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Results of the research cruises of FRV *Walther Herwig* to South America. LXXVIII. Records of some dragon-, hatchet-, and viperfishes (Stomiiformes) from waters off Argentina and Uruguay

Ergebnisse der Forschungsreisen des FFS *Walther Herwig* nach Südamerika. LXXVIII. Nachweise einiger Drachen-, Tiefsee-Beil- und Viperfische (Stomiiformes) von den Gewässern vor Argentinien und Uruguay

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Summary: We report the first records of stomiiform species from the Exclusive Economic Zones of Argentina (three species) and Uruguay (twelve species). For additional species previously cited in scientific literature from these national areas but without documented voucher specimens, we provide evidence-based confirmations of their presence in both countries.

Keywords: Stomiati, Stomiatiformes, Southwest Atlantic, first records, fish diversity

Zusammenfassung: Wir berichten Erstnachweise von Arten der Stomiiformes aus den ausschließlichen Wirtschaftszonen von Argentinien (drei Arten) und Uruguay (zwölf Arten). Darüber hinaus erbringen wir für andere Arten, welche in der Literatur für diese nationalen Gebiete bereits erwähnt wurden, jedoch ohne Angaben zu Belegexemplaren, empirische Bestätigungen für deren Präsenz in beiden Ländern.

Schlüsselwörter: Stomiati, Stomiatiformes, Südwestatlantik, Erstnachweise, Fischdiversität

Resumen: Presentamos primeros registros de especies stomiiformes de las Zonas Económicas Exclusivas de Argentina (tres especies) y Uruguay (doce especies). Además, para especies ya mencionadas en la literatura para estas áreas nacionales, pero sin ofrecer información sobre ejemplares depositadoes en una colección científica, presentamos confirmaciones basadas en evidencia para su presencia en ambos países.

Palabras clave: Stomiati, Stomiatiformes, Atlántico Suroeste, primeros registros, diversidad de peces

1. Introduction

Stomiiformes are a remarkable teleost radiation highly adapted to live in the deep-sea, e.g., possessing often extremely large mouths, highly movable teeth, jaws and in stomiids even neurocrania which can bend upwards (Fink 1981; Kenaley 2012; Schnell & Johnson 2017), as well as light organs for camouflage, prey attraction and communication (Widder et al. 1984; Davis et al. 2014). The order is well-defined by many apomorphic characters (Fink & Weitzman 1982; Wiley & Johnson 2010) and presently contains 464 valid species (Fricke et al. 2025). However, the supposed phylogenetic relationships and taxonomic levels within the order underwent several changes during the last decades and is still debated (e.g., Fink1985;

Harold & Weitzman 1996; Kenaley et al. 2014; Rabosky et al. 2018; Smith et al. 2024; Chang et al. 2025). Herein we follow the systematic of eight families of which five are reported in the present study, i.e., Vinciguerriidae, Diplophidae, Gonostomatidae, Sternoptychidae and Stomiidae (with 6 subfamilies) as listed by van der Laan et al. (2025).

Some members of the Stomiiformes are extremely abundant and widely distributed in meso-pelagic waters of all oceans. For some species, however, information on their occurrence is limited. We herein present records of stomiiform species collected by the German fishery research vessel *Walther Herwig* in the Exclusive Economic Zones of Argentina and Uruguay (Fig. 1). Between 1966 and 1981 the *Walther Herwig* conducted seven expeditions to the Southwest Atlantic Ocean. Of these, four were dedicated to the waters along the coast of southern South America and the other three headed towards the Atlantic sector of Antarctica. During these cruises more than 800 localities have been sampled and at the end over 2.500 lots were deposited in the collection of the Institut für Seefischerei Hamburg (ISH), since 1993 hosted at the zoological museum collection of the University of Hamburg (ZMH), now part of the Leibniz-Institute for the Analysis of Biodiversity Change. A recent comparison of the existing collection data at the ZMH with the latest faunal lists of Argentina (Mabragaña & Cousseau 2021) and Uruguay (Nion et al. 2016) revealed that possibly first records for 16 species from Argentina and 38 from Uruguay may be still available at ZMH and awaiting publication (Koerber & Stehmann 2025). The herein treated Stomiiformes only represent a small part of this hidden treasure, untouched for five decades.

Applying the concept of 'double strictness' (Koerber 2023, 2024, 2025), these are thus restricted to reproducible records, for being based on voucher specimens, which have been collected within the maritime territory of those countries, the latter referring to the necessity of jurisdictional range for the mere possibility of monitoring and management of biodiversity.

After cross-checking our findings against the literature so far known to us, we tentatively express first records or, if the species has been mentioned already for Argentina and/or Uruguay yet without information on voucher specimens, as evidence-based confirmations. In many cases these first records are updating the respective most current national faunal lists for marine fishes of Argentina and Uruguay (Mabragaña & Cousseau 2021, Nion et al. 2016). Anyhow, we may be wrong in stating first records as there might still be literature, especially from Russian, Japanese or Polish authors, yet unknown to us (therefore 'tentatively').

Additionally, we present some records from the Malvinas/Falkland Islands and the South Georgia & South Sandwich Islands without commenting on eventual first records as we are not yet sufficiently familiar with the literature about these areas.

Nevertheless, the stomiiform records presented herein for the Exclusive Economic Zones of Argentina and Uruguay are not the first ones collected by the *Walther Herwig* in these areas and already mentioned in literature.

The description of *Woodsia meyerwaardeni* Krefft, 1973, includes paratypes from *Walther Herwig* stations 146/71, 239/71, and 348/71 in the EEZ-AR. *Maurolicus stehmanni* Parin & Kobyliansky, 1993, was described based on a holotype and a paratype from Argentina (WH 204/66), as well as on paratypes from Uruguay (WH 208/66, 417/66).

Additionally, Uruguayan non-type ZMH/ISH-specimens of *Ichthyococcus australis* Mukhacheva, 1980, and *Astronesthes boulengeri* Gilchrist, 1902, have been mentioned from *Walther Herwig* station 197/66 by Krefft (1983) and Koerber (2023), and by Parin et al. (1999) and Koerber & Fricke (2024), respectively.

2. Material & Methods

Synonymies and currently applied generic combinations have been taken from Fricke et al. (2025). The systematic structure of Stomiiformes applied in table 2 follows van der Laan et al. (2025).

Following the ZMH-collection lot number the quantity of contained specimens and the standard lengths in mm are provided in brackets. Measurements were taken with digital calipers to the nearest decimal of a millimeter for specimens below 120 mm standard length (SL). For larger specimens lengths were rounded to the nearest millimeter.

Abbreviations & acronyms

AR	Argentina (ISO 3166)
BR	Brazil (ISO 3166)
EEZ	Exclusive Economic Zone
FCZ-FK	Fisheries Conservation Zone of the Malvinas/Falkland Islands
FK	Malvinas/Falkland Islands (ISO 3166)
FRV	fishery research vessel
GS	South Georgia & South Sandwich Islands (ISO 3166)
INIDEP	Instituto Nacional de Investigación y Desarrollo Pesquero, Mar del Plata
ISH	Institut für Seefischerei, Hamburg (collection at ZMH since 1993)
nm	nautical miles
UY	Uruguay (ISO 3166)
WH	FRV *Walther Herwig*
ZMH	originally ‚Zoologisches Museum Hamburg', now ichthyological collection of the 'Museum der Natur, Hamburg'

Tab. 1: *Walther Herwig* stations mentioned herein, in chronological order. In addition, data on the two stations of other ships as mentioned in the text.
Tab. 1: Erwähnte Stationen der *Walther Herwig* in chronologischer Reihenfolge. Zusätzlich zwei Stationen von anderen Schiffen, die auch im Text genannt werden.

station	position	date	depth m	territory	remarks
Walther Herwig					West-Germany
197/66	35°56'S 52°33'W	30. May 1966	480-70	EEZ-UY	
204/66	37°23'S 54°52'W	07. Jun. 1966	160	EEZ-AR	
208/66	35°02'S 52°12'W	08. Jun. 1966	280-260	EEZ-UY	
269/66	39°56'S 55°54'W	19. Jun. 1966	800	EEZ-AR	
271/66	41°00'S 56°57'W	20. Jun. 1966	1000	EEZ-AR	
331/66	51°05'S 55°49'W	29. Jun. 1966	800	FCZ-FK	
417/66	35°47'S 52°52'W	26. Jul. 1966	270	EEZ-UY	
30/68	36°37'S 51°32'W	16. Feb. 1968	2000-0	EEZ-UY	
146/71	43°43'S 59°25'W	05. Jan. 1971	250	EEZ-AR	
227/71	52°02'S 55°20'W	25. Jan. 1971	1225	FCZ-FK	
228/71	51°56'S 56°17'W	25. Jan. 1971	1000	FCZ-FK	
239/71	54°53'S 59°00'W	03. Feb. 1971	1200-1000	EEZ-AR	
240/71	54°56'S 58°05'W	03. Feb. 1971	1250	EEZ-AR	
339/71	38°59'S 54°29'W	25. Feb. 1971	1207	EEZ-AR	
340/71	38°50'S 54°25'W	25. Feb. 1971	1000	EEZ-AR	
348/71	38°20'S 54°33'W	05. Mar. 1971	1040-997	EEZ-AR	
97-II/76	54°12'S 40°02'W	03. Jan. 1976	2600	EEZ-GS	
thUY/77	37°19'S 53°39'W	01. Nov. 1977	3000	EEZ-UY	th = trial haul
552/78	48°22.6'S 59°14.9'W	20. May. 1978	781	FCZ-FK	
692/78	40°34.8'S 55°38.6'W	26. Jun. 1978	1530	EEZ-AR	
318/81	54°27.2'S 62°19.3'W	01. Feb. 1981	125	EEZ-AR	
Besnard					Brazil
1890	33°58'S 51°32'W	17. Aug. 1972		EEZ-BR	
Kurchatov					Soviet Union
926/71	52°54'S 55°38'W	17. Dec. 1971	2016-0	FCZ-FK	

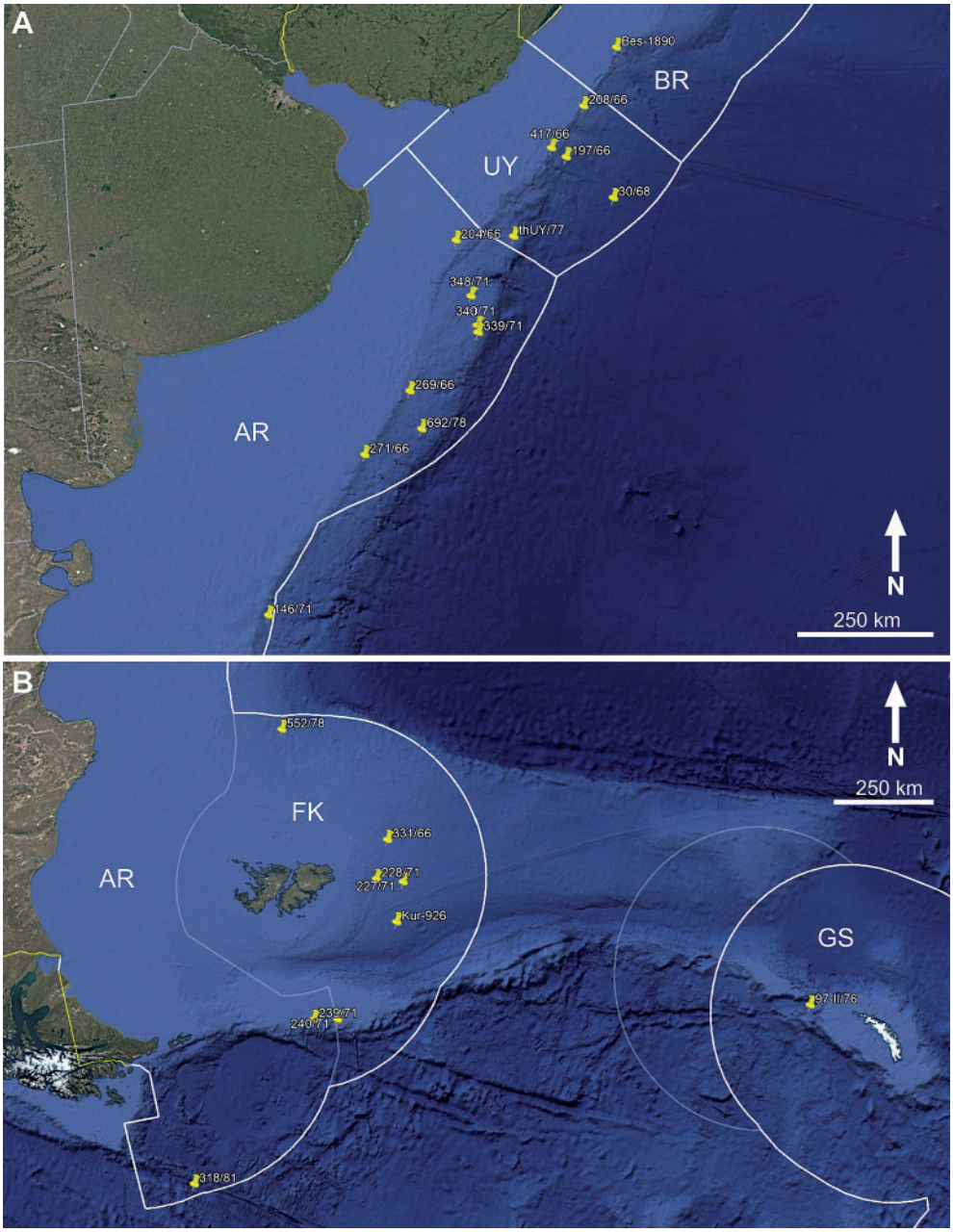


Fig. 1: *Walther Herwig* stations mentioned in the text and table 1. **A** Stations in the territorial waters of southern Brazil (BR), Uruguay (UY), and northern Argentina (AR). **B** Stations in the territorial waters of southern Argentina (AR), the Malvinas/Falkland Islands (FK), and South Georgia & South Sandwich Islands (GS). Faded lines indicate disputed maritime limits.

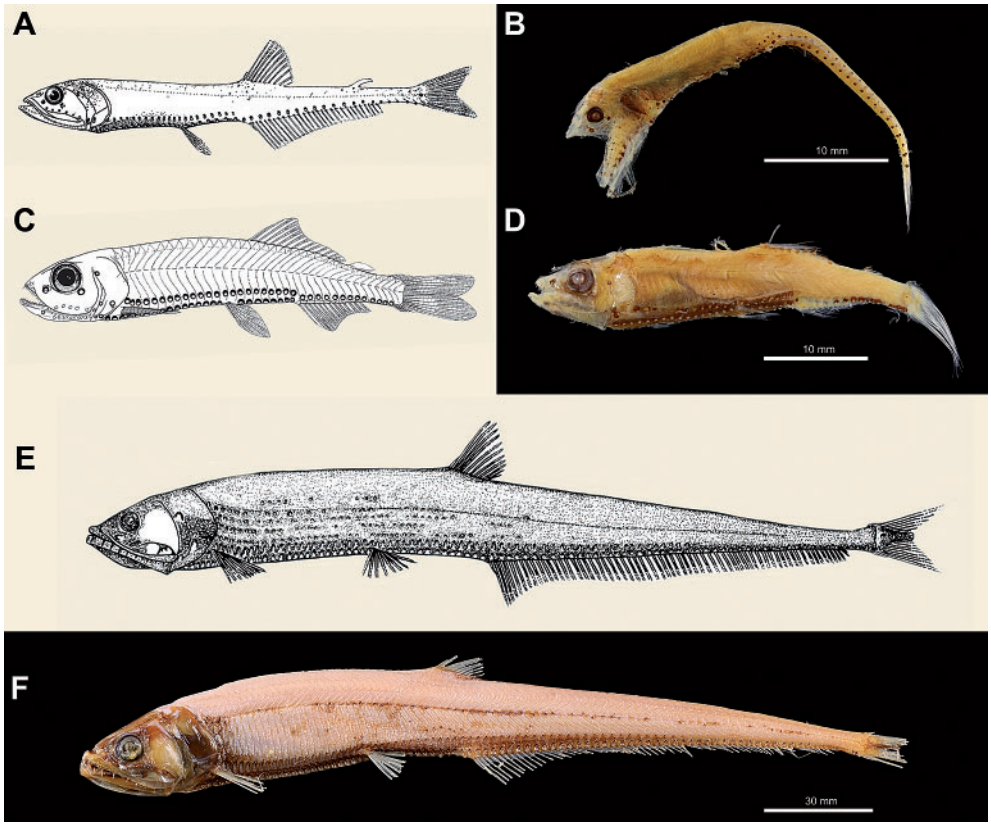
Abb. 1: *Walther Herwig* Stationen, die im Text und Tabelle 1 erwähnt sind. **A** Stationen in den Gewässern von Südbrasilien (BR), Uruguay (UY), und Nordargentinien (AR). **B** Stationen in den Gewässern von Südargentinien (AR), den Malvinas/Falkland Inseln (FK), und Südgeorgien & den südlichen Sandwich Inseln (GS). Blasse Linien zeigen umstrittene maritime Grenzen an.

Tab. 2: Systematic arrangement of Stomiiformes treated herein, indicating first records (f), evidence-based confirmations (e), and mere records (x).
Tab. 2: Systematik der hier behandelten Stomiiformes, mit Auszeichnung der Erstnachweise (f), belegten Nachweisen (e), und sonstiger Nachweise (x).

Taxon	AR	UY	FK	GS
Vinciguerriidae				
Pollichthys Grey 1959				
P. mauli (Poll, 1953)		**e**		
Vinciguerria Jordan & Evermann 1896				
V. poweriae (Cocco, 1838)		**f**		
Diplophidae				
Diplophos Günther, 1873				
D. australis Ozawa, Oda & Ida, 1990		**f**		
Gonostomatidae				
Cyclothone Goode & Bean, 1883				
C. microdon (Günther, 1878)	**f**	**f**	**x**	
C. obscura Brauer, 1902		**f**		
C. parapallida Badcock, 1982		**f**		
C. pseudopallida Mukhacheva, 1964	**f**			
Margrethia Jespersen & Tåning, 1919				
M. valentinae Parin, 1982		**f**		
Sigmops Gill 1883				
S. bathyphilus (Vaillant, 1884)		**f**		
S. elongatus (Günther, 1878)		**e**		
Sternoptychidae - Sternoptychinae				
Argyropelecus Cocco, 1829				
A. aculeatus Valenciennes, 1850		**e**		
A. hemigymnus Cocco, 1829		**e**		
Stomiidae - Chauliodontinