

## Apteronotidae, by James S. Albert

### Apteronotidae

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Family Apterontidae. Pp 503-508 In: R.E. Reis, S.O. Kullander & C.J. Ferraris, Jr. (eds). Checklist of the Freshwater Fishes of South and Central America. 2003, Edipuers, Porto Alegre, 735p.

Species diversity and systematics of the Apteronotidae has been reviewed by Mago-Leccia (1994), Albert and Campos-da-Paz (1998), and Albert (2001). Apteronotid species are readily recognized as the only gymnotiform fishes with a caudal fin and a dorsal organ (a longitudinal strip of fleshy tissue firmly attached to posterodorsal midline). Among gymnotiforms, apteronotid species also possess the following unique combination of characters: small eye (its diameter less than distance between nares); infraorbital and supraorbital laterosensory lines connected anterior to eye; infraorbital bones ossified as slender tubes; anterior nares located outside gape; no urogenital papilla; 1-2 rows of conical teeth in both jaws; anal-fin origin at, or anterior to, isthmus; no urogenital papilla. Apteronotids also possess a high frequency tone-type electric organ discharge (more than 750 Hz at maturity).

There are currently 72 names available in the literature for apteronotid genera and species. Of these, 13 generic and 52 species names are valid. There are in addition 12 manuscript names for species currently in preparation, bringing the known diversity of the Apteronotidae to 64 species. Many more apteronotid species are anticipated, as the rate of description is accelerating.

Apteronotids are relatively conservative in terms of overall external morphology. Like all gymnotiforms the shape is typically culteriform, with an elongate body and anal fin. Higher level apteronotid taxonomy emphasizes differences in snout length and shape, and shape and position of the mouth. Apteronotids exhibit substantial diversity in total adult body size, ranging from an undescribed Amazonian species of *Adontosternarchus*, and *Megadontognathus kaitukaensis* (each growing to about 160 mm) to *Apteronotus* (formerly *Ubidia*) *magdalenae* (1.3 M) (Campos-da-Paz, 1999).

The Apteronotidae are confined to the Humid Neotropics, ranging the Río de la Plata of Argentina ( $35^{\circ}$  S) to the Río Tuira of Panama ( $8^{\circ}$  N). Apteronotids are known from the continental waters of all South American countries except Chile (Albert, 2001), and are most diverse - both taxonomically and ecologically - in the Amazon basin.

The ecology and natural history of most apteronotid species is poorly understood. *Apteronotus* species are the most widely distributed, extending the full range of the family. *Apteronotus* species inhabit both floodplain and *tierra firme* (non-floodplain) streams and rivers. Like many apteronotids, *Apteronotus* are aggressive predators of small aquatic insect larvae and fishes. Apteronotids are most diverse in the Amazonian floodplain, where many species are specialized to inhabit deep portions of the river channel. Some main channel apteronotids are aggressive piscivores (e.g., *Sternarchella*), whereas other are planktivores (*Adontosternarchus*). *Magosternarchus* spp. eat the tails of other electric fishes. Other species (e.g., *Sternarchorhynchus*, *Sternarchorhamphus*) have tubular snouts and forage on the beds of aquatic insect larvae on the rivers bottoms. At least one species (*Sternarchogiton nattereri*) eats freshwater sponges which grow on submerged trees, stumps, and other woody debris. *Orthosternarchus* is perhaps the most specialized for life at the river bottom, in many ways resembling cave fishes; they are almost entirely blind, with minute, asymmetrically arranged eyes; and they have almost no pigments or scales, appearing bright pink in life due to the underlying blood hemoglobin.

An important aspect of apteronotid diversity is sexual dimorphism in snout size and shape. Reproductively mature males of *Parapteronotus hasemani* have highly elongate jaws, which are presumed to be involved in male-male competition. Mature males of *Sternarchorhynchus roseni* possess numerous teeth on their lower jaw. Mature male *Sternarchogiton nattereri* grow teeth externally over the snout, giving them an appearance so unusual that for 40 years they have been regarded as representing an entirely different genus (*Oedemognathus*).

