

CLOFFAR - update 2 - supplement to Checklist of the Freshwater Fishes of Argentina.

Stefan Koerber¹, Thomas O. Litz² & Juan Marcos Mirande³

¹ Friesenstr. 11, 45476 Muelheim, Germany, pecescrilloos@koerber-germany.de

² Friedhofstr. 8, 88448 Attenweiler, Germany, pecesuruguayos@aol.com

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

Remarks on this update

Since the publication of the first update to CLOFFAR, the most remarkable published single paper is the one of Malabarba et al. (2015) presenting descriptions of five new species of *Gymnogeophagus*. Unfortunately the authors did not include specimens from Argentina, but only diminished the quantity of cichlid fishes from Argentina by one when restricting the distribution of *G. gymnogenys* to the Laguna de los Patos/Mirim basin in Brazil and Uruguay. We are looking forward which of these species will be confirmed from Argentina in the future.

The rest of the twelve changes included in this update is based on three descriptions of new species and five first records for Argentina which rise the total number to 526. Two new combinations and one synonymization do not influence this count. *Astyanax jacuhiensis* has been identified as the senior synonym for a species previously known from Argentina first as *A. bimaculatus* and then as *A. asuncionensis*.

	CLOFF AR	update # 1	update # 2	total
Rajiformes	6			6
Acipenseriformes	1			1
Clupeiformes	6			6
Cypriniformes	5			5
Characiformes	183		4	187
Siluriformes	200	1	4	205
Gymnotiformes	15			15
Osmeriformes	4			4
Salmoniformes	6			6
Atheriniformes	4	1		5
Cyprinodontiformes	30			30
Beloniformes	2			2
Synbranchiformes	1			1
Perciformes	49	2	-1	50
Pleuronectiformes	2			2
Lepidosireniiformes	1			1
total	515	4	7	526

In the first update to CLOFFAR we had 'corrected' the names of two species after their new combinations from *Cyanocharax*, masculine, to *Diapoma*, neutrum, believing that *alburnus* and *lepiciastus* were declinable adjectives. After some discussions with specialists in zoological nomenclature this seems not to be clear, our action resulted to be forejudged 'disimprovements' and we take these changes back herein. On the other hand a name dedicated to a geographical locality should have been changed with the gender of the respective generic name and was not: *uruguayensis* to *uruguayense*.

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 that have not been included in that paper or that have undergone systematical changes since then are listed herein. 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.pecescriollos.de, usually with figures and some data from the respective publication.

class ACTINOPTERYGII

order CHARACIFORMES

family Erythrinidae

Hoplias

H. mbigua Azpelicueta, Benítez, Aichino & Mendez, 2015 NEW
 new species from the Paraná basin in Misiones [info](#)
 published in Azpelicueta et al. (2015)
 type locality Misiones, río Paraná, Nemesio Parma

family Characidae

subfamily Stevardiinae

tribus Diapomini

Bryconamericus

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

Diapoma

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

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

D. lepiclastus (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 NEW
 first record for Argentina from the Upper Uruguay basin [info](#)
 published in Almirón et al (2016)

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* [info](#)
 published in Thomaz et al. (2015)

Piabina

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

tribus Eretmobryconini

Markiana

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

subfamily *Astyanax* clade

Astyanax

A. dissensus Lucena & Thofehrn, 2013 NEW
 first record for Argentina from río Uruguay in Corrientes [info](#)
 published in Terán et al. (2016)

A. lacustris (Lütken, 1875) NEW
Astyanax asuncionensis is a jr. synonym [info](#)
 published in Lucena & Soares (2016)
 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 NEW
 first record for Argentina from río Uruguay basin in Misiones [info](#)
 published in Casciotta et al. (2016)

order **SILURIFORMES**

family **Pseudopimelodidae**

Microglanis

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

family **Heptapteridae****Pimelodella**

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

Rhamdella

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

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 [info](#) NEW
 published in Friel & Carvalho (2016)

family **Trichomycteridae**

subfamily Stegophilinae

Pseudostegophilus

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

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 Hypostominae

tribus Hypostomini

Hypostomus

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

subfamily Loricariinae
tribus Loricariini

Rineloricaria

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

order **ATHERINIFORMES**

family **Atherinopsidae**
subfamily Atherinopsinae
tribus Sorgentinini

Odontesthes

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

order **PERCIFORMES**

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

Crenicichla

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

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

Cichlidae considered not to be distributed in Argentina

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

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
- 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, Š. Říčanová, K. Dragová, L. Piálek & O. Říčan (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
- 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
- Piálek, L., K. Dragová, J. Casciotta, A. Almirón & O. Říčan (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
- Terán, G.E., F. Alonso, I. García, P. Calviño & J.M. Mirande (2016): Occurrence of *Astyanax dissensus* Lucena & Thofehn, 2013 (Teleostei: Characidae) in Argentina. Check List 12 (1/1828): 1-3
- 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 (2016): CLOFFAR - update 2 - supplement to Checklist of the Freshwater Fishes of Argentina. Ichthyological Contributions of PecesCriollos 43: 1-6 available as pdf-file at www.pecescrilloos.de since 12.May.2016