAGCTGCTGGCC
Odontostilbe_pequira_12659	GGACATGCTGTTGATTACGA	ATAACCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Acinocheirodon_melanogrammus_37551	GGACATGCTGTTGATTACGA	ATAACCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Serrapinnus_heterodon_20305	GGACATGCTGTTGATTACGA	ATAACCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Odontostilbe_sp2_29616	GGACATGCTGCTGATTACGA	ATAACCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
Kolpotocheirodon_figueiredoi_37576	GGACATGCTGCTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC
1Kolpotocheirodon_figueiredoi_37575	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGCGAGGAGCTGCTAGGCC

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Serrapinnus_kriegi_25764	GGACATGCTGTTGATTACGA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACACGGAGGAGCTGCTAGCC
Compsura_heterura_24984	GGACATGCTGCTGATTACGA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACACGGAGGAGCTGCTAGCC
Gen_e_sp_nova_27603	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Acinocheiroidon_cf_melanogrammus_37550	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGTGAGGAGCTGCTAGCC
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	GGATATGCTGTTGATTACAA	ATAATCCCTATGATTACTCG	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACACGGAGGAGCTGCTAGCC
Serrapinnus_notomelas_19890	GGACATGCTGTTGATAACGA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACACGGAGGAGCTGCTAGCC
Serrapinnus_notomelas_18293	GGACATGCTGTTGATAACGA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACACGGAGGAGCTGCTAGCC
Cheiroidon_stenodon_20130	GGACATGCTGTTGATTACGA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACAGTGAGGAGCTGCTAGCC
Serrapinnus_sp1_22401	GGACATGCTGTTGATTACGA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACACGGAGGAGCTGCTAGCC
Odontostilbe_fugitiva_22932	GGACATGCTGTTGATTACGA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACACGGAGGAGCTACTGGCC
Cheiroidon_pulcher_8	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_fugitiva_23714	GGACATGCTGTTGATTACGA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACACGGAGGAGCTACTGGCC
Serrapinnus_calliurus_22121	GGACATGCTGTTGATTACGA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACACGGAGGAGCTGCTAGCC
Serrapinnus_calliurus_25768	GGACATGCTGTTGATTACGA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACACGGAGGAGCTGCTAGCC
Odontostilbe_ecuadorensis_9	GGACATGCTGTTGATTACGA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGCATCAATG	ACACGGAGGAGCTGCTAGCC
Cynopotamus_magdalenae_29515	GGATATGCTGTTGATTACAA	ATAATCCCTACGATTACTGT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACTGTGAGGAGTGTCTAGCC
Phenacogaster_sp_27299	GGATATGCTGTTGATTACAA	ATAATCCCTACGATTACTGT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACACGGAGGAGCTGCTAGCC
Aphyocharacidium_sp_33167	GGATATGCTGTTGATCACAA	ATAATCCCTATGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACACGGAGGAATGTCTAGCC
Hemibrycon_sp_33168	GGATATGCTGTTGATTACAA	ATAATCCCTACGATTACTCT	TACATCTCCCAAGGAGAAGT	AACGTGTGCAAGTATCAATG	ACACGGAGGAGCTGCTAGCC
Brycon_insignis_16075	ACCGACAATGCCTTTGATGT	GCTCGGTTTCACTCCAGAGC	AGAAGATGGGAGTGTACAAA	TTGATTGGTGCCATCATGCA	TTACCGGAACATGAAGTTCA
Gnatocharax_sp_24494	ACCGATAGTGCCTTTGACGT	GCTTGGCTTCACTCCAGATG	AGAAGATGGGAGTGTACAAA	CTAAGTGGTGCTATCATGCA	CTATGGTAAATGAAATTCA
Macropsobrycon_xinguensis_40499	ACTGACAGTGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTTTACAAA	TTGACTGGTGCTATCATGCA	TTATGGGAACATGAAGTTCA
Bryconops_affinis_4168	ACCGATAATGCCTTTGATGT	GCTTGGTTTCACTCCAGATG	AGAAAATGGGAGTGTACAAA	TTGACTGGTGCCATCATGCA	CTATGGTAAATGAAGTTCA
Chalceus_epakros_26504	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocharax_anisitsi_12660	ACTGACAGTGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCTATCATGCA	TTATGGGAACATGAAGTTCA
Carlana_eigenmani_19864	ACTGACAGTGCCTTCGATGT	GCTGGGTTTACAGCCAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCTATCATGCA	TTATGGGAACATGAAGTTCA
Astyanax_mxicanus_24957	ACTGACAGTGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATAGGAGTGTACAAA	TTGACTGGTGCCATCATGCA	TTATGGGAACATGAAGTTCA
Spintherobolus_brocdae_22558	ACCGACAGTGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCCATCATGCA	TTACGGGAACATGAAGTTCA
Spintherobolus_leptoura_36098	ACCGACAGTGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCCATCATGCA	TTATGGGAACATGAAGTTCA
Spintherobolus_ankoseion_24957	ACCGACAGTGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGCGTGTACAAA	TTGACTGGTGCCATCATGCA	TTATGGGAACATGAAGTTCA
Charax_leticiae_12700	ACAGACAATGCCTTTGATGT	CTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	CTGATTGGTGCCATCATGCA	TTACGGGAACATGAAGTTCA
Diapoma_sp_21274	ACCGACAGTGCCTTTGATGT	GCTTGGGTTTACAGCCAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCAATCATGCA	CTATGGGAACATGAAGTTCA
Prodontocharax_melanotus_10	ACCGACAGTGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Prodontocharax_sp_7	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Nanocheiroidon_insignis_27476	ACAGACAATGCCTTTGATGT	GCTTGGTTTCACTCCAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Pseudocheiroidon_arnoldi_5	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Pseudocheiroidon_terrabaie_6	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Heterocheiroidon_yatai_24954	ACCGACAATGCCTTTGATGT	GCTGGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Cheiroidon_killiani_24964	ACCGACAATGCCTTTGATGT	GCTGGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCGATCATGCA	TTACGGGAACATGAAGTTCA
Cheiroidon_australe_24979	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheiroidon_interruptu20486	ACCGACAATGCCTTTGATGT	GCTGGGTTTACACACAGATG	AGAAGATGGGAGTGATAAA	TTGACTGGTGCGATCATGCA	TTACGGGAACATGAAGTTCA
Cheiroidon_killiani_19803	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheiroidon_killiani_24969	ACCGACAATGCCTTTGATGT	GCTGGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCGATCATGCA	TTACGGGAACATGAAGTTCA
Cheiroidon_australe_24963	ACAGACAATGCCTTTGATGT	GCTGGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCGATCATGCA	TTACGGGAACATGAAGTTCA
Cheiroidon_interruptu21266	ACAGACAATGCCTTTGATGT	GCTGGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCGATCATGCA	TTACGGGAACATGAAGTTCA
Cheiroidon_ibicuhiensis_25598	ACCGACAATGCCTTTGATGT	CTGGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCGATCATGCA	TTACGGGAACATGAAGTTCA
Cheiroidon_killiani_24974	ACCGACAATGCCTTTGATGT	GCTGGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCGATCATGCA	TTACGGGAACATGAAGTTCA
Saccoderma_melanostigma_27475	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCGATCATGCA	TTACGGGAACATGAAGTTCA
Compsura_gorgonae_1	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_mitoptera_3	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Compsura_sp_nova_4	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_dialepturus_2	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_australe_25845	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Odontostilbe_paraguayensis_20127	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCGATCATGCA	TTACGGGAACATGAAGTTCA
Odontostilbe_sp1_22626	ACCGACAATGCTTTTATGAT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Serrapinnus_microdon_17057	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Kolpotocheiroidon_theloura_25982	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCGATCATGCA	TTACGGGAACATGAAGTTCA
Macropsobrycon_uruguayanae_29061	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCGATCATGCA	TTACGGGAACATGAAGTTCA
Odontostilbe_pequira_24958	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Odontostilbe_pequira_20124	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Odontostilbe_pequira_12659	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Acinocheiroidon_melanogrammus_37551	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCTATCATGCA	TTATGGGAACATGAAGTTCA
Serrapinnus_heterodon_20305	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGCGTGTACAAA	TTGATCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Odontostilbe_sp2_29616	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGCGTGTACAAA	TTGATCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Kolpotocheiroidon_figueiredoi_37576	ACAGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCTATCATGCA	TTACGGGAACATGAGGTTCA
1Kolpotocheiroidon_figueiredoi_37575	ACAGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCTATCATGCA	TTACGGGAACATGAGGTTCA
Serrapinnus_kriegi_25764	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Compsura_heterura_24984	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
Gen_e_sp_nova_27603	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Acinocheiroidon_cf_melanogrammus_37550	ACCGACAATGCCTTTGATGT	GCTTGGTTTACACACAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCTATCATGCA	TTACGGGAACATGAAGTTCA
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	ACCGACAATGCTTTTATGAT	GCTTGGTTTACAGCCAGATG	AGAAAATGGGAGTGTACAAA	TTGACTGGTGCTATCATGCA	TTATGGGAACATGAAGTTCA

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Serrapinnus_notomelas_19890	ACCGACAATGCCTTTGATGT	GCTTGGTTTCACACCAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCTATCATGCA	TTACCGGAACATGAAGTTCA
Serrapinnus_notomelas_18293	ACCGACAATGCCTTTGATGT	GCTTGGTTTCACACCAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCTATCATGCA	TTACCGGAACATGAAGTTCA
Cheirodon_stenodon_20130	ACCGACAATGCCTTTGATGT	GCTTGGTTTCACACCAGATG	AGAAGATGGGAGTGTACAAA	TTGACCGGTGCTATCATGCA	TTACCGGAACATGAAGTTCA
Serrapinnus_spl_22401	ACCGACAATGCCTTTGATGT	GCTTGGTTTCACACCAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCTATCATGCA	TTACCGGAACATGAAGTTCA
Odontostilbe_fugitiva_22932	ACCGACAATGCCTTTGATGT	GCTTGGTTTCACACCAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCGATCATGCA	TTACCGGAACATGAAGTTCA
Cheirodon_pulcher_8	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_fugitiva_23714	ACCGACAATGCCTTTGATGT	GCTTGGTTTCACACCAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCGATCATGCA	TTACCGGAACATGAAGTTCA
Serrapinnus_calliurus_22121	ACCGACAATGCCTTTGATGT	GCTTGGTTTCACACCAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCGATCATGCA	TTACCGGAACATGAAGTTCA
Serrapinnus_calliurus_25768	ACCGACAATGCCTTTGATGT	GCTTGGTTTCACACCAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCTATCATGCA	TTACCGGAACATGAAGTTCA
Odontostilbe_ecuadorensis_9	ACCGACAATGCCTTTGATGT	GCTTGGTTTCACACCAGATG	AGAAGATGGGAGTGTACAAA	CTGACCGGTGCGATCATGCA	TTACCGGAACATGAAGTTCA
Cynopotamus_magdaleneae_29515	ACAGACAACGCGTTGATGT	TCTTGGTTTCACACCAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGCGCATCATGCA	TTACCGGAACATGAAGTTCA
Phenacogaster_sp_27299	ACAGACAATGCCTTTGATGT	TCTTGGTTTCACACCAGATG	AGAAGATGGGAGTGTACAAA	CTGACTGGTGCCATCATGCA	TTATGGGAACATGAAGTTCA
Aphyocharacidium_sp_33167	ACCGACAATGCCTTTGATGT	GCTTGGTTTCACTCCAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCAATCATGCA	TTATGGGAACATGAAGTTCA
Hemibrycon_sp_33168	ACCGACAATGCCTTTGATGT	GCTTGGATTACGCGCAGATG	AGAAGATGGGAGTGTACAAA	TTGACTGGTGCAATCATGCA	TTATGGGAACATGAAGTTCA
Brycon_insignis_16075	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCCGATGGTAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGGCTGAAC	TCTGCAGATCTTCTGAAGGG
Gnatoccharax_sp_24494	AGCAGAAGCAACGAGGAGAA	CAGGCTGAACCTGATGGTAC	AGAAGCTGCTGACAAATCTG	CTTACCTAATGGGGCTGAAC	TCTGCTGATCTTCTGAAGGG
Macropsobrycon_xinguensis_40499	AGCAAAAGCAGCGGAGGAA	CAGGCTGAACCTGATGGTAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGGCTGAAT	TCTGCAGATCTTCTGAAGGG
Bryconops_affinis_4168	AGCAGAAGCAGCGAGAGGAA	CAGGCTGAACCTGATGGTTC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGGCTCAAC	TCTGCAGACTCTCTGAAGGG
Chalceus_epakros_26504	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocharax_anisitsi_12660	AGCAAAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTAG	CGAAGCTGCTGATAAATCTG	CCTACCTAATGGGGCTGAAC	TCTGCAGATCTTCTGAAGGG
Carlana_eigenmani_19864	AGCAAAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGGTGAAC	TCTGCAGATCTTCTGAAGGG
Astyanax_mexicanus_24599	AGCAAAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTAG	CGAAGCTGCTGATAAATCTG	CCTACCTAATGGGGCTAAAC	AGTGCAGATCTTCTGAAGGG
Spintherobolus_brocceae_22558	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTAC	AGAAGCTGCTGACAAATCTG	CTCATCTAATGGGGCTGAAC	TCTGCAGATCTTCTGAAGGG
Spintherobolus_leptoura_36098	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTAC	AGAAGCGGCTGACAAATCCG	CTCATCTAATGGGGCTGAAC	TCTGCAGATCTTCTGAAGGG
Spintherobolus_ankoseion_24957	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTAC	AGAAGCGGCTGACAAATCCG	CCTATCTAATGGGGCTGAAC	TCTGCAGATCTTCTGAAGGG
Charax_leticiae_12700	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGGCTGAAC	TCTGCAGATCTTCTGAAGGG
Diapoma_sp_21274	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTTC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Prodontoccharax_melanotus_10	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGTCTGAAC	TCTGCAGATCTTCTGAAGGG
Prodontoccharax_sp_7	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Nanocheirodon_insignis_27476	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGATAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Pseudocheirodon_arnoldi_5	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGATAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Pseudocheirodon_terrabaee_6	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Heterocheirodon_yatai_24954	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGATAAATCTG	CCTACCTGATGGGTCTGAAC	TCTGCGGATCTGCTGAAGGG
Cheirodon_killiani_24964	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGATAAATCTG	CCTACCTAATGGGTCTGAAC	TCTGCAGATCTTCTGAAGGG
Cheirodon_australe_24979	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheirodon_interruptu20486	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGATAAATCTG	CCTACCTAATGGGTCTGAAC	TCTGCAGATCTTCTGAAGGG
Cheirodon_killiani_19803	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheirodon_killiani_24969	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGATAAATCTG	CCTACCTAATGGGTCTGAAC	TCTGCAGATCTTCTGAAGGG
Cheirodon_australe_24963	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGATAAATCTG	CCTACCTAATGGGTCTGAAC	TCTGCAGATCTTCTGAAGGG
Cheirodon_interruptus_21266	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGATAAATCTG	CCTACCTAATGGGTCTGAAC	TCTGCAGATCTTCTGAAGGG
Cheirodon_ibicuhiensis_25598	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGTCTGAAC	TCTGCAGATCTTCTGAAGGG
Cheirodon_killiani_24974	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGATAAATCTG	CCTACCTAATGGGTCTGAAC	TCTGCAGATCTTCTGAAGGG
Saccoderma_melanostigma_27475	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGTCTGAAC	TCTGCAGATCTTCTGAAGGG
Campsura_gorgonaeae_1	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_mitoptera_3	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Campsura_sp_nova_4	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_dialepturus_2	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_pulchra_25845	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGACGGCAC	AGAAGCTGCTGACAAATCTG	CTTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Odontostilbe_paraguayensis_20127	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCCGACGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTGCTGAAGGG
Odontostilbe_spl_22626	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGTCTGAAC	TCTGCAGATCTTCTGAAGGG
Serrapinnus_microdon_17057	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CTTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Kolpotocheirodon_theloura_25982	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Macropsobrycon_uruguayanae_29061	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGACGGCAC	AGAAGCCGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Odontostilbe_pequira_24958	AGCAAAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Odontostilbe_pequira_20124	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCCGACGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Odontostilbe_pequira_12659	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Acinocheirodon_melanogrammus_37551	AGCAAAAGCAGCGTGAGGAA	CAGGCTGAGCCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CATACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Serrapinnus_heterodon_20305	AGCAAAAGCAGCGTGAGGAA	CAGGCTGAGCCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CATACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Odontostilbe_sp2_29616	AGCAAAAGCAGCGTGAGGAA	CAGGCTGAGCCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CATACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Kolpotocheirodon_figueiredoi_37576	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
1Kolpotocheirodon_figueiredoi_37575	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Serrapinnus_kriegi_25764	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGACGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTGCTGAAGGG
Campsura_heterura_24984	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGACGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Gen_e_sp_nova_27603	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Acinocheirodon_cf_melanogrammus_37550	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
1Aphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTTC	AGAAGCTGCTGACAAATCTG	CTTACTTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Serrapinnus_notomelas_19890	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTGCTGAAGGG
Serrapinnus_notomelas_18293	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTGCTGAAGGG
Cheirodon_stenodon_20130	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Serrapinnus_spl_22401	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGACGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTGCTGAAGGG
Odontostilbe_fugitiva_22932	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCCGACGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCGGATCTTCTGAAGGG
Cheirodon_pulcher_8	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_fugitiva_23714	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGACGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCGGATCTTCTGAAGGG

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Serrapinnus_calliurus_22121	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGACGGCAC	AGAAGCTGCTGACAACTCTG	CTTACCTAATGGGACTGAAC	TCTGCGGATCTTCTGAAGGG
Serrapinnus_calliurus_25768	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGACGGCAC	AGAAGCTGCTGACAACTCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTCTGAAGGG
Odontostilbe_ecuadorensis_9	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCCGACGGCAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Cynopotamus_magdalena_29515	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTAC	AGAAGCTGCTGACAACTCTG	CTTATCTAATGGGCTGAAC	TCTGCAGATCTTCTGAAGGG
Phenacogaster_sp_27299	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTAC	AGAAGCTGCTGACAACTCTG	CCTACCTAATGGGCTGAAC	TCTGCAGATCTTCTGAAGGG
Aphyocharacidium_sp_33167	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Hemibrycon_sp_33168	AGCAGAAGCAGCGTGAGGAA	CAGGCTGAACCTGATGGTAC	AGAAGCTGCTGACAAATCTG	CCTACCTAATGGGACTGAAC	TCTGCAGATCTTCTGAAGGG
Brycon_insignis_16075	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGCCAAAGGTGTGA	????????????????????	????????????????????
Gnatocharax_sp_24494	GCTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGCCAAAGGGTGTGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Macropsobrycon_xinguensis_40499	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	AC?AAGGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Bryconops_affinis_4168	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGCCAAGGTGTGGA	TCAAGTATACTACTCAATTG	GTGCCTGGCTAAGTCAGTG
Chalceus_epakros_26504	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocharax_anisitsi_12660	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAGGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Carlana_eigenmani_19864	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAGGTATACTACTCCCTTG	GTGCACCTGGCTAAGTCAGTG
Astyanax_mexicanus_24599	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Spintherobolus_brocceae_22558	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
Spintherobolus_leptoura_36098	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGCCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Spintherobolus_ankoseion_24957	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGCCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Charax_leticiae_12700	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
Diapoma_sp_21274	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGCCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Prodontocharax_melanotus_10	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Prodontocharax_sp_7	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Nanocheiroidon_insignis_27476	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Pseudocheiroidon_arnoldi_5	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Pseudocheiroidon_terrabae_6	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Heterocheiroidon_yatai_24954	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
Cheiroidon_killiani_24964	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAGTATGTC	????????????????????	????????????????????	????????????????????
Cheiroidon_australe_24979	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheiroidon_interrupta_20486	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAGTATGTC	????????????????????	????????????????????	????????????????????
Cheiroidon_killiani_19803	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Cheiroidon_killiani_24969	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAGTATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Cheiroidon_australe_24963	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAGTATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Cheiroidon_interruptus_21266	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAGTATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Cheiroidon_ibicuihensis_25598	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAGTATGTC	????????????????????	????????????????????	????????????????????
Cheiroidon_killiani_24974	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAGTATGTC	????????????????????	????????????????????	????????????????????
Saccoderma_melanostigma_27475	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Compsura_gorgonae_1	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_mitoptera_3	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_melanostigma_20127	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_dialepturus_2	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_pulchra_25845	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
Odontostilbe_paraguayensis_20127	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATACGTC	????????????????????	????????????????????	????????????????????
Odontostilbe_spl_22626	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAGTATGTC	????????????????????	????????????????????	????????????????????
Serrapinnus_microdon_17057	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Kolpotocheiroidon_theloura_25982	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Macropsobrycon_uruguayanae_29061	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATACGTC	????????????????????	????????????????????	????????????????????
Odontostilbe_pequiri_24958	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
Odontostilbe_pequiri_20124	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
Odontostilbe_pequiri_12659	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Acinocheiroidon_melanogrammus_37551	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
Serrapinnus_heterodon_20305	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Odontostilbe_sp2_29616	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATACGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Kolpotocheiroidon_figueiredoi_37576	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
1Kolpotocheiroidon_figueiredoi_37575	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
Serrapinnus_kriegi_25764	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATACGTC	????????????????????	????????????????????	????????????????????
Compsura_heterura_24984	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATACGTC	????????????????????	????????????????????	????????????????????
Gen_e_sp_nova_27603	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Acinocheiroidon_cf_melanogrammus_37550	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	ACTCTGCCACCCAAGGGTTA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
Serrapinnus_notomelas_19890	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATACGTC	????????????????????	????????????????????	????????????????????
Serrapinnus_notomelas_18293	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATACGTC	????????????????????	????????????????????	????????????????????
Cheiroidon_stenodon_20130	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTT	????????????????????	????????????????????	????????????????????
Serrapinnus_spl_22401	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATACGTC	????????????????????	????????????????????	????????????????????
Odontostilbe_fugitiva_22932	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
Cheiroidon_pulcher_8	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Odontostilbe_fugitiva_23714	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATATGTC	????????????????????	????????????????????	????????????????????
Serrapinnus_calliurus_22121	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATACGTC	????????????????????	????????????????????	????????????????????
Serrapinnus_calliurus_25768	ACTCTGCCATCCAAGAGTCA	AGGTAGGAAATGAATACGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Odontostilbe_ecuadorensis_9	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Cynopotamus_magdalena_29515	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG
Phenacogaster_sp_27299	TCTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATACGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCGCTCG	GTGCACCTGGCTAAGTCAGTG
Aphyocharacidium_sp_33167	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAA????????????????	????????????????????
Hemibrycon_sp_33168	ACTCTGCCATCCAAGGGTCA	AGGTAGGAAATGAATATGTC	ACAAAAGGTCAAGGTGTGGA	TCAAGTATACTACTCACTTG	GTGCACCTGGCTAAGTCAGTG

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Brycon_insignis_16075	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGTACCGCTGAGAAG	GAGCTTCTCCCTGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Gnatocharax_sp_24494	TATGAGAAGATGTTCAACTG	G????????????????????	????????????????????	????????????????????	????????????????????
Macropsobrycon_xinguensis_40499	TATGAGAAGATGTTCAACTG	G????????????????????	????????????????????	????????????????????	????????????????????
Bryconops_affinis_4168	TATGAGAAGATGTTCAACTG	G????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	????????????????????	????????????????????	????????????????????	????????????????????	????????????TGGCAGCCAG
Aphyocharax_anisitsi_12660	TATGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGTACTGCTGAGAAG	GAGCTTCTCCCTGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Carlana_eigenmani_19864	TATGAGAAGATGTTCAACTG	G????????????????????	????????????????????	????????????????????	?????????????????AGCAG
Astyanax_mexicanus_24599	TATGAGAAGATGTTCAACTG	G????????????????????	????????????????????	????????????????????	????????????????????
Spintherobolus_brocceae_22558	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGTACTGCTGAGAAG	GAGCTTCTCCCTGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Spintherobolus_leptoura_36098	TATGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGTACTGCTGAGAAG	GAGCTTCTCCCTGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Spintherobolus_ankoseion_24957	TATGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGTACTGCTGAGAAG	GAGCTTCTCCCTGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Charax_leticiae_12700	????????????????????	?ATCTTCCAGCCCTTGACA	CCCTCCGTACTGCTGAGAAG	GAGCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Diapoma_sp_21274	TATGAAAAGATGTTCAACTG	G????????????????????	????????????????????	????????????????????	????????????TGGCAGCCAG
Prodontocharax_melanotus_10	TATGAGAAGATGTTCAACTG	G????????????????????	????????????????????	????????????????????	????????????????????
Prodontocharax_sp_7	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Nanocheiroidon_insignis_27476	TATGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Pseudocheiroidon_arnoldi_5	TACGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGAAGCTGCTGAGAAG	GAGCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Pseudocheiroidon_terrabae_6	????????????????????	????????????????????	????????????????????	?????????????????CCA	TCAGTTTGAGTGGCAGCCAG
Heterocheiroidon_yatai_24954	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAACCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Cheiroidon_killiani_24964	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAACCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Cheiroidon_austriale_24979	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAACCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Cheiroidon_interruptu_20486	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAACCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Cheiroidon_killiani_19803	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAACCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Cheiroidon_killiani_24969	TATGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAACCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Cheiroidon_austriale_24963	TATGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAACCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Cheiroidon_interruptu_21266	TATGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAACCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Cheiroidon_ibicuhiensis_25598	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAACCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Cheiroidon_killiani_24974	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAACCTTCTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Saccoderma_melanostigma_24775	TATGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Compsura_gorgonae_1	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Odontostilbe_mitoptera_3	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Compsura_sp_nova_4	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Odontostilbe_dialepturus_2	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Odontostilbe_pulchra_25845	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Odontostilbe_paraguayensis_20127	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Odontostilbe_sp_22626	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Serrapinnus_microdon_17057	TACGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Kolpotocheiroidon_theloura_25982	TATGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Macropsobrycon_uruguayanae_29061	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Odontostilbe_pequira_24958	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Odontostilbe_pequira_20124	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Odontostilbe_pequira_12659	TACGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Acinocheiroidon_melanogrammus_37551	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Serrapinnus_heterodon_20305	TACGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Odontostilbe_sp_229616	TACGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Kolpotocheiroidon_figueiredoi_37576	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
1Kolpotocheiroidon_figueiredoi_37575	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Serrapinnus_kriegi_25764	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Compsura_heterura_24984	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Gen_e_sp_nova_27603	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Acinocheiroidon_cf_melanogrammus_37550	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGTGCTGCTGAGAAG	GAGCTTCTTCCGGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Serrapinnus_notomelas_19890	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Serrapinnus_notomelas_18293	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Cheiroidon_stenodon_20130	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Serrapinnus_sp_122401	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Odontostilbe_fugitiva_22932	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Cheiroidon_pulcher_8	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Odontostilbe_fugitiva_23714	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Serrapinnus_calliurus_22121	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Serrapinnus_calliurus_25768	TACGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Odontostilbe_ecuadorensis_9	TACGAGAAGATGTTCAACTG	GATATTCCAGCCCTTGACA	CCCTCCGGACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Cynopotamus_magdalena_29515	TATGAAAAGAT????????	????????????????????	????????????????????	????????????????????	?????????????CAGCCAG
Phenacogaster_sp_27299	TATGAGAAGATGTTCAACTG	G????????????????????	????????????????????	????????????????????	????????????????????
Aphyocharacidium_sp_33167	????????????????????	?ATATTCCAGCCCTTGACA	CCCTCCGTACTGCTGAGAAG	GAGCTTCTTCCAGGCTTCCA	TCAGTTTGAGTGGCAGCCAG
Hemibrycon_sp_33168	TATGAGAAGATGTTCAACTG	G????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	CTCTCAAAAACGTGGCCAGC	TCCTGGAAACGTAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCCTCTGTAGATGAAGTG	CCCGCAGACACCATCTCTAG
Gnatocharax_sp_24494	????????????CGTGTCCAG	TCTTGGAAACGTGGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCCTCTGTAGATGAAGTG	CCCGCAGACACCATCTCTAG
Macropsobrycon_xinguensis_40499	????????????CGGGC	TCTTGGAAACATCTGCATCAG	CGCTGGGCTCTCCGGCTGGA	CAGTGTCTGTAGAGGACGTG	CCAGCAGACACCATCTCTAG
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	CTCTCAAAAACGTGTCCAGC	TCTTGGAAACGTAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCCTCTGTAGATGAAGTG	CCCGCAGACACCATCTCTAG
Aphyocharax_anisitsi_12660	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGATGGGCTCTCCGGCTGGA	CGGTGTCTGTAGAGATGTG	CCAGCAGACACCATCTCTAG

