

## CLOFFAR - update 3 - supplement to Checklist of the Freshwater Fishes of Argentina.

Stefan Koerber<sup>1</sup>, Thomas O. Litz<sup>2</sup> & Juan Marcos Mirande<sup>3</sup>

<sup>1</sup> Friesenstr. 11, 45476 Muelheim, Germany, pecescrilloos@koerber-germany.de

<sup>2</sup> Friedhofstr. 8, 88448 Attenweiler, Germany, pecesuruguayos@aol.com

<sup>3</sup> CONICET - Fundación Miguel Lillo, Miguel Lillo 251, 4000 San Miguel de Tucumán, Argentina.  
mcmirande@gmail.com

### Remarks on this update

In May 2016 we have published the second update to CLOFFAR and in these few months a total of 24 changes have summed up. The total number of fishes known from the freshwaters of Argentina has increased to 540, caused by three new species and 13 first records. Four new combinations and four synonymizations do not have influence on the total count. The paper of most importance in quantity without doubt is the one of Casciotta et al. on their findings in the Iguazú National Park, unfortunately also including two first records of exotic introduced species, *Clarias gariepinus* and *Geophagus brasiliensis*.

*Clarias gariepinus* was included in this update against our standard to only recognize records which have been published based on voucher material. In this case the determination could undoubtedly be done based on a photo and this invasive species has been reported before from the lower Iguazú river in Brazil in 2012 already. The confirmation of *Crenicichla iguassuensis* has undergone some see-saw development in the past and the respective remarks can be found when following the link. Also another publication needs to be commented on: The synonymizations of four rivulids by Calviño has been published as an isolated statement beyond any systematical context. Nevertheless, it has been formally published and in some of these cases the probability of being synonyms had been stated previously by other authors. Future will show the resilience and acceptance of those synonymizations. The paper of Ortí et al. dates from 2008 and was simply not known to us before and thus, the new combination of *Myloplus tiete* from *Myleus* is only included now, eight years later.

	CLOFF AR	update # 1	update # 2	update # 3	total
Rajiformes	6				6
Acipenseriformes	1				1
Clupeiformes	6				6
Cypriniformes	5				5
Characiformes	183		4	4	191
Siluriformes	200	1	4	11	216
Gymnotiformes	15				15
Osmeriformes	4				4
Salmoniformes	6				6
Atheriniformes	4	1			5
Cyprinodontiformes	30			-3	27
Beloniformes	2				2
Synbranchiformes	1				1
Perciformes	49	2	-1	2	52
Pleuronectiformes	2				2
Lepidosireniformes	1				1
<b>total</b>	<b>515</b>	<b>4</b>	<b>7</b>	<b>12</b>	<b>540</b>

The aim of this list of species of freshwater fishes from Argentina is to provide an updated supplement to the 'Checklist of the Freshwater Fishes of Argentina (CLOFFAR)' published by Mirande & Koerber (2015). Only those species are listed here that have not been included in that paper and earlier updates or which have undergone systematical changes since then. Changes in this sense may be new species, synonymies, revalidations, new combinations, first records etc., every factor which might modify the data published at present. Information already provided in CLOFFAR is not repeated herein.

This list is not a publication in the sense of the 'Code' (ICZN) and expressions as 'new species', 'new combination' etc. are only used to highlight changes in comparison with the original CLOFFAR.