Apteronotid systematics and taxonomy are rapidly changing as new species and previously undocumented phenotypes are discovered. The total expected number of species cannot currently be estimated with confidence. A large number of undescribed apteronotid species are known in museum collections and many more are likely to be captured from continued field studies, particularly in Western and Central Amazonia.

There is little direct commercial exploitation of apteronotid species. Many species are ecologically important in Amazonian floodplains, often constituting a significant fraction of the biomass (Crampton, 1996). Two species (*Apteronotus albifrons* and *A. leptorhynchus*) are common in the aquarium trade. Apteronotids are not an important food resource.

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### (1) Description:

Species diversity and systematics of the Apteronotidae has been reviewed by Mago-Leccia (1994), Albert and Campos-da-Paz (1998), and Albert (2001). Apteronotid species are readily recognized as the only gymnotiform fishes with a caudal fin and a dorsal organ (a longitudinal strip of fleshy tissue firmly attached to posterodorsal midline). Among gymnotiforms, apteronotid species also possess the following unique combination of characters: small eye (its diameter less than distance between nares); infraorbital and supraorbital laterosensory lines connected anterior to eye; infraorbital bones ossified as slender tubes; anterior nares located outside gape; no urogenital papilla; 1-2 rows of conical teeth in both jaws; anal-fin origin at, or anterior to, isthmus; no urogenital papilla. Apteronotids also possess a high frequency tone-type electric organ discharge (more than 750 Hz at maturity).

### (2) Composition and diversity

There are currently 72 names available in the literature for apteronotid genera and species. Of these, 13 generic and 52 species names are valid. There are in addition 12 manuscript names for species currently in preparation, bringing the known diversity of Apteronotidae to 64 species. Many more apteronotid species are anticipated, as the rate of description is accelerating.

Apteronotids are relatively conservative in terms of overall external morphology. Like all gymnotiforms the shape is typically culteriform, with an elongate body and anal fin. Higher level apteronotid taxonomy emphasizes differences in snout length and shape, and shape and position of the mouth. Apteronotids exhibit substantial diversity in total adult body size, ranging from an undescribed Amazonian species of *Adontosternarchus*, and *Megadontognathus kaitukaensis* (each growing to about 160 mm) to *Apteronotus* (formerly *Ubidia*) *magdalenese* (1.3 M).

### (3) Biogeographic distribution

The Apteronotidae is confined to the Humid Neotropics, ranging the Rio de la Plata of Argentina ( $35^{\circ}$  S) to the Rio Tuira of Panama ( $8^{\circ}$  N). Apteronotids are known from the continental waters of all South American countries except Chile (Albert, 2001), and are most diverse - both taxonomically and ecologically - in the Amazon basin.

### (4) Habitat/biology

The ecology and natural history of most apteronotid species is poorly understood. *Apteronotus* species are the most widely distributed, extending the full range of the family. *Apteronotus* species inhabit both floodplain and *tierra firme* (non-floodplain) streams and rivers. Like many apteronotids, *Apteronotus* are aggressive predators of small aquatic insect larvae and fishes. Apteronotids are most diverse in the Amazonian floodplain, where many species are specialized to inhabit deep portions of the river channel. Some main channel apteronotids are aggressive piscivores (e.g., *Sternarchella*), whereas others are planktivores (*Adontosternarchus*). *Magosternarchus* spp. predate the tails of other electric fishes. Other species (e.g., *Sternarchorhynchus*, *Sternarchorhamphus*) have tubular snouts and forage on the beds of aquatic insect larvae on the river bottoms. At least one species (*Sternarchogiton nattereri*) eats freshwater sponges which grow on submerged trees, stumps, and other woody debris. *Orthosternarchus* is perhaps the most specialized for life at the river bottom, in many ways resembling cave fishes; they are almost entirely blind, with minute, assyemtically arranged eyes; and they have almost no pigments or scales, appearing bright pink in life due to the underlying blood hemoglobin.