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Carlana_eigenmani_19864	CTCTC?AAAAAGTATACCAG	TCTTGGAAACATAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CGCGCTCTGTAGATGAAGTA	CCAGCAGACACCATTCTCTAG
Astyanax_mexicanus_24599	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATCAT	AGATGGGCTCTCTGGCTGGA	CGGTGTCTGTAGAGGACGTG	CCAGCAGACACCATTCTCTAG
Spintherobolus_brocceae_22558	CTCTCAAAAACGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCCTCTGTGGATGACGTA	CCAGCAGACACCATTCTCTAG
Spintherobolus_leptoura_36098	CTCTCAAAAACGTGGCCAGC	TCTTGGAAACATAGGCATTAT	CGATGGGCTCTCTGGGCTGGA	CAGCCTCTGTAGATGACGTA	CCAGCAGACACCATTCTCTAG
Spintherobolus_ankoseion_24957	CTCTCAAAAACGTGGCCAGC	TCTTGGAAACATAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCCTCTGTAGATGACGTA	CCAGCAGACACCATTCTCTAG
Charax_leticiae_12700	CTCTCAAAAACGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCCTCTGTAGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Diapoma_sp_21274	CTCTCAAAAACGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCCTCTGTGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Prodontocharax_melanotus_10	?????????GTGTCCAGC	TCTTGGGCGTAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CCGTGTCTGTGAAAGACGTT	CCAGCGGACACCATTCTCCAG
Prodontocharax_sp_7	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CCGTGTCTGTGAAAGACGTT	CCAGCGGACACCATTCTCCAG
Nanocheirodon_insignis_27476	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Pseudocheirodon_arnoldi_5	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Pseudocheirodon_terrabrae_6	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATTAT	CGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Heterocheirodon_yatai_24954	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CAGCGTCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Cheirodon_killiani_24964	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCGTCTGTAGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Cheirodon_australe_24979	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CAGCGTCTGTAGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Cheirodon_interruptu_20486	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CAGCGTCTGTAGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Cheirodon_killiani_19803	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCGTCTGTAGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Cheirodon_killiani_24969	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCGTCTGTAGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Cheirodon_australe_24963	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CAGCGTCTGTAGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Cheirodon_interruptus_21266	CTCTCAAAAATGTGTCCAGC	TCTTGGAGGTAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCGTCTGTAGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Cheirodon_ibicuhiensis_25598	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CAGCGTCTGTAGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Cheirodon_killiani_24974	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCGTCTGTAGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Saccoderma_melanostigma_27475	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCATCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Compura_gorgoniae_1	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCATCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Odontostilbe_mitoptera_3	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCATCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Compura_sp_nova_4	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCATCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Odontostilbe_dialepturus_2	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCATCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Odontostilbe_pulchra_25845	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCATCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Odontostilbe_paraguayensis_20127	CTCTCAAAAATGTGTCCAGC	TCTTGGAGGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCATCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Odontostilbe_sp_22626	CTCTCAAAAATGTGTCCAGC	GCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCATCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Serrapinnus_microdon_17057	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCTTCTGTAGAAAGATGTT	CCAGCGGACACCATTCTCTAG
Kolpotocheirodon_theloura_25982	CTCTCAAAAATGTGTCCAGT	GCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGATGGA	CCGTGTCTGTAGAAAGACGTT	CCAGCGGACACCATTCTCTAG
Macropsobrycon_uruguayanae_29061	CTCTCAAAAATGTGTCCAGT	GCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGATGGA	CCGCGTCTGTAGAAAGACGTT	CCAGCGGACACCATTCTCTAG
Odontostilbe_pequira_24958	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CCGCTTCTGTAGAAAGATGTT	CCAGCGGACACCATTCTCTAG
Odontostilbe_pequira_20124	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCTTCTGTAGAAAGATGTT	CCAGCGGACACCATTCTCTAG
Odontostilbe_pequira_12659	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CCGCTTCTGTAGAAAGATGTT	CCAGCGGACACCATTCTCTAG
Acinocheirodon_melanogrammus_37551	CTCTCAAAAATGTGTCCAGC	TCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCTTCTGTAGAAAGATGTT	CCAGCGGACACCATTCTCTAG
Serrapinnus_heterodon_20305	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCTTCTGTAGAAAGATGTT	CCAGCGGACACCATTCTCTAG
Odontostilbe_sp2_29616	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCTTCTGTAGAAAGATGTT	CCAGCGGACACCATTCTCTAG
Kolpotocheirodon_figueiredoi_37576	CTCTCAAAAATGTGTCCAGT	GCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGATGGA	CCGCGTCTGTAGAAAGACGTT	CCAGCGGACACCATTCTCTAG
1Kolpotocheirodon_figueiredoi_37575	CTCTCAAAAATGTGTCCAGT	GCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGATGGA	CCGCGTCTGTAGAAAGACGTT	CCAGCGGACACCATTCTCTAG
Serrapinnus_kriegi_25764	CTCTCAAAAATGTGTCCAGT	GCTTGGAGCATAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAGGACGTT	CCAGCGGACACCATTCTCCAG
Compura_heterura_24984	CTCTCAAAAATGTGTCCAGC	GCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAGGACGTT	CCAGCGGACACCATTCTCCAG
Gen_e_sp_nova_27603	CTCTCAAAAATGTGTCCAGC	GCTTGGAGCATAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAGGACGTT	CCAGCGGACACCATTCTCTAG
Acinocheirodon_cf_melanogrammus_37550	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CCGCTTCTGTAGAAAGACGTT	CCAGCGGACACCATTCTCCAG
1Aphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	CTCTCAAAAACGTGTCCAGC	TCTTGGAAATAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCCTCTGTAGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Serrapinnus_notomelas_19890	CTCTCAAAAATGTGTCCAGC	GCTTGGAGCATAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAGGACGTT	CCAGCGGACACCATTCTCCAG
Serrapinnus_notomelas_18293	CTCTCAAAAATGTGTCCAGT	GCTTGGAGCATAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAGGACGTT	CCAGCGGACACCATTCTCCAG
Cheirodon_stenodon_20130	CTCTCAAAAATGTGTCCAGT	GCTTGGAGGTAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAAAGACGTT	CCAGCGGACACCATTCTCCAG
Serrapinnus_spl_22401	CTCTCAAAAATGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCTTCTGTAGAAAGATGTT	CCAGCGGACACCATTCTCTAG
Odontostilbe_fugitiva_22932	CTCTCAAAAATGTGTCCAGC	GCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAGGACGTT	CCAGCGGACACCATTCTCTAG
Cheirodon_pulcher_8	CTCTCAAAAATGTGTCCAGC	TCTTGGAGGTAGGCATCAT	TGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAAAGACGTT	CCAGCAGACACCATTCTCTAG
Odontostilbe_fugitiva_23714	CTCTCAAAAATGTGTCCAGT	GCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAGGACGTT	CCAGCGGACACCATTCTCTAG
Serrapinnus_calliurus_22121	CTCTCAAAAATGTGTCCAGC	GCTTGGAGCATAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAGGACGTT	CCAGCGGACACCATTCTCCAG
Serrapinnus_calliurus_25768	CTCTCAAAAATGTGTCCAGC	GCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCTTCTGTAGAGGACATT	CCAGCGGACACCATTCTCCAG
Odontostilbe_ecuadorensis_9	CTCTCAAAAATGTGTCCAGC	GCTTGGAGCGTAGGCATCAT	CGACGGGCTCTCTGGCTGGA	CCGCGTCTGTAGAGGACGTT	CCAGCGGACACCATTCTCCAG
Cynopotamus_magdalena_29515	CTCTCAAAAACGTGTCCAGC	TCTTGGAAACATAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCTCTGTAGAAAGATGTT	CCAGCAGACCATATATCTTAG
Phenacogaster_sp_27299	????????????????????	????????????????????	????????????????????	????????????????????	????????GACACCATTCTCTAG
Aphyocharacidium_sp_33167	CTCTCAAAAATGTGTCCAGC	TCTTGGAAATAGGCATCAT	CGATGGGCTCTCTGGCTGGA	CAGCCTCTGTAGAAAGATGTT	CCAGCAGACACCATTCTCTAG
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	AAGGTTCCGCTATGATGTTG	CGCTAGTATCAGCTCTAAAA	GACCTGGAGGAGGACATCAT	GGAGGGATTGAGAGAGAGAG	GGTTGGATGACGACACCTGC
Gnatocharax_sp_24494	ACGATTCCGCTATGATGTTG	CGCTAGTATCAGCTTTGAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAGAGAG	GGTTGGATGACGACACCTGC
Macropsobrycon_xinguensis_40499	ACGATTCCGCTATGATGTTG	CAGTGGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAGAGAG	GGTTGGACGACGACACCTGC
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	AAGATTCCGCTACGATGTGG	CGCTAGTGTGAGCTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGATTGAGAGAGAGAG	GGCTGGACGACGACACCTGT
Aphyocharax_anisitsi_12660	ACGATTCCGCTATGATGTTG	CGCTGGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAGAGAG	GGTTGGATGACAGACACCTGC
Carlana_eigenmani_19864	AAGGTTCCGCTATGATGTTG	CGCTGGTATCAGCTCTAAAA	GACTTGGAGGAGGACATCAT	GGAGGGACTGAGAGAGAGAG	GGTTGGATGACGACACCTGC
Astyanax_mexicanus_24599	ACGATTCCGCTATGATGTTG	CGCTGGTATCAGCTTTGAAA	GACCTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAGAGAG	GGTTGGATGACGACACCTGC
Spintherobolus_brocceae_22558	AAGGTTCCGCTATGATGTTG	CGCTAGTATCAGCTCTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAGAGAG	GGCTGGATGACAGACACCTGC
Spintherobolus_leptoura_36098	AAGGTTCCGCTATGATGTTG	CTCTTGATATCAGCTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTTTGCGAGAGAGAG	GGCTGGATGACAGACACCTGC
Spintherobolus_ankoseion_24957	AAGGTTCCGCTATGATGTTG	CGCTTGATATCAGCTCTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTTTGCGAGAGAGAG	GGCTGGATGACAGACACCTGC
Charax_leticiae_12700	ACGATTCCGCTATGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAGAGAG	GGTTGGATGACAGACACCTGC
Diapoma_sp_21274	ACGATTCCGCTATGATGTTG	CGCTAGCATCAGCTTTGAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAGAGG	GGTTGGATGACAGACATGC

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Prodontocharax_melanotus_10	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Prodontocharax_sp_7	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Nanocheiroidon_insignis_27476	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTAAA	GACTTGGAGGAGGACATTAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Pseudocheiroidon_arnoldi_5	ACGGTTCGCTACGATGTTG	CAGTAGTTTCAGCTTTAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTAGATGACAGCACTGC
Pseudocheiroidon_terrabae_6	ACGGTTCGCTACGATGTTG	CAGTAGTTTCAGCTTTAAA	GACTTGGAGGAGGACATTAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Heterocheiroidon_yatai_24954	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Cheiroidon_killiani_24964	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAAAGAG	GGCTGGATGACAGCACTGC
Cheiroidon_australe_24979	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAAAGAG	GGCTGGATGACAGCACTGC
Cheiroidon_interruptu_20486	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAAAGAG	GGCTGGATGACAGCACTGC
Cheiroidon_killiani_19803	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAAAGAG	GGCTGGATGACAGCACTGC
Cheiroidon_killiani_24969	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAAAGAG	GGCTGGATGACAGCACTGC
Cheiroidon_australe_24963	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAAAGAG	GGCTGGATGACAGCACTGC
Cheiroidon_interruptus_21266	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAAAGAG	GGCTGGATGACAGCACTGC
Cheiroidon_ibicuhiensis_25598	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAAAGAG	GGCTGGATGACAGCACTGC
Cheiroidon_killiani_24974	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAAAGAG	GGCTGGATGACAGCACTGC
Saccoderma_melanostigma_27475	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGACAGAG	GGCTGGATGACAGCACTGC
Compura_gorgonae_1	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGACAGAG	GGCTGGATGACAGCACTGC
Odontostilbe_mitoptera_3	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGACAGAG	GGCTGGATGACAGCACTGC
Compura_sp_nova_4	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGACAGAG	GGCTGGATGACAGCACTGC
Odontostilbe_dialepturus_2	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGACAGAG	GGCTGGATGACAGCACTGC
Odontostilbe_pulchra_25845	ACGGTTCGCTACGATGTTG	CGCTGGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Odontostilbe_paraguayensis_20127	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Odontostilbe_spl_22626	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Serrapinnus_microdon_17057	ACGATTCCGCTACGATGTTG	CGCTGGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Kolpotocheiroidon_theloura_25982	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Macropsobrycon_uruguayanae_29061	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Odontostilbe_pequira_24958	ACGATTCCGCTACGATGTTG	CGCTGGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Odontostilbe_pequira_20124	ACGATTCCGCTACGATGTTG	CGCTGGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Odontostilbe_pequira_12659	ACGATTCCGCTACGATGTTG	CGCTGGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Acinocheiroidon_melanogrammus_37551	ACGATTCCGCTACGATGTTG	CGCTGGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Serrapinnus_heterodon_20305	ACGATTCCGCTACGATGTTG	CGCTGGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Odontostilbe_sp2_29616	ACGATTCCGCTACGATGTTG	CGCTGGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Kolpotocheiroidon_figueiredoi_37576	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
1Kolpotocheiroidon_figueiredoi_37575	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Serrapinnus_kriegeri_25764	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Compura_heterura_24984	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Gen_e_sp_nova_27603	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Acinocheiroidon_cf_melanogrammus_37550	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	AGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	ACGATTCCGCTATGATGTTG	CAGTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAAGGCTTGAGAGAGAGGG	GGTGGATGACAGCACTGC
Serrapinnus_notomelas_19890	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Serrapinnus_notomelas_18293	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Cheiroidon_stenodon_20130	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Serrapinnus_spl_22401	ACGATTCCGCTACGATGTTG	CGCTGGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Odontostilbe_fugitiva_22932	ACGGTTCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Cheiroidon_pulcher_8	ACGATTCCGCTACGATGTTG	CGCTGGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Odontostilbe_fugitiva_23714	ACGGTTCGCTACGATGTTG	CGCTAGTATCAGCTTTGAG	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Aphyocheiroidon_hemigrammus_40025	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Serrapinnus_calliurus_22121	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Serrapinnus_calliurus_25768	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Odontostilbe_ecuadorensis_9	ACGATTCCGCTACGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGATAGAG	GGCTGGATGACAGCACTGC
Cynopotamus_magdalenae_29515	ACGATTCCGCTATGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGCTTGAGAGAGCGAG	GTTTAGATGACAGCACTGC
Phenacogaster_sp_27299	AGATTCCGATATGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGCTTGAGAGAGCGAG	GTTTCTTGAGAGAGCGTGC
Aphyocharacidium_sp_33167	ACGATTCCGCTATGATGTTG	CGCTAGTATCAGCTTTGAAA	GACTTGGAGGAGGACATCAT	GGAGGGTCTGAGAGAGAGAG	GGCTGGATGACAGCACTGC
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	ACGTACGGTTTCACTGTGGT	AGTCAAGGAGTCATGTGATG	GCATGGGAGATGTCAGCGAG	AAGCACGGGAGGAGGACACGC	CGTTCCTGAGAAGGCTGTGA
Gnatocharax_sp_24494	ACCTCAGGTTTCACTGTGGT	AATCAAGGAGTCATGTGATG	GCATGGGAGATGTCAGTGAG	AAGCATGGAGGAGGAGCCGGC	TGTTCCCTGAGAAGGCTGTAA
Macropsobrycon_xinguensis_40499	ACATCAGGTTTCACTGTGGT	AATCAAGGAGTCGTGTGATG	GCATGGGGGATGTCAGCGAG	AAGCACGGAGGAGGAGCCGGC	TGTTCCCTGAGAAGGCTGTGA
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	ACGTACGGTTTCACTGTGGT	GATAAAGGAGTCATGTGATG	GCATGGGAGATGTCAGCGAG	AAGCACGGTGGAGGAGCCGGC	CATTCCAGAGAAGGCTGTGA
Aphyocharax_anisitsi_12660	ACGCCAGGTTTCACTGTGGT	AATCAAGGAGTCGTGTGATG	GCATGGGGGATGTCAGCGAG	AAGCACGGAGGAGGAGCCGGC	TGTTCCCTGAGAAGGCTGTGA
Carlana_eigenmani_19864	ACGTACGGTTTCACTGTGGT	AGTCAAGGAGTCATGTGATG	GCATGGGAGATGTCAGCGAG	AAGCACGGAGGAGGAGCCAGC	CATTCTTGAGAAGGCTGTGA
Astyanax_mexicanus_24599	ACGTACGGTTTCACTGTGGT	AATCAAGGAGTCGTGTGATG	GCATGGGGGATGTCAGCGAA	AAGCACGGAGGTGGAGCCGGC	TGTTCCCTGAGAAGGCTGTGA
Spintherobolus_broccae_22558	ACCTCAGGTTTCACTGTGGT	AATCAAGGAGTCATGTGATG	GCATGGGAGATGTCAGCGAG	AAGCATGGAGGAGGAGCCAGC	TGTTCCCTGAGAAGGCTGTGA
Spintherobolus_leptoura_36098	ACATCAGGTTTCACTGTGGT	AATCAAGGAGTCGTGTGATG	GCATGGGAGATGTCAGCGAG	AAGCATGGAGGAGGAGCCAGC	TGTTCCCTGAGAAGGCTGTGA
Spintherobolus_ankoseion_24957	ACATCAGGTTTCACTGTAGT	AATCAAGGAGTCGTGTGATG	GCATGGGTGATGTCAGCGAG	AAGCATGGAGGAGGAGCCAGC	TGTTCCCTGAGAAGGCTGTGA
Charax_leticiae_12700	ACATCAGGTTTCACTGTGGT	AATCAAGGAGTCATGTGATG	GCATGGGAGATGTCAGCGAG	AAGCATGGAGGAGGAGCCAGC	TATTCTGAAAAGGCTGTAA
Diapoma_sp_21274	ACACAGGTTTCACTGTGGT	AGTCAAGGAGTCATGTGATG	GCATGGGAGATGTCAGCGAA	AAGCATGGAGGAGGAGCCGGC	TGTTCCCTGAGAAGGCTGTAA
Prodontocharax_melanotus_10	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCATGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGAGCCGGC	TGTTCCAGAAAAGGCTGTAA
Prodontocharax_sp_7	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCATGTGATG	GCATGGGGGATGTCAGCGAG	AAACACGGAGGAGGAGCCGGT	TGTTCCAGAAAAGGCTGTAA
Nanocheiroidon_insignis_27476	ACCTCAGGTTTCACTGTGGT	AATCAAGGAGTCATGTGATG	GCATGGGGGATGTCAGCGAG	AAACACGGAGGTGGAGCCGGC	TGTTCCAGAAAAGGCTGTAA
Pseudocheiroidon_arnoldi_5	ACCTCAGGTTTCACTGTGGT	AATCAAGGAGTCATGTGATG	GCATGGGGGATGTCAGCGAG	AAACACGGAGGTGGAGCCGGC	TGTTCCAGAAAAGGCTGTAA
Pseudocheiroidon_terrabae_6	ACCTCAGGTTTCACTGTGGT	AATCAAGGAGTCATGTGATG	GCATGGGGGATGTCAGCGAG	AAACACGGAGGTGGAGCCGGC	TGTTCCAGAAAAGGCTGTAA
Heterocheiroidon_yatai_24954	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCATGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGAGCCGGC	TGTTCCAGAAAAGGCTGTAA
Cheiroidon_killiani_24964	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCATGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGAGCCGGC	TGTTCCAGAAAAGGCTGTAA

Apêndice

Cheirodon_australe_24979	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Cheirodon_interruptu20486	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Cheirodon_killiani_19803	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Cheirodon_killiani_24969	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Cheirodon_australe_24963	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Cheirodon_interruptus_21266	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Cheirodon_ibicuihensis_25598	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Cheirodon_killiani_24974	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Saccoderma_melanostigma_27475	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Compsura_gorgonae_1	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Odontostilbe_mitoptera_3	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Compsura_sp_nova_4	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Odontostilbe_dialepturus_2	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Odontostilbe_pulchra_25845	ACCTCAGGTTTCACTGTGGT	AATCAAGGAGTCTTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Odontostilbe_paraguayensis_20127	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Odontostilbe_sp1_22626	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Cheirodon_killiani_19803	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Serrapinnus_microdon_17053	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACATGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Kolpotocheirodon_theloura_25982	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Macropsobrycon_uruguayanae_29061	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACATGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Odontostilbe_pequirá_24958	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGAGATGTCAGCGAG	AAACATGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Odontostilbe_pequirá_20124	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGAGATGTCAGCGAG	AAACATGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Odontostilbe_pequirá_12659	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGAGATGTCAGCGAG	AAACATGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Acinocheirodon_melanogrammus_37551	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Serrapinnus_heterodon_20305	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Odontostilbe_sp2_29616	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Kolpotocheirodon_figueiredoi_37576	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
1Kolpotocheirodon_figueiredoi_37575	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Serrapinnus_kriegi_25764	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Compsura_heterura_24984	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
Gen_e_sp_nova_27603	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGGATGTCAGCGAG	AAACACGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Acinocheirodon_cf_melanogrammus_37550	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGC	TGTCCCAGAAAAGGCTGTAA
1Aphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	ACGTCAGGTTTCACTGTGGT	AATCAAGGAGTCACTGTGATG	GCATGGGAGATGTCAGCGAG	AAGCATGGAGGAGGACCGGC	TGTTCTTGAGAAGGCAGTGA
Serrapinnus_notomelas_19890	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Serrapinnus_notomelas_18293	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Cheirodon_stenodon_20130	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGTGATGTCAGCGAG	AAACACGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Serrapinnus_sp1_22401	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTCTTGTGATG	GCATGGGAGATGTCAGCGAG	AAACATGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Odontostilbe_fugitiva_22932	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACATGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Cheirodon_pulcher_8	ACCTCAGGTTTCACTGTGGT	AATCAAGGAGTCTTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Odontostilbe_fugitiva_23714	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Serrapinnus_calliurus_22121	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Serrapinnus_calliurus_25768	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Odontostilbe_ecuadorensis_9	ACCTCAGGTTTCACTGTGGT	AGTCAAGGAGTGTGTGATG	GCATGGGAGATGTCAGCGAG	AAACACGGAGGAGGACCGGT	TGTCCCAGAAAAGGCTGTAA
Cynopotamus_magdalena_29515	ACCTCAGGTTTCACTGTGGT	AATCAAGGAGTCACTGTGATG	GCATGGGAGATGTCAGCGAG	AAGCATGGAGGAGGACCAAG	TGTTCTTGAAAAGGCGTAA
Phenacogaster_sp_27299	ACGTCAGGTTTCACTGTGGT	AATCAAGGAGTCACTGTGATG	GAATGGGAGATGTCAGCGAG	AAGCATGGAGGAGGACCAAG	TGTTCTTGAGAAGGCGTAA
Aphyocharacidium_sp_33167	ACGTCAGGTTTCACTGTGGT	AGTCAAGGAGTCACTGTGATG	GCATGGGAGATGTCAGCGAG	AAGCATGGAGGAGGACCGGC	TGTTCCGGAAGAAGGCTGTAA
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCTGA	AGGTGAGGAAGAAGCGTGCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCGGAGCTGTCCCTG
Gnatocharax_sp_24494	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTTCGGAAGCTGTCCCTG
Macropsobrycon_xinguensis_40499	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAACTGTCCCTG
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCTGA	AGGTGAGGAAGAAGCGTGCA	CCATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTGTCCCTG
Aphyocharax_anisitsi_12660	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCAGA	AGGTGAGGAAGAAGCTGTCA	CGATATTCCAGGAGCAAAAAG	CCCAACTCAGAACTGTCCCTG
Carlana_eigenmani_19864	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCTGA	AGGTGAGGAAGAAGCGTGCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCGGAGCTGTCCCTG
Astyanax_mexicanus_24599	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CGATATTCCAGGAGCAAAAAG	CCCAACTCAGAACTGTCCCTG
Spintherobolus_broccae_22558	GATTCTCTTTTACACTAATG	TCCATCACCATTCAAGCTGA	AGGTGAGGAAGAAGCTGTCA	CGATATTCCAGGAGCAAAAAG	CCCAACTCAGAGCTGTCCCTG
Spintherobolus_leptoura_36098	GATTCTCTTTTACACTAATG	TCCATCACCATTCAAGCTGA	AGGTGAGGAAGAAGCTGTCA	CGATATTCCAGGAGCAAAAAG	CCCAACTCAGAGCTGTCCCTG
Spintherobolus_ankoseion_24957	GATTCTCTTTTACACTAATG	TCCATCACCATTCAAGCTGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTGTCCCTG
Charax_leticiae_12700	GATTCTCTTTTACTGTGATG	TCCATCACCATTCAAGCAGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTGTCCCTG
Diapoma_sp_21274	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCAGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTTCGAGCTGTCCCTG
Prodontocharax_melanotus_10	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCTGAGCTTTCCTG
Prodontocharax_sp_7	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCTGAGCTTTCCTG
Nanocheirodon_insignis_27476	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTTTCCTG
Pseudocheirodon_arnoldi_5	GATTCTCTTTTACAGTTAATG	TCAATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTTTCCTG
Pseudocheirodon_terrabae_6	GATTCTCTTTTACAGTTAATG	TCAATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTTTCCTG
Heterocheirodon_yatai_24954	GGTTCTCTTTTACGTTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTTTCCTG
Cheirodon_killiani_19803	GGTTCTCTTTTACGTTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTTTCCTG
Cheirodon_australe_24979	GGTTCTCTTTTACGTTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTTTCCTG
Cheirodon_interruptu20486	GGTTCTCTTTTACGTTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTTTCCTG
Cheirodon_killiani_19803	GGTTCTCTTTTACGTTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTTTCCTG
Cheirodon_killiani_24969	GGTTCTCTTTTACGTTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTTTCCTG
Cheirodon_australe_24963	GGTTCTCTTTTACGTTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTTTCCTG
Cheirodon_interruptus_21266	GGTTCTCTTTTACGTTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTTTCCTG
Cheirodon_ibicuihensis_25598	GGTTCTCTTTTACGTTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAAG	CCCAACTCAGAGCTTTCCTG