'NEW' after species names indicates that this record has not been included in previously published updates. 'Info' provides hyperlinks to the individual species accounts in [www.pecescrilloos.de](http://www.pecescrilloos.de), usually with figures and some data from the respective publication.

class ACTINOPTERYGII

order CHARACIFORMES

family Parodontidae

***Apareiodon***

***A. vittatus*** Garavello, 1977  
first record for Argentina from the Río Iguazú  
published in Casciotta et al. (2016) [info](#) NEW

family Anostomidae

***Megaleporinus***

***M. macrocephalus*** (Garavello & Britski, 1988)  
new combination from *Leporinus*  
published in Ramirez et al. (2017) [info](#) NEW

***M. obtusidens*** (Valenciennes, 1837)  
new combination from *Leporinus*  
published in Ramirez et al. (2017) [info](#) NEW

family Erythrinidae

***Hoplias***

***H. mbigua*** Azpelicueta, Benítez, Aichino & Mendez, 2015  
new species from the Paraná basin in Misiones  
published in Azpelicueta et al. (2015) [info](#)

***H. misionera*** Rosso et al., 2016  
new species from the Uruguay and Paraná basins  
published in Rosso et al. (2016) [info](#) NEW  
type locality Misiones, río Acaraguá, Villa Bonita

family Serrasalmididae

***Myloplus***

***M. tiete*** (Eigenmann & Norris, 1900)  
new combination from *Myleus*  
published in Ortí et al. (2008) [info](#) NEW

family

**Characidae**

subfamily

Stevardiinae

[Thomaz et al. 2015]

tribus

Diapomini

***Bryconamericus***

***B. indefessus*** (Mirande, Aguilera & Azpelicueta, 2006)  
 new combination from *Nantis*  
 published in Thomaz et al. (2015)

[info](#)***Diapoma***

***D. alburnus*** (Hensel, 1870)  
 new combination from *Cyanocharax*  
 published in Thomaz et al. (2015)

[info](#)

***D. guarani*** (Mahnert & Géry, 1987)  
 new combination from *Hyphessobrycon*  
 published in Thomaz et al. (2015)

[info](#)

***D. lepiciastus*** (Malabarba, Weitzman & Casciotta, 2003)  
 new combination from *Cyanocharax*  
 published in Thomaz et al. (2015)

***D. obi*** (Casciotta, Almirón, Piálek & Rican, 2012)  
 new combination from *Cyanocharax*  
 published in Thomaz et al. (2015)

***D. pyrrhopteryx*** Menezes & Weitzman, 2011  
 first record for Argentina from the Upper Uruguay basin  
 published in Almirón et al. (2016)

[info](#)

***D. uruguayense*** (Messner, 1962)  
 new combination from *Cyanocharax*  
 published in Thomaz et al. (2015)  
 remarks not *uruguayensis* as *Diapoma* is neuter

***Piabarchus***

***P. stramineus*** (Eigenmann, 1908)  
 new combination from *Bryconamericus*  
 published in Thomaz et al. (2015)

[info](#)***Piabina***

***P. thomasi*** (Fowler, 1940)  
 new combination from *Bryconamericus*  
 published in Thomaz et al. (2015)

[info](#)

tribus

Eretmobryconini

***Markiana***

***M. nigripinnis*** (Perugia, 1891)  
*Tetragonopterus anomalus* is a jr. synonym  
 published in Carvalho & Santos (2015)  
 synonym *Tetragonopterus anomalus* Steindachner, 1891  
 type locality *anomalus*: Corrientes, Río Paraná

[info](#)

subfamily *Astyanax* clade

### ***Astyanax***

- A. bifasciatus*** Garavello & Sampaio, 2010  
 first record for Argentina from the Río Iguazú  
 published in Casciotta et al. (2016) [info](#) NEW
- A. dissensus*** Lucena & Thofehrn, 2013  
 first record for Argentina from río Uruguay in Corrientes  
 published in Terán et al. (2016) [info](#)
- A. dissimilis*** Garavello & Sampaio, 2010  
 first record for Argentina from the Río Iguazú  
 published in Casciotta et al. (2016) [info](#) NEW
- A. lacustris*** (Lütken, 1875)  
*Astyanax asuncionensis* is a jr. synonym  
 published in Lucena & Soares (2016) [info](#)  
 original *Tetragonopterus lacustris*  
 synonyms *Astyanax altiparanae* Garutti & Britski, 2000  
*A. bimaculatus asuncionensis* Géry, 1972  
*A. bimaculatus paraguayensis* Eigenmann, 1921  
*Tetragonopterus jacuhiensis* Cope, 1894
- A. xiru*** Lucena, Castro & Bertaco, 2013  
 first record for Argentina from río Uruguay basin in Misiones  
 published in Casciotta et al. (2016) [info](#)

order **SILURIFORMES**

family **Clariidae**

### ***Clarias***

- C. gariepinus*** (Burchell, 1822)  
 first record for Argentina from the Río Iguazú  
 published in Casciotta et al. (2016) [info](#) NEW  
 original *Silurus gariepinus*  
 remarks introduced exotic species  
 origin Africa

family **Pimelodidae**

### ***Steindachneridion***

- S. melanodermatum*** Garavello, 2005  
 first record for Argentina from the Río Iguazú  
 published in Casciotta et al. (2016) [info](#) NEW

family **Pseudopimelodidae**

### ***Microglanis***

- M. carlae*** Vera Alcaraz, da Graça & Shibatta, 2008  
 first record for Argentina from the Pre-Delta National Park,  
 lower Paraná basin  
 published in Almirón et al. (2015) [info](#)

***M. nigrolineatus*** Terán, Jarduli, Alonso, Mirande & Shibatta, 2016  
new species from the río Bermejo basin in Salta  
published in Terán et al. (2016) [info](#) NEW

family **Heptapteridae**

***Pimelodella***

***P. mucosa*** Eigenmann & Ward, 1907  
first record for Argentina from swamps in Formosa  
published in Aguilera & Azpelicueta (2015) [info](#)

***Rhamdella***

***R. longiuscula*** Lucena & da Silva, 1991  
first record for Argentina from the Uruguay basin in Misiones  
published in Benitez et al. (2016) [info](#)

***Rhamdia***

***R. branneri*** Haseman, 1911  
first record for Argentina from the Río Iguazú  
published in Casciotta et al. (2016) [info](#) NEW

***R. voulezi*** Haseman, 1911  
first record for Argentina from the Río Iguazú  
published in Casciotta et al. (2016) [info](#) NEW

**Heptapteridae considered not to be distributed in Argentina**

*Pimelodella howesi* Fowler, 1940 | in CLOFFAR sub *P. howesi* | Aguilera & Azpelicueta (2015) [info](#)

family **Aspredinidae**

***Amaralia***

***A. oviraptor*** Friel & Carvalho, 2016  
new species from the Paraguay and Paraná basins  
published in Friel & Carvalho (2016) [info](#)

family **Trichomycteridae**

subfamily Stegophilinae

***Pseudostegophilus***

***P. maculatus*** (Steindachner, 1879)  
new combination from *Parastegophilus*  
published in DoNascimento (2015) [info](#)

subfamily Trichomycterinae

***Silvinichthys***

***S. pachonensis*** Fernández & Liotta, 2016  
new species from San Juan  
published in Fernández & Liotta (2016) [info](#) NEW

**Trichomycterus**

- T. mboyacy** Wosiacki & Garavello, 2004  
 first record for Argentina from the Río Iguazú  
 published in Casciotta et al. (2016) [info](#) NEW
- T. stawiarski** (Miranda Ribeiro, 1968)  
 first record for Argentina from the Río Iguazú  
 published in Casciotta et al. (2016) [info](#) NEW  
 original *Pygidium stawiarski*

family **Callichthyidae**

subfamily Corydoradinae

**Corydoras**

- C. ehrhardti** Steindachner, 1910  
 first record for Argentina from the Río Iguazú in Misiones [info](#)  
 published in Cardoso et al. (2015)  
 synonym *Corydoras meridionalis* Ihering, 1911
- C. paleatus** (Jenyns, 1842)  
 remarks correction of spelling: in CLOFFAR as *palaetus*

family **Loricariidae**

subfamily Hypoptopomatinae

tribus Otothyriini

**Hisonotus**

- H. yasi** (Almirón, Azpelicueta & Casciotta, 2004)  
 new combination from *Epactionotus* [info](#) NEW  
 published in Casciotta et al. (2016)

subfamily Hypostominae

tribus Ancistrini

**Ancistrus**

- A. mullerae** Bifi, Pavanelli & Zawadzki, 2009  
 first record for Argentina from the Río Iguazú [info](#) NEW  
 published in Casciotta et al. (2016)

tribus Hypostomini

**Hypostomus**

- H. formosae** Cardoso, Brancolini, Paracampo, Lizarralde, Covain &  
 Montoya-Burgos, 2016 [info](#)  
 new species from the Río Paraguay basin in Formosa  
 published in Cardoso et al. (2016)

subfamily Loricariinae

tribus Loricariini

**Rineloricaria**

***R. steinbachi*** (Regan, 1906)  
 new combination from *Ixinandria* [info](#)  
 published in Covain et al. (2016)

order **ATHERINIFORMES**  
 family **Atherinopsidae**  
 subfamily Atherinopsinae  
 tribus Sorgentinini

**Odontesthes**

***O. humensis*** de Buen, 1953 [info](#)  
 first record for Argentina from the Río de la Plata  
 published in Bogan et al. (2015)  
 synonym *Odontesthes guazu* de Buen, 1953

order **CYPRINODONTIFORMES**  
 family **Rivulidae**  
 subfamily Cynolebiasinae  
 tribus Cynolebiasini

**Austrolebias**

***A. bellottii*** (Steindachner, 1881) [info](#) NEW  
*Austrolebias apaii* is a jr. synonym  
 published in Calviño et al. (2016)

***A. robustus*** (Günther, 1883) [info](#) NEW  
*Austrolebias nonoiuliensis* is a jr. synonym  
 published in Calviño et al. (2016)

subfamily Rivulinae  
 tribus Neofundulini

**Neofundulus**

***N. paraguayensis*** (Eigenmann & Kennedy, 1903) [info](#) NEW  
*Neofundulus ornatipinnis* is a jr. synonym  
 published in Calviño et al. (2016)

tribus Plesiolebiasini

**Papiliolebias**

***P. bitteri*** (Costa, 1989) [info](#) NEW  
*Papiliolebias hatinne* is a jr. synonym  
 published in Calviño et al. (2016)

family **Poeciliidae**  
 subfamily Poeciliinae  
 tribus Cnesterodontini

**Phalloceros**

**P. harpagos** Lucinda, 2008  
 first record for Argentina from the Río Iguazú  
 published in Casciotta et al. (2016) [info](#) NEW

order **PERCIFORMES**

suborder LABROIDEI  
 family **Cichlidae**  
 subfamily Cichlinae  
 tribus Geophagini

**Crenicichla**

**C. iguassuensis** Haseman, 1911  
 confirmed for Argentina from the Río Iguazú  
 published in Casciotta et al. (2016) [info](#) NEW

**C. tapii** Piálek, Dragová, Casciotta, Almirón & Říčan, 2015  
 new species from the Río Iguazú in Misiones  
 published in Piálek et al. (2015) [info](#)

**C. tuca** Piálek, Dragová, Casciotta, Almirón & Říčan, 2015  
 new species from the Río Iguazú in Misiones  
 published in Piálek et al. (2015) [info](#)

**Geophagus**

**G. brasiliensis** (Quoy & Gaimard, 1824)  
 first record for Argentina from the Río Iguazú  
 published in Casciotta et al. (2016) [info](#) NEW  
 original *Chromis brasiliensis*  
 remarks introduced exotic species  
 origin coastal basins in East and Southeast Brazil

**Cichlidae considered not to be distributed in Argentina**

*Geophagus gymnogonys* Hensel, 1870 | in CLOFFAR sub *Gymnogeophagus g.* | Malabarba et al. (2015) [info](#)