An important aspect of apteronotid diversity is sexual dimorphism in snout size and shape. Reproductively mature males of *Parapteronotus hasemani* have highly elongate jaws, which are presumed to be involved in male-male competition. Mature males of *Sternarchorhynchus roseni* possess numeous teeth on their lower jaw. Mature male

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*Sternarchogiton nattereri* grow teeth externally over the snout, giving them an appearance to unusual that for 40 years they have been regarded as representing an entirely different genus (*Oedemognathus*)

### (5) Present state of knowledge of species diversity and taxonomy

Apteronotid systematics and taxonomy is rapidly changing as new species and previously undocumented phenotypes are discovered. The total expected number of species cannot currently be estimated with confidence. A large number of undescribed apteronotid species are known in museum collections and many more are likely to be captured from continued field studies, particularly in Western and Central Amazonia.

### (6) Commercial interests.

There is little direct commercial exploitation of Apteronotid species. Many species are ecologically important in Amazonian floodplains, often constituting a significant fraction of the biomass (Crampton, 1996). Two species (*Apteronotus albifrons* and *A. leptorhynchus*) are common in the aquarium trade. Apteronotids are not an important food resource.

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**Ghost knifefishes (English)**

**Ituí (Portuguese)**

**Cuchillo fantasma (Spanish, Venezuela)**

### *ADONTOSTERNARCHUS*

< i > *Adontosternarchus* < /i > Ellis in Eigenmann 1912 : 424 (in key). Type species: < i > *Sternarchus sachsi* < /i > Peters 1877. Gender: masculine.

*Adontosternarchus balaenops*

(Cope, 1878)

< i > *Sternarchus balaenops* < /i > Cope 1878: 682. Type locality: Pebás, Amazon system, Peru. Holotype: ANSP 21462.

Max. length: 250 mm total length

Distribution: South America: Amazon in Peru and Brazil.

Countries: Brazil, Peru

*Adontosternarchus clarkae*

Mago-Leccia, Lundberg & Baskin, 1985

< i > *Adontosternarchus clarkae* < /i > Mago-Leccia, Lundberg & Baskin 1985: 14. figs. 1c, 16. Type locality:

Raudal (Rapids) de Mavahate, Río Negro near San Carlos de Río Negro, Amazonas Territory, Venezuela.

Holotype: MBUCV V-12703.

Max. length: 186 mm.

Distribution: South America: Venezuela and Brazil.

Countries: Brazil, Venezuela

*Adontosternarchus devenanzii*

Mago-Leccia, Lundberg & Baskin, 1985

< i > *Adontosternarchus devenanzii* < /i > Mago-Leccia, Lundberg & Baskin 1985: 11. figs. 1b, 2-6, 14. Type locality: Caño Cuajarito, trib. of Río Portuguesa, 3 km above La Unión, Estado Guárico, Venezuela. Holotype:

MBUCV V-7513.

Max. length: 186 mm.

Distribution: South America: Venezuela, Rio Portuguesa and Orinoco, Amazon basin of Brazil.

Countries: Brazil, Venezuela

*Adontosternarchus sachsi*

(Peters, 1877)

< i > *Sternarchus sachsi* < /i > Peters 1877: 473. Unnumbered plate following p. 556. Type locality: San Fernando de Apure, Río Orinoco basin, Venezuela. Holotype: ZMB 10044.

Max. length: 322 mm.

Distribution: South America: Venezuela and Brazil.

Countries: Brazil, Venezuela

### *APTERONOTUS*

< i > *Apteronotus* < /i > Lacepède 1800 : 208. Type species: < i > *Apteronotus passan* < /i > Lacepède 1800. Type by monotypy. Gender: masculine.

## Apteronotidae, by James S. Albert

<i>Sternarchus</i> Bloch & Schneider 1801 : 497. Type species: <i>Gymnotus albifrons</i> Linnaeus 1766. Type by subsequent designation. Gender: masculine.

<i>Memarchus</i> Kaup in Duméril 1856 : 201. Type species: <i>Gymnotus albifrons</i> Linnaeus 1766.

Gender: masculine.

<i>Ubidia</i> Miles 1945 : 461. Type species: <i>Ubidia magdalenensis</i> Miles 1945. Type by original designation (also monotypic). Gender: feminine.