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Cheirodon_killiani_24974	GGTTCTCTTTTACGTTGATG	TCCATCAGCTGTTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAA	CCCAACTCAGAGCTTTTCCTG
Saccoderma_melanostigma_27475	GATTCTCTTTTACTGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAA	CCCAACTCTGAGCTTTTCCTG
Compsura_gorgonae_1	GATTCTCTTTTACTGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAA	CCCAACTCGGAGCTTTTCCTG
Odontostilbe_mitoptera_3	GATTCTCTTTTACTGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAA	CCCAACTCGGAGCTTTTCCTG
Compsura_sp_nova_4	GATTCTCTTTTACTGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAA	CCCAACTCGGAGCTTTTCCTG
Odontostilbe_dialepturus_2	GATTCTCTTTTACTGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAA	CCCAACTCGGAGCTTTTCCTG
Odontostilbe_pulchra_25845	GATTCTCGTTTACGGTGATG	TCCATCACTATTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCGGAGCTTTTCCTG
Odontostilbe_paraguayensis_20127	GATTCTCGTTTACGGTGATG	TCCATCACCCTTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCAGAGCTTTTCCTG
Odontostilbe_sp1_22626	GATTCTCGTTTACGGTGATG	TCCATCACCCTTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCAGAGCTTTTCCTG
Serrapinnus_microdon_17057	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Kolpotocheirodon_theloura_25982	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Macropsobrycon_uruguayanae_29061	GATTCTCTTTTACAGTGATG	TCCATCACCCTTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCGGAGCTTTTCCTG
Odontostilbe_pequira_24958	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Odontostilbe_pequira_20124	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Odontostilbe_pequira_12659	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Acinocheirodon_melanogrammus_37551	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Serrapinnus_heterodon_20305	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Odontostilbe_sp2_29616	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Kolpotocheirodon_figueiredoi_37576	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
1Kolpotocheirodon_figueiredoi_37575	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Serrapinnus_notomelas_25764	GATTCTCGTTTACAGTAATG	TCCATCACCCTTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Compsura_heterura_24984	GATTCTCGTTTACAGTGATG	TCCATCACCCTTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCGGAGCTTTTCCTG
Gen_e_sp_nova_27603	GATTCTCGTTTACAGTGATG	TCCATCACCCTTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Acinocheirodon_cf_melanogrammus_37550	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCAGAAGCTTTTCCTG
1Aphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	GATTCTCTTTTACAGTGATG	TCCATCACTGTTCAAGCAGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAG	CCCAACTCTGAGCTTTTCCTG
Serrapinnus_notomelas_19890	GATTCTCGTTTACAGTGATG	TCCATCACCCTTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCAGAGCTTTTCCTG
Serrapinnus_notomelas_18293	GATTCTCGTTTACAGTGATG	TCCATCACCCTTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCAGAGCTTTTCCTG
Cheirodon_stenodon_20130	GATTCTCTTTTACAGTGATG	TCCATCACTATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Serrapinnus_sp1_22401	GATTCTCTTTTACAGTGATG	TCCATCACCATTCAAGCGGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Odontostilbe_fugitiva_22932	GATTCTCTTTTACAGTGATG	TCCATCACCCTTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Cheirodon_pulcher_8	GATTCTCGTTTACAGTGATG	TCCATCACTATTCAAGCAGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAG	CCCAACTCTGAGCTTTTCCTG
Odontostilbe_fugitiva_23714	GATTCTCTTTTACAGTGATG	TCCATCACCCTTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCGGAGCTTTTCCTG
Serrapinnus_calliurus_22121	GATTCTCGTTTACAGTGATG	TCCATCACCCTTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCAGAGCTTTTCCTG
Serrapinnus_calliurus_25768	GATTCTCGTTTACAGTGATG	TCCATCACCCTTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCAGAGCTTTTCCTG
Odontostilbe_ecuadorensis_9	GATTCTCGTTTACAGTGATG	TCCATCACCCTTCAAGCGGA	AGGCGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCCAACTCTGAGCTTTTCCTG
Cynopotamus_magdaleneae_29515	GATTCTCTTTTACTGTGATG	TCCATCACTGTTCAAGCGGA	AGGTGAAGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAG	CCCAACTCAGAGCTGTCTCTG
Phenacogaster_sp_27299	GATTCTCTTTTACTGTGATG	TCCGTCATCTGTTCAAGCAGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCAAAAG	CCCAACTCGGAGCTGTCTCTG
Aphyocharacidium_sp_33167	GATTCTCTTTTACAGTGATG	GCCGTCACCATTTCAAGCAGA	AGGTGAGGAAGAAGCTGTCA	CAATCTTCCAGGAGCCAAAA	CCTAACTCTGAGAGCTGTCTCTG
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	CAGGCCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACTGCCATCTT	AGGTCCTGTAGTGGCAGAGC	GTAAGCGTATGAAGGAGAGT
Gnatocharax_sp_24494	CGGACCGCTGTGCCTCATGT	TTGTGGACGAGTCTGATCAC	GAGATGCTGACTGCCATCTT	GGGTCCTGTAGTGGCAGAGC	GTAGAGCGATGAAGGAGAGT
Macropsobrycon_xinguensis_40499	CGGACCACTGTGCCTCATGT	TTGTGGACGAGTCTGATCAT	GAAATGCTGACTGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAGAGCGATGAAGGAGAGT
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	CAGGCCCTCTGTGCCTCATGT	TCGTGGACGAGTCTGATCAT	GAGATGCTGACTGCCATCTT	GGGTCTCTGTGTGGCAGAGC	GTAGAGCTATGAAGGAGAGT
Aphyocharax_anisitsi_12660	CGGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAGAGCGATGAAGGAGAGT
Carlana_eigenmanni_19864	CAGGCCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAT	GAGATGCTGACCGCCATCTT	TGGTCTCTGTAGTGGCAGAGC	GTAGAGCGATGAAGGAGAGT
Astyanax_mexicanus_24599	CGGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAT	GAGATGCTGACCGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAGAGCGATGAAGGAGAGT
Spintherobolus_broccae_22558	CGGACCACTGTGCCTCATGT	TTGTGGACGAGTCCATATCAC	GAGATGCTCACCGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Spintherobolus_leptoura_36098	CGGACCACTGTGCCTCATGT	TTGTGGACGAGTCCATATCAC	GAGATGCTGACCGCCATCTT	GGGTCTCTGTGTGGCAGAAC	GTAAGCGATGAAGGAGAGT
Spintherobolus_ankoseion_24957	CGGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Charax_leticiae_12700	CGGACCACTGTGCCTCATGT	TTGTGGACGAGTCTGATCAT	GAGATGCTGACCGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAGAGCAATGAAGGAGAGT
Diapoma_sp_21274	CGGACCACTGTGCCTCATGT	TTGTGGACGAGTCTGATCAC	GAGATGCTGACCGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAGAGCGATGAAGGAGAGT
Prodontocharax_melanotus_10	TCGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCGCCATCTT	GGGTCTCTGTGTGGCGAGAC	GTAAGCGATGAAGGAGAGT
Prodontocharax_sp_7	TCGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Nanocheirodon_insignis_27476	TCGACCACTGTGCCTCATGT	TTGTGGATGAGTCTGATCAC	GAGATGCTGACCGCCATCTT	GGGACCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Pseudocheirodon_arnoldi_5	TCGACCACTGTGCCTCATGT	TTGTGGATGAGTCTGATCAC	GAGATGCTGACTGCCATCTT	GGGACCTGTAGTGGCAGAAC	GTAAGCGATGAAGGAGAGT
Pseudocheirodon_terrabaes_6	TCGACCACTGTGCCTCATGT	TTGTGGATGAGTCTGATCAC	GAGATGCTGACCGCCATCTT	GGGACCTGTAGTGGCAGAAC	GTAAGCGATGAAGGAGAGT
Heterocheirodon_yatai_24954	TCGGCCACTGTGCCTTATGT	TTGTAGACGAGTCCGATCAC	GAGATGCTGACCGCCATCTT	AGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Cheirodon_killiani_24964	TCGGCCACTGTGCCTTATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCGCTGTCTT	AGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Cheirodon_australe_24979	TCGGCCACTGTGCCTTATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCGCTGTCTT	AGGTCTCTGTAGTGGCAGAAC	GTAAGCGATGAAGGAGAGT
Cheirodon_interruptu_20486	TCGGCCACTGTGCCTTATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCGCTGTCTT	AGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Cheirodon_killiani_19803	TCGGCCACTGTGCCTTATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCGCTGTCTT	AGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Cheirodon_killiani_24969	TCGGCCACTGTGCCTTATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCGCTGTCTT	AGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Cheirodon_australe_24963	TCGGCCACTGTGCCTTATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCGCTGTCTT	AGGTCTCTGTAGTGGCAGAAC	GTAAGCGATGAAGGAGAGT
Cheirodon_interruptus_21266	TCGGCCACTGTGCCTTATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCGCTGTCTT	AGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Cheirodon_ibicuihensis_25598	TCGGCCACTGTGCCTTATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACTGCAGTCTT	AGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Cheirodon_killiani_24974	TCGGCCACTGTGCCTTATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCGCTGTCTT	AGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Saccoderma_melanostigma_27475	TCGACCACTGTGCCTCATGT	TCGTGGATGAGTCCGATCAC	GAGATGCTGACCGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Compsura_gorgonae_1	TCGACCACTGTGCCTCATGT	TCGTGGATGAGTCCGATCAC	GAGATGCTGACCGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Odontostilbe_mitoptera_3	TCGACCACTGTGCCTCATGT	TCGTGGATGAGTCCGATCAC	GAGATGCTGACCGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Compsura_sp_nova_4	TCGACCACTGTGCCTCATGT	TCGTGGATGAGTCCGATCAC	GAGATGCTGACCGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Odontostilbe_dialepturus_2	TCGACCACTGTGCCTCATGT	TCGTGGATGAGTCCGATCAC	GAGATGCTGACCGCCATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT
Odontostilbe_pulchra_25845	TCGGCCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAT	GAGATGCTGACCGCTATCTT	GGGTCTCTGTAGTGGCAGAGC	GTAAGCGATGAAGGAGAGT

Odontostilbe_paraguayensis_20127	TCGACCACTGTGCCTCATGT	TCGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGACCTCTAGTGGCAGAGC	GTAAGCGCATGAAGGAGAGT
Odontostilbe_spl_22626	TCGACCACTGTGCCTCATGT	TCGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAAGCGCATGAAGGAGAGT
Serrapinnus_microdon_17057	TCGACCACTGTGCCTCATGT	TCGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAAGCGCATGAAGGAGAGT
Kolpotocheiroidon_theloura_25982	TCGACCACTGTGCCTCATGT	TTGTGGACGAATCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GCAAAGCGCATGAAGGAGAGT
Macropsobrycon_uruguayanae_29061	TCGACCACTGTGCCTCATGT	TTGTGGACGAATCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GCAAAGCGCATGAAGGAGAGT
Odontostilbe_pequira_24958	TCGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAAGCCCATGAAGGAGAGT
Odontostilbe_pequira_20124	TCGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GCAAAGCAATGAAGGAGAGT
Odontostilbe_pequira_12659	TCGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GCAAAGCGCATGAAGGAGAGT
Acinocheiroidon_melanogrammus_37551	TCGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAAGCCCATGAAGGAGAGT
Serrapinnus_heterodon_20305	TCGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAAGCCCATGAAGGAGAGT
Odontostilbe_sp2_29616	TCGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAAGCCCATGAAGGAGAGT
Kolpotocheiroidon_figueiredoi_37576	TCGACCACTGTGCCTCATGT	TTGTGGACGAATCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GCAAAGCGCATGAAGGAGAGT
1Kolpotocheiroidon_figueiredoi_37575	TCGACCACTGTGCCTCATGT	TTGTGGACGAATCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GCAAAGCGCATGAAGGAGAGT
Serrapinnus_kriegi_25764	TCGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GCAAAGCGCATGAAGGAGAGT
Compsura_heterura_24984	TCGACCACTGTGCCTCATGT	TCGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GCAAAGCGCATGAAGGAGAGT
Gen_e_sp_nova_27603	TCGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAAGCCCATGAAGGAGAGT
Acinocheiroidon_cf_melanogrammus_37550	TCGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAAGCCCATGAAGGAGAGT
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	CGCACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAGACCAATGAAGGAGAGT
Serrapinnus_notomelas_19890	TCGACCACTGTGCCTCATGT	TCGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGACCTCTAGTGGCAGAGC	GTAAGCGCATGAAGGAGAGT
Serrapinnus_notomelas_18293	TCGACCACTGTGCCTCATGT	TCGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGACCTCTAGTGGCAGAGC	GTAAGCGCATGAAGGAGAGT
Cheiroidon_stenodon_20130	TCGACCACTGTGCCTCATGT	TTGTGGACGAATCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GCAAAGCGCATGAAGGAGAGT
Serrapinnus_spl_22401	TCGACCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GCAAAGCGCATGAAGGAGAGT
Odontostilbe_fugitiva_22932	TCGACCACTGTGCCTCATGT	TCGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAAGCGCATGAAGGAGAGT
Cheiroidon_pulcher_8	TCGCCCCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAAGCGCATGAAGGAGAGT
Odontostilbe_fugitiva_23714	TCGACCACTGTGCCTCATGT	TCGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGACCTCTAGTGGCAGAGC	GTAAGCGCATGAAGGAGAGT
Serrapinnus_calliurus_22121	TCGACCACTGTGCCTCATGT	TCGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGACCTCTAGTGGCAGAGC	GTAAGCGCATGAAGGAGAGT
Serrapinnus_calliurus_25768	TCGACCACTGTGCCTCATGT	TCGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGACCTCTAGTGGCAGAGC	GTAAGCGCATGAAGGAGAGT
Odontostilbe_ecuadorensis_9	TCGACCACTGTGCCTCATGT	TCGTGGACGAGTCCGATCAC	GAGATGCTGACTGCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAAGCGCATGAAGGAGAGT
Cynopotamus_magdalenae_29515	CGCACCACTATGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAGACCAATGAAGGAGAGT
Phenacogaster_sp_27299	CGCACCGCTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACTGCCATCTT	GGGTCTCTAGTGGCAGAGC	GCAAAGCAATGAAGGAGAGT
Aphyocharacidium_sp_33167	CGCGCACTGTGCCTCATGT	TTGTGGACGAGTCCGATCAC	GAGATGCTGACCCTATCTT	GGGTCTCTAGTGGCAGAGC	GTAGAGCGCATGAAGGAGAGT
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	CGCCTCATTCTGTCCATAGG	TGGGCTCCTTCGTTCTCTTC	GCTTCTTCTCCGAGGCACA	GGCTATGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Gnatocharax_sp_24494	CGCCTCATTCTGTCCATAGG	TGGGCTCCTTCGTTCTCTTC	GCTTCTTCTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GCAGAGAAATGGAAGGGTTGG
Macropsobrycon_xinguensis_40499	CGCCTCATTCTGTCCATAGG	TGGGCTCCTTCGTTCTCTTC	GCTTCTTCTCCGAGGCACA	GGCTATGACGAGAAGATGGT	GCAGAGAAATGGAAGGGTTGG
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	CGCCTCATTCTGTCCATAGG	TGGGCTCCTTCGTTCTCTTC	GCTTCTTCTCCGAGGCACA	GGCTATGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Aphyocharax_anisitsi_12660	CGCCTGATCCTTCTCATAGG	TGGGCTCCTTCGTTCTCTTC	GCTTCTTCTCCGAGGAACA	GGCTATGACGAGAAGATGGT	GCAGAGAAATGGAAGGGTTGG
Carlana_eigenmani_19864	CGCCTCATTCTGTCCATAGG	TGGGCTCCTTCGTTCTCTTC	GCTTCTACTTCCGAGGCACA	GGCTATGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Astyanax_mexicanus_24599	CGCCTCATTCTGTCCATAGG	TGGGCTCCTTCGTTCTCTTC	GCTTCTTCTCCGAGGCACA	GGCTATGACGAGAAGATGGT	GCAGAGAAATGGAAGGGTTGG
Spintherobolus_brocceae_22558	CGCCTCATTCTGTCCATAGG	TGGGCTCCTTCGTTCTCTTC	GCTTCTACTTCCGAGGCACA	GGCTATGACGAGAAGATGGT	GCAGAGAAATGGAAGGGTTGG
Spintherobolus_leptoura_36098	CGCCTCATTCTGTCCATAGG	CGGGCTCCTTCGTTCTCTTC	GCTTCTACTTCCGAGGCACA	GGCTATGACGAGAAGATGGT	GCAGAGAAATGGAAGGGTTGG
Spintherobolus_ankoseion_24957	CGCCTCATTCTGTCCATAGG	TGGGCTCCTTCGTTCTCTTC	GCTTCTACTTCCGAGGCACA	GGCTATGACGAGAAGATGGT	GCAGAGAAATGGAAGGGTTGG
Charax_leticiae_12700	CGCCTCATTCTGTCCATAGG	TGGGCTCCTTCGTTCTCTTC	GCTTCTTCTCCGAGGCACA	GGCTACGACGAGAAGATGGT	CGCGGAAATGGAGGGTTAG
Diapoma_sp_21274	CGCCTCATTCTGTCCATAGG	TGGGCTCCTTCGTTCTCTTC	GCTTCTTCTCCGAGGCACA	GGCTATGACGAGAAGATGGT	GCAGAGAAATGGAAGGGTTGG
Prodontocharax_melanotus_114	CGCCTCATTCTGTCCATAGG	TGGGCTCCTTCGTTCTCTTC	GCTTCTTCTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Prodontocharax_sp_7	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Nanocheiroidon_insignis_27476	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGCACA	GGCTATGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Pseudocheiroidon_arnoldi_5	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGCACA	GGCTACGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Pseudocheiroidon_terrabae_6	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGCACA	GGCTACGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Heterocheiroidon_yatai_24954	CGACTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGTACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTAG
Cheiroidon_killiani_24964	CGACTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGTACA	GGCTACGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTAG
Cheiroidon_australe_24979	CGACTCATACTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGTACA	GGCTACGATGAGAAGATGGT	GAGGGAATGGAAGGGTTAG
Cheiroidon_interruptu_20486	CGACTCATACTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGTACA	GGCTACGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTAG
Cheiroidon_killiani_19803	CGACTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGTACA	GGCTACGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTAG
Cheiroidon_killiani_24969	CGACTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGTACA	GGCTACGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTAG
Cheiroidon_australe_24963	CGACTCATACTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGTACA	GGCTACGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTAG
Cheiroidon_interruptu_21266	CGACTCATACTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGTACA	GGCTACGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTAG
Cheiroidon_ibicuhiensis_25598	CGACTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGTACA	GGCTACGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTAG
Cheiroidon_killiani_24974	CGACTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCCGAGGTACA	GGCTACGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTAG
Saccoderma_melanostigma_27475	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTATGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Compsura_gorgoniae_1	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTATGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Odontostilbe_mitoptera_3	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTATGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Compsura_sp_nova_4	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTATGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Odontostilbe_dialepturus_2	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTATGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Odontostilbe_pulchra_25845	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTACGACGAGAAGATGGT	GAGGGAATGGAAGGGTTAG
Odontostilbe_paraguayensis_20127	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTAG
Odontostilbe_spl_22626	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Serrapinnus_microdon_17057	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTATGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Kolpotocheiroidon_theloura_25982	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTATGACGAGAAGATGGT	GAGGGAATGGAAGGGTTGG
Macropsobrycon_uruguayanae_29061	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTAG
Odontostilbe_pequira_24958	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTATGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Odontostilbe_pequira_20124	CGCCTCATTCTGTCCATAGG	TGGGCTTCTTCGTTCTCTTC	GCTTCTTCTCAGAGGCACA	GGCTATGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG

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Odontostilbe_pequira_12659	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAGGGGTTGG
Acinocheiroidon_melanogrammus_37551	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTATGACGAGAAGATGGT	GAGAGAAATGGAGGGGTTGG
Serrapinnus_heterodon_20305	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTATGACGAGAAGATGGT	GAGAGAAATGGAGGGGTTGG
Odontostilbe_sp2_29616	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTATGACGAGAAGATGGT	GAGAGAAATGGAGGGGTTGG
Kolpotocheiroidon_figueiredoi_37576	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAGGGGTTGG
1Kolpotocheiroidon_figueiredoi_37575	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAGGGGTTGG
Serrapinnus_kriegi_25764	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGATGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Campsura_heterura_24984	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Gen_e_sp_nova_27603	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGGGAATGGAAGGGCTGG
Acinocheiroidon_cf_melanogrammus_37550	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTATGACGAGAAGATGGT	GAGAGAAATGGAGGGGTTGG
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	CGACTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGATGAAAAGATGGT	GCGGGAAATGGAGGGGCTGG
Serrapinnus_notomelas_19890	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAGGGGTTGG
Serrapinnus_notomelas_18293	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAGGGGTTGG
Cheiroidon_stenodon_20130	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAGGGGTTGG
Serrapinnus_sp1_22010	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTATGACGAGAAGATGGT	GAGAGAAATGGAGGGGTTGG
Odontostilbe_fugitiva_22932	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Cheiroidon_pulcher_8	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAAAAGATGGT	GAGAGAAATGGAAGGGTTGG
Odontostilbe_fugitiva_23714	CGACTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Serrapinnus_calliurus_22121	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAGGGGTTGG
Serrapinnus_calliurus_25768	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAGGGATGG
Odontostilbe_ecuadorensis_9	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAAGGGTTGG
Cynopotamus_magdalena_29515	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GCGGGAAATGGAGGGTCTGG
Phenacogaster_sp_27299	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGGGAATGGAGGGTCTGG
Aphyocharacidium_sp_33167	CGCCTCATTCTGTCATAGG	TGGGCTTCTTCGATCCTTTC	GCTTCTTCTTCCGAGGCACA	GGCTACGACGAGAAGATGGT	GAGAGAAATGGAGGGGCTGG
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACACGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCA	GTCACTCGAAGCCACGAGGA
Gnatocharax_sp_24494	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACACGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGAAGCCACGAGGA
Macropsobrycon_xinguensis_40499	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	AACACGAGCTGAAGCCTCTC	AAAATATGGTGTGCACTCT	ATTACTCGAAGCCACGAGGA
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalcus_epakros_26504	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACACGAGCTGAAGCCTCTC	GAACATGGTGTGCACTCC	ATCACTCGAAGCCACGAGGA
Aphyocharax_anisitsi_12660	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	AACACGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCT	ATCACTCGAAGCCATGAGGA
Carlana_eigenmani_19864	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACACGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCA	ATCACTCGAAGCCATGAGGA
Astyanax_mexicanus_24599	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	AACACGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTTCT	ATCACTCGAAGCCATGAGGA
Spintherobolus_broccae_22558	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGAAGCCACGAGGA
Spintherobolus_leptoura_36098	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGAAGCCACGAGGA
Spintherobolus_ankoseion_24957	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGAAGCCACGAGGA
Charax_leticiae_12700	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGAAGCCATGAGGA
Diapoma_sp_21274	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGAAGCCACGAGGA
Prodontocharax_melanotus_10	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Prodontocharax_sp_7	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Nanocheiroidon_insignis_27476	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGATGA
Pseudocheiroidon_arnoldi_5	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGAAGCCACGAGGA
Pseudocheiroidon_terrabae_6	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Heterocheiroidon_yatai_24954	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Cheiroidon_killiani_24964	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Cheiroidon_austriale_24963	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Cheiroidon_interruptu20486	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Cheiroidon_killiani_19803	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Cheiroidon_killiani_24969	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Cheiroidon_austriale_24963	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Cheiroidon_interruptus_21266	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Cheiroidon_ibicuihensis_25598	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Cheiroidon_killiani_24974	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Saccoderma_melanostigma_27475	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Campsura_gorgonae_1	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Odontostilbe_mitoptera_3	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Campsura_sp_nova_4	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Odontostilbe_dialepturus_2	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Odontostilbe_pulchra_25845	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAAGA
Odontostilbe_paraguayensis_20127	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCATGAGGA
Odontostilbe_sp1_22626	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCATGAGGA
Serrapinnus_microdon_17057	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Kolpotocheiroidon_theloura_25982	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCATGAGGA
Macropsobrycon_uruguayanae_29061	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Odontostilbe_pequira_24958	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Odontostilbe_pequira_20124	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Odontostilbe_pequira_12659	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Acinocheiroidon_melanogrammus_37551	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Serrapinnus_heterodon_20305	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Odontostilbe_sp2_29616	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Kolpotocheiroidon_figueiredoi_37576	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCATGACGA
1Kolpotocheiroidon_figueiredoi_37575	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCATGACGA
Serrapinnus_kriegi_25764	AGGCTTCAGGTTCCACCTAC	ATCTGCACCTTGTGTGACTC	CACCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA

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Compsura_heterura_24984	AGGCTTCAGGTTCCACCTAC	GTCTGCACCTTGTGTGACTC	CACGCGAGCTGAAGCCTCGC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Gen_e_sp_nova_27603	AGGCTTCGGGTTCCACGTAC	GTCTGCACCTTGTGTGACTC	CACGCGAGCTGAAGCCTCGC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCATGAGGA
Acinocheiroidon_cf_melanogrammus_37550	AGGCTTCAGGTTCCACCTAC	GTCTGCACCTTGTGTGACTC	CACCTCGAGCTGAAGCCTCGC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	AGGCTTCAGGTTCCACGTAC	GTCTGCACCTTGTGTGACTC	CACGCGAGCTGAAGCCTCGC	AAAACATGGTGTGCACTCC	ATCACTCGAAGCCACGAGGA
Serrapinnus_notomelas_19890	AAAGCTTCAGGTTCCACCTAC	GTCTGCACCTTGTGTGACTC	CACGCGAGCTGAAGCCTCGC	AAAACATGGTGTGCCCTCT	ATCACTCGGAGCCACGAGGA
Serrapinnus_notomelas_18293	AAAGCTTCAGGTTCCACCTAC	GTCTGCACCTTGTGTGACTC	CACGCGAGCTGAAGCCTCGC	AAAACATGGTGTGCACTCT	ATCACTCGGAGCCACGAGGA
Cheiroidon_stenodon_20130	AGGCTTCGGGTTCCACCTAT	GTCTGCACCTTGTGTGACTC	CACGCGAGCTGAAGCCTCGC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCATGAGGA
Serrapinnus_spl_22401	AGGCTTCGGGTTCCACCTAC	GTCTGCACCTTGTGTGACTC	CACCTCGAGCTGAAGCCTCGC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Odontostilbe_fugitiva_22932	AAAGCTTCGGGTTCCACCTAC	GTCTGCACCTTGTGTGACTC	CACGCGAGCTGAAGCCTCGC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Cheiroidon_pulcher_8	AGGCTTCAGGTTCCACCTAT	GTCTGCACCTTGTGTGACTC	CACCTCGAGCTGAAGCCTCGC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Odontostilbe_fugitiva_23714	AAAGCTTCGGGTTCCACCTAT	GTCTGCACCTTGTGTGACTC	CACGCGAGCTGAAGCCTCTC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Serrapinnus_calliurus_22121	AAAGCTTCAGGTTCCACCTAC	GTCTGCACCTTGTGTGACTC	CACGCGAGCTGAAGCCTCGC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCACGAGGA
Serrapinnus_calliurus_25768	AAAGCTTCGGGTTCCACCTAC	GTCTGCACCTTGTGTGACTC	CACGCGAGCTGAAGCCTCGC	AAAACATGGTGTGCACTCT	ATCACTCGGAGCCACGAGGA
Odontostilbe_ecuadorensis_9	AGGCTTCAGGTTCCACCTAC	GTCTGCACCTTGTGTGACTC	CACGCGAGCTGAAGCCTCGC	AAAACATGGTGTGCACTCC	ATCACTCGGAGCCATGAGGA
Cynopotamus_magdalena_29515	AGGCTTCAGGTTCCACGTAC	ATCTGCACCTTGTGTGACTC	AACACGAGCTGAAGCCTCAC	AAAACATGGTGTACACTCC	ATCACTCGAAGCCATGAGGA
Phenacogaster_sp_27299	AGGCTTCAGGTTCCACATAC	ATCTGCACCTTGTGTGACTC	GACACGAGCTGAAGCCTCGC	AAAATATGGTGTGCACTCC	ATCACTCGAAGCCATGAAGA
Aphyocharacidium_sp_33167	AGGCTTCGGGTTCAACCTAC	GTCTGCACCTTGTGTGACTC	CACGCGAGCTGAAGCCTCAA	AAAACATGGTGTGCACTCT	ATCACTCGAAGCCACGAGGA
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	AAACCTTGAGCGCTACGAGA	TCTGGAGGACCAACCCCTTC	TCCGAATCTGCAGAGGAAT	GCGAGATCGGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Gnatocara_sp_24494	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCGGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGCAAGCCGTTTCATG
Macropsobrycon_xinguensis_40499	AAACCTTGAGAGATATGAGA	TTTGGAGATCCAAACCCATTC	TCAGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	GAACCTTCGAGCGCTATGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGAGGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGCAAGCCTTTCATG
Aphyocharax_anisitsi_12660	AAACCTTGAGAGGTATGAGA	TTTGGAGATCCAAACCCATTC	TCAGAGACTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Carlana_eigenmani_19864	AAACCTTGAGCGCTATGAGA	TCTGGAGGACCAACCCCTTC	TCCGAGTCTGCAGAGGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Astyanax_mexicanus_24599	AAACCTTGAGAGATATGAGA	TTTGGAGGACCAACCCCTTC	TCAGAGACTGCAGATGAAT	GCGGATCGAGTCAAAGGGG	TCTCCGCTAAGCCTTTCATG
Spintherobolus_brocceae_22558	AAACCTTGAGCGGTATGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Spintherobolus_leptoura_36098	AAACCTTGAGCGGTATGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGACGAAT	GAGGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Spintherobolus_ankoseino_24957	AAACCTTGAGCGGTATGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGACGAAT	GAGGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Charax_leticiae_12700	AAACCTTGAGAGATATGAAA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Diapoma_sp_21274	AAACCTTGAGGGGAGGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCGGACGAAT	GCGGATAGAGTCAAAGGGG	TCTCAGTACACGCTTTCATG
Prodontocara_melanotus_10	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Prodontocara_sp_7	AAACCTTGAGAGGTATGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGACGAAT	GCATGACCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Nanocheiroidon_insignis_27476	AAACAGTGAGAGATAGGAGA	GAGGGAGGGCTACCCCTTC	TCTGAGTTTGCCGACGAAT	GAGAGACCGGTCAAAGGGG	TGTAGCTAAGCCTTTCATG
Pseudocheiroidon_arnoldi_5	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGATCGGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Pseudocheiroidon_terrabae_6	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGAGATCGGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Heterocheiroidon_yatai_24954	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGTGAATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Cheiroidon_killiani_24964	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCAGAGTCTGCAGACGAAT	GCGTGAATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Cheiroidon_australe_24979	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGTGAATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Cheiroidon_interruptu_20486	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGTGAATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Cheiroidon_killiani_19803	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCAGAGTCTGCAGACGAAT	GCGTGAATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Cheiroidon_killiani_24963	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCAGAGTCTGCAGACGAAT	GCGTGAATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Cheiroidon_australe_24963	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGTGAATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Cheiroidon_interruptus_21266	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGTGAATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Cheiroidon_ibicuhiensis_25598	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGTGAATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Cheiroidon_killiani_24974	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCAGAGTCTGCAGACGAAT	GCGTGAATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Saccoderma_melanostigma_27475	AAACCTTGAGAGATCTGAGA	TATGGAGGACCAACCCCTTC	TCTCAGTCTACCGTCTAAT	AAGAGATAGAGTCAAAGGGG	TCTCAGTACGCTTTCATG
Compsura_gorgoneae_1	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGACGAAT	ACGCGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Odontostilbe_mitoptera_3	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGACGAAT	ACGCGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Compsura_sp_nova_4	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGACGAAT	ACGCGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Odontostilbe_dialepturus_2	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGACGAAT	ACGCGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Odontostilbe_pulchra_25845	AAACCTTGAGCGGTACGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGCAAGCCTTTCATG
Odontostilbe_paraguayensis_20127	AAACCTTGAGCGGTACGAGA	TATGGAGGACCAACCCCTTC	TCTGAGAGTGCAGACGAAT	GCGGACCGAGTCAAAGGGG	TCTCAGCAAGCCTTTCATG
Odontostilbe_spl_22626	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGACCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Serrapinnus_microdon_17057	AAACCTTGAGAGATACGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGACCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Kolpotocheiroidon_theloura_25982	AAACCTTGAGAGGTATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Macropsobrycon_uruguayanae_29061	AAACCTTGAGAGATATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGCAAGCCTTTCATG
Odontostilbe_pequira_24958	GAACCTTGAGAGATACGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGACCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Odontostilbe_pequira_20124	GAACCTTGAGAGATACGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGACCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Odontostilbe_pequira_12659	GAACCTTGAGAGATACGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGACGAAT	GCGTGAATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Acinocheiroidon_melanogrammus_37551	AAACCTTGAGAGATACGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Serrapinnus_heterodon_20305	AAACCTTGAGAGATACGAGA	TATGGAGGACCAACCCCTTC	TCTGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Odontostilbe_sp2_29616	AAACCTTGAGAGATACGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Kolpotocheiroidon_figueiredoi_37576	AAACCTTGATAGGTATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGCAAGCCTTTCATG
1Kolpotocheiroidon_figueiredoi_37575	AAACCTTGATAGGTATGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGCAAGCCTTTCATG
Serrapinnus_kriegi_25764	AAACCTTGAGCGGTACGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGACCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
Compsura_heterura_24984	AAACCTTGAGCGGTACGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGACCGAGTCAAAGGGG	TCTCAGCAAGCCTTTCATG
Gen_e_sp_nova_27603	AAACCTTGAGAGATACGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGACCGAGTCAAAGGGG	TCTCAGCAAGCCTTTCATG
Acinocheiroidon_cf_melanogrammus_37550	AAACCTTGAGAGATACGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGATCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	TACAGTGAGAGATATGAAA	GAGGGAGGACCAACCCCTTC	TCTGAGTCTGCAGTCTCAA	GCGAGATAGCGTCAAAGGGG	TTTCAGTAAGCCTTTCATG
Serrapinnus_notomelas_19890	AAACCTTGAGCGGTACGAGA	TATGGAGGACCAACCCCTTC	TCCGAGTCTGCAGACGAAT	GCGGACCGAGTCAAAGGGG	TCTCAGTAAGCCTTTCATG

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Serrapinnus_notomelas_18293	AAACCTTGAGCGGTACGAGA	TATGGAGAACGAACCCCTTC	TCCGAGTCTGCAGACGAAC	GCGCGACCGAGTCAAAGGGG	TCTCAGCTAAGCCTTTCATG
Cheirodon_stenodon_20130	AAACCTTGAGAGGTATGAGA	TATGGAGAACGAACCCCTTC	TCCGAGTCTGCAGACGAAC	GCGCGATCGAGTCAAAGGGG	TCTCAGCGAAGCCTTTCATG
Serrapinnus_spl_22401	AAACCTTGAGAGATACGAGA	TATGGAGAACGAACCCCTTC	TCCGAGTCTGCAGACGAAC	GCGCGACCGAGTCAAAGGGG	TCTCAGCTAAGCCTTTCATG
Odontostilbe_fugitiva_22932	AAACAGTGAGCGCTACGAGA	TATGGAGAACGAACCCCTTC	TCTGAGTCTGCAGACTAAT	GCGGAGCCGAGTCAAAGGGG	TCTTAGCGAAGCCTTTCATG
Cheirodon_pulcher_8	AAACCTTGAGAGATACGAGA	TATGGAGAACGAACCCCTTC	TCCGAGTCTGCAGACGAAC	GCGTGATCGAGTCAAAGGGG	TCTCAGCTAAGCCTTTCATG
Odontostilbe_fugitiva_23714	AGACCTTGAGCGTACGAGA	TATGGAGAACGAACCCCTTC	TCTGAGTCTGCAGACGAAC	GCGCGACCGAGTCAAAGGGG	TCTCAGCGAAGCCTTTCATG
Serrapinnus_calliurus_22121	AAACCTTGAGCGGTACGAGA	TATGGAGAACGAACCCCTTC	TCCGAGTCTGCAGACGAAC	GCGCGACCGAGTCAAAGGGG	TCTCAGCGAAGCCTTTCATG
Serrapinnus_calliurus_25768	AAACCTTGAGCGATACGAGA	TATGGAGAACGAACCCCTTC	TCCGAGTCTGCAGACGAAC	GCGCGACCGAGTCAAAGGGG	TCTCAGCGAAGCCTTTCATG
Odontostilbe_ecuadorensis_9	TAACATTGAGCGGTACGAGA	TATGGAGAACGAACCCCTTC	TCTGAGAGTGCAGACGAAC	GCGCGACCGAGTCAAAGGGG	TCTCAGCGAAGCCTTTCATG
Cynopotamus_magdaleneae_29515	AAACCTTGAGAGATATGAAA	TATGGAGAACGAACCCCTTC	TCTGAGTCTGCAGACGAAC	GCGGGATCGAGTCAAAGGGG	TTTTCAGTAAAGCCTTTCATG
Phenacogaster_sp_27299	AAACCTTGAGAGATATGAAA	TATGGAGAACGAACCCCTTC	TCTGAGTCTGCAGACGAAC	GCGGGATCGAGTCAAAGGGG	TTTTCAGCGAAGCCTTTCATG
Aphyocharacidium_sp_33167	AAACCTTGAGAGATATGAGA	TATGGAGAACGAACCCCTTC	TCCGAATCTGCAGACGAAC	GCGCGATCGAGTCAAAGGGG	TCTCAGCTAAGCCTTTCATG
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	GAGACCCAGCCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACTGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Gnatocharax_sp_24494	GAGACCCAGCCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCCACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	TGGAGAAATGTACCAAGAAA
Macropsobrycon_xinguensis_40499	GAGACACAGCCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAACTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	GAGACCCAGCCCACGCTAGA	TGCCTTGCACTGCGACATTG	GCAACGCTACAGAGTTTAT	AAGATATTCAGGATGAGAT	TGGTGAATGTACCAAGAAA
Aphyocharax_anisitsi_12660	GAGACCGACGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GTAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	TGGTGAATGTACCAAGAAA
Carlana_eigenmani_19864	GAGACCCAGCCCACACCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCCACTGAGTTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Astyanax_mexicanus_24599	GAGACCGACGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAACTCTAC	AAGATATTCAGGATGAGAT	TGGTGAATGTACCAAGAAA
Spintherobolus_brocceae_22558	GAGACCCAGCCCACGTTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	TGGTGAATGTACCAAGAAA
Spintherobolus_leptoura_36098	GAGACTCAGCCCACGTTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACGAGATTCTAC	AAGATATTCAGGATGAGAT	TGGTGAATGTACCAAGAAA
Spintherobolus_ankoseion_24957	GAGACTCAGCCCACGTTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	TGGTGAATGTACCAAGAAA
Charax_leticiae_12700	GAGATTGACGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	TGGTGAGATGTACCAAGAAA
Diapoma_sp_21274	GAGAGTCAGCCCACGCTAGA	TACCTTGCCCTGTGACATTG	TCAAGACTTCAGAGTTATAC	AAGATATTCAGGATGAGAT	TGGAGAAATGTACCAAGAAA
Prodontocharax_melanotus_10	GAGACCCAGCCGACACCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Prodontocharax_sp_7	GAGACCCAGCCGACGTTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTTATAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Nanocheirodon_insignis_27476	GAGATGCGACCCGACGTTAGA	TGCTTTGCACTGTGACATTG	GCAAGGATAGAGAGTTATAC	TCGATATTCCTGGATGAGAT	CGGTGAAATGTACCAAGAAA
Pseudocheirodon_arnoldi_5	GAGACCCAGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Pseudocheirodon_terrabrae_6	GAGACCCAGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Heterocheirodon_yatai_24954	GAGACCCAGACGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	TGGTGAATGTACCAAGAAA
Cheirodon_killiani_24964	GAGACCCAGACGACGTTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Cheirodon_australe_24979	GAGACCCAGACGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Cheirodon_interruptu20486	GAGACCCAGACGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Cheirodon_killiani_19803	GAGACCCAGACGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Cheirodon_killiani_24969	GAGACCCAGACGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Cheirodon_australe_24963	GAGACCCAGACGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Cheirodon_interruptus_21266	GAGACCCAGACGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Cheirodon_ibicuihensis_25598	GAGACCCAGACGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Cheirodon_killiani_24974	GAGACCCAGACGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Saccoderma_melanostigma_27475	GAGATGCGACCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAAGGCTACAGAGTCTCTAC	AAGATATTCCTGGATGAGAT	CGGTGAAATGTACCAAGAAA
Compsura_gorgonae_1	GAGACCCAGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Odontostilbe_mitoptera_3	GAGACCCAGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Compsura_sp_nova_4	GAGACCCAGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Odontostilbe_dialepturus_2	GAGACCCAGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Odontostilbe_pulchra_25845	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Odontostilbe_paraguayensis_20127	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Odontostilbe_spl_22626	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Serrapinnus_microdon_17057	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Kolpotocheirodon_theloura_25982	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Macropsobrycon_uruguayanae_29061	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Odontostilbe_pequira_24958	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Odontostilbe_pequira_20124	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Odontostilbe_pequira_12659	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Acinocheirodon_melanogrammus_37551	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Serrapinnus_heterodon_20305	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Odontostilbe_sp2_29616	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Kolpotocheirodon_figueiredoi_37576	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
1Kolpotocheirodon_figueiredoi_37575	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Serrapinnus_kriegi_25764	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Compsura_heterura_24984	GAGACCCAGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Gen_e_sp_nova_27603	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Acinocheirodon_cf_melanogrammus_37550	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
1Aphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	GAGACCCAGCCACTCTAGC	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCCTGGATGAGAT	TGGTGAGATGGACAGAGAG
Serrapinnus_notomelas_19890	GAGACCCAGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Serrapinnus_notomelas_18293	GAGACCCAGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Cheirodon_stenodon_20130	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Serrapinnus_spl_22401	GAGACCCAGCCACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Odontostilbe_fugitiva_22932	GAGACCCAGCCGACGTTAGA	TGCCTTGCACTGGGACATTG	GGAATGATACAGAGTTATAC	TAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Cheirodon_pulcher_8	GAGACCCAGCCACGCTAGA	TGCCTTGCACTGCGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Odontostilbe_fugitiva_23714	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGCGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA
Serrapinnus_calliurus_22121	GAGACCCAGCCGACGCTAGA	TGCCTTGCACTGTGACATTG	GCAATGCTACAGAGTCTCTAC	AAGATATTCAGGATGAGAT	CGGTGAAATGTACCAAGAAA

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Serrapinnus_calliurus_25768	GAGACCCAGCCGACGCTTGA	TGCTCTGCACTGTGACATTG	GCAATGCTACAGAGTTCTAC	AAGATATTCCAGGATGAGAT	CGGTGAAATGTACCAAAAAAG
Odontostilbe_ecuadorensis_9	GAGACCCAGCCGACGCTGGA	TGCTCTGCACTGTGACATTG	GGAATGCTACAGAGTTCTAC	AAGATATTCCAGGATGAGAT	CGGTGAAATGTACCAAAAAAG
Cynopotamus_magdalenae_29515	GAGATTACGCCACGCTAGA	TGCTTTCGCACTGTGACATTG	GCAATGCTACAGAGTTCTAC	AAATATTCCAGGATGAGAT	TGTTGAGATGTACCAAGAAAG
Phenacogaster_sp_27299	GAGATTACGCCACGCTAGA	TGCTTTCGCACTGTGACATCG	GCAATGCTACAGAGTTCTAC	AAGATATTCCAGGATGAGAT	AGGTGAGATGTACCAAGAAAG
Aphyocharacidium_sp_33167	GAGACCCAGCCGACGCTAGA	TGCTTTCGCACTGTGACATTG	GCAATGCTACAGAGTTCTAC	AAGATATTCCAGGATGAGAT	TGTTGAAATGTACCAAGAAAG
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	ACAACCCAGCTCGTAGAGGAG	CGCCGACGCTGGCGTTACG	CCTGGACAAGCAGCTCAGGA	AGAAGATGAAGTTGAAGCCA	GTGATGAGGATGAATGGAAA
Gnatoccharax_sp_24494	TCAACCCCGCTCGAGAGGAG	CGAAGAAAGCTGGCGATCAGC	CCTTGACAAGCAGCTGAGGA	AGAAGATGAAACTGAAGCCG	GTGATGAGAATGAATGGGAA
Macropsobrycon_xinguensis_40499	TCAACCCCTGCCGAGAGGAG	CGCGCGCGCTGGCGATCGGC	TCTTGACAAGCAGTTGAGGA	TGAAGATGAAGCTGAAGCCG	GTGATGAGGATGAACGGGAA
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	GCAGCCACCTCGAGAGGAG	CGCCGCGCTGGCGATCAGC	CCTCGACAAGCAGCTGAGAA	AGAAGCTGAAGCTGAAGCCA	GTGATGAGAATGAATGGAAA
Aphyocharax_anisitsi_12660	TCAACCTCTCTCGAGAGGAG	CGTCGGCGCTGGCGATCTGC	TCTTGACAAGCAGTTGAGGA	TGAAGATGAAGCTGAAGCCG	GTGATGAGGATGAACGGGAA
Carlana_eigenmanni_19864	ACAACCCAGCTCGAGAAGAG	CGTCGGCGCTGGCGTTACGC	CCTTGACAAGCAGCTGAGGA	AGAAGATGAAGCTGAAGCCG	GTGATGAGGATGAACGGGAA
Astyanax_mexicanus_24599	TCAACCCCGCTCGAGAGGAG	AGACGGCGCTGGCGATCGGC	TCTTGACAAGCAGTTGAGGA	TGAAGATGAAGCTGAAGCCG	GTGATGAGGATGAACGGGAA
Spintherobolus_brocceae_22558	TCAACCCAGCTCGAGAGGAG	CGACGACGCTGGCGTTACGC	CCTTGACAAGCAGCTGCGGA	AGAAGATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Spintherobolus_leptoura_16098	TCAACCCAGCTCGAGAGGAG	CGACGGCGCTGGCGTTACGC	CCTTGACAAGCAACTGCGGA	AGAAGATGAAGCTGAAGCCG	ATAATGAGGATGAACGGGAA
Spintherobolus_ankoseion_24957	TCAACCCCGCTCGAGAGGAG	CGACGGCGCTGGCGTTACGC	CCTTGACAAGCAGCTGCGAA	AGAAGATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Charax_leticiae_12700	TCAACCCAGCTCGAGAGGAA	CGACGACGCTGGCGATCGGC	CCTTGACAAGCAGCTGAGGA	AGAAGATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Diapoma_sp_21274	TCAACCCCGCCAGAGAGGAG	CGAAGACGCAAGCGATCAGC	CCTTGACAAGCAGCTGAGGA	CGAAGATGAAGCTGAAGCCG	GTGATGAGGATGAACGGGAA
Prodontocharax_melanotus_10	TCAACCCCGCCAGAGGAA	CGCGGACGCTGGCGATCTGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Prodontocharax_sp_7	TCAACCCCGCCAGAGAGAA	CGACGATGCTGGCGATCCTCC	CCTTGACAAGCAGCTGCGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Nanocheiroidon_insignis_27476	TCAACCCCGCCAGAGAGGAG	AGAAAATGAAGCGATCGCC	CCTAGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Pseudocheiroidon_arnoldi_5	TCAACCTGTCTCGAGAGGAG	CGCGGATGCTGGCGATCGGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Pseudocheiroidon_terrabae_6	TCAACCTGTCTCGAGAGGAG	CGCGGATGCTGGCGATCGGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Heterocheiroidon_yatai_24954	TCAACCCCGCGCGAGAGGAG	CGCGGACGCTGGCGGTACGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAATGGAAA
Cheiroidon_killiani_24964	TCAACCTCTGCGGAGAGGAG	CGCGGACGCTGGCGGTACGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Cheiroidon_australe_24979	TCAACCTCTGCGGAGAGGAG	CGCGGACGCTGGCGGTACGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Cheiroidon_interruptu_20486	TCAACCTCTGCGGAGAGGAG	CGCGGACGCTGGCGGTACGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Cheiroidon_killiani_19803	TCAACCTCTGCGGAGAGGAG	CGCGGACGCTGGCGGTACGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Cheiroidon_killiani_24969	TCAACCTCTGCGGAGAGGAG	CGCGGACGCTGGCGGTACGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Cheiroidon_australe_24963	TCAACCTCTGCGGAGAGGAG	CGCGGACGCTGGCGGTACGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Cheiroidon_interruptu_21266	TCAACCTCTGCGGAGAGGAG	CGCGGACGCTGGCGGTACGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Cheiroidon_ibicuhiensis_25598	TCAACCCCGCGCGAGAGGAG	CGCGGACGCTGGCGGTACGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Cheiroidon_killiani_24974	TCAACCTCTGCGGAGAGGAG	CGCGGACGCTGGCGGTACGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Saccoderma_melanostigma_27475	TCAACCTTCTCGAGAGGAA	CGGAGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAATGGAAA
Compura_gorgonae_1	TCAACCTGTCTCGAGAGGAA	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAATGGAAA
Odontostilbe_mitoptera_3	TCAACCTGTCTCGAGAGGAA	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAATGGAAA
Compura_sp_nova_4	TCAACCTGTCTCGAGAGGAA	CGGACGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAATGGAAA
Odontostilbe_dialepturus_2	TCAACCTGTCTCGAGAGGAA	CGTCGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAATGGAAA
Odontostilbe_pulchra_25845	TCAACCCCGCTCGAGAGGAG	CGTCGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Odontostilbe_paraguayensis_20127	TCAACCCCGCTCGAGAGGAG	CGTCGACGTTGGCGATTCGC	CCTAGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Odontostilbe_sp_22626	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Serrapinnus_microdon_17057	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Kolpotocheiroidon_theloura_25982	TCAACCCCGCTCGAGAGGAG	CGCGGATGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Macropsobrycon_uruguayanae_29061	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Odontostilbe_pequira_24958	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Odontostilbe_pequira_20124	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Odontostilbe_pequira_12659	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Acinocheiroidon_melanogrammus_37551	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Serrapinnus_heterodon_20305	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Odontostilbe_sp_29616	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAATGGAAA
Kolpotocheiroidon_figueiredoi_37576	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
1Kolpotocheiroidon_figueiredoi_37575	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Serrapinnus_kriegi_25764	TCAACCCCACTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTAGACAAGCAGCTGCGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Compura_heterura_24984	TCAACCCCGCTCGAGAGGAG	CGTCGACGCTGGCGATTCGC	CCTAGACAAGCAGCTGCGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Gen_e_sp_nova_27603	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	TCTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Acinocheiroidon_cf_melanogrammus_37550	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAATGGAAA
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	TCAACCCAGCCAGAGAGGAG	AGAAGACGCAAGCGATTCGCG	CCTCGCCAAGCAGCTGAGGA	AGAAGATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Serrapinnus_notomelas_19890	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Serrapinnus_notomelas_18293	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Cheiroidon_stenodon_20130	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Serrapinnus_sp_122401	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Odontostilbe_fugitiva_22932	TCAACCCCGCTCGAGAGGAG	CGAAGACGAAGCGATTCGCC	TCTGACAAGCAGCTGCGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Cheiroidon_pulcher_8	TCAACCCCGCTCGAGAGGAG	CGTCGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Odontostilbe_fugitiva_23714	TCAACCCCGCTCGAGAGGAG	CGTCGACGCTGGCGATTCGC	TCTTGACAAGCAGCTGCGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Serrapinnus_calliurus_22121	TCAACCCCGCTCGAGAGGAG	CGTCGACGCTGGCGATTCGC	CCTAGACAAGCAGCTGCGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Serrapinnus_calliurus_25768	TCAACCCCGCTCGAGAGGAG	CGCGGACGCTGGCGATTCGC	TCTAGACAAGCAGCTGCGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Odontostilbe_ecuadorensis_9	TCAACCCCGCTCGAGAGGAG	CGTCGACGCTGGCGATTCGC	CCTAGACAAGCAGCTGAGAA	AGAAAATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Cynopotamus_magdalenae_29515	TCAATCTGCTCGAGAGGAG	CGACGACGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGGA	AGAAGATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Phenacogaster_sp_27299	TCAACCCAGCTCGAGAGGAG	CGACGGCGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGGA	AGAAGATGAAGCTGAAGCCA	GTGATGAGGATGAACGGGAA
Aphyocharacidium_sp_33167	TCAATCTGCTCGAGAGGAG	CGCGGGCGCTGGCGATTCGC	CCTTGACAAGCAGCTGAGGA	AGAAGATGAAGCTGAAGCCG	GTGATGAGGATGAACGGGAA
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????

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Brycon_insignis_16075	CTACGCCCGCGGCTGATGA	CCCGTGAGGCTATAGAGGTG	GTATGTGAGCTGGTTCCTTC	AGAAGAGCGTCGCAAGGCTC	TGACCGAGCTGATGGAGTTG
Gnatocharax_sp_24494	CTACGCCCGACGGCTGATGA	CCCGTGAGGCGGTGGAGGTG	GTGTGTGATCTGATTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Macropsobrycon_xinguensis_40499	CTATGCCCGCGGCTGATGA	CCCGTGAGGCTATTGAGGTC	GTGTGTGAGTTGGTTCCTTC	TGACGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	CTATGCCCGACGGCTGATGA	CCCATGAGGCCATGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCGAAGGCTC	TGAGGGAGCTGATGGAGTTG
Aphyocharax_anisitsi_12660	CTACGCCCGCGGCTGATGA	CCCGGAGGCGTGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Carlana_eigenmani_19864	CTATGCCCGCGGCTGATGA	CCCGTGAGGCTATAGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAAAGAGCTGATGGAGTTG
Astyanax_mexicanus_24599	CTATGCCCGGAGGTTGATGA	CCAGTGAGGCTGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Spintherobolus_brocceae_22558	CTACGCCCGCGGCTGATGA	CCAGTGAGGCTGTGGAAGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Spintherobolus_leptoura_36098	TTACGCTCGGCGCTGATGA	CCAGTGAGGCTGTGGAAGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Spintherobolus_ankoseion_24957	TTACGCTCGGCGCTGATGA	CCAGTGAGGCTGTGGAAGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Charax_leticiae_12700	CTACGCCCGACGGCTGATGA	CCCGTGAGGCTGTGGATGCG	GTGTGTGAGTTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAAAGAGCTGATGGAGTTG
Diapoma_sp_21274	GTACGCCCGACGGCTGATGA	CCCGTGAGGCGATAGATGTG	GTGTGTGAGCGGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAAAGAGCTGATGGAGTTG
Prodontocharax_melanotus_10	CTATGCCCGACGGTTGATGA	CCCGTGAGGCGGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	CGAGGAGCGTCGCAAGGCTC	TGAAAGAGCTGATGGAGTTG
Prodontocharax_sp_7	GTATGCCAGACGGTTGATGA	CCCGTGAGGCGGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAAAGAGCTGATGGAGTTG
Nanocheiroidon_insignis_27476	GTATGCCCGACGGTTGATGA	CCCGGAGATCCGTGGAGGTG	GTGTGTGAGTTGGTTCCTTC	AGAGGAGAGTCGCAAGGCTC	TAAGAGAGCTGATGGAGTTG
Pseudocheiroidon_arnoldi_5	CTATGCCCGACGGTTGATGA	CCCGTGAGTCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TAAGAGAGCTGATGGAGTTG
Pseudocheiroidon_terrabae_6	CTATGCCCGACGATTGATGA	CCCGTGAGTCCGTAGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TAAGAGAGCTGATGGAGTTG
Heterocheiroidon_yatai_24954	CTATGCCCGACGGTTGATGA	CCCGTGAGTCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Cheiroidon_killiani_24964	CTATGCCCGACGGTTGATGA	CCCGTGAGGCGATGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Cheiroidon_austriale_24979	CTATGCCCGACGGTTGATGA	CCCGTGAGGCGATGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Cheiroidon_interruptu_20486	CTATGCCCGACGGTTGATGA	CCCGTGAGGCGATGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Cheiroidon_killiani_19803	CTATGCCCGACGGTTGATGA	CCCGTGAGGCGATGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Cheiroidon_killiani_24969	CTATGCCCGACGGTTGATGA	CCCGTGAGGCGATGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Cheiroidon_austriale_24963	CTATGCCCGACGGTTGATGA	CCCGTGAGGCGATGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Cheiroidon_interruptus_21266	CTATGCCCGACGGTTGATGA	CCCGTGAGGCGATGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Cheiroidon_austriale_24979	CTATGCCCGACGGTTGATGA	CCCGTGAGGCGATGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Cheiroidon_killiani_24974	CTATGCCCGACGGTTGATGA	CCCGTGAGGCGATGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Saccoderma_melanostigma_27475	GTAGGCCCGATGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGTTGGTTCCTTC	CGAGGAGCGTCGCAAGGCTC	TAAGAGAGCTGATGGAGTTG
Campsura_gorgonae_1	CTATGCCAGACGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TAGAGAGCTGATGGAGTTA
Odontostilbe_mitoptera_3	CTATGCCCGACGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTAGCAAGGCTC	TGAGAGAGCTGATGGAGTTA
Campsura_sp_nova_4	CTATGCCCGACGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTAGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Odontostilbe_dialepturus_2	CTATGCCCGACGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTAGCAAGGCTC	TGAGAGAGCTGATGGAGTTA
Odontostilbe_pulchra_25845	CTATGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGATGTG	GTGTGCGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Odontostilbe_paraguayensis_20127	CTACGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGATGTG	GTGTGCGAGCTAGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Odontostilbe_spl_22626	CTATGCCCGCGGCTTATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTGATGGAGTTG
Serrapinnus_microdon_17057	CTATGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Kolpotocheiroidon_theloura_25982	CTATGCCCGCGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGCGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Macropsobrycon_uruguayanae_29061	CTATGCCCGCGGCTTATGA	CCAGTGAAGCCGTGGAGTTC	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Odontostilbe_pequira_24958	CTATGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Odontostilbe_pequira_20124	CTATGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Odontostilbe_pequira_12659	CTATGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Acinocheiroidon_melanogrammus_37551	CTATGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Serrapinnus_heterodon_20305	CTATGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Odontostilbe_sp2_29616	CTATGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Kolpotocheiroidon_figueiredoi_37576	CTATGCCCGCGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGATTCTTC	AGAGGAGCGTCGCAAGGCTC	TGACAGAGCTGATGGAGTTG
1Kolpotocheiroidon_figueiredoi_37575	CTATGCCCGCGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGATTCTTC	AGAGGAGCGTCGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Serrapinnus_kruegi_25984	CTACGCCCGCGGTTGATGA	CCCGTGAGGCCGTGGATGTG	GTTCGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Campsura_heterura_24974	CTACGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGATGTG	GTGTGCGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Gen_e_sp_nova_27603	CTACGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGATGTG	GTGTGCGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Acinocheiroidon_cf_melanogrammus_37550	CTATGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	GTACGCCCGACGGTTGATGA	CCCGTGAGGCTGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Serrapinnus_notomelas_19890	CTACGCCCGTCGGTTGATGA	CCCGTGAGGCTGTGGATGTG	GTGTGCGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAATTG
Serrapinnus_notomelas_18293	CTACGCCCGTCGGTTGATGA	CCCGTGAGGCTGTGGATGTG	GTGTGCGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Cheiroidon_stenodon_20130	CTATGCCCGACGGTTGATGA	CCCGTGAGGCCGTGGAGGTG	GTGTGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Serrapinnus_spl_22401	CTACGCCCGTCGGTTGATGA	CCCGTGAGGCTGTGGATGTG	GTGTGCGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Odontostilbe_fugitiva_22932	CTACGCCCGTCGGTTGATGA	CCCGTGAGGCTGTGGATGTG	GTGTGCGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Cheiroidon_pulcher_8	CTATGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGATGTG	GTGTGCGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Odontostilbe_fugitiva_23714	CTACGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGATGTG	GTGTGCGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Serrapinnus_calliurus_22121	CTACGCCCGACGGTTGATGA	CCCGTGAGGCCGTGGATGTG	GTGTGCGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Serrapinnus_calliurus_25768	CTACGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGATGTG	GTGTGCGAGCTGGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Odontostilbe_ecuadorensis_9	CTACGCCCGTCGGTTGATGA	CCCGTGAGGCCGTGGATGTG	GTGTGCGAGCTAGTTCCTTC	AGAGGAGCGACGCAAGGCTC	TGACAGAGCTGATGGAGTTG
Cynopotamus_magdalenae_29515	CTACGCCAGACGGCTGATGA	CCCGTGAGGCTGTGGAAGTG	GTGTGTGATTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAGAGAGCTAATGGAGTTG
Phenacogaster_sp_27299	CTACGCCCGACGGCTGATGA	CCCGTGAGGCTGTGGAGGTG	GTGTGTGAGTTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TGAAAGAGCTGATGGAGTTG
Aphyocharacidium_sp_33167	CTATGCCAGACGGCTGATGA	CCCGTGAGGCCATGGAAGTG	GTTCGTGAGCTGGTTCCTTC	AGAGGAGCGTCGCAAGGCTC	TAAGAGAGCTGATGGAGTTG
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	TACCTCCAGATGAAGCCCGT	GTGGCGCTCTACCTGCCAC	CCAAAGACTGCCCTGATCAA	CTCTGCCGTTACAGCTACAA	CTCACAACGCTTCGCTGAAC
Gnatocharax_sp_24494	TACCTCCAGATGAAGCCCGT	GTGGCGCTCTACCTGTCCAC	CCAGAGACTGCCCCGATCAA	GTCTGCCGTTACAGCTTTAA	CTCGCAACGCTTTCGCGAAC
Macropsobrycon_xinguensis_40499	TACCTTCAGATGAAGCCCGT	GTGGCGCTCTACCTGCCAC	CCAGAGACTGCCCTGATCAA	CTGTGCCGTTACAGCTTTAA	CTCGCAACGCTTTCGCTGAAC
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	TACCTCCAGATGAAGCCCGT	GTGGCGTTCACCTGTCCCG	CCAGAGACTGCCCCGATCAA	CTCTGCCGTTACAGCTTTAA	CTCGCAACGCTTTCGCTGAAC
Aphyocharax_anisitsi_12660	TACGTCCAGATGAAGCCCGT	GTGGCGCTCTACCTGCCAC	CCAGAGACTGCCCTGACCAA	CTGTGCCGTTACAGCTTTAA	CTCACAACGCTTTCGCTGAAC
Carlana_eigenmani_19864	TACCTTCAGATGAAGCCCGT	GTGGCGCTCTACCTGCCAC	CCAAAGACTGCCCTGATCAA	CTCTGCCGTTACAGCTACAA	CTCACAACGCTTTCGCTGAAC

Astyanax_mexicanus_24599	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACCTGCCAG	CCAGAGACTGCCCTGATCAA	CTCTGCCGTTATAGCTTCAA	CTCACAACGCTTTGCTGAAC
Spintherobolus_brocceae_22558	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCCGATCAA	CTCTGCCGTTACAGCTTCAA	CTCGCAGCGCTTCGCTGAAA
Spintherobolus_leptoura_36098	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTTCTTGCCAG	CCAAAGACTGTCCCGATCAA	CTCTGCCGTTACAGCTTCAA	CTCGCAGCGCTTCGCTGAAA
Spintherobolus_ankoseion_24957	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACCTGCCAG	CCAAAGACTGTCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCAGACCGCTTTGCTGATT
Charax_leticiae_12700	TACCTCCAGATGAAGCCCGT	CTGGCGCTCCACTGCCAG	CCAAGGACTGCCCTGATCAA	CTGTGTCGTTACAGCTTCAA	CTCCCAACGATTTGCTGAAC
Diapoma_sp_21274	TACCTCCCGATGAAGCCCGT	CTGGCGCTTTACTTGTCAA	CCAGAGACTGCCCGGCTCAA	GTCTGTGCTTACAGTTTCAA	CTCGCAACGCTTTGCCCGAAC
Prodontocharax_melanotus_10	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTTCTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGACC
Prodontocharax_sp_7	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGTTTCAA	CTCACAACGGTTTCGAGACT
Nanocheiroidon_insignis_27476	TCCTCCAGATGAAGCCCGT	CTGGCGCTCTACCTGCCAG	CCAGAAACGGTCCAGATCAA	CTCTGCCGTTACCGCTTAA	CTCAGAACGGTTGGCTGATT
Pseudocheiroidon_arnoldi_5	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGATTCGCTGATC
Pseudocheiroidon_terrae_6	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCCTAATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGATTTGCTGATC
Heterocheiroidon_yatai_24954	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Cheirodon_killiani_24964	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Cheirodon_austriale_24979	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Cheirodon_interruptu_20486	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Cheirodon_killiani_19803	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Cheirodon_killiani_24969	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Cheirodon_austriale_24963	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Cheirodon_interruptus_21266	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Cheirodon_ibicuihensis_25598	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Cheirodon_killiani_24974	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Saccoderma_melanostigma_27475	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAAAACCTGCCAGATCAA	CTCTGCCGTTACATTTTCAA	CTCACAACGGTTTCGCTGAGC
Compsura_gorgonae_1	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Odontostilbe_mitoptera_3	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Compsura_sp_nova_4	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Odontostilbe_dialepturus_2	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Odontostilbe_mitoptera_3	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Odontostilbe_paraguayensis_20127	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTATAGCTTCAA	CTCACAACGATTTGCGAGATC
Odontostilbe_sp_12626	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Serrapinnus_microdon_17057	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Kolpotocheiroidon_theloura_25982	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTATAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Macropsobrycon_uruguayanae_29061	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Odontostilbe_pequirá_24958	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Odontostilbe_pequirá_20124	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Odontostilbe_pequirá_12659	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Acinocheiroidon_melanogrammus_37551	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Serrapinnus_heterodon_20305	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Odontostilbe_sp_29616	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Kolpotocheiroidon_figueiredoi_37576	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTATAGCTTCAA	CTCACAACGGTTTCGCTGAGC
1Kolpotocheiroidon_figueiredoi_37575	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTATAGCTTCAA	CTCACAACGGTTTCGCTGAGC
Serrapinnus_kriegi_25764	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTATAGCTTCAA	CTCACAACGGTTTCGAGATC
Compsura_heterura_24984	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGTTTCAA	CTCACAACGGTTTCGAGATC
Gen_e_sp_nova_27603	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGTTTCAA	CTCACAACGGTTTCGAGATC
Acinocheiroidon_cf_melanogrammus_37550	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTAA	CTCACAACGCTTCGCTGACC
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	TCCTCCAGATGAACCTGCT	CTGGCGCTTACTTGTCCAA	CCAGGGACTGCCCTGACCAA	CTGTGCCGTTACAGCTTCAA	CTCGCAACGATTCGCTGAAT
Serrapinnus_notomelas_19890	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTATAGCTTCAA	CTCACAACGATTCGAGATC
Serrapinnus_notomelas_18293	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTATAGCTTCAA	CTCACAACGATTCGAGATC
Cheirodon_stenodon_20130	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTATAGCTTCAA	CTCACAACGGTTTCGCTGACC
Serrapinnus_sp_12401	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTATAGCTTCAA	CTCACAACGATTCGAGATC
Odontostilbe_fugitiva_22932	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAAAGACTGCCAGATCAA	CTCTGCCGTTACCGCTTCAA	CTCACAACGGTTTCGAGATC
Cheirodon_eigenmani_19864	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGTTTCAA	CTCACAACGGTTTCGCTGACC
Odontostilbe_fugitiva_23714	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGTTTCAA	CTCACAACGGTTTCGAGACC
Serrapinnus_calliurus_22121	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGTTTCAA	CTCACAACGGTTTCGAGATC
Serrapinnus_calliurus_25768	TACCTCCAGATGAAGCCCGT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGTTTCAA	CTCACAACGATTCGAGATC
Odontostilbe_ecuadorensis_9	TACCTCCAGATGAAGCCCGT	CTGGCGCTCCACTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTATAGCTTCAA	CTCACAACGATTCGAGATC
Cynopotamus_magdaleneae_29515	TATCTTCAGATGAAGCCGCT	CTGGCGCTCTACTTGCCAG	CCAGGGACTGCCCTGATCAA	CTGTGCCGTTACAGCTTCAA	CTCTCAACGATTTGCTGAAC
Phenacogaster_sp_27299	TACATCCAGATGAAGCCGCT	CTGGCGCTCTACTTGCCAG	CCAAGGACTGCCCTGATCAA	CTGTGCCGTTACAGCTTCAA	CTCA????????????????
Aphyocharacidium_sp_33167	TACCTCCAGATGAAGCCGCT	CTGGCGCTCTACTTGCCAG	CCAGAGACTGCCAGATCAA	CTCTGCCGTTACAGCTTCAA	CTCACAACGATTTGCTGACC
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	TCCTGTCCAATACATTCAA	TATCGTTACGATGGCAAGAT	TACCAACTACCTCCACAAGA	CAGTGGCTCACGTGCTGAG	ATTGTGGAGCGGGA?GGCTC
Gnatocharax_sp_24494	CTTTGTCCACTACGTTCAA	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CAGTAGCCCATGTACCTGAG	AT?GTGGAGC??????????
Macropsobrycon_xinguensis_40499	CTTTGTACACTACATTCAA	TATCGCTACGACGGCAAGAT	TACCAACTACCTCCACAAGA	CTCTGGCCCATGTTCCCGCC	ATTGTGGAGCGGAATCCTTC
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Chalceus_epakros_26504	TTCTGTCCAGCACTTTCAA	TATCGCTATGATGGCAAGAT	TCCCAACTACCTCCACAAGA	CAGTGGCCCACTGCTGCTGAG	ATCTGTGGAGCGGGATGGCTC
Aphyocharax_anisitsi_12660	CTTTGTCTACTACGTTCAA	TACCGCTACGATGGCAAGAT	TACCAATTACCTCCACAAGA	CTCTGGCCCATGTGCTGCTGAG	ATTGTGGAGCGGGATGGCTC
Carlana_eigenmani_19864	TCTGTGCCACTACATTCAA	TATCGCTACGATGGCAAGAT	TACCAACTACCTCCACAAGA	CTCTGGCTCATGTGCTGCTGAG	ATTGT?GAGCGGGATGGATC
Astyanax_mexicanus_24599	CTTTGTCCAGTACGTTCAA	TACCGCTACGATGGCAAGAT	TACCAACTACCTCCACAAGA	CTCTGGCCCATGTGCTGCTGAG	ATTGTGGAGCGGGATGGATC
Spintherobolus_brocceae_22558	CTTTGTCCACACCTTCAA	TATCGCTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CAGTGGCCCATGTGCTGCTGAG	ATTGTGGAGCGGGATGGATC
Spintherobolus_leptoura_36098	CTTTGTCCAGTACGTTCAA	TATCGCTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CAGTGGCCCATGTGCTGCTGAG	ATTGT?GAGCGGGATGGATC
Spintherobolus_ankoseion_24957	CTTTGTCCACACGTTCAA	TATCGCTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CAGTGGCCCATGTGCTGCTGAG	ATTGTGGAGCGGGATGGATC
Charax_leticiae_12700	CTTTGTCCACCATGTTCAA	TATCGCTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CAGTGGCCCACTGCTGCTGAG	ATTGTGGAGCGGGATGGCTC
Diapoma_sp_21274	CTCTGTCCACTACTTTCAA	TATAGATCCGAGGGCAAAAT	CACCAACTACCTCCACAAGA	CAGTGGCCCATGTGCTGCTGAG	CTCTGGATCGGGATGGCTC
Prodontocharax_melanotus_10	TCCTGTCTCAACTTTCAA	TATCGCTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CAGTGGCT??????????????	????????????????????

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Prodontocharax_sp_7	TCCCGTCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	TACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Nanocheiroidon_insignis_27476	TCCCGTCCACAACATTCAAG	CATTGGTCCGATGGCAAGAT	CTCCAACCTACCTGCACGAGA	CAATGGCTCATGTGCCTGAA	ATAGTAAAGCAGGATGGATC
Pseudocheiroidon_arnoldi_5	TCCGTGCCACAACATTCAAG	TATCGGTACGATGGCAAGAT	CACCTAATACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATTGTGGAGCGGGATGGCTC
Pseudocheiroidon_terrabrae_6	TCCGTGCCACAACATTCAAG	TATCGGTACGATGGCAAGAT	CACCTAATACCTCCACAAGA	CACCTGGCTCATGTGCCTGAA	????????????????????
Heterocheiroidon_yatai_24954	TCCGTGCCACAACATTCAAG	TATCGGTATGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Cheiroidon_killiani_24964	TCCGTGCCACAACATTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Cheiroidon_austriale_24979	TCCGTGCCACAACATTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAA	ATCGTGGAGCGGGATGGCTC
Cheiroidon_interruptu20486	TCCGTGCCACAACATTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Cheiroidon_killiani_19803	TCCGTGCCACAACATTCAAG	TATCGGTATGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Cheiroidon_killiani_24969	TCCGTGCCACAACATTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Cheiroidon_austriale_24963	TCCGTGCCACAACATTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Cheiroidon_interruptus_21266	TCCGTGCCACAACATTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Cheiroidon_ibicuhiensis_25598	TCCGTGCCACAACATTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Cheiroidon_killiani_24974	TCCGTGCCACAACATTCAAG	TATCGGTATGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Saccoderma_melanostigma_27475	TTCGTCGCCACAACCTTCAAG	CATCGCTCCGATGGCAAGAT	CTCCAACCTACCTCCACGAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGATCAGGGAAGCTC
Compura_gorgoneae_1	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Odontostilbe_mitoptera_3	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Compura_sp_nova_4	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Odontostilbe_dialepturus_2	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Odontostilbe_pulchra_25845	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CATTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Odontostilbe_paraguayensis_20127	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CTCCAATTACCTCCACAAGA	CATTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Odontostilbe_spl_22626	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Serrapinnus_microdon_17057	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGATGGCTC
Kolpotocheiroidon_theloura_25982	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Macropsobrycon_uruguayanae_29061	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGATC
Odontostilbe_pequira_24958	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CATTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Odontostilbe_pequira_20124	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAATTACCTCCACAAGA	CATTGGCTCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Odontostilbe_pequira_12659	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Acinocheiroidon_melanogrammus_37551	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAATTACCTCCACAAGA	CATTGGCTCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Serrapinnus_heterodon_20305	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAATTACCTCCACAAGA	CATTGGCTCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Odontostilbe_sp2_29616	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Kolpotocheiroidon_figueiredoi_37576	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATTGTGGAGCGGGATGGATC
1Kolpotocheiroidon_figueiredoi_37575	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATTGTGGAGCGGGATGGATC
Serrapinnus_kriegi_25764	TTCCTCCACAACCTTCAAG	TATCGATACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGATC
Compura_heterura_24984	TTCCTCCACAACCTTCAAG	TATCGATACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Gen_e_sp_nova_27603	TTCCTCCACAACCTTCAAG	TATCGATACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CCCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGATC
Acinocheiroidon_cf_melanogrammus_37550	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	TTCGTCGCCACAACCTTCAAA	TATTGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CAATGGCCCATGTGCCTGAA	ATTGTGGAGCGGGATGGATC
Serrapinnus_notomelas_19890	TTCCTCCACAACCTTCAAG	TATCGATACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Serrapinnus_notomelas_18293	TTCCTCCACAACCTTCAAG	TATCGATACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Cheiroidon_stenodon_20130	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Serrapinnus_spl_22401	TTCCTCCACAACCTTCAAG	TATCGATACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Odontostilbe_fugitiva_22932	TTCGTCGCCACAACCTTCAAG	CATCGGTCCGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATTGTGGAGCGGGATGGATC
Cheiroidon_pulcher_8	TTCGTCGCCACAACCTTCAAG	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGATC
Odontostilbe_fugitiva_23714	TTCCTCCACAACCTTCAAG	TATCGATATGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATTGTGGAGCGGGATGGCTC
Serrapinnus_calliurus_22121	TTCCTCCACAACCTTCAAG	TATCGATACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Cheiroidon_stenodon_20130	TTCCTCCACAACCTTCAAG	TATCGATACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATCGTGGAGCGGGATGGCTC
Odontostilbe_ecuadorensis_9	TTCCTCCACAACCTTCAAG	TATCGATACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CCCTGGCCCATGTGCCTGAG	ATCGTAAAGCGGGATGGATC
Cynopotamus_magdalena_29515	TTCGTGCCACTACGTTCAA	TATCGGTACGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATTGTGGAGCGGGATGGCTC
Phenacogaster_sp_27299	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocharacidium_sp_33167	TTCGTCGCCACAACGTTCAA	TATCGGTATGATGGCAAGAT	CACCAACTACCTCCACAAGA	CACCTGGCCCATGTGCCTGAG	ATTGTGGAGCGGGATGGCTC
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Brycon_insignis_16075	A????????????????????	????????????????????	????????????????????GA	AGCCTCGCGATGGCAGCCCT	GAGTGTACCTTATTCATAA
Gnatocharax_sp_24494	????????????????????	????????????????????	????????????????????AA	AACCTCGCGACGGAGGCCCT	GAGTGTACCTCATTATCATGG
Macropsobrycon_xinguensis_40499	AAT????????????????	????????????????????	????????????????????AA	AACCTCAGATGGGAGCCCT	GAGTGTACCTCATTATCATGG
Bryconops_affinis_4168	????????????????????	????????????????????	????????????????????GA	AGCCTTGCAACGGGAGCCCT	GAGTGTACCTATCCATCATGG
Chalceus_epakros_26504	GATTGT????????????	????????????????????	????????????????????	????????????????????	GAGTGTACCTTATTCACGG
Aphyocharax_anisitsi_12660	AATTGGTGCTGGGCCAGTG	AGGGCAATGAGTCTGGCAAC	AAGCTCTTCCGACGCTTCAA	AGCCTCGCGATGGGAGCCCT	GAGTGTGCCTCATCCACGG
Carlanella_eigenmani_19864	????????????????????	????????????????????	????????????????????GA	AGCCTCGCGATGGGAGCCCT	GAGTGTACCTTATTCATGG
Astyanax_mexicanus_24599	GATTGGTGCTGGGCCAGTG	????????????????????	????????????????????AA	AACCTCAGGATGGGAGCCCT	GAGAGTTACCTCATTATCATGG
Spintherobolus_brocae_22558	AATTGGTGCTGGGCCAGTG	AGGGCAATGAGTCTGGTAAC	AAGCTCTTCCGCGCTTCCA	GACCTCTCGATGGGAGCCCT	GAGTGTACCTCATTATCATGG
Spintherobolus_leptoura_36098	CATT????????????	????????????????????	????????????????????CA	GACCTCTCGATGGGAGCCCT	GAGTGTACCTCATTATCATGG
Spintherobolus_ankoseion_24957	AATTGGTGCTGGGCCAGTG	AGGGCAATGAGTCTGGTAAC	AAGCTCTTCCGCGCTTCCA	GACCTCTCGATGGGAGCCCT	GAGTGTACCTCATTATCATGG
Charax_leticiae_12700	AATTGGTGCTGGGCCAGTG	AGGGCAACGAGTCTGGCAAC	AAGCTCTTCCGACGCTTCCA	AGCCTCGCGATGGGAGCCCT	GAATGTACCTCATTATCATGG
Diapoma_sp_21274	CTTGCCCCCTTTTACCTTTC	AGTTTCATGGAGGCTCCCAAG	GATCCCTCTTTAC?CTTCAA	AACCTCGAGATGGGAGCCCT	GAGTGTACCTCATTATCATGG
Prodontocharax_melanotus_10	????????????????????	????????????????????	????????????????????GA	AACCTTGATGGGAGCCCT	GAATGTACCTCATTATCATGG
Prodontocharax_sp_7	TATTGGTGCTGGGCCAGTG	AGGGCAATGAGTCTGGCAAC	AAGCTCTTCCGACGCTTCCA	AACCTTGATGGGAGCCCT	GAATGTACCTCATTATCATGG
Nanocheiroidon_insignis_27476	AATTGGTGCTGGGCCAGTG	AGGGCAATGAGTCTGGCAAC	AAGCTCTTCCAGAGCTTCCA	AACCTTTGATGGGAGCCCT	GAGTGTACCTCATTATCATGG
Pseudocheiroidon_arnoldi_5	AATTGGTGCTGGGCCAGTG	AGGGCAATGAGTCTGGCAAC	AAACTCTTCCGACGCTTCCA	AACCTTTGATGGGAGCCCT	GAGTGTACCTCATTATCATGG
Pseudocheiroidon_terrabrae_6	????????????????????	????????????????????	????????????????????GA	AACCTTTGATGGGAGCCCT	GAGTGTACCTCATTATCATGG
Heterocheiroidon_yatai_24954	TATTGGTGCTGGGCCAGTG	AGGGCAATGAGTCTGGCAAC	AAGCTCTTCCGACGCTTCCA	AACCTTGATGGGAGCCCT	GAATGTACCTCATTATCATGG
Cheiroidon_killiani_24964	TATTGGTGCTGGGCCAGTG	AGGGCAATGAGTCTGGCAAC	AAGCTCTTCCGACGCTTCCA	AACCTTGATGGGAGCCCT	GAATGTACCTCATTATCATGG
Cheiroidon_austriale_24979	TATTGGTGCTGGGCCAGTG	AGGGCAATGAGTCTGGCAAC	AAGCTCTTCCGACGCTTCCA	AACCTTGATGGGAGCCCT	GAATGTACCTCATTATCATGG

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Cheirodon_interruptu20486	TATTGGTGCCTGGGCCAGTG	AAGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAATGTTACCTCATTCAATGG
Cheirodon_killiani_19803	TATTGGTGCCTGGGCCAGTG	AAGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGAGAGCCCT	GAATGTTACCTCATTCAATGG
Cheirodon_killiani_24969	TATTGGTGCCTGGGCCAGTG	AAGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGAGAGCCCT	GAATGTTACCTCATTCAATGG
Cheirodon_australe_24963	TATTGGTGCCTGGGCCAGTG	AAGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGAGAGCCCT	GAATGTTACCTCATTCAATGG
Cheirodon_interruptus_21266	TATTGGTGCCTGGGCCAGTG	AAGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAATGTTACCTCATTCAATGG
Cheirodon_ibicuihensis_25598	TATTGGTGCCTGGGCCAGTG	AAGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAATGTTACCTCATTCAATGG
Cheirodon_killiani_24974	TATTGGTGCCTGGGCCAGTG	AAGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGAGAGCCCT	GAATGTTACCTCATTCAATGG
Saccoderma_melanostigma_27475	CATTGGTGTCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGGCTCTCAGAACTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Compsura_gorgonae_1	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Odontostilbe_mitoptera_3	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Compsura_sp_nova_4	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Odontostilbe_dialepturus_2	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Odontostilbe_pulchra_25845	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Odontostilbe_paraguayensis_20127	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Odontostilbe_spl_22626	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Serrapinnus_microdon_17057	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Kolpotocheironon_theloura_25982	AATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCAA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Macropsobrycon_uruguayanae_29061	GATTGGTGCCTGGGCCAGTG	AAGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Odontostilbe_pequirá_24958	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Odontostilbe_pequirá_20124	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Odontostilbe_pequirá_12659	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Acinocheironon_melanogrammus_37551	????????????????????	????????????????????	????????????????????	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Serrapinnus_heterodon_20305	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Odontostilbe_sp2_29616	GATT????????????????	????????????????????	????????????????????	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Kolpotocheironon_figueiredoi_37576	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTC??	????????????????????	????????????????????
1Kolpotocheironon_figueiredoi_37575	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTC??	????????????????????	????????????????????
Serrapinnus_kriegi_25764	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Compsura_heterura_24984	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Gen_e_sp_nova_27603	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGCTCGCTTCGA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Acinocheironon_cf_melanogrammus_37550	GATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTC??	????????????????????	????????????????????
1Aphyocheironon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheironon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	AATTGGTGCCTGGGCCAGTG	TGGGCAAGTATCTGGCAAC	CAGGTCTTCTCAGGCTTCAA	AACCTCGGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Serrapinnus_notomelas_19890	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Serrapinnus_notomelas_18293	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGAGGAGGAGCCCT	GAGTGTACCTCATTCAATGG
Cheirodon_stenodon_20130	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Serrapinnus_spl_22401	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGAGGAGGAGCCCT	GAGTGTACCTCATTCAATGG
Odontostilbe_fugitiva_22932	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Cheirodon_pulcher_8	AATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGCGCTTCGA	AACCTTGTGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Odontostilbe_fugitiva_23714	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Serrapinnus_calliurus_22121	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Serrapinnus_calliurus_25768	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Odontostilbe_ecuadorensis_9	CATTGGTGCCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCGA	AACCTTGTGACGGGAGCCCT	GAGTGTACCTCATTCAATGG
Cynopotamus_magdaleneae_29515	AAT?G?T????????????	????????????????????	????????????????????	AGCCTCGCATGGGAAGCCCA	GAGTGTACCTTATTCAATGG
Phenacogaster_sp_27299	????????????????????	????????????????????	????????????????????	AACCTCGTGAATGGAAGCCCT	GAGTGTACCTCATTCAATGG
Aphyocharacidium_sp_33167	GATTGGGCGCTGGGCCAGTG	AGGGCAATGAGCTGGCAAC	AAGCTCTTCCGACGCTTCAA	AACCTGGTATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Hemibrycon_sp_33168	????????????????????	????????????????????	????????????????????	AACCTCGAGATGGGAGCCCT	GAGTGTACCTCATTCAATGG
Brycon_insignis_16075	AGGCCGAACACCCAATAAG	AACCTATCTTCTAGCCTCTAC	ATGCATAGTGTGACAGCTCG	TGGATGCAATCGGAAGGTCA	CAGTGAATGTCTAGAGAAA
Gnatocharax_sp_24494	TGGCCGAACACCCAATAAG	AACCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	AGGATGCAATCGGAAGGTCA	CGCTAAGATGTCTAGAGAAA
Macropsobrycon_xinguensis_40499	TGGCAGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGATGCAATCGGAAGGTCA	CGCTGAGATGTCTAGAGAAA
Bryconops_affinis_4168	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	CGGATGCAATCGGAAGGTCA	CGCTGACATGCCAGGAGAAA
Chalcus_epakros_26504	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGATGCAATCGGAAGGTCA	CGCTGAATGCCAGGAGAAA
Aphyocharax_anisitsi_12660	TGGTGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	CTGCTCAGTGTGACAGCTCG	TGGATGCAATCGGAAGGTCA	CGCTGACATGCCAGGAGAAA
Carlana_eigenmani_19864	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGATGCAATCGGAAGGTCA	CGCTGAGATGTCTAGGAGAAA
Astyanax_mexicanus_24599	TGGTGAACACCCAATAAG	AATTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGATGCAATCGGAAGGTCA	CGCTGAGATGTCTAGGAGAAA
Spintherobolus_broccae_22558	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGCTGGACAGCTCG	TGGATGCAATCGGAAGGTCA	CAGTGAATGTCTAGGAGAAA
Spintherobolus_leptoura_36098	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGCTGGACAGCTCG	TGGATGCAATCGGAAGGTCA	CAGTGAATGTCTAGGAGAAA
Spintherobolus_ankoseion_24957	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGCTGGACAGCTCG	TGGATGCAATCGGAAGGTCA	CAGTGAATGTCTAGGAGAAA
Charax_leticiae_12700	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGATGCAATCGGAAGGTCA	CGCTAAGATGTCTAGGAGAAA
Diapoma_sp_21274	TGGCCGAACACCCAATAAG	AGTGTCTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGATGCAATCGGAAGGTCA	CGCTGAGATGTCTAGGAGAAA
Prodontocharax_melanotus_10	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTGAGGTGTCTAGGAGAAA
Prodontocharax_sp_7	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTGAGGTGTCTAGGAGAAA
Nanocheironon_insignis_27476	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTGAGGTGTCTAGGAGAAA
Pseudocheironon_arnoldi_5	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGTGTCAATCGGAAGGTCA	CGCTGAGGTGTCTAGGAGAAA
Pseudocheironon_terrabae_6	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGTGTCAATCGGAAGGTCA	CGCTGAGGTGTCTAGGAGAAA
Heterocheironon_yatai_24954	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTAAGATGTCTAGGAGAAA
Cheirodon_killiani_24964	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTAAGATGTCTAGGAGAAA
Cheirodon_australe_24979	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTAAGATGTCTAGGAGAAA
Cheirodon_interruptu20486	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTAAGATGTCTAGGAGAAA
Cheirodon_killiani_19803	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTAAGATGTCTAGGAGAAA
Cheirodon_killiani_24969	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTAAGATGTCTAGGAGAAA
Cheirodon_australe_24963	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTAAGATGTCTAGGAGAAA
Cheirodon_interruptus_21266	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTAAGATGTCTAGGAGAAA
Cheirodon_ibicuihensis_25598	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTAAGATGTCTAGGAGAAA
Cheirodon_killiani_24974	TGGCCGAACACCCAATAAG	AGCTGTCTCTAGCCTCTAC	ATGCTTAGTGTGACAGCTCG	TGGCTGCAATCGGAAGGTCA	CGCTAAGATGTCTAGGAGAAA

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Saccoderma_melanostigma_27475	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Compsura_gorgonae_1	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Odontostilbe_mitoptera_3	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Compsura_sp_nova_4	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Odontostilbe_dialepturus_2	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Odontostilbe_pulchra_25845	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Odontostilbe_paraguayensis_20127	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Odontostilbe_sp1_22626	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Serrapinnus_microdon_17057	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Kolpotocheirodon_theloura_25982	TGGCCGAAC	TCTTAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGATGTCT	TGGAGAAA
Macropsobrycon_uruguayanae_29061	TGGCCGAAC	TCCCAATAACG	ATCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Odontostilbe_pequira_24958	TGGCCGAAC	TCTTAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Odontostilbe_pequira_20124	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Odontostilbe_pequira_12659	TGGCCGAAC	TCTTAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Acinocheirodon_melanogrammus_37551	TGGCCGAAC	TCTTAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Serrapinnus_heterodon_20305	TGGCCGAAC	TCTTAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Odontostilbe_sp2_29616	TGGCCGAAC	TCTTAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Kolpotocheirodon_figueiredoi_37576	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????
1Kolpotocheirodon_figueiredoi_37575	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????
Serrapinnus_kriegi_25764	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Compsura_heterura_24984	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Gen_e_sp_nova_27603	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Acinocheirodon_cf_melanogrammus_37550	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????
1Aphyocheirodon_hemigrammus_40027	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????
Aphyocheirodon_hemigrammus_40025	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????????????	????????
Tetragonopterus_argenteus_22029	TGGCCGAAC	ACCACAATAACG	AGCTGTCTCC	TAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGATGCAAT	CGGAAGGTCA	CGCTGAGATGTCT	TGGAGAAA
Serrapinnus_notomelas_19890	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Serrapinnus_notomelas_18293	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Cheirodon_stenodon_20130	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Serrapinnus_sp1_22401	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Odontostilbe_fugitiva_22932	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Cheirodon_pulcher_8	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Odontostilbe_fugitiva_23714	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Serrapinnus_calliurus_22121	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Serrapinnus_calliurus_25768	TGGCCGAAC	TCTTAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Odontostilbe_ecuadorensis_9	TGGCCGAAC	TCCCAATAACG	AGCTGTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGATAGTCG	TGGCTGCAAT	CGGAAGGTCA	CGCTGAGGTGTCT	TGGAGAAA
Cynopotamus_magdalenae_29515	TGGCCGAAC	ACCACAATAACG	AGCTGTCTCC	TAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGATGCAAT	CGGAAGGTCA	CGCTAAGATGTCT	TGGAGAAA
Phenacogaster_sp_27299	TGGCCGAAC	ACCACAATAACG	AGCTGTCTCC	TAGCCTCTAC	ATGCTTAGTGT	CGACAGTCG	TGGGTGCAAT	CGGAAGGTCA	CGCTAAGATGTCT	TGGAGAAA
Aphyocharacidium_sp_33167	TGGCAGAAC	ACCACAATAACG	AGCTCTCTCC	CAGCCTCTAC	ATGCTTAGTGT	CGACAGCCG	AGGATGTAAT	CGGAAGGTCA	CGCTGAAGTGTCT	TGGAGAAA
Hemibrycon_sp_33168	TGGCCGAAC	ACCACAATAACG	AGTTGTCTCT	TAGCCTGTAC	ATGCTTAGTGT	CGACAGCCG	TGGATGCAAT	CGGAAGATCA	CGCTGAGGTGTCT	TGGAGAAA
Brycon_insignis_16075	GAGCTGGTGGGG	GAGCCTCC	AGGGCCTCGCT	TAGGCCACA	CTATTATCGTAG	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	CCTTTTTGGAGG	CAGGTCTCT
Gnatocharax_sp_24494	GAGCTGGTGGGG	GAGCCTCC	TGGAACCTCGCT	TACGGCCACA	CTGTTAGTGTGGT	TCCACAGC	AGGGGGAAGAAC	CTGCTGTGT	GCTTTTTGGAGG	CAGGTCTCT
Macropsobrycon_xinguensis_40499	GAAC	TGGGGGGAGCCTCC	GGGCCCTCGGT	TATGGCCACC	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	CAGGTCTCT
Bryconops_affinis_4168	GAGCTGGTGGGG	GAGCCTCC	AGGGCCTCGAT	TATGGCCACA	GCATTAGTGTGGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	CCTTTTTGGAGG	CAGGTCTCT
Chalceus_epakros_26514	GAGCTGGTGGGG	GAGATCCC	AGGGCCTCGCT	TATGGCCACA	CTGTTAGCCTGGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	CAGGTCTCT
Aphyocharax_anisitsi_12660	GAGCTGGTGGGG	GAGCCGCC	AGGGCCTCGGT	TATGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	TCTTTTTGGAGG	CAGGTCTCT
Carlana_eigenmani_19864	GAGCTGGTGGGG	GAGCCTCC	AGGGCCTCGAT	TATGGCCACA	CCATTAGCCTAGT	TCCACAGC	AGGGGGAAGAAC	CTGCTGTGT	CCTTTTTGGAGG	CAGGTCTCT
Astyanax_mexicanus_24599	GAGCTGGTGGGG	GAGCCTCC	AGGTCTCTCGGT	TATGGTCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	CAGGTCTCT
Spintherobolus_broccae_22558	GAGCTTGTGGG	GAGCCTCC	AGGGCCTCGGT	TATGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Spintherobolus_leptoura_36098	GAGCTTGTGGG	GAGCCTCC	AGGGCCTCGGT	TATGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Spintherobolus_ankoseion_24957	GAGCTTGTGGG	GAGCCTCC	AGGGCCTCGGT	TATGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Charax_leticiae_12700	GAGCTGGTGGGG	GAGCCTCC	AGGACCTCGCT	TACGGCCACA	CTATTAATGTAGT	TCCACAGC	AGGGGGAAGAAC	CTGCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Diapoma_sp_21274	GAGCTGGTGGGG	GAGCCTCC	AGGGCCGGGT	TATGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGAGGGAAGACT	CTGCTGTGT	TGCTTTTGGAGG	CAGGTCTCT
Prodontocharax_melanotus_10	GAGCTGGTGGGG	GAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGACT	CTGCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Prodontocharax_sp_7	GAGCTGGTGGGG	GAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Nanocheirodon_insignis_27476	GAGCTGGTGGGG	GAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Pseudocheirodon_arnoldi_5	GAGCTGGTGGG	GAGAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Pseudocheirodon_terrabaie_6	GAGCTGGTGGG	GAGAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Heterocheirodon_yatai_24954	GAGCTTGTGGG	GAGAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Cheirodon_killiani_24964	GAGCTGGTGGG	GAGAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	ACTTTTTGGAGG	AAGGTCTCT
Cheirodon_australe_24979	GAGCTGGTGGG	GAGAGCTTCC	AGGACCTCGCT	TATGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	ACTTTTTGGAGG	AAGGTCTCT
Cheirodon_interruptu20486	GAGCTGGTGGG	GAGAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	ACTTTTTGGAGG	AAGGTCTCT
Cheirodon_killiani_19803	GAGCTGGTGGG	GAGAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Cheirodon_killiani_24969	GAGCTGGTGGG	GAGAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	ACTTTTTGGAGG	AAGGTCTCT
Cheirodon_australe_24963	GAGCTGGTGGG	GAGAGCTTCC	AGGACCTCGCT	TATGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	ACTTTTTGGAGG	AAGGTCTCT
Cheirodon_interruptus_21266	GAGCTGGTGGG	GAGAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	ACTTTTTGGAGG	AAGGTCTCT
Cheirodon_ibicuhiensis_25598	GAGCTGGTGGG	GAGAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	ACTTTTTGGAGG	AAGGTCTCT
Odontostilbe_mitoptera_3	GAGCTGGTGGGG	GAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Odontostilbe_mitoptera_3	GAGCTGGTGGGG	GAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Compsura_sp_nova_4	GAGCTGGTGGGG	GAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Odontostilbe_dialepturus_2	GAGCTGGTGGGG	GAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAGTGTAGT	TCCACAGC	AGGGGGAAGAAC	CGCCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Odontostilbe_pulchra_25845	GAGCTGGTGGGG	GAGCTTCC	AGGACCTCGCT	TACGGCCACA	CCATTAATGTGT	TCCACAGC	AGGGGGAAGAAC	CTGCTGTGT	GCTTTTTGGAGG	AAGGTCTCT
Odontostilbe_paraguayensis_20127	GAGCTGGTGGGG	GAGCTTCC	GGGACCTCGCT	TACGGCCACA	CCATTAACGTGT	TCCACAGC	AGGGGGAAGAAC	CTGCTGTGT	GCTTTTTGGAGG	AAGGTCTCT

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Odontostilbe_spl_22626	GAGCTGGTGGGGAGCTTCC	GGGACCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Serrapinnus_microdon_17057	GAGCTGGTGGGGAGCTTCC	AGGGCCCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Kolpotocheiroidon_theloura_25982	GAGCTGGTGGGGAGCTTCC	AGGACCTCGCTATGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Macropsobrycon_uruguayanae_29061	GAGCTGGTGGGGAGCTTCC	AGGGCCCTCGCTACGGCCACA	CAATTAATGTTGTCCACAGC	AGGGGGAAGACCGCTGTGT	GCTTTTTGGAGGAAGGTCCT
Odontostilbe_pequira_24958	GAGCTGGTGGGGAGCTTCC	AGGGCCCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Odontostilbe_pequira_20124	GAGCTGGTGGGAGAGCTTCC	AGGGCCCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Odontostilbe_pequira_12659	GAGCTGGTGGGGAGCTTCC	AGGGCCCTCGCTATGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Acinocheiroidon_melanogrammus_37551	GAGCTGGTGGGGAGCTTCC	AGGGCCCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	CGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Serrapinnus_heterodon_20305	GAGCTGGTGGGGAGCTTCC	AGGGCCCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Odontostilbe_sp2_29616	GAGCTGGTGGGGAGCTTCC	AGGGCCCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Kolpotocheiroidon_figueiredoi_37576	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Kolpotocheiroidon_figueiredoi_37575	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Serrapinnus_kriegi_25764	GAGCTGGTGGGGAGCTTCC	GGGACCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Compsura_heterura_24984	GAGCTGGTGGGGAGCTTCC	GGGACCTCGCTATGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Gen_e_sp_nova_27603	GAGCTGGTGGGGAGCTTCC	AGGACCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Acinocheiroidon_cf_melanogrammus_37550	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	GAGCTGGTGGGGAGCTTCC	AGGACCTCGCTACGGCCACA	CTATTAATGTAGTCCACAGC	AGGGGGAAGACCGCTGTGT	GCTTTTTGGAGGACAGGTCCT
Serrapinnus_notomelas_19890	GAGCTGGTGGGGAGCTTCC	GGGACCTCGCTACGGCCACA	CCATTAACGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Serrapinnus_calliurus_22121	GAGCTGGTGGGGAGCTTCC	GGGACCTCGCTACGGCCACA	CCATTAACGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Cheiroidon_stenodon_20130	GAGCTGGTGGGGAGCTTCC	GGGACCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Serrapinnus_spl_22401	GAGCTGGTGGGGAGCTTCC	GGGACCTCGCTACGGCCACA	CCATTAACGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Odontostilbe_fugitiva_22932	GAGCTGGTGGGGAGCTTCC	GGGACCTCGCTACGGCCACA	CCATTAACGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Cheiroidon_pulcher_8	GAGCTGGTGGGGAGCTTCC	AGGACCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Odontostilbe_fugitiva_23714	GAGCTGGTGGGGAGCTTCC	GGGACCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCCTGTGT	GCTTTTTGGAGGAAGGTCCT
Serrapinnus_calliurus_25768	GAGCTGGTGGGGAGCTTCC	GGGACCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCATGTGT	GCTTTTTGGAGGAAGGTCCT
Odontostilbe_ecuadorensis_9	GAGCTGGTGGGGAGCTTCC	GGGACCTCGCTACGGCCACA	CCATTAATGTTGTCCACAGC	AGGGGGAAGACTGCATGTGT	GCTTTTTGGAGGAAGGTCCT
Cynopotamus_magdalenae_29515	GAGCTGGTGGGGAGCTTCC	AGGACCTCGCTACGGCCACA	CCATTAGTGTAGTCCACAGC	AGGGGGAAGACCGCTGTGT	GCTTTTTGGAGGACAGGTCCT
Phenacogaster_sp_27299	GAGCTGGTGGGGAGCTTCC	AGGACCTCGCTACGGCCACA	CCATTAGTGTAGTCCACAGC	AGGGGGAAGACCGCTGTGT	GCTTTTTGGAGGACAGGTCCT
Aphyocharacidium_sp_33167	GAGCTGGTGGGGAGCTTCC	AGGACCTCGCTATGGCCACA	CCATTAGTGTAGTCCACAGC	AGGGGGAAGACCGCTGTGT	GCTTTTTGGAGGACAGGTCCT
Hemibrycon_sp_33168	GAGCTGGTGGGGAGCTTCC	AGGGCCGCGGTATGGCCACA	CCATTAGTGTAGTCCACAGC	AGGGGGAAGACCGCTGTGT	GCTTTTTGGAGGAGGTCCT
Brycon_insignis_16075	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTCCACCCC	AGGTGTACCTCATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Gnatocharax_sp_24494	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTCCGCCCC	AGGTGTACCTCATTGACCTA	GAATTTGGCTGCTGCTCAGC
Macropsobrycon_xinguensis_40499	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTCCACCCC	AGGTGTACCTCATTGACCTA	GAGTTTGGAGGAGGTCCTCAGC
Bryconops_affinis_4168	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTCCGCCCC	AGGTGTACCTCATTGACCTA	GAGTTTGGCTGCTGCTCGGC
Chalceus_epakros_26504	ACATGCCACCTGCTGAGAGA	ACCACGGAGAACTGGAACAC	TGTGGTGGATTGTCCGCCCC	AGGTGTACCTCATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Aphyocharax_anisitsi_12660	ACATGTGCAGCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTCCGCCCC	AGGTGTACCTCATAGACCTA	GAGTTTGGCTGCTGCTCGGC
Carlana_eigenmanni_19864	ACATGCCACCTGCTGAGAGA	ACCACAGAAATTTGGAATTG	TGTGATAGACTGTCCGCCCC	AGGTGTACCTCATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Astyanax_mexicanus_24599	ACATGCCACCTTCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTCCGCCCC	AGGTGTATCTCATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Spintherobolus_broccae_22558	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGCCACCCC	AGGTGTACCTCATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Spintherobolus_leptoura_36098	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGCCACCCC	AGGTGTACCTCGTTGACCTA	GAGTTTGGCTGCTGCTCAGC
Spintherobolus_ankoseion_24957	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGCCACCCC	AGGTGTACCTCATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Charax_leticiae_12700	ACATGCCACCTTGGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTACGCCCC	AGGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Diapoma_sp_21274	ACATGCCACCTGCTGAGAGA	ACATCAGAACTGGAATTG	TGTGGTGGACTGTCCACCCC	AGGTGTATCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Prodontocharax_melanotus_10	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Prodontocharax_sp_7	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Nanocheiroidon_insignis_27476	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTCCGCCCC	AGGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Pseudocheiroidon_arnoldi_5	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTACGCCTC	AGGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCACAGC
Pseudocheiroidon_terrabae_6	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTACGCCTC	AGGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCACAGC
Heterocheiroidon_yatai_24954	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Cheiroidon_killiani_24964	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACTCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Cheiroidon_australe_24979	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Cheiroidon_interruptu20486	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Cheiroidon_killiani_19803	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACTCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Cheiroidon_killiani_24969	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACTCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Cheiroidon_australe_24963	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Cheiroidon_interruptu_21266	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Cheiroidon_ibicuihensis_25598	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Cheiroidon_killiani_24974	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACTCCTC	AAGTGTACCTTATTGACCTA	GAATTTGGCTGCTGCTCAGC
Saccoderma_melanostigma_27475	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Compsura_gorgonae_1	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Odontostilbe_mitoptera_3	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Compsura_sp_nova_4	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Odontostilbe_dialepturus_2	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTAGACTGTACGCCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Odontostilbe_pulchra_25845	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Odontostilbe_paraguayensis_20127	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTACGCCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Odontostilbe_spl_22626	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTCCACCTC	AAGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Serrapinnus_microdon_17057	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Kolpotocheiroidon_theloura_25982	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTCCACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Macropsobrycon_uruguayanae_29061	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Odontostilbe_pequira_24958	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Odontostilbe_pequira_20124	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Odontostilbe_pequira_12659	ACATGCCACCTGCTGAGAGA	ACCACAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC

Acinocheirodon_melanogrammus_37551	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Serrapinnus_heterodon_20305	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Odontostilbe_sp2_29616	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Kolpotocheirodon_figueiredoi_37576	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Kolpotocheirodon_figueiredoi_37575	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Serrapinnus_kriegi_25764	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACTCCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Compsura_heterura_24984	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACGCCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Gen_e_sp_nova_27603	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACTCCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Acinocheirodon_cf_melanogrammus_37550	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Aphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	ACATGCCACCTGCCGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACGCCCC	AGGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Serrapinnus_notomelas_19890	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACTCCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Serrapinnus_notomelas_18293	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACTCCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Cheirodon_stenodon_20130	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACCCCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Serrapinnus_sp1_22401	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACTCCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Odontostilbe_fugitiva_22932	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACGCCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Cheirodon_pulcher_8	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Odontostilbe_fugitiva_23714	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Serrapinnus_calliurus_22121	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Serrapinnus_calliurus_25768	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Odontostilbe_ecuadorensis_9	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACACCTC	AGGTGTACCTTATTGACCTG	GAGTTTGGCTGCTGCTCAGC
Cynopotamus_magdalenae_29515	ACATGCCACCTGCCGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACGCCCC	AGGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Phenacogaster_sp_27299	ACATGCCACCTGCCGAGAGA	ACCACAGAGAACTGGAATTG	CTGGTGGACTGTACGCCCC	AGGTGTACCTTATCGACCTA	GAGTTTGGCTGCTGCTCAGC
Aphyocharacidium_sp_33167	ACATGCCACCTGCTGAGAGA	ACCACAGAGAACTGGAATTG	TGTGGTGGACTGTACGCCCC	AGGTGTACCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Hemibrycon_sp_33168	ACATGCCACCTGCTGAGAGA	ACCTCAGAGAACTGGAATTG	TGTGGTGGACTGTCCGCCCC	AGGTGTATCTTATTGACCTA	GAGTTTGGCTGCTGCTCAGC
Brycon_insignis_16075	GCATAACCTCCCCGAGCTCA	CAGACGGCCAGTCATTTCAC	CTGGCACTGGCTCGGAGGA	CTGTGTCTACTTCTTGGGGG	GCCACATTCTCTCCACTGAC
Gnatocharax_sp_24494	ACATAACCATCCCTGAGCTGA	CGGATGGCCAGTCGTTCCAC	CTGACACTGGCTCGAGAGGA	CTGTGTCTATTCTCTGGGGG	GCCACATTCTTCCACTGAC
Macropsobrycon_xinhuensis_40499	TCATAACCTCCGAGAGCTGA	CAGACGGCTCAGTCGTTCCAC	TTGGCACTGGCTCGAGAGGA	CTGTGTCTACTTCTTAGGGG	GCCACATTCTCTCCACTGAC
Bryconops_affinis_4168	GCATAACCATCCGAGAGCTCA	CAGATGGCCAGTCATTTCAC	CTGGCGCTGGCTCGAGAGGA	CTGTGTGTATTCTCTTGGGG	GCCACATTCTCTCCACTGAC
Chalceus_epakros_26504	CAGCGCACTGCCGAGCTCA	CAGACGGCTCAGTCATTTCAC	CTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Aphyocharax_anisitsi_12660	GCATACTATCCCGAGCTCG	CAGACGGCCAGTCGTTTCAC	CTGGCGCTGGCTCGAGAGGA	CTGTGTGTATTCTCTGGGGG	GCCACATTCTCTCCACTGAC
Carlana_eigenmani_19864	GCATAACCTCCCTGAGCTCA	CAGACGGCCAGTCATTTCAC	CTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGGG	GCCACATTCTCTCCACTGAC
Astyanax_mexicanus_24599	GCATAACCTCCCTGAGCTAA	CAGACGGCTCAGTCGTTCCAC	TTGGCACTGGCTCGAGAGGA	CTGTGTGTACTTCTTGGGGG	GCCACATTCTCTCCACTGAC
Spintherobolus_brocceae_22558	GCATAACCTCCCCAGCTGA	CAGATGGCCAGTCGTTTCAC	CTGGCACTGGCTCGAGAGGA	CTGTGTCTACTTCTTAGGGG	GTCACATTCTCTCCACTGAC
Spintherobolus_leptoura_36098	GCATAACCTCCCCAGCTGA	CAGATGGCCAGTCGTTTCAC	CTGGCACTGGCTCGAGAGGA	CTGTGTCTACTTCTTAGGGG	GTCACATTCTCTCCACTGAC
Spintherobolus_ankoseion_24957	GCATAACCTCCCCAGCTGA	CAGATGGCCAGTCGTTTCAC	CTGGCACTGGCTCGAGAGGA	CTGTGTCTACTTCTTAGGGG	GTCACATTCTCTCCACTGAC
Charax_leticiae_12700	ACATAACCTCCCTGAGCTGA	CAGACGGCTCAGTCGTTTCAC	CTGGCACTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Diapoma_sp_21274	ACATAACCTCCCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	CTGGCGCTGGCTCGAGAGGA	CTGTGTGTACTTCTTGGGGG	GCCATATTCTCTCCACTGAC
Prodontocharax_melanotus_10	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCACTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Prodontocharax_sp_7	ACATAACCTTCTGAGCTGA	CAGATGGCCAGTCGTTTCAC	TTGGCACTGGCTAGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Nanocheirodon_insignis_27476	ACATAACCTTCTGAGCTGA	CAGATGGCCAGTCATTTCAC	TTGGCACTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Pseudocheirodon_arnoldi_5	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCATTTCAC	TTTGGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Pseudocheirodon_terrabeae_6	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCATTTCAC	TTTGGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Heterocheirodon_yatai_24953	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Cheirodon_killiani_24964	ACATAACCTTCTGAGCTGA	CAGATGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Cheirodon_austriale_24979	ACATAACCTTCTGAGCTGA	CAGATGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Cheirodon_interruptu20486	ACATAACCTTCTGAGCTGA	CAGATGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Cheirodon_killiani_19803	ACATAACCTTCTGAGCTGA	CAGATGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Cheirodon_killiani_24969	ACATAACCTTCTGAGCTGA	CAGATGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Cheirodon_austriale_24963	ACATAACCTTCTGAGCTGA	CAGATGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Cheirodon_interruptu_21266	ACATAACCTTCTGAGCTGA	CAGATGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Cheirodon_ibicuhiensis_25598	ACATAACCTTCTGAGCTGA	CAGATGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Cheirodon_killiani_24974	ACATAACCTTCTGAGCTGA	CAGATGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Saccoderma_melanostigma_27475	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCACTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Compsura_gorgonae_1	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCACTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Odontostilbe_mitoptera_3	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCACTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Compsura_sp_nova_4	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCACTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Odontostilbe_dialepturus_2	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCACTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Odontostilbe_pulchra_12659	ACATAACCTTCTGAGCTGA	CTGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Odontostilbe_paraguayensis_20127	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Odontostilbe_sp1_22626	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Serrapinnus_microdon_17057	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Kolpotocheirodon_theloura_25982	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Macropsobrycon_uruguayanae_29061	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCATTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Odontostilbe_pequiri_24958	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Odontostilbe_pequiri_20124	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Odontostilbe_pulchra_12659	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Acinocheirodon_melanogrammus_37551	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Serrapinnus_heterodon_20305	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Odontostilbe_sp2_29616	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Kolpotocheirodon_figueiredoi_37576	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Kolpotocheirodon_figueiredoi_37575	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Serrapinnus_kriegi_25764	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC
Compsura_heterura_24984	ACATAACCTTCTGAGCTGA	CAGACGGCCAGTCGTTTCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGTCTACTTCTTGGGG	GCCACATTCTCTCCACTGAC

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Gen_e_sp_nova_27603	ACATAACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCCACCAGC
Acinocheirodon_cf_melanogrammus_37550	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
lAphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	ACATAACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	CTGGCCCTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCCACTGAC
Serrapinnus_notomelas_19890	ACATAACCTTCCTGAGCTGA	CAGACGGCCAGTCATTCCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCAACTGAC
Serrapinnus_notomelas_18293	ACATAACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCAACTGAC
Cheirodon_stenodon_20130	ACATAACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCAACTGAC
Serrapinnus_spl_22401	ACATAACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCAACTGAC
Odontostilbe_fugitiva_22932	ACATAACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCCACCAGC
Cheirodon_pulcher_8	ACATAACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCCACTGAC
Odontostilbe_fugitiva_23714	ACATAACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCCACCAGC
Serrapinnus_calliurus_22121	ACATAACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCCACCAGC
Serrapinnus_calliurus_25768	ACATAACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCCACCAGC
Odontostilbe_ecuadorensis_9	ACATAACCTTCCTGAGCTGA	CTGACGGACAGTCGTTCCAC	TTGGCGCTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCCACCAGC
Cynopotamus_magdalena_29515	ACATACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	CTGGCACTGGCTCGAGAGGA	CTGGCTGCTACTTCCTTGGGG	GCCACATTCTCTTACCAGC
Phenacogaster_sp_27299	ACATACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	TTGGCACTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTTACCAGC
Aphyocharacidium_sp_33167	ACATACCTTCCTGAGCTGA	CAGATGGCCAGTCGTTCCAC	TTGGCACTGGCTCGAGAGGA	CTGTGCTACTTCCTTGGGG	GCCACATTCTCTCCACCAGC
Hemibrycon_sp_33168	GCATACCTTCCTGAGCTGA	CAGACGGCCAGTCGTTCCAC	CTGGCCCTGGCTCGAGAGGA	CTGTGCTATTTCCTTGGGG	GCCACATTCTCTCCACCAGC
Brycon_insignis_16075	TGCGACCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTGGGCAGTCCAGTGCTC	TCTGCGAGGCTCTTAAACGA	TGGTCTGTCCATCACAAGTG
Gnatocharax_sp_24494	TGTGCGCCCTCTGCTGTT	CAAGCTCCAATGTGGAGCTTC	TTTATAGGCAGTCCAGTGCTC	TCATGTGAGATTTTAAATGA	GGGTCTATCCATCACAAGTG
Macropsobrycon_xinguensis_40499	TGCGGACCACTCGCTGTT	CAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	ACCTGTGAGGCTCTTAAACGA	GGGTCTATCCATCACAAGTG
Bryconops_affinis_4168	TGCGGACCACTCGCTGTT	CAGGCTGCGTGTGGAGCTTC	TTCAAGGCAGTCCAGTGCTC	ACCTGTGAGGCTCTTAAATGA	TGGTCTGTCCATCACAAGTG
Chalceus_epakros_26504	TGCGGACCACTCGCTGTT	CAGGCTGCGGAGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCTGTGAGGCTCTTAAATGA	TGGCTGTCTATCACAAGTG
Aphyocharax_anisitsi_12660	TGCGGACCACTCGCTGTT	CGGCTGCATGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCTGTGAGGCTCTTAAATGA	TGGTCTGTCTATAACAAGTG
Carlana_eigenmanni_19864	TGCGGACCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCTGTGAGGCTCTTAAATGA	TGGTCTGTCCATCACAAGTG
Astyanax_mexicanus_24599	TGCGGACCACTCGCTGTT	CAGGCTGCGTGTGGAGCTTC	TTTATAGGCAGTCCAGTGCTC	TCTGTGAGGCTCTTAAATGA	GGGTCTATCCATCACAAGTG
Spintherobolus_brocace_22558	TGCGGACCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Spintherobolus_leptoura_36098	TGCGGACCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Spintherobolus_ankoseion_24957	TGCGGACCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Charax_leticiae_12700	TGTGCGCACTCGCTGTT	CAGGCTCCAATGTGGAGCTTC	TTTATAGGCAGTCCAGTGCTC	TCATGTGAAGTTTAAATGA	GGGTCTGTCCATCACAAGTG
Diapoma_sp_21274	TGCGGACCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	GGGTCTATCCATCACAAGTG
Prodontocharax_melanotus_10	TGTGCGCACTCGCTGTT	CAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Prodontocharax_sp_7	TGTGCGCACTCGCTGTT	CAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Nanocheirodon_insignis_27476	TGTGCGCACTCGCTGTT	CGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCTGTGAGGCTCTTAAATGA	GGGTCTGTCCATCACAAGTG
Pseudocheirodon_arnoldi_5	TGTGCGCACTCGCTGTT	CGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Pseudocheirodon_terrabae_6	TGTGCGCACTCGCTGTT	CGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Heterocheirodon_yatai_24954	TGTGCGCACTCGCTGTT	CAAGTTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Cheirodon_killiani_24964	TGTGCGCACTCGCTGTT	CAAGTTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Cheirodon_australe_24979	TGTGCGCACTCGCTGTT	CAAGTTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Cheirodon_interruptu_20486	TGTGCGCACTCGCTGTT	CAAGTTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Cheirodon_killiani_19803	TGTGCGCACTCGCTGTT	CAAGTTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Cheirodon_killiani_24969	TGTGCGCACTCGCTGTT	CAAGTTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Cheirodon_australe_24963	TGTGCGCACTCGCTGTT	CAAGTTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Cheirodon_interruptu_21266	TGTGCGCACTCGCTGTT	CAAGTTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Cheirodon_ibicuhiensis_25598	TGTGCGCACTCGCTGTT	CAAGTTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Cheirodon_killiani_24974	TGTGCGCACTCGCTGTT	CAAGTTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Saccoderma_melanostigma_27475	TGTGCGCACTCGCTGTT	CAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Compsura_gorgonae_1	TGTGCGCACTCGCTGTT	TAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	GGGTTGTCCATCACAAGTG
Odontostilbe_mitoptera_3	TGTGCGCACTCGCTGTT	TAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Compsura_sp_nova_4	TGTGCGCACTCGCTGTT	TAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	GGGTTGTCCATCACAAGTG
Odontostilbe_dialepturus_2	TGTGCGCACTCGCTGTT	TAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAGGCTCTTAAACGA	GGGTTGTCCATCACAAGTG
Odontostilbe_pulchra_25845	TGTGCGCACTCGCTGTT	CAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Odontostilbe_paraguayensis_20127	TGTGCGCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Odontostilbe_spl_22626	TGTGCGCACTCGCTGTT	CAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCATGTGAAGTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Serrapinnus_microdon_17057	TGTGCGCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Kolpotocheirodon_theloura_25982	TGTGCGCACTCGCTGTT	CAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Macropsobrycon_uruguayanae_29061	TGTGCGCACTCGCTGTT	CAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Odontostilbe_pequira_24958	TGTGCGCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Odontostilbe_pequira_20124	TGTGCGCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Odontostilbe_pequira_12659	TGTGCGCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Acinocheirodon_melanogrammus_37551	TGTGCGCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Serrapinnus_heterodon_20305	TGTGCGCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Odontostilbe_sp2_29616	TGTGCGCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Kolpotocheirodon_figueiredoi_37576	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
lKolpotocheirodon_figueiredoi_37575	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Serrapinnus_kriegi_25764	TGTGCGCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Compsura_heterura_24984	TGTGCGCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG
Gen_e_sp_nova_27603	TGTGCGCACTCGCTGTT	CAGGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCGTGTGAGGCTCTTAAACGA	GGGTCTGTCTATCACAAGTG
Acinocheirodon_cf_melanogrammus_37550	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
lAphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	TGTGCGCACTCGCTGTT	CAAGCTCCAATGTGGAGCTTC	TTTATAGGCAGTCCAGTGCTC	TCATGTGAGATTTTAAACGA	GGGTCTATCCATCACAAGTG
Serrapinnus_notomelas_19890	TGTGCGCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCTGTGAGGCTCTTAAACGA	AGGTCTGTCCATCACAAGTG
Serrapinnus_notomelas_18293	TGTGCGCACTCGCTGTT	CAAGCTGCGTGTGGAGCTTC	TCTTATAGGCAGTCCAGTGCTC	TCTGTGAGGCTCTTAAACGA	GGGTCTGTCCATCACAAGTG

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Cheirodon_stenodon_20130	TGTCGACCACCTCGCTTGT	CAAGCTGCGTGTGGAGCTTC	TCTTAGGCAGTCCAGTGCTC	TCTTGTGAGGTCCTTAAACGA	GGGCTGTGCCATCACAAGTG
Serrapinnus_spl_22401	TGTCGACCACCTCGCTTGT	CAAGCTGCGTGTGGAGCTTC	TCTTAGGCAGTCCAGTGCTC	TCTTGTGAGGTCCTTAAACGA	GGGCTGTGCCATCACAAGCG
Odontostilbe_fugitiva_22932	TGTCGACCACCTCGCTTGT	CAAGCTGCGTGTGGAGCTTC	TCTTAGGCAGTCCAGTGCTC	TCGTGTGAGGTCCTTAAACGA	GGGCTGTGCCATCACAAGTG
Cheirodon_pulcher_8	TGTCGACCACCTCGCTTGT	CAAGCTGCGTGTGGAGCTTC	TCTTAGGCAGTCCAGTGCTC	TCGTGTGAGGTCCTTAAACGA	GGGCTGTGCCATCACAAGTG
Odontostilbe_fugitiva_23714	TGTCGACCACCTCGCTTGT	CAAGCTGCGTGTGGAGCTTC	TCTTAGGCAGTCCAGTGCTC	TCGTGTGAGGTCCTTAAACGA	GGGCTGTGCCATCACAAGTG
Serrapinnus_calliurus_22121	TGTCGACCACCTCGCTTGT	CAAGCTGCGTGTGGAGCTTC	TCTTAGGCAGTCCAGTGCTC	TCTTGTGAGGTCCTTAAACGA	GGGCTGTGCCATCACAAGCG
Serrapinnus_calliurus_25768	TGTCGACCACCTCGCTTGT	CAAGCTGCGTGTGGAGCTTC	TCTTAGGCAGTCCAGTGCTC	TCGTGTGAGGTCCTTAAACGA	GGGCTGTGCCATCACAAGTG
Odontostilbe_ecuadorensis_9	TGTCGACCACCTCGCTTGT	CAAGCTGCGTGTGGAGCTTC	TCTTAGGCAGTCCAGTGCTC	TCTTGTGAGGTCCTTAAACGA	GGGCTGTGCCATCACAAGCG
Cynopotamus_magdaleneae_29515	TGTCGACCACCTCGCTTGT	CAAGCTGCGTGTGGAGCTTC	TCTTAGGCAGTCCAGTGCTC	TCATGTGAGGTTTTTAAATGA	GGGCTATCCATCACAAGTG
Phenacogaster_sp_27299	TGTCGACCACCTCGCTTGT	CAAGCTGCGTGTGGAGCTTC	TCTTAGGCAGTCCAGTGCTC	TCATGTGAGGTTTTTAAATGA	GGGCTATCCATCACAAGTG
Aphyocharacidium_sp_33167	TGTCGACCACCTCGCTTGT	CAAGCTGCGTGTGGAGCTTC	TCTTAGGCAGTCCAGTGCTC	TCATGTGAGGTCCTTAAACGA	GGGCTGTGCCATCACAAGTG
Hemibrycon_sp_33168	TGTCGACCACCTCGCTTGT	CAAGCTGCGTGTGGAGCTTC	TCTTAGGCAGTCCAGTACTC	TCATGTGAGGTCCTTAAACGA	GGGCTATCCATCACAAGTG
Brycon_insignis_16075	CCATTGCAACTTCTATAGGC	TCTGCTCATGATATATGAT	CCTTGGTGGCTACCACTGAC	ACTCCGAGAAAGCGAATGCAG	TGCACGTACGTTGCACCTGGA
Gnatocharax_sp_24494	CCATTGCAACTTCGGTAGGC	TCTGCTCATGAGTACATGGT	CCTTGGGGGTACCACTGAC	AGTCCCAGAAAGCGAATGCAG	TGCACATTTGTCACACTGGA
Macropsobrycon_xinguensis_40499	CCATTGCAACTTCTGTAGGC	TCTGCTCATGAGTATATGAT	CCTTGGTGGCTACCACTGAC	AGTCTGAGAAAGCGGATGCAG	TGCACGTACGTTGTGCTGGA
Bryconops_affinis_4168	CCATTGCAACTTCTATAGGC	TCTGCTCATGAGTATATGAT	CCTTGGCGGCTACCACTGAC	ACTCCGAGAAAGCGAATGCAG	TGCACGTACGTTGCCTGGA
Chalceus_epakros_26504	CCATTGCAACTTCTGTAGGC	TCTGCTCATGAGTACATCAT	CCTAGGTGGATACCACTGAC	ACTCCGAGAAAGCGAATGCAG	TGCACGTACATTGCACCTGGA
Aphyocharax_anisitsi_12660	CCATTGCAACTTCTGTAGGC	TCTGCTCATGAGTATATGAT	CCTTGGTGGCTACCACTGAC	ACTCCGAGAAAGCGGATGCAG	TGCACGTACGTTGCACCTGGA
Carlana_eigenmani_19864	CCATTGCAACTTCTGTAGGC	TCTGCTCATGAGTATATGAT	CCTTGGAGGCTACCACTGAC	ACTCCGAGAAAGCGAATGCAG	TGCACGTACGTTGCACCTGGA
Astyanax_mexicanus_24599	CCATTGCAACTTCTGTAGGC	TCTGCTCATGAGTACATAAT	CCTTGGTGGCTACCACTGAC	AGTCCGAGAAAGCGGATGCAG	TGCACGTACGTTGCCTTAGA
Spintherobolus_brocceae_22558	CCATTGCAACTTCTGTAGGC	TCTGCTCATGAGTTCATGAT	CCTTGGTGGTACCACTGTG	AGTCCGAGAAAGCGAATGCAG	TGCACATACATTGCACCTGGA
Spintherobolus_leptoura_36098	CCGTTGCAACTTCTGTAGGC	TCTGCTCATGAGTTTCATGAT	CCTTGGTGGTACCACTGTG	AGTCCGAGAAAGCGAATGCAG	TGCACATACATTGCACCTGGA
Spintherobolus_anoseion_24957	CCATTGCAACTTCTGTAGGC	TCTGCTCATGAGTTCATGAT	CCTTGGTGGTACCACTGTG	AGTCCGAGAAAGCGAATGCAG	TGCACATACATTGCACCTGGA
Charax_leticiae_12700	CCATTGCAACTTCTGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTGAC	AGTCCGAGAAAGCGGATGCAG	TGCACGTACATTGCACCTGGA
Diapoma_sp_21274	CCGTTGCAACTTCTGTAGGC	TCAGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTGAC	AGTCAGAGAAAGCGGATGCAG	TGCACATACGTATCGTTGGA
Prodontocharax_melanotus_10	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Prodontocharax_sp_7	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Nanocheirodon_insignis_27476	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Pseudocheirodon_arnoldi_5	CCATTGCAACTTCAGTAGGA	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCTG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Pseudocheirodon_terrabrae_6	CCATTGCAACTTCAGTAGGA	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCTG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Heterocheirodon_yatai_24954	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Cheirodon_killiani_24964	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGG
Cheirodon_australe_24979	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTATGTTGCACCTGGA
Cheirodon_interruptu_20486	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Cheirodon_killiani_19803	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGG
Cheirodon_killiani_24969	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGG
Cheirodon_australe_24963	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Cheirodon_interruptus_21266	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Cheirodon_ibicuihensis_25598	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Cheirodon_killiani_24974	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGG
Saccoliderma_melanostigma_27475	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Compura_gorgonae_1	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCTGAGAAAGCGCATGCAG	TGCACATTTCGTTGCACCTGGA
Odontostilbe_mitoptera_3	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCTGAGAAAGCGCATGCAG	TGCACATTTCGTTGCACCTGGA
Compura_sp_nova_4	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTTCGTTGCACCTGGA
Odontostilbe_dialepturus_2	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCTGAGAAAGCGCATGCAG	TGCACATTTCGTTGCACCTGGA
Odontostilbe_pulchra_25845	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Odontostilbe_paraguayensis_20127	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCTGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Odontostilbe_sp_22626	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCTGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Serrapinnus_microdon_17057	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGTACTGGA
Kolpotocheirodon_theloura_25982	CCATTGGAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Macropsobrycon_uruguayanae_29061	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Odontostilbe_pequira_24958	CCATTGCAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGTACTGGA
Odontostilbe_pequira_20124	CCATTGCAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGTACTGGA
Odontostilbe_pequira_12659	CCATTGCAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCTGAGAAAGCGCATGCAG	TGCACATTACGTTGTACTTGA
Acinocheirodon_melanogrammus_37551	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGTACTGGA
Serrapinnus_heterodon_20305	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGTACTGGA
Odontostilbe_sp2_29616	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGTACTGGA
Kolpotocheirodon_figueiredoi_37576	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Kolpotocheirodon_figueiredoi_37575	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Serrapinnus_kriegi_25764	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Compura_heterura_24984	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCTGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Gen_e_sp_nova_27603	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Acinocheirodon_cf_melanogrammus_37550	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Aphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	CCATTGCAACTTCTGTAGGC	TCTACTCATGAGTACATGAT	CCTTGGTGGCTACCACTGAC	AGTCTGAGAAAGCGGATGCAG	TGCACGTATGTTGCACCTGGA
Serrapinnus_notomelas_19890	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Serrapinnus_notomelas_18293	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Cheirodon_stenodon_20130	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCTGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Serrapinnus_spl_22401	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Odontostilbe_fugitiva_22932	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCTGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Cheirodon_pulcher_8	CCATTGCAACTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGGATGCAG	TGCACATTACGTTGCACCTGGA
Odontostilbe_fugitiva_23714	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCTGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Serrapinnus_calliurus_22121	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA
Serrapinnus_calliurus_25768	CCATTGTAACCTTCAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCCGAGAAAGCGCATGCAG	TGCACATTACGTTGCACCTGGA

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Odontostilbe_ecuadorensis_9	CCATTGTAACCTCTAGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCCG	AGTCTGAAAAGCGCATGCAG	TGCACCTACGTTGCAC TTGGA
Cynopotamus_magdalenae_29515	CCATTGCAACTTCTGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCAG	AGTCAGAGAAAACGGATGCAG	TGCACGTACATTGCAC TTGGA
Phenacogaster_sp_27299	CCATTGCAACTTCTGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGTTACCACTCAG	AGTCGGAGAAAACGGATGCAG	TGCACGTACGTTGCAC TTGGA
Aphyocharacidium_sp_33167	CCATTGCAACTTCTGTAGGC	TCTTCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCAG	AGTCTGAGAAACGGATGCAG	TGCACATACGTTGCAC TTGGA
Hemibrycon_sp_33168	CAATTGCAACTTCTGTAGGC	TCTGCTCATGAGTACATGAT	CCTTGGTGGCTACCACTCAG	AGTCAGAGAAACGGATGCAG	TGCACATACGTTGCAC TTGGA
Brycon_insignis_16075	CGATGTTGGCATACTAGTAGG	AATCTCGAGAAACCAACCA	TGGACCACTGAGATTAGCCA	AAGCCGCACTTGGTTCCGTTG	GAAGCCTGGAAAAGGGTTG
Gnatocharax_sp_24494	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGACATCAGTCA	AAGTCGCACTTGGTTTGGTG	GAACCTGGAAAAGGGCAGT
Macropsobrycon_xinguensis_40499	CGATGTTGGCATACTAGTAGG	AACCTCGAGAAACCAACCA	TGGACCACTGAGATCAGCCA	GAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAATGGTAGT
Bryconops_affinis_4168	TGATGTTGGCATACTAGTAGG	AACCTCGAGAAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GCAGTCTGGAACAGGGGAGT
Chalceus_epakros_26504	TGATGTTGGCATACTAGTAGG	AACCCAGAGAACCAACCG	TGGACCACTGAGATCAGCCA	GAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGGAGC
Aphyocharax_anisitsi_12660	TGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCG	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTCCGTTG	GCAGTCTGGAACAGGGGAGC
Carlana_eigenmani_19864	CGATGTTGGCATACTAGTAGG	AACCTCGAGAAACCAACAA	TGGACCACTGAGATTATCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAACAGGGTAGC
Astyanax_mexicanus_sp_24599	CGATGTTGGCATACTAGTAGG	AACCTCGAGATCCACGCCA	TGGGCACTGAGATCAGCCA	GAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAAT
Spintherobolus_brocceae_22558	TGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGTCTGGAAAAGGGGAGC
Spintherobolus_leptoura_36098	TGATGTTGGCATACTAGTAGG	AACCTCGAGAAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGTCTGGAAAAGGGGAGC
Spintherobolus_ankosein_24957	TGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAGTCTGGAAAAGGGGAGC
Charax_leticiae_12700	TGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGTCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGGACT
Diapoma_sp_21274	CGACGTTGGCATACTAGTAGG	AACCTCGAGAAACCAACAA	TGGACCACTGAGATCAGCCA	GAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Prodontocharax_melanotus_10	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGTCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Prodontocharax_sp_7	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Nanocheirodon_insignis_27476	CGATGTTGGCATACTAGTAGG	AACCTCGAGAAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Pseudocheirodon_arnoldi_5	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATTAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Pseudocheirodon_terrabae_6	CGATGTTGGCATACTAGTAGG	AACCTCGAGAAACCAACCA	TGGACCACTGAGATTAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Heterocheirodon_yatai_24954	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Cheirodon_killiani_24964	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Cheirodon_australe_24979	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Cheirodon_interruptu20486	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Cheirodon_killiani_19803	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Cheirodon_killiani_24969	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Cheirodon_australe_24963	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Cheirodon_interruptu_21266	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Cheirodon_libicuhiensis_25598	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Cheirodon_killiani_24974	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Saccoderma_melanostigma_27475	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Compsura_gorgonae_1	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTATGGTG	GAAGCCTGGAAAAGGGTAGT
Odontostilbe_mitoptera_3	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Compsura_sp_nova_4	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTATGGTG	GAAGCCTGGAAAAGGGTAGT
Odontostilbe_dialepturus_2	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTATGGTG	GAAGCCTGGAAAAGGGTAGT
Odontostilbe_pulchra_25845	CGACGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Odontostilbe_paraguayensis_20127	CGACGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGTCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
OdontostilbeSpl_22626	CGACGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Serrapinnus_microdon_17057	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Kolpotocheirodon_theloura_25982	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGTCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Macropsobrycon_uruguayanae_29061	CGACGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGAG	GAAGCCTGGAAAAGGGTAGT
Odontostilbe_pequira_24959	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Odontostilbe_pequira_20124	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Odontostilbe_pequira_12659	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Acinocheirodon_melanogrammus_37551	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Serrapinnus_heterodon_20305	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
OdontostilbeSpl_29616	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Kolpotocheirodon_figueiredoi_37576	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Kolpotocheirodon_figueiredoi_37575	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Serrapinnus_kriegi_25764	CGACGTCGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTCCGAG	GAAGCCTGGAAAAGGGTAGT
Compsura_heterura_24984	CGATGTCGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGTCGCACTTGGTCCGAG	GAAGCCTGGAAAAGGGTAGT
Gen_e_sp_nova_27603	CGATGTCGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTCCGTTG	GAAGCCTGGAAAAGGGTAGT
Acinocheirodon_cf_melanogrammus_37550	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Aphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	TGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGTCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Serrapinnus_notomelas_19890	CGACGTCGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGTCGCACTTGGTCCGAG	GAAGCCTGGAAAAGGGTAGT
Serrapinnus_notomelas_18293	CGACGTCGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGTCGCACTTGGTCCGAG	GAAGCCTGGAAAAGGGTAGT
Cheirodon_stenodon_20130	CGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGTCTGGAAAAGGGTAGT
SerrapinnusSpl_22431	CGACGTCGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGTCGCACTTGGTCCGAG	GAAGCCTGGAAAAGGGTAGT
Odontostilbe_fugitiva_22932	CGACGTCGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTCCGTTG	GAAGCCTGGAAAAGGGTAGT
Cheirodon_pulcher_8	CGACGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGAG	GAAGCCTGGAAAAGGGTAGT
Odontostilbe_fugitiva_23714	CGACGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTCCGTTG	GAAGCCTGGAAAAGGGTAGT
Serrapinnus_calliurus_22121	CGACGTCGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGTCGCACTTGGTCCGAG	GAAGCCTGGAAAAGGGTAGT
Serrapinnus_calliurus_25768	CGACGTCGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGAG	GAAGCCTGGAAAAGGGTAGT
Odontostilbe_ecuadorensis_9	CGACGTCGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Cynopotamus_magdalenae_29515	TGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGTCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGCAGT
Phenacogaster_sp_27299	TGATGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGTCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGCAGT
Aphyocharacidium_sp_33167	CGATGTTGGGATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Hemibrycon_sp_33168	CGACGTTGGCATACTAGTAGG	AACCTCGAGAACCAACCA	TGGACCACTGAGATCAGCCA	AAGCCGCACTTGGTTTGGTG	GAAGCCTGGAAAAGGGTAGT
Brycon_insignis_16075	GCTCTGATGCTATTCCCTG	AGAGGGGAAATCCAGCACTC	CAGATGCGCACTTACTCTAC	CAAGTAAGCTCCAGCAAGA	GGGAGATCGAGAAACCCAA

