

## CLOFFAR - update 5 - 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, pecescrillos@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

Since the last update from October 2017, we have registered again a dozen of changes influencing the list of freshwater fishes found in Argentina. The total number of species has increased to 558 caused by five first records, six new species and one negative record, a species listed for Argentina erroneously in the past. One synonymization did not influence the total count.

In difference to the past, characiforms and catfishes are not the main drivers anymore, but the movement has switched more towards cichlids and cyprinodontiforms. Another new *Gymnotus* has been described based on material from Argentina and, also noteworthy, yet another Tararira. Unfortunately also another species of sturgeon has been recorded from Argentinean freshwaters.

	CLOFF AR	update # 1	update # 2	update # 3	update # 4	update # 5	total
Myliobatiformes	6						6
Acipenseriformes	1					1	2
Clupeiformes	6						6
Cypriniformes	5						5
Characiformes	183		4	4	2	2	195
Siluriformes	200	1	4	11	2	1	219
Gymnotiformes	15				1	1	17
Galaxiiformes	4						4
Salmoniformes	6						6
Atheriniformes	4	1					5
Cyprinodontiformes	30			-3	1	2	30
Beloniformes	2						2
Synbranchiformes	1						1
"Perciformes"	3						3
Centrarchiformes	3						3
Mugiliformes	2						2
Cichliformes	41	2	-1	2	2	3	49
Pleuronectiformes	2						2
Ceratodontiformes	1						1
<b>total</b>	<b>515</b>	<b>4</b>	<b>7</b>	<b>14</b>	<b>8</b>	<b>10</b>	<b>558</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.pecescrillos.de](http://www.pecescrillos.de), usually with figures and some data from the respective publication.

class            **A C T I N O P T E R Y G I I**

order            **ACIPENSERIFORMES**

family            **Acipenseridae**

***Acipenser***

***A. gueldenstaedtii*** Brandt & Ratzeburg, 1833

NEW

first record for Argentina from the Paraná and La Plata rivers  
 published in      Demonte et al. (2017)

[info](#)

order            **CHARACIFORMES**

family            **Parodontidae**

***Apareiodon***

***A. vittatus*** Garavello, 1977

[info](#)

first record for Argentina from the Río Iguazú  
 published in      Casciotta et al. (2016)

family            **Curimatidae**

***Steindachnerina***

***S. insculpta*** (Fernández-Yépez, 1948)

NEW

first record for Argentina from the Río Bermejo in Jujuy  
 published in      Aguilera et al. (2018)

[info](#)

family            **Anostomidae**

***Megaleporinus***

***M. macrocephalus*** (Garavello & Britski, 1988)

[info](#)

new combination from *Leporinus*  
 published in      Ramirez et al. (2017)

***M. obtusidens*** (Valenciennes, 1837)

[info](#)

new combination from *Leporinus*  
 published in      Ramirez et al. (2017)

family            **Erythrinidae**

***Hoplias***

***H. argentinensis*** Rosso, Mabragaña, González-Castro, Bogan, Cardoso, Mabragaña,

NEW

Delpiani & Díaz de Astarloa, 2018

[info](#)

new species from the La Plata, Paraná and Uruguay basins

published in Rosso et al. (2018)  
 type locality Santa Fé, río Coronada

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

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

family **Serrasalmidae**

**Myloplus**

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

family **Characidae**

subfamily Bryconinae

**Brycon**

**B. hilarii** (Valencienas, 1850)  
 confirmed for Argentina [info](#)  
 published in Lima (2017)  
 original *Chalceus hilarii*  
 synonyms *Megalobrycon erythropyterus* Cope, 1872  
*Brycon microlepis* Perugia, 1897

subfamily Characinae

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

*Cynopotamus gulo* Cope, 1870 | in CLOFFAR sub *Galeocharax kneri* | Giovannetti et al. (2017) [info](#)

subfamily Stevardiinae

tribus Diapomini

**Bryconamericus**

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

**Diapoma**

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

**D. guarani** (Mahnert & Géry, 1987)  
 new combination from *Hyphessobrycon* [info](#)  
 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  
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

## subfamily *Astyanax* clade

## *Astyanax*

**A. bifasciatus** Garavello & Sampaio, 2010  
first record for Argentina from the Río Iguazú  
published in Casciotta et al. (2016)

info

**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

**A. lacustris** (Lütken, 1875)  
Astyanax asuncionensis is a jr. synonym  
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. powelli** Terán, Butí & Mirande, 2017  
new species from the arheic of Río Sucuma, Catamarca

info

published in Terán et al. (2017)

**A. xiru** Lucena, Castro & Bertaco, 2013  
first record for Argentina from río Uruguay basin in Misiones  
published in Casciotta et al. (2016)

[info](#)

subfamily *Hemigrammus* clade

### ***Hemigrammus***

**H. tridens** Eigenmann, 1907  
first record for Argentina from Río Paraná basin in Corrientes  
published in Azpelicueta & Koerber (2017)

[info](#)

order **SILURIFORMES**

family **Clariidae**

### ***Clarias***

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

[info](#)

family **Pimelodidae**

### ***Steindachneridion***

**S. melanodermatum** Garavello, 2005  
first record for Argentina from the Río Iguazú  
published in Casciotta et al. (2016)

[info](#)

family **Pseudopimelodidae**

### ***Microglanis***

**M. cariae** 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](#)

### **Pseudopimelodidae considered not to be distributed in Argentina**

*Pimelodus cottooides* Boulenger, 1891 | in CLOFFAR sub *Microglanis* c. | Souza-Shibatta et al. (2018)

[info](#)

NEW

family **Heptapteridae**

### ***Cetopsorhamdia***

**C. iheringi** Schubart & Gomes, 1959  
first record for Argentina from the Paraná basin in Misiones  
published in Benítez et al. (2017)

NEW

[info](#)

***Heptapterus***

***H. mandimbusu*** Aguilera, Benítez, Terán, Alonso & Mirande, 2017  
new species from the Uruguay basin in Misiones  
published in Aguilera et al. (2017) [info](#)

***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 Benítez et al. (2016) [info](#)

***Rhamdia***

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

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

**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](#)

***Xyliphius***

***X. barbatus*** Alonso de Arámburu & Arámburu, 1962  
*Xyliphius lombarderoi* is a jr. synonym [info](#)  
published in Carvalho et al. (2017)  
synonyms *X. lombarderoi* Risso & Risso, 1964

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)	<a href="#">info</a>
<b>S. pedernalensis</b>	Fernández, Sanabria & Quiroga, 2017 new species from San Juan published in Fernández et al. (2017)	<a href="#">info</a>
<b>Trichomycterus</b>		
<b>T. mboycy</b>	Wosiacki & Garavello, 2004 first record for Argentina from the Río Iguazú published in Casciotta et al. (2016)	<a href="#">info</a>
<b>T. stawiarski</b>	(Miranda Ribeiro, 1968) first record for Argentina from the Río Iguazú published in Casciotta et al. (2016) original <i>Pygidium stawiarski</i>	<a href="#">info</a>
<b>T. varii</b>	Fernández & Andreoli Bize, 2018 new species from the Pilcomayo basin in Jujuy published in Fernández & Andreoli Bize (2018)	NEW <a href="#">info</a>
<b>T. ytororo</b>	Terán, Ferrer, Benítez, Alonso, Aguilera & Mirande, 2017 new species from the Paraná basin in Misiones published in Terán et al. (2017)	<a href="#">info</a>
family	<b>Callichthyidae</b>	
subfamily	Corydoradinae	
<b>Corydoras</b>		
<b>C. ehrhardti</b>	Steindachner, 1910 first record for Argentina from the Río Iguazú in Misiones published in Cardoso et al. (2015) synonym <i>Corydoras meridionalis</i> Ihering, 1911	<a href="#">info</a>
<b>C. paleatus</b>	(Jenyns, 1842) remarks	correction of spelling: in CLOFFAR as <i>palaetus</i>
family	<b>Loricariidae</b>	
subfamily	Hypoptopomatinae	
tribus	Otothyrini	
<b>Hisonotus</b>		
<b>H. yasi</b>	(Almirón, Azpelicueta & Casciotta, 2004) new combination from <i>Epactonotus</i> published in Casciotta et al. (2016)	<a href="#">info</a>
subfamily	Hypostominae	
tribus	Ancistrini	
<b>Ancistrus</b>		
<b>A. mullerae</b>	Bifi, Pavanelli & Zawadzki, 2009 first record for Argentina from the Río Iguazú published in Casciotta et al. (2016)	<a href="#">info</a>