### *Apteronotus albifrons*

(Linnaeus, 1766)

<i>Gymnotus albifrons</i> Linnaeus 1766: 428. Type locality: Suriname. No types known.

<i>Apteronotus passan</i> Lacepède 1800: 209. pl. 6 (fig. 3). Type locality: Suriname. Holotype: MNHN 3808.

<i>Sternarchus lacepedii</i> Castelnau 1855: 93. pl. 45 (fig. 3). Type locality: Suriname. No types known.

<i>Sternarchus maximilliani</i> Castelnau 1855: 93. pl. 45 (fig. 4). Type locality: Río Urubamba, Peru. No types known..

Max. length: 500 mm.

Distribution: South America: Venezuela to Paraguay and Paraná rivers. Also in the Amazon basin of Peru (Ref. 6329).

Countries: Brazil, Ecuador, French Guiana, Guyana, Paraguay, Peru, Suriname, Venezuela

Common names: Black ghost (English), Ituí cavalo (Portuguese)

### *Apteronotus apurensis*

Fernández-Yépez, 1968

<i>Apteronotus apurensis</i> Fernández-Yépez 1968: [6]. pl. 5 (unnumb.). Type locality: Río Bucaral, Paso Mirabal, Río Apure system, Orinoco basin, Venezuela. Holotype: MBUCV-V-10840.

Max. length: 308 mm

Distribution: South America: Venezuela.

Countries: Venezuela

### *Apteronotus bonapartii*

(Castelnau, 1855)

<i>Sternarchus bonapartii</i> Castelnau 1855: 92. pl. 45 (fig. 2). Type locality: Lake emptying into Río Ucayali, Peru. Holotype: MNHN 3807.

Max. length: 270 mm

Distribution: South America: Amazon basin.

Countries: Brazil, Peru

### *Apteronotus ellisi* Alonso de Arámburu, 1957

<i>Porotergus ellisi</i> Alonso de Arámburu 1957: 154. fig. 1. Type locality: Lower Río Paraná, San Pedro, Buenos Aires Prov., Argentina. Holotype: MLP 1-V-37-3. Valid as <i>Apteronotus ellisi</i> according to

Albert, 2000.

Max. length: 328 mm

Distribution: South America: Argentina, Paraná River.

Countries: Argentina

### *Apteronotus macrolepis*

(Steindachner 1881)

<i>Sternarchus macrolepis</i> Steindachner 1881: 98. Type locality: Amazonas, Brazil. Syntypes: (several) NMW 65333 (2). A valid species (Albert, 2000).

Max. length: 180 mm

## **Apteronotidae, by James S. Albert**

Distribution: South America: Amazon basin

Countries: Brazil, Peru

### ***Apteronotus brasiliensis***

(Reinhardt, 1852)

<i>Sternarchus brasiliensis</i> Reinhardt 1852: 148. Type locality: Rio das Velhas, Brazil. Syntypes: ?NMW 65015; ZMB 9185 and/or 9195; ZMUC 35-36, 41..

Max. length: 290 mm

Distribution: South America: Brazil.

Countries: Brazil

### ***Apteronotus cuchillejo***

(Schultz, 1949)

<i>Sternarchogiton cuchillejo</i> Schultz 1949: 72. pl. 3 (fig. B). Type locality: Río Motatán, 8 km below Motatán, Maracaibo basin, Venezuela. Holotype: USNM 121600.

Max. length: 189 mm

Distribution: South America: endemic to the Catatumbo River.

Countries: Venezuela

### ***Apteronotus cuchillo***

Schultz, 1949

<i>Apteronotus cuchillo</i> Schultz 1949: 69. pl. 3 (fig. A). Type locality: Río Socuy, 3 km above mouth, Maracaibo basin, Venezuela. Holotype: USNM 121591.

Max. length: 390 mm

Distribution: South America: Maracaibo basin, Venezuela. Reported from Colombia, the Catatumbo River (Ref. 26543) and Rio Baudo, Choco (Albert, in press).

Countries: Colombia, Venezuela

### ***Apteronotus jurubidae***

(Fowler, 1944)

<i>Sternarchus jurubidae</i> Fowler 1944: 242. fig. 20. Type locality: Río Jurubidá, Nuquí, Colombia.

Holotype: ANSP 71435.

Max. length: 253 mm

Distribution: South America: Colombia.

Countries: Colombia

### ***Apteronotus leptorhynchus***

(Ellis, 1912)

<i>Sternarchus leptorhynchus</i> Ellis in Eigenmann 1912: 439. Type locality: Amatuk, Guyana. Holotype: FMNH 53294.

Max. length: 269 mm

Distribution: South America: the Guianas, Brazil and Peru; rivers of Colombia and Venezuela, including the Catatumbo River (Ref. 26543).

Countries: Brazil, Colombia, French Guiana, Guyana, Peru, Suriname, Venezuela

### ***Apteronotus macrostomus***

(Fowler, 1943)

<i>Sternarchus macrostomus</i> Fowler 1943: 263. fig. 63. Type locality: Villavicencio, Río Meta basin, Colombia. Holotype: ANSP 70528.

Max. length: 260 mm

Distribution: South America: Colombia.

Countries: Colombia

## **Apteronotidae, by James S. Albert**

### ***Apteronotus magdalenensis***

(Miles, 1945)

<i>Ubidia magdalenensis</i> Miles 1945: 461. figs. 11-12. Type locality: Río Magdalena, Honda, Tolima, Colombia. Holotype: unkown, reported as 280 mm . Sec. Caza y Pesca, Min. Nat. Econ. Bogotá.

Max. length: 1,294 mm.

Distribution: South America: Colombia, Magdalena River.

Countries: Colombia

### ***Apteronotus marauna***

(Triques, 1998)

<i>Tembeassu marauna</i> Triques 1998: 6. figs. 1-3. Type locality: Ilha Solteira, Rio Paraná, Mato Grosso do Sul State, Brazil, ca. 20°30'S, 51°00'W. Holotype: MZUSP 48510.

Max. length: 196 mm

Distribution: South America: Brazil. Needs a better reference.

Countries: Brazil.

### ***Apteronotus mariae***

(Eigenmann & Fisher, 1914)

<i>Sternarchus mariae</i> Eigenmann & Fisher 1914: 236. Type locality: Girardot, Colombia. Holotype: FMNH 56774.

Max. length: 204 mm

Distribution: South America: Colombia.

Countries: Colombia

### ***Apteronotus rostratus***

(Meek & Hildebrand, 1913)

<i>Stenarchus rostratus</i> Meek & Hildebrand 1913: 85. Type locality: Río Grande near Cana, Panama. Holotype: FMNH 7592.

Max. length: 272 mm

Distribution: Central America: Panama.

Countries: Panama

### ***Apteronotus spurrelli***

(Regan, 1914)

<i>Sternarchus spurrellii</i> Regan 1914: 32. Type locality: Río Condoto, Colombia. Syntypes: BMNH 1914.5.18.90-93..

Max. length: 270 mm

Distribution: South America: Colombia.

Countries: Colombia

## **COMPSARAIA**

### ***Compsaraia compsus***

(Mago-Leccia, 1994)

<i>Porotergus compsus</i> Mago-Leccia 1994: 82. figs. 90, 91. Type locality: Río Orinoco, at Isla Iguana, between km 152 and 153, Delta Amacuro, Venezuela. Holotype: MBUCV-V-11010.

Max. length: 338 mm

Distribution: South America: has been collected in the Orinoco, Meta and Apure Rivers and the Rio Negro, San Carlos de Rio Negro, Venezuela. Amazon Basin of Brazil.

Countries: Venezuela, Brazil

## Apteronotidae, by James S. Albert

### **MAGOSTERNARCHUS**

<i>Magosternarchus</i> Lundberg, Cox Fernandes & Albert in Lundberg et al. 1996 : 658. Type species:

<i>Magosternarchus raptor</i> Lundberg, Cox Fernandes & Albert 1996. Type by original designation

Gender: masculine.

***Magosternarchus duccis*** Lundberg, Cox, Fernandes & Albert, 1996

<i>Magosternarchus duccis</i> Lundberg, Cox Fernandes & Albert 1996: 664. fig. 2. Type locality: Rio Branco, 3-11 km upriver from confluence with Rio Negro, 1°17'S, 61°51'W, Roraima State, Brazil, 6-7 m. Holotype: MZUSP 48439.

Max. length: 226 mm TL

Distribution: South America: Amazon.

Countries: Brazil

***Magosternarchus raptor*** Lundberg, Cox, Fernandes & Albert, 1996

<i>Magosternarchus raptor</i> Lundberg, Cox Fernandes & Albert 1996: 661. fig. 1. Type locality: Rio Solimões, 17 km down-river from confluence of Rio Purus, 3°36'S, 61°21'W, Amazonas State, Brazil. Holotype:

MZUSP 48436.

Max. length: 199 mm TL

Distribution: South America: Amazon.

Countries: Brazil

### **MEGADONTOGNATHUS**

<i>Megadontognathus</i> Mago-Leccia 1994 : 38. Type species: <i>Megadontognathus cuyuniense</i> Mago-Leccia 1994. Type by original designation (also monotypic). Gender: masculine.

***Megadontognathus cuyuniense*** Mago-Leccia, 1994

<i>Megadontognathus cuyuniense</i> Mago-Leccia 1994: 81. figs. 58, 89a, 89b. Type locality: Río Cuyuni at Paruruvaca rapids, Bolívar, Venezuela. Holotype: MBUCV-V-9499.

Max. length: 238 mm TL

Distribution: South America: known only from the Cuyuni Basin and the Rio Caroní in Venezuela.

Countries: Venezuela

***Megadontognathus kaitukaensis*** Campos-da-Paz, 1999

<i>Megadontognathus kaitukaensis</i> Campos-da-Paz, 1999. Type locality: , Cachoeiras de Kaituká, 05°15'50"W. Rio Xingu, Pará. Holotype: INPA 14074.

Max. length: 160 mm

Distribution: South America: known only from the Rio Xingu, Pará, Brazil.

Countries: Brazil

### **ORTHOSTERNARCHUS**

<i>Orthosternarchus</i> Ellis 1913 : 144. Type species: <i>Sternarchus tamandua</i> Boulenger 1898. Type by original designation (also monotypic). Gender: masculine.

***Orthosternarchus tamandua***(Boulenger, 1898)

## **Apteronotidae, by James S. Albert**

<i>Sternarchus tamandua</i> Boulenger 1898: 427. pl. 42. Type locality: Rio Juruá, Brazil. Holotype: BMNH 1897.12.1.208.

Max. length: 440 mm

Distribution: South America: Amazonas, Brazil.

Countries: Brazil

### **PARAPTERONOTUS**

*Parapteronotus hasemani* (Ellis, 1913)

<i>Sternarchus hasemani</i> Ellis 1913: 147. pl. 23 (fig. 1). Type locality: Santarém, Pará, Brazil. Holotype: FMNH 54562.

<i>Apteronotus anas</i> Eigenmann & Allen 1942: 321. pl. 15 (fig. 1). Type locality: Iquitos, Amazon system, Peru. Holotype: CAS 56510. Considered a synonym of <i>Apteronotus hasemani</i> (Fernandes et al.. 1998; Albert, 2000).

Max. length: 381 mm

Distribution: South America: Amazon basin

Countries: Brazil, Peru

### **PLATYUROSTERNARCHUS**

<i>Platyurosternarchus</i> Mago-Leccia 1994 : 37. Type species: <i>Sternarchus macrostoma</i> Günther 1870. Type by original designation (also monotypic) Gender: masculine.

*Platyurosternarchus macrostomus* (Günther, 1870)

<i>Sternarchus macrostoma</i> Günther 1870: 4. Type locality: Xeberos, Río Maraño drainage, Amazon system, Peru. Holotype: BMNH 1867.6.13.76.

Max. length: 355 mm

Distribution: South America: Amazon of Peru, Venezuela and Brazil.

Countries: Brazil, Peru, Venezuela

### **POROTERGUS**

<i>Porotergus</i> Ellis in Eigenmann 1912 : 423, 440. Type species: <i>Porotergus gymnotus</i> Ellis 1912. Type by original designation. Gender: masculine.