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Gnatocharax_sp_24494	GCTTTGATCATTATTCCTTC	AGAGGGAAATCCATCACCTC	CAGAGGCGCACCACTTCTAC	CAGGTCAGCTTCCAAACAAG	GGCAGATGCAGAAGACCCAA
Macropsobrycon_xinguensis_40499	GCCTTGATCATTATTCATC	AGAGGGAAATCCAGCACCTC	CAGAAGCGCATTACTTCTAC	CAGGTCAGCTTCCAAACAAG	GGGAGACTGGAAGATCCAA
Bryconops_affinis_4168	GCTCTGATCGCTATTCCATC	CGAAGGAAATCCAGCTCCTC	CGGATGCGCATTCTCTCTAC	CGGGTAAGCTTTCAGCAAGA	GGGAGGTGCAGAAGACCCAA
Chalceus_epakros_26504	GCTCTGATCGCTATTCCATC	AGAGGGAAATCCATCACCTC	CAGATGCACATTACTTCTAC	CAGGTAAGCTTCCAGCAAGA	GGAAGATGCAGAAGACCCAA
Aphyocharax_anisitsi_12660	GCTCTGATCGCTATTCCAA	AGAAGGAAATCCGCGACCTC	CGGATGCCTATCTCTTCTAC	CAGGTGAGCTTCCAGCAAGA	GGGAGGTGCAGAAGACCCAA
Carlana_eigenmani_19864	GCTCTGATCGGTATTCCATC	AGAGGGAAATCCAGTACCTC	CGGATGCGCATTACTTCTAC	CAAGTAAGCTTCCAGCAAGA	GGGAGATGTAGAAGACCCAA
Astyanax_mexicanus_24599	GCTTTGATCATTATTCATC	AGAGGGAAATCCAGCACCTC	CAGATGCGCACTACTGCTAC	CAGGTCAGCTTCCGACATGA	GGAAGATGCTGAAGATCCAA
Spintherobolus_broccae_22558	GCCTTGATAATGATCCCATC	AGAAGGAAATCCAGCATCTC	CAGATGTGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Spintherobolus_leptoura_36098	GCCTTGATAATGATCCCATC	AGAAGGAAATCCAGCATCTC	CAGATGTGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGTGCAGAAGACCCAA
Spintherobolus_ankoseion_24957	GCCTTGATAATGATCCCATC	AGAAGGAAATCCAGCATCTC	CAGATGTGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Charax_leticiae_12700	GCCTTGATCATGATTCCATC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAAACAAG	GAGAGATGCAGAAGATCCAA
Diapoma_sp_21274	GCCTTGATCATGATACCATC	AGAAGGAAATCCAGCACCTC	CCGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCCAGA	AGGAGATGCAGAAGACCCAA
Prodontocharax_melanotus_10	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Prodontocharax_sp_7	GCCTTGATCATGATTCCATC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Nanocheiroidon_insignis_27476	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Pseudocheiroidon_arnoldi_5	GCCTTGATTATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Pseudocheiroidon_terrabaes_6	GCCTTGATTATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Heterocheiroidon_yatai_24954	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Cheiroidon_killiani_24964	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Cheiroidon_australe_24979	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Cheiroidon_australe_24963	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Cheiroidon_killiani_19803	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Cheiroidon_killiani_24969	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Cheiroidon_australe_24963	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Cheiroidon_interruptus_21266	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Cheiroidon_ibicuihensis_25598	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Cheiroidon_killiani_24974	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Saccoderma_melanostigma_27475	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Compura_gorgonae_1	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Odontostilbe_mitoptera_3	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Compura_sp_nova_4	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Odontostilbe_dialepturus_2	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Odontostilbe_pulchra_25845	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Odontostilbe_paraguayensis_20127	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Odontostilbe_spl_22626	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Serrapinnus_microdon_17057	TCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Kolpotocheiroidon_theloura_25982	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGATGACCCAA
Macropsobrycon_uruguayanae_29061	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGACGACCCAA
Odontostilbe_pequira_24958	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Odontostilbe_pequira_20124	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Odontostilbe_pequira_12659	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Acinocheiroidon_melanogrammus_37551	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Serrapinnus_heterodon_20305	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Odontostilbe_sp2_29616	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Kolpotocheiroidon_figueiredoi_37576	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Kolpotocheiroidon_figueiredoi_37575	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Serrapinnus_kriegi_25764	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAAACAAG	GGGCGATGCAGACGACCCAA
Compura_heterura_24984	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCCGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Gen_e_sp_nova_27603	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCCGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Acinocheiroidon_cf_melanogrammus_37550	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	GCCTTGATCATGATTCCATC	AGAAGGAAATCCAGCACCTC	CAGATGCACATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCTGAAGACCCAA
Serrapinnus_notomelas_19890	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCCGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Serrapinnus_notomelas_18293	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCCGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Serrapinnus_spl_22401	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCCGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Odontostilbe_fugitiva_22932	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCCGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAAACAAG	GGGCGATGCAGACGACCCAA
Cheiroidon_pulcher_8	GCCTTGATCATGATTCCATC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGAAGACCCAA
Odontostilbe_fugitiva_23714	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCCGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAAACAAG	GGGCGATGCAGACGACCCAA
Serrapinnus_calliurus_22121	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCCGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Serrapinnus_calliurus_25768	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCCGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Odontostilbe_ecuadensis_9	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCCGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGCGATGCAGACGACCCAA
Cynopotamus_magdalenae_29515	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAAACAAG	AGCAGATGCAGAAGATCCAG
Phenacogaster_sp_27299	GCCTTGATCATGATTCCCTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAAACAAG	GGCAGATGCTGAAGATACAA
Aphyocharacidium_sp_33167	GCCTTGATCATGATTCCGTC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGAAAGA	GGGAGATGCAGAAGACCCAA
Hemibrycon_sp_33168	GCCTTGATCATGATACCATC	AGAAGGAAATCCAGCACCTC	CAGATGCGCATTACTTCTAC	CAGGTCAGCTTCCAGCAAGA	GGGAGATGCAGAAGACCCAA
Brycon_insignis_16075	CTCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGCTCCTCTAGAGGATTCAG	AAGAGTTGTACTTCGGGCGT	GATCTCAATGAGATGGAGTT
Gnatocharax_sp_24494	CTCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGCTCCTCTAGAGGATTCAG	AAGAATCTTACTTTGGGCGT	GATCCCAACGAGATGGAGTT
Macropsobrycon_xinguensis_40499	CTCAGACCTGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGCTCCTCTAGAGGATTCAG	AAGAATCTTACTTTGGGCGT	GATCCCAATGAGATGGAGTT
Bryconops_affinis_4168	CCAGATGTGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	TGCTCCTCTCGAGGATTCAG	AAGAATCTTACTTTGGGCGT	GATCCTAATGAGATGGAGTT
Chalceus_epakros_26504	CCAGACCTGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGCTCCTCTAGAGGATTCAG	AAGAATCTTACTTTGGGCGT	GATCCCAATGAGATGGAGTT
Aphyocharax_anisitsi_12660	CTCTGACGTGCAGCCAGGAG	TCCACAGACTTTGAGGATTC	CGCTCCTCTAGAGGATTCAG	AAGAATCTTACTTTGGGCGT	GATCTCAACGAGATGGAGTT
Carlana_eigenmani_19864	CTCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGCTCCTCTAGAGGATTCAG	AAGAATCTTACTTTGGGCGT	GATCCTAATGAGATGGAGTT
Astyanax_mexicanus_24599	CGCAGACCTGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGCTCCTCTAGAGGATTCAG	AAGAATCTTACTTTGGGCGT	GATCCCAATGAGATGGAGTT

Apêndice

Spintherobolus_broccae_22558	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTGGAAGATTCCAG	AAGAACTGTACTTTGGGCGT	GATCCTATTGAGATGGAGTT
Spintherobolus_leptoura_36098	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTGGAAGATTCCG	AAGAACTGTACTTTGGGCGT	GATCCTATTGAGATGGAGTT
Spintherobolus_ankoseion_24957	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTGGAAGATTCCAG	AAGAACTGTACTTTGGGCGT	GATCCTATTGAGATGGAGTT
Charax_leticiae_12700	CTCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTATACTTTGGACGT	GATCCCAACGAGATGGAGTT
Diapoma_sp_21274	CCCAGACTTGTAGCCAAGAG	TCTACAGAGTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTTGGGCGA	GATCCCAATGAGATGGAGTT
Prodontocharax_melanotus_10	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Prodontocharax_sp_7	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGGCGT	GATCCCAATGAGATGGAGTT
Nanocheiroidon_insignis_27476	CCCAGGCATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Pseudocheiroidon_arnoldi_5	CCCAGACATGCAGTCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Pseudocheiroidon_terrabae_6	CCCAGACATGCAGTCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTTGGACGT	GATCCCAATGAGATGGAGTT
Heterocheiroidon_yatai_24954	CCCAGGCATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTTGGACGT	GATCCCAATGAGATGGAGTT
Cheiroidon_killiani_24964	CCCAGGCATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Cheiroidon_australe_24979	CCCAGGCATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Cheiroidon_interruptu_20486	CCCAGGCATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Cheiroidon_killiani_19803	CCCAGGCATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Cheiroidon_killiani_24969	CCCAGGCATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Cheiroidon_australe_24963	CCCAGGCATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Cheiroidon_interruptus_21266	CCCAGGCATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Cheiroidon_ibicuhiensis_25598	CCCAGGCATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Cheiroidon_killiani_24974	CCCAGGCATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Saccoderma_melanostigma_27475	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	CGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTTGGACGT	GATCCCAATGAGATGGAGTT
Compsura_gorgonae_1	CCCAGACATGTAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCTG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Odontostilbe_mitoptera_3	CCCAGACATGTAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCTG	AAGAGCTGTACTTTGGACGT	GATCCCAATGAGATGGAGTT
Compsura_sp_nova_4	CCCAGACATGTAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCTG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Odontostilbe_dialepturus_2	CCCAGACATGTAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Odontostilbe_pulchra_25845	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Odontostilbe_paraguayensis_20127	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
OdontostilbeSpl_22626	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGGCGT	GATCCTAATGAGATGGAGTT
Serrapinnus_microdon_17057	CACAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGGCGT	GATCCCAATGAGATGGAGTT
Kolpotocheiroidon_theloura_25982	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Macropsobrycon_uruguayanae_29061	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Odontostilbe_pequirá_24958	CACAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGGCGT	GATCCCAATGAGATGGAGTT
Odontostilbe_pequirá_20124	CACAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGGCGT	GATCCCAATGAGATGGAGTT
Odontostilbe_pequirá_12659	CACAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGGCGT	GATCCCAATGAGATGGAGTT
Acinocheiroidon_melanogrammus_37551	CACAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGGCGT	GATCCCAATGAGATGGAGTT
Serrapinnus_heterodon_20305	CACAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGGCGT	GATCCCAATGAGATGGAGTT
OdontostilbeSpl_29616	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGGCGT	GATCCCAATGAGATGGAGTT
Kolpotocheiroidon_figueiredoi_37576	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Kolpotocheiroidon_figueiredoi_37575	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Serrapinnus_kriegi_25764	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Compsura_heterura_24984	CCCAGGCATGCAGCCAAGAG	TCCACAGACTTCGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAAATGGAGTT
Gen_eSpl_nova_27603	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Acinocheiroidon_cf_melanogrammus_37550	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	CTCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTATACTTTGGACGT	GATCCCAATGAGATGGAGTT
Serrapinnus_notomelas_19890	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAAATGGAGTT
Serrapinnus_notomelas_18293	CCCAGACATGCAGCCAAGAG	TCCACAGACTTCGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAAATGGAGTT
Cheiroidon_stenodon_20130	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTGGAAGATTCCAG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
SerrapinnusSpl_22401	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTCGGACGT	GATCCCAATGAAATGGAGTT
Odontostilbe_fugitiva_22932	CCCAGACATGCAGCCAAGAG	TCCACAGACTTCGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Cheiroidon_pulcher_8	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTTGGACGT	GATCCCAATGAGATGGAGTT
Odontostilbe_fugitiva_23714	CCCAGACATGCAGCCAAGAG	TCCACAGACTTCGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Serrapinnus_calliurus_22121	CCCAGACATGCAGCCAAGAG	TCCACAGACTTCGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAGATGGAGTT
Serrapinnus_calliurus_25768	CCCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAAATGGAGTT
Odontostilbe_ecuadorensis_9	CCCAGACATGCAGCCAAGAG	TCCACAGACTTCGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAGCTGTACTTCGGACGT	GATCCCAATGAAATGGAGTT
Cynopotamus_magdalenae_29515	CTCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTATACTTTGGACGT	GATCCCAACGAGATGGAGTT
Phenacogaster_sp_27299	CTCAGACATGCAGCCAAGAG	TCCACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTTACTTTGGACGT	GATCCCAACGAGATGGAGTT
Aphyocharacidium_sp_33167	CCCAGACTTGTAGCCAAGAG	TCTACAGACTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTTGGACGT	GATCCCAATGAGATGGAGTT
Hemibrycon_sp_33168	CCCAGACATGCAGCCAAGAG	TCCACAGAGTTTGAGGATTC	AGTCTCTCTAGAAGATTCCAG	AAGAACTGTACTTTGGGCGA	GATCCCAATGAGATGGAGTT
Brycon_insignis_16075	CAGCAGTGTGGAGAAGGAG	ACACCTACAACGAGGAAGAT	GAGGAGGACGAATCTCTGAC	CGGTTATTGGATCAAGTGTT	GTCTCACCTGCCTGATAGAC
Gnatocharax_sp_24494	CAGCAGTGTGGAGAAGGAG	ACGCTTACAATGAGGAAGAC	GAGGAGGACGAATCTCAGAC	CGGTTATTGGATCAAGTGTT	GTCTCACTTCCAGGTAGAG?
Macropsobrycon_xinguensis_4019	CAGCAGTGCAGGAGAAGGAG	ATGCTTACAACGAGGATGAT	GAGGATGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGATAGAC
Bryconops_affinis_4168	CAGCAGCGATGGAGAAGGAG	ACACCTACAACGAGATGAT	GAGGAGGACGAATCTCAGAC	GGGTTATTGGATCAAGTGCT	GTCTCACCTGCCTGGTAGAC
Chalceus_epakros_26504	CAGCAGCGAGGGAGAAGGAG	ACACCTACAACGAGGAAGAT	GAGGAGGACGAATCTCAGAC	CGGTTATTGGATCAAGTGCT	GCATCACCTGCCAGGTAGAC
Aphyocharax_anisitsi_12660	CAGCAGCGATGGAGAAGGAG	ACACCTACAACGAGGACGAT	GAGGAGGACGAATCTCAGAC	GGGTTATTGGATCAAGTGCT	GTCTCACCTGCCTGGTAGAC
Carlana_eigenmani_19864	CAGCAGCGATGGAGAAGGAG	ATGCTTACAATGAGGAAGAT	GAGGAGGACGAATCTCAGAC	TGGTTATTGGATCAAGTGCT	GTCTCACCTGCCTGGTAGAC
AstyanaMexicanus_24599	CAGCAGCGATGGGGAAGGAG	ACGCTTACAACGAGGATGAC	GAGGAGGACGAATCTCAGAC	TGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGATAGAC
Spintherobolus_broccae_22558	TAGCAGCGATGGAGAAGGAG	ATGCTTACAATGAGGATGAT	GAGGAGGATGAATCTCAGAC	CGGTTATTGGATCAAGTGCT	GTCTCTCTGCCAGATAGAT
Spintherobolus_leptoura_36098	TAGCAGCGATGGAGAAGGAG	ATGCTTACAATGAGGATGAT	GAGGAGGATGAATCTCAGAC	CGGTTATTGGATCAAGTGCT	GTCTCTCTGCCAGATAGAT
Spintherobolus_ankoseion_24957	TAGCAGCGATGGAGAAGGAG	ATGCTTACAATGAGGATGAT	GAGGAGGATGAATCTCAGAC	CGGTTATTGGATCAAGTGCT	GTCTCTCTGCCAGATAGAT
Charax_leticiae_12700	CAGCAGTGTGGAGAAGGAG	ACACCTACAATGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTATTGGATCAAGTGTT	GTCTCACTTCCAGGTAGAC
Diapoma_sp_21274	CAGCAGCGATGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGATGAATCTCAGAC	TGGTTACTGGATCAAGTGTT	GTCTCTCTGTCAAGTAGAC
Prodontocharax_melanotus_10	CAGCAGTGTGGAGAAGGAG	ACACCTACAATGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Prodontocharax_sp_7	CAGCAGCGATGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC

Nanocheiroidon_insignis_27476	CAGCAGCGATGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Pseudocheiroidon_arnoldi_5	CAGCAGCGATGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Pseudocheiroidon_terrabae_6	CAGCAGCGATGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Heterocheiroidon_yatai_24954	CAGCAGCGATGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Cheirodon_killiani_24964	CAGCAGCGATGGAGAAGGAG	ACATCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Cheirodon_australe_24979	CAGCAGTGATGGAGAAGGAG	ACATCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Cheirodon_interruptu20486	CAGCAGCGATGGAGAAGGAG	ACATCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Cheirodon_killiani_19803	CAGCAGCGATGGAGAAGGAG	ACATCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Cheirodon_killiani_24969	CAGCAGCGATGGAGAAGGAG	ACATCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Cheirodon_australe_24963	CAGCAGCGATGGAGAAGGAG	ACATCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Cheirodon_interruptus_21266	CAGCAGCGATGGAGAAGGAG	ACATCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Cheirodon_ibicuhiensis_25598	CAGCAGCGATGGAGAAGGAG	ACATCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Cheirodon_killiani_24974	CAGCAGCGATGGAGAAGGAG	ACATCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Saccoderma_melanostigma_27475	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Compsura_gorgonae_1	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Odontostilbe_mitoptera_3	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Compsura_sp_nova_4	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Odontostilbe_dialepturus_2	CAGCAGCGACGGAGATGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Odontostilbe_pulchra_25845	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGATGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Odontostilbe_paraguayensis_20127	CAGCAGCGACGGAGAAGGAG	ACACCTACAATGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Odontostilbe_sp2_22626	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Serrapinnus_microdon_17057	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Kolpotocheiroidon_theloura_25982	CAGCAGCGATGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Macropsobrycon_uruguayanae_29061	CAGCAGCGATGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Odontostilbe_pequira_24958	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Odontostilbe_pequira_20124	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Odontostilbe_pequira_12659	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Acinocheiroidon_melanogrammus_37551	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Serrapinnus_heterodon_20305	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Odontostilbe_sp2_29616	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Kolpotocheiroidon_figueiredoi_37576	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Kolpotocheiroidon_figueiredoi_37575	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Serrapinnus_kriegi_25764	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGATGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Compsura_heterura_24984	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Gen_e_sp_nova_27603	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Acinocheiroidon_cf_melanogrammus_37550	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
1Aphyocheiroidon_hemigrammus_40027	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Aphyocheiroidon_hemigrammus_40025	????????????????????	????????????????????	????????????????????	????????????????????	????????????????????
Tetragonopterus_argenteus_22029	CAGCAGTGATGGAGAAGGAG	ACACCTACAATGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Serrapinnus_notomelas_19890	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Serrapinnus_notomelas_18293	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Cheirodon_stenodon_20130	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Serrapinnus_sp1_22401	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Odontostilbe_fugitiva_22932	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Cheirodon_pulcher_8	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGATGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Odontostilbe_fugitiva_23714	CAGCAGCGATGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Serrapinnus_calliurus_22121	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAT
Serrapinnus_calliurus_25768	CAGCAGCGACGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Odontostilbe_ecuadorensis_9	CAGCAGCGATGGAGAAGGAG	ACACCTACAATGAGGATGAT	GAGGAGGATGAATCTCAGAC	CGGTTACTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAC
Cynopotamus_magdalenae_29515	CAGCAGTGATGGAGAAGGAG	ACACCTACAATGAAGATGAT	GAGGAGGACGAATCTCAGAC	TGGTTATTGGATCAAGTGCT	GTCTCACTTGCCAGGTAGAC
Phenacogaster_sp_27299	CAGCAGTGATGGAGAAGGAG	ACACCTACAATGAGGATGAT	GAGGAGGACGAATCTCAGAC	CGGTTATTGGATCAAGTGCT	GTCTCACTTGCCAGGTAGAT
Aphyocharacidium_sp_33167	CAGCAGCGATGGAGAAGGAG	ACACCTACAATGAGGATGAT	GAGGAGGATGAATCTCAGAC	TGGTTATTGGATCAAGTGCT	GTCTCTCTGCCAGGTAGAT
Hemibrycon_sp_33168	CAGCAGTGATGGAGAAGGAG	ACACCTACAACGAGGATGAT	GAGGAGGATGAATCTCAGAC	TGGTTACTGGATCAAGTGCT	GTCTCACTTGCCAGGTAGAC
Brycon_insignis_16075	GTGAACACCTGGAAACC???	????????????????????	????????????????		
Gnatocharax_sp_24494	????????????????????	????????????????????	???????????????		
Macropsobrycon_xinguensis_40499	ATCAAC??????????????	????????????????????	???????????????		
Bryconops_affinis_4168	GTGAACACCT????????	????????????????????	???????????????		
Chalceus_epakros_26504	GTGAACACCTGGGAGCC???	????????????????????	???????????????		
Aphyocharax_anisitsi_12660	GTGAACACCTGGGAGCC???	????????????????????	???????????????		
Carlana_eigenmani_19864	GTGAACACCTG????????	????????????????????	???????????????		
Astyanax_mexicanus_24599	ATCAACACCTGGGAACC???	????????????????????	???????????????		
Spintherobolus_brocceae_22558	GTCAACACCTGGGAGCCCTT	CTACTCCACTGAGCTCACCC	GACCGCCATGA		
Spintherobolus_leptoura_36098	GTCAACACCTGGGAGCC???	????????????????????			
Spintherobolus_ankoseion_24957	GTCAACACCTGGGAGCCCTT	CTACTCCACTGAGCTCACCC	GACCGCCATGA		
Charax_leticiae_12700	GTCAACACCTGGGAACCTTT	TTACTCCACTGAGCTCACCC	GACCGCCATGA		
Diapoma_sp_21274	ATCAACACCTGG?A?????	????????????????????	???????????????		
Prodontocharax_melanotus_10	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGCCCTGA		
Prodontocharax_sp_7	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGCCCTGA		
Nanocheiroidon_insignis_27476	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGCCATGA		
Pseudocheiroidon_arnoldi_5	GTCAACACCTGGGAACCGTT	TTACTCCACTGAGCTTACCC	GACCGCCATGA		
Pseudocheiroidon_terrabae_6	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTTACCC	GACCGCCATGA		
Heterocheiroidon_yatai_24954	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGCCATGA		
Cheirodon_killiani_24964	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGCCATGA		
Cheirodon_australe_24979	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGCCATGA		
Cheirodon_interruptu20486	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGCCATGA		

Cheirodon_killiani_19803	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCCTGA
Cheirodon_killiani_24969	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Cheirodon_australe_24963	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Cheirodon_interruptus_21266	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCCTGA
Cheirodon_ibicuihiensis_25598	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCCTGA
Cheirodon_killiani_24974	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Saccoderma_melanostigma_27475	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Compsura_gorgonae_1	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Odontostilbe_mitoptera_3	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Compsura_sp_nova_4	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Odontostilbe_dialepturus_2	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Odontostilbe_pulchra_25845	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Odontostilbe_paraguayensis_20127	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Odontostilbe_sp1_22626	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Serrapinnus_microdon_17057	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Kolpotocheirodon_theloura_25982	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Macropsobrycon_uruguayanae_29061	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Odontostilbe_pequira_24958	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Odontostilbe_pequira_20124	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Odontostilbe_pequira_12659	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Acinocheirodon_melanogrammus_37550	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Serrapinnus_heterodon_20305	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Odontostilbe_sp2_29616	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Kolpotocheirodon_figueiredoi_37576	????????????????????	????????????????????	????????????
1Kolpotocheirodon_figueiredoi_37575	????????????????????	????????????????????	????????????
Serrapinnus_kriegi_25764	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Compsura_heterura_24984	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Gen_e_sp_nova_27603	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Acinocheirodon_cf_melanogrammus_37550	????????????????????	????????????????????	????????????
1Aphyocheirodon_hemigrammus_40027	????????????????????	????????????????????	????????????
Aphyocheirodon_hemigrammus_40025	????????????????????	????????????????????	????????????
Tetragonopterus_argenteus_22029	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Serrapinnus_notomelas_19890	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Serrapinnus_notomelas_18293	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Cheirodon_stenodon_20130	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Serrapinnus_sp1_22401	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Odontostilbe_fugitiva_22932	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Cheirodon_pulcher_8	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Odontostilbe_fugitiva_23714	ATCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Serrapinnus_calliurus_22121	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Serrapinnus_calliurus_25768	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Odontostilbe_ecuadorensis_9	GTCAACACCTGGGAACCGTT	CTACTCCACTGAGCTCACCC	GACCGGCCATGA
Cynopotamus_magdalena_29515	ATCAACACCTGGGAACCGTT	????????????????????	????????????
Phenacogaster_sp_27299	GTCAACACCTGGGAACCGTT	????????????????????	????????????
Aphyocharacidium_sp_33167	GTCAACACCTGGGAACCGTT	????????????????????	????????????
Hemibrycon_sp_33168	GTCAACACCTGGGAACCGTT	????????????????????	????????????