tribus Hypostomini

### ***Hypostomus***

***H. formosae*** Cardoso, Brancolini, Paracampo, Lizarralde, Covain & Montoya-Burgos, 2016

new species from the Río Paraguay basin in Formosa  
published in Cardoso et al. (2016)

[info](#)

subfamily Loricariinae

tribus Loricariini

### ***Rineloricaria***

***R. steinbachi*** (Regan, 1906)

new combination from *Ixinandria*  
published in Covain et al. (2016)

[info](#)

order **GYMNOTIFORMES**

family **Gymnotidae**

### ***Gymnotus***

***G. carapo*** Linnaeus, 1758

again confirmed for Argentina as a species based on a new  
subspecies *G. c. australis* Craig, Crampton & Albert, 2017  
from the Río Iguazú basin in Misiones  
published in Craig et al. (2017)

[info](#)

***G. cuiá*** Craig, Malabarba, Crampton & Albert, 2018

new species from Argentina, Paraguay and Uruguay  
published in Craig et al. (2018)

NEW

[info](#)

order **ATHERINIFORMES**

family **Atherinopsidae**

subfamily Atherinopsinae

tribus Sorgentinini

### ***Odontesthes***

***O. humensis*** de Buen, 1953

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

[info](#)

order **CYPRINODONTIFORMES**

family **Rivulidae**

subfamily Cynolebiasinae

tribus Cynolebiasini

### **Austrolebias**

***A. bellottii*** (Steindachner, 1881)

*Austrolebias apaii* is a jr. synonym  
published in Calviño et al. (2016)

[info](#)

***A. robustus*** (Günther, 1883)

*Austrolebias nonoiuliensis* is a jr. synonym  
published in Calviño et al. (2016)

[info](#)

***A. wichi*** Alonso, Terán, Calviño, García, Cardoso & García, 2018

new species from the Río Bermejo basin in Salta  
published in Alonso et al. (2018)

NEW

[info](#)

subfamily Rivulinae

tribus Neofundulini

### **Neofundulus**

***N. paraguayensis*** (Eigenmann & Kennedy, 1903)

*Neofundulus ornatipinnis* is a jr. synonym  
published in Calviño et al. (2016)

[info](#)

tribus Plesiolebiasini

### **Papiliolebias**

***P. bitteri*** (Costa, 1989)

*Papiliolebias hatinne* is a jr. synonym  
published in Calviño et al. (2016)

[info](#)

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](#)

tribus Gambusiini

### **Gambusia**

***G. holbrooki*** Girard, 1859

first record for Argentina  
published in Cabrera et al. (2017)

[info](#)

tribus Poeciliini

### **Poecilia**

***P. reticulata*** Peters, 1859

first record for Argentina from the Paraguay river basin  
published in Rosso et al. (2017)

NEW

[info](#)

family

**Anablepidae*****Jenynsia******J. lineata*** (Jenyns, 1842)*Jenynsia multidentata* is a junior synonym  
published in Amorim (2018)[info](#)

NEW

order

**CICHLIFORMES**

family

**Cichlidae**

subfamily

Cichlinae

tribus

Geophagini

***Crenicichla******C. iguassuensis*** Haseman, 1911confirmed for Argentina from the Río Iguazú  
published in Casciotta et al. (2016)[info](#)***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](#)***C. yjhui*** Piálek, Casciotta, Almirón & Říčan, 2018  
new species from the arroyo Urugua-í in Misiones  
published in Piálek et al. (2018)

NEW

[info](#)***Geophagus******G. brasiliensis*** (Quoy & Gaimard, 1824)

first record for Argentina from the Río Iguazú

[info](#)

published in Casciotta et al. (2016)

original *Chromis brasiliensis*

remarks introduced exotic species

origin coastal basins in East and Southeast Brazil

***Gymnogeophagus******G. constellatus*** Malabarba, Malabarba & Reis, 2015

NEW

first record for Argentina from the Río Uruguay basin

[info](#)

published in Říčan et al. (2017)

***G. lipokarenos*** Malabarba, Malabarba & Reis, 2015[info](#)

first record for Argentina from the Río Uruguay basin

published in Casciotta et al. (2017)

***G. taroba*** Casciotta, Almirón, Piálek & Říčan, 2017

NEW

first record for Argentina from the Río Iguazú basin

[info](#)

published in Casciotta et al. (2017)

***G. terrapurpura*** Loureiro, Zarucki, Malabarba & González-Bergonzoni, 2016[info](#)

first record for Argentina from the Río Uruguay basin

published in García et al. (2017)

**Cichlidae considered not to be distributed in Argentina***Geophagus gymnopterus* 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
- Aguilera, G., M. Benítez, G.E. Terán, F. Alonso & J.M. Mirande (2017): A new species of *Heptapterus* Bleeker 1858 (Siluriformes, Heptapteridae) from the Uruguay River Basin in Misiones, Northeastern Argentina. Zootaxa 4299 (4): 572-580
- Aguilera, G., G.E. Terán, F. Alonso & J.M. Mirande (2018): First record of *Steindachnerina insculpta* (Fernández-Yépez, 1948) (Characiformes, Curimatidae) in Argentina. Check List 14 (6): 1017-1020
- Almirón, A., J. Casciotta, L. Cioteck & P. Giorgis (2015): Guía de los peces del Parque Nacional Pre-Delta. Administración de Parques Nacionales. 2nd. edition. Administracion de Parques Nacionales. 299 p.
- Almirón, A., J. Casciotta, Š. Říčanová, K. Dragová, L. Piálek & O. Říčan (2016): First record of *Diapoma pyrrhopteryx* Menezes & Weitzman, 2011 (Characiformes: Characidae) from freshwaters of Argentina. Ichthyological Contributions of PecesCriollos 40: 1-3
- Alonso, F., G.E. Terán, P. Calviño, I. García, Y. Cardoso & G. García (2018): An endangered new species of seasonal killifish of the genus *Austrolebias* (Cyprinodontiformes: Aplocheiloidei) from the Bermejo river basin in the Western Chacoan Region. PLoS ONE 13 (5): e0196261. 20 p.
- Amorim, P.F. (2018): *Jenynsia lineata* species complex, revision and new species description (Cyprinodontiformes: Anablepididae). Journal of Fish Biology 92 (5): 1312-1332
- 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 illoana 59 (1-2): 71-82
- Azpelicueta, M. & S. Koerber (2017): *Hemigrammus tridens* Eigenmann (Characiformes, Characidae): first records of a small tetra from the Paraná River basin. Revue suisse de Zoologie 124 (1): 67-71
- Benítez, 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
- Benítez, M., G.E. Terán, F. Alonso, G. Aguilera & J.M. Mirande (2017): *Cetopsorhamdia iheringi* (Siluriformes, Heptapteridae): a new record for the freshwater ichthyofauna of Argentina. Revista del Museo Argentino de Ciencias Naturales, n.s. 19 (2): 113-119
- Bogar, 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
- Cabrera, M.B., S. Bogar, P. Posadas, G.M. Somoza, J.I. Montoya-Burgos & Y.P. Cardoso (2017): Risks associated with introduction of poeciliids for control of mosquito larvae: first record of the non-native *Gambusia holbrooki* in Argentina. Journal of Fish Biology 91 (2): 704-710
- 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. Bogar, J.M. Meluso & V. Bauni (2015): Presencia de *Corydoras ehrhardti* Steindachner, 1910 en Argentina. Historia Natural 5 (1): 21-27
- Carvalho, F.R., R.E. Reis & M.H. Sabaj (2017): Description of a new blind and rare species of *Xyliophius* (Siluriformes: Aspredinidae) from the Amazon basin using high-resolution computed tomography. Copeia 105 (1): 14-28
- 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. Cioteck, P. Giorgis, O. Říčan, 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, L. Piálek & O. Říčan (2017): *Gymnogeophagus taroba* (Teleostei : Cichlidae ), a new species from the río Iguazú basin, Misiones, Argentina. Historia Natural 7 (2): 5-22
- Casciotta, J., A. Almirón, Š. Říčanová, K. Dragová, L. Piálek, F. Alonso & O. Říčan (2017): First record of *Gymnogeophagus lipokarenos* Malabarba, Malabarba & Reis, 2015 (Teleostei: Cichliformes) from Argentina. Ichthyological Contributions of PecesCriollos 54: 1-5
- 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
- Costa, W.J.E.M. (2016): Comparative morphology and classification of South American cynopoeciline killifishes (Cyprinodontiformes: Aplocheilidae), with notes on family-group names used for aplocheiloids. Vertebrate Zoology 66 (2): 125-140
- 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): 492-517
- Craig, J.M., W.G.R. Crampton & J.S. Albert (2017): Revision of the polytypic electric fish *Gymnotus carapo* (Gymnotiformes, Teleostei), with descriptions of seven subspecies. Zootaxa 4318 (3): 401-438
- Craig, J.M., L.R. Malabarba, W.G.R. Crampton & J.S. Albert (2018): Revision of Banded Knifefishes of the *Gymnotus carapo* and *G. tigre* clades (Gymnotidae Gymnotiformes) from the Southern Neotropics. Zootaxa 4379 (1): 47-73

- Demonte, D., J. Liotta, E. Rueda, R. Civetti & J.C. Rozzati (2017): First record of the Russian sturgeon *Acipenser gueldenstaedtii* Brandt & Ratzeburg, 1833 (Acipenseriformes: Acipenseridae) from Argentina. Ichthyological Contributions of PecesCriollos 58: 1-5
- 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. Andreoli Bize (2018): New species of *Trichomycterus* (Siluriformes: Trichomycteridae) from the High Andean Plateau of Argentina. Zootaxa 4504 (3): 359-370
- 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
- Fernández, L., E.A. Sanabria & L.B. Quiroga (2017): Description of *Silvinichthys pedernalensis* n. sp. (Teleostei, Siluriformes) from the Andean Cordillera of southern South America. Animal Biodiversity and Conservation 40 (1): 41-47
- 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
- García, I., A. Puentes, G.E. Terán, S. Koerber & F. Alonso (2017): First record of *Gymnocephagus terrapurpura* (Teleostei: Cichliformes) from Argentina. Ichthyological Contributions of PecesCriollos 52: 1-4
- Giovannetti, V., M. Toledo-Piza & N.A. Menezes (2017): Taxonomic revision of *Galeocharax* (Characiformes: Characidae: Characinae). Neotropical Ichthyology 15 (1): e160040. 32 p.
- Koerber, S., H.S. Vera-Alcaraz & R.E. Reis (2017): Checklist of the Fishes of Paraguay (CLOFPY). Ichthyological Contributions of PecesCriollos 53: 1-99
- Lima, F.C.T. (2017): A revision of the cis-andean species of the genus *Brycon* Mueller & Troschel (Characiformes: Characidae). Zootaxa 4222 (1): 1-189
- Lucena, C.A. & H. G. Soares (2016): Review of species of the *Astyanax bimaculatus* "caudal peduncle spot" subgroup sensu Garuti & 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 *Gymnocephagus* 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
- Mirande, J.M. (2017): Combined phylogeny of ray-finned fishes (Actinopterygii) and the use of morphological characters in large-scale analyses. Cladistics 33 (4): 333-350
- Ortí, G., A. Sivasundar, K. Dietz & M. Jégu (2008): Phylogeny of the Serrasalmidae (Characiformes) based on mitochondrial DNA sequences. Genetics and Molecular Biology 31 (1): 343-351
- Pialek, L., J. Casciotta, A. Almirón & O. Říčan (2018): A new pelagic predatory pike cichlid (Teleostei: Cichlidae: *Crenicichla*) from the *C. mandelburgi* species complex with parallel and reticulate evolution. Hydrobiologia (2018): published online ahead of print on 07 Sep 2018. 19 p.
- Pialek, 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
- 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 morphological data. Molecular Phylogenetics and Evolution 107: 308-323
- Říčan, O., L. Pialek, Š. Říčanová, K. Dragová, A. Almirón & J. Casciotta (2017): First record of *Gymnocephagus constellatus* Malabarba, Malabarba & Reis, 2015 (Teleostei: Cichliformes) from Argentina. Ichthyological Contributions of PecesCriollos 56: 1-3
- Rosso, J.J., M. González-Castro, S. Bogan, Y.P. Cardoso, E. Mabragaña, M. Delpiani & J.M. Díaz de Astarloa (2018): Integrative taxonomy reveals a new species of the *Hoplias malabaricus* species complex (Teleostei: Erythrinidae). Ichthyological Exploration of Freshwaters 28 (3): 235-252
- Rosso, J.J., F. del Rosso, E. Mabragaña, N.F. Schenone, E. Avigliano & J.M. Díaz de Astarloa (2017): Molecular and taxonomic characterisation of introduced specimens of *Poecilia reticulata* in the lower Paraguay River basin (Cyprinodontiformes: Poeciliidae). Neotropical Ichthyology 15 (4): e17004612. 8 p.
- Rosso, J.J., E. Mabragaña, 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. Cybium 40 (3): 199-208
- Souza-Shibatta, L., J.F.R. Tonini, V.P. Abrahão, L.R. Jarduli, C. Oliveira, L.R. Malabarba, S.H. Sofia & O.A. Shibatta (2018): Reappraisal of the systematics of *Microglanis cottooides* (Siluriformes, Pseudopimelodidae), a catfish from southern Brazil. Plos One 13 (7): e0199963. 20 p.
- 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., C.I. Butí & J.M. Mirande (2017): A new species of *Astyanax* (Ostariophysi: Characidae) from the headwaters of the arheic Río Sucuma, Catamarca, Northwestern Argentina. Neotropical Ichthyology 15 (2): e160165. 9 p.
- Terán, G.E., J. Ferrer, M. Benítez, F. Alonso, G. Aguilera & J.M. Mirande (2017): Living in the waterfalls: A new species of *Trichomycterus* (Siluriformes: Trichomycteridae) from Tabay stream, Misiones, Argentina. Plos One 12 (6): e0179594. 13 p.

recommended form for reference:

Koerber, S., T.O. Litz & J.M. Mirande (2018):  
CLOFFAR - update 5 - supplement to Checklist of the Freshwater Fishes of Argentina.  
Ichthyological Contributions of PecesCriollos 60: 1-13  
available as pdf-file at [www.pecescriollos.de](http://www.pecescriollos.de) since 11.Nov.2018