*Porotergus gimbeli* Ellis, 1912

<i>Porotergus gimbeli</i> Ellis in Eigenmann 1912: 441. Type locality: Pará, Brazil. Holotype: FMNH 54566.

Max. length: 240 mm

Distribution: South America: Amazon of Brazil.

Countries: Brazil

*Porotergus gymnotus* Ellis, 1912

<i>Porotergus gymnotus</i> Ellis in Eigenmann 1912: 441. Type locality: Amatuk, Guyana. Holotype: FMNH 53575.

Max. length: 250 mm

Distribution: South America: the Guianas, Amazon of Brazil.

Countries: Brazil, French Guiana, Guyana

## Apteronotidae, by James S. Albert

### ***STERNARCHELLA***

<i>Sternarchella</i> Eigenmann in Eigenmann & Ward 1905 : 163. Type species: <i>Sternarchus schotti</i> Steindachner 1868. Type by original designation. Gender: feminine.

***Sternarchella curvioperculata*** Godoy, 1968

<i>Sternarchella curvioperculata</i> Godoy 1968: 352. figs. 3-5. Type locality: Affluent of the Rio Mogi Guassu, São Paulo State, Brazil. Holotype: EEBP 336.

Max. length: 253 mm

Distribution: South America: South Brazil, Paraná River.

Countries: Brazil

***Sternarchella orthos*** Mago-Leccia, 1994

<i>Sternarchella orthos</i> Mago-Leccia 1994: 84. fig. 93. Type locality: Río Apure near Río Boquerones mouth, east of San Fernando de Apure, Apure, Venezuela. Holotype: MBUCV-V-14173.

Max. length: 300 mm

Distribution: South America: known only from the Orinoco Basin, mostly in the channel of main rivers.

Countries: Venezuela

***Sternarchella schotti*** (Steindachner, 1868)

<i>Sternarchus schotti</i> Steindachner 1868: 252. pl. 1 (figs. 1-2). Type locality: Manaus, Brazil. Holotype: NMW 65335.

Max. length: 400 mm

Distribution: South America: Brazil. Needs a better reference.

Countries: Brazil

***Sternarchella sima*** Starks, 1913

<i>Sternarchella sima</i> Starks 1913: 22. pl. 4. Type locality: Pará, Brazil. Holotype: SU 22220.

<i>Sternarchella orinoco</i> Mago-Leccia 1994: 97. figs. 94a-b, 95. Type locality: Río Orinoco, at Isla Iguana, between km 152 and 153, Delta Amacuro, Venezuela. Holotype: MBUCV-V-10514. Considered a synonym of <i>Sternarchella sima</i> by Albert, 2000.

Max. length: 400

Distribution: South America: Amazon of Brazil, Orinoco of Venezuela: living in the main channel of large rivers.

Countries: Brazil, Venezuela

***Sternarchella terminalis***(Eigenmann & Allen, 1942)

<i>Poroterus terminalis</i> Eigenmann & Allen 1942: 324. Type locality: Upper Amazon, Iquitos, Peru. Holotype: CAS 54912.

Max. length: 224 mm.

Distribution: South America: Amazon.

Countries: Peru, Brazil.

### ***STERNARCHOGITON***

<i>Sternarchogiton</i> Eigenmann in Eigenmann & Ward 1905 : 164. Type species: <i>Sternarchus nattereri</i> Steindachner 1868. Type by original designation. Gender: masculine.

## Apteronotidae, by James S. Albert

### ***Sternarchogiton nattereri*(Steindachner, 1868)**

<i>Sternarchus nattereri</i> Steindachner 1868: 176. Type locality: Manaus, Brazil. Holotype: NMW 65014.

<i>Oedemognathus exodon</i> Myers 1936: 115. Type locality: Río Ampiyacu, Amazon system, e. Peru. Holotype: USNM 102040.

Max. length: 250 mm

Distribution: South America: Brazil, Peru, Venezuelan Amazon.

Countries: Brazil, Peru, Venezuela

### ***Sternarchogiton porcinum*Eigenmann & Allen, 1942**

<i>Sternarchogiton porcinum</i> Eigenmann & Allen 1942: 325. pl. 16 (fig. 1). Type locality: Río Huallaga at Yurimaguas, Amazon system, Peru. Holotype: CAS 28810.

Max. length: 300 mm

Distribution: South America: Amazon of Peru and Brazil.

Countries: Brazil, Peru

## ***STERNARCHORHAMPHUS***

<i>Sternarchorhamphus</i> Eigenmann in Eigenmann & Ward 1905 : 165. Type species: <i>Sternarchus (Rhamphosternarchus) muelleri</i> Steindachner 1881. Type by original designation. Gender: masculine.

### ***Sternarchorhamphus muelleri*(Steindachner, 1881)**

<i>Sternarchus (Rhamphosternarchus) muelleri</i> Steindachner 1881: 99. Type locality: Amazon R. near Pará, Brazil. Syntypes: NMW 65328..

Max. length: 455 mm .

Distribution: South America: Amazon in Brazil, Peru, Venezuela.

Countries: Brazil, Peru, Venezuela

## ***STERNARCHORHYNCHUS***

<i>Sternarchorhynchus</i> Castelnau 1855 : 95. Type species: <i>Sternarchus muelleri</i> Castelnau 1855. Type by monotypy. Gender: masculine.

<i>Rhamphosternarchus</i> Günther 1870 : 4. Type species: <i>Sternarchus oxyrhynchus</i> Müller & Troschel 1849. Type by subsequent designation. Gender: masculine.

### ***Sternarchorhynchus curvirostris*(Boulenger, 1887)**

<i>Sternarchus (Rhamphosternarchus) curvirostris</i> Boulenger 1887: 282. pl. 24. Type locality: Canelos, e.

Ecuador. Syntypes: BMNH 1880.12.8.90-91..

Max. length: 406 mm

Distribution: South America: Ecuador, Peru, and Brazil.

Countries: Brazil, Ecuador, Peru

### ***Sternarchorhynchus mormyrus*(Steindachner, 1868)**

<i>Sternarchus mormyrus</i> Steindachner 1868: 176. Type locality: Maribitanos, Brazil. Syntypes: NMW 65336, 65345.

Max. length: 540 mm

## **Apteronotidae, by James S. Albert**

Distribution: South America: Brazil.

Countries: Brazil

***Sternarchorhynchus oxyrhynchus***(Müller & Troschel, 1849)

<i>Sternarchus oxyrhynchus</i> Müller & Troschel 1849: 16. pl. 2 (figs. 1-2). Type locality: Essequibo R., Guyana. Holotype: ZMB 4086.

<i>Sternarchorhynchus mulleri</i> Castelnau 1855: 95. Type locality: Essequibo R., Guyana. No types known.

Max. length: 470 mm

Distribution: South America: Venezuela and the Guianas, Barazilian Amazon.

Countries: Brazil, French Guiana, Guyana, Venezuela

***Sternarchorhynchus roseni***Mago-Leccia, 1994

<i>Sternarchorhynchus roseni</i> Mago-Leccia 1994: 99. fig. 92. Type locality: Río Apure at Jarina, near San Fernando de Apure, Río Orinoco basin, Apure, Venezuela. Holotype: MBUCV-V-20037.

Max. length: 340 mm

Distribution: South America: known from the Orinoco and Amazon Basins.

Countries: Brazil, Venezuela

***Sternarchorhynchus britskii*** Campos-da-Paz, 1999

<i>Sternarchorhynchus britskii </i> Campos-da-Paz, 1999. Type locality Ilha Solteira, Rio Paraná, Mato Grosso do Sul, Brazil. Holotype: MZUSP 52923.

Max. length: 261 mm

Distribution: South America: Parana Basin.

Countries: Brazil

***Sternarchorhynchus mesensis*** Campos-da-Paz, 1999

<i>Sternarchorhynchus mesensis </i> Campos-da-Paz, 1999. Type locality: Serra da Mesa, Rio Tocantins, Goiás, Brazil. Holotype: MZUSP 17591.

Max. length: 249 mm

Distribution: South America: Rio Tocantins.

Countries: Brazil