**References**

- Aguilera, G. & M. Azpelicueta (2015): First record of *Pimelodella mucosa* Eigenmann & Ward, 1907 (Siluriformes: Heptapteridae) in Formosa, Argentina and comments on the geographical distribution of *P. howesi* Fowler, 1940. CheckList 11 (5/1757): 1-3
- Almirón, A., J. Casciotta, L. Ciotek & P. Giorgis (2015): Guía de los peces del Parque Nacional Pre-Delta. Administración de Parques Nacionales. 2nd. edition. Administración de Parques Nacionales. 299 p.
- Almirón, A., J. Casciotta, Š. Říčanová, K. Dragová, L. Piálek & O. Říčan (2016): First record of *Diapoma pyrropteryx* Menezes & Weitzman, 2011 (Characiformes: Characidae) from freshwaters of Argentina. Ichthyological Contributions of PecesCriollos 40: 1-3
- Azpelicueta, M., M.F. Benítez, D.R. Aichino & D.C.M. Mendez (2015): A new species of the genus *Hoplias* (Characiformes, Erythrinidae), a tararira from the lower Paraná River, in Misiones, Argentina. Acta zoológica lilloana 59 (1-2): 71-82



- Benitez, M.F., A.E. Almirón, J.R. Casciotta & M. Azpelicueta (2016): First records of *Rhamdella longiuscula* from Argentina and new localities for *Rhamdella cainguae* (Siluriformes: Heptapteridae). *CheckList* 12 (1/1844): 1-5
- Bogan, S., V. Bauni, J.M. Meluso, E. Carini & M. Homberg (2015): *Odontesthes humensis* de Buen, 1953 (Atheriniformes: Atherinopsidae: Sorgentinini) from the La Plata River, first record from Argentina. *Ichthyological Contributions of PecesCriollos* 38: 1-5
- Calviño, P., D.O. Nadalin, M.J. Serio & H.L. López (2016): Colección ictiológica del Museo de La Plata: la familia Rivulidae. *ProBiota - Serie técnica y didáctica* 36: 1-21
- Cardoso, Y.C., S. Bogan, J.M. Meluso & V. Bauni (2015): Presencia de *Corydoras ehrhardti* Steindachner, 1910 en Argentina. *Historia Natural* 5 (1): 21-27
- Carvalho, F.R. & A.C. Santos (2015): Taxonomic status of *Tetragonopterus anomalus* Steindachner, 1891, an inquirenda species in Characidae (Teleostei: Characiformes). *Zootaxa* 4018 (1): 146-150
- Casciotta, J., A. Almirón, L. Ciotek, P. Giorgis, O. Řičan, L. Piálek, K. Dragová, Y. Croci, M. Montes, J. Iwaszkiw & A. Puentes (2016): Visibilizando lo invisible. Un relevamiento de la diversidad de peces del Parque Nacional Iguazú, Misiones, Argentina. *Historia Natural* 6 (2): 5-77
- Casciotta, J., A. Almirón, Š. Řičanová, K. Dragová, L. Piálek & O. Řičan (2016): First record of *Astyanax xiru* Lucena, Castro & Bertaco, 2013 (Characiformes: Characidae) from the río Uruguay basin of Argentina. *Ichthyological Contributions of PecesCriollos* 42: 1-4
- Covain, R., S. Fisch-Muller, C. Oliveira, J.H. Mol, J.I. Montoya-Burgos & S. Dray (2016): Molecular phylogeny of the highly diversified catfish subfamily Loricariinae (Siluriformes, Loricariidae) reveals incongruences with morphological classification. *Molecular Phylogenetics and Evolution* 94 (B): 463-472
- DoNascimento, C. (2015): Morphological evidence for the monophyly of the subfamily of parasitic catfishes Stegophilinae (Siluriformes, Trichomycteridae) and phylogenetic diagnoses of its genera. *Copeia* 103 (4): 933-960
- Fernández, L. & J. Liotta (2016): *Silvinichthys pachonensis*, a new catfish from high altitude, with a key to the species of the genus (Siluriformes: Trichomycteridae). *Ichthyological Exploration of Freshwaters* 27 (4): 375-383
- Friel, J.P. & T.P. Carvalho (2016): A new species of *Amaralia* Fowler (Siluriformes: Aspredinidae) from the Paraná-Paraguay River Basin. *Zootaxa* 4088 (4): 531-546
- Lucena, C.A. & H. G. Soares (2016): Review of species of the *Astyanax bimaculatus* "caudal peduncle spot" subgroup *sensu* Garutti & Langeani (Characiformes, Characidae) from the rio La Plata and rio São Francisco drainages and coastal systems of southern Brazil and Uruguay. *Zootaxa* 4072 (1): 101-125
- Malabarba, L.R., M.C. Malabarba & R.E. Reis (2015): Descriptions of five new species of the Neotropical cichlid genus *Gymnogeophagus* Miranda Ribeiro, 1918 (Teleostei: Cichliformes) from the rio Uruguay drainage. *Neotropical Ichthyology* 13 (4): 637-662
- Mirande, J.M. & S. Koerber (2015): Checklist of the Freshwater Fishes of Argentina (CLOFFAR). *Ichthyological Contributions of PecesCriollos* 36: 1-68
- Ortí, G., A. Sivasundar, K. Dietz & M. Jégu (2008): Phylogeny of the Serrasalminae (Characiformes) based on mitochondrial DNA sequences. *Genetics and Molecular Biology* 31 (1): 343-351
- Piálek, L., K. Dragová, J. Casciotta, A. Almirón & O. Řičan (2015): Description of two new species of *Crenicichla* (Teleostei: Cichlidae) from the lower Iguazú River with a taxonomic reappraisal of *C. iguassuensis*, *C. tesay* and *C. yaha*. *Historia Natural* 5 (2): 5-27
- Ramirez, J.L., J.L.O. Birindelli & P.M. Galetti (2017): A new genus of Anostomidae (Ostariophysi: Characiformes): Diversity, phylogeny and biogeography based on cytogenetic, molecular and orphological data. *Molecular Phylogenetics and Evolution* 107: 308-323
- Rosso, J.J., E. Mabrugaña, M. González-Castro, M.S. Delpiani, E. Avigliano, N. Schenone & J.M. Díaz de Astarloa (2016): A new species of the *Hoplias malabaricus* species complex (Characiformes: Erythrinidae) from the La Plata River basin. *Cybio* 40 (3): 199-208
- Terán, G.E., F. Alonso, I. García, P. Calviño & J.M. Mirande (2016): Occurrence of *Astyanax dissensus* Lucena & Thofehrn, 2013 (Teleostei: Characidae) in Argentina. *Check List* 12 (1/1828): 1-3
- Terán, G.E., L.R. Jarduli, F. Alonso, J.M. Mirande & O.A. Shibatta (2016): *Microglanis nigrolineatus*, a new species from northwestern Argentina (Ostariophysi: Pseudopimelodidae). *Ichthyological Exploration of Freshwaters* 27 (3): 193-202
- Thomaz, A.T., D. Arcila, G. Ortí & L.R. Malabarba (2015): Molecular phylogeny of the subfamily Stevardiinae Gill, 1858 (Characiformes: Characidae): classification and the evolution of reproductive traits. *BMC Evolutionary Biology* 15 (146): 1-25. Additional file 5: New Stevardiinae classification based on phylogenetic relationships.

recommended form for reference:

Koerber, S., T.O. Litz & J.M. Mirande (2017):  
CLOFFAR - update 3 - supplement to Checklist of the Freshwater Fishes of Argentina.  
*Ichthyological Contributions of PecesCriollos* 47: 1-9  
available as pdf-file at [www.pecescrilloos.de](http://www.pecescrilloos.de) since 03.Jan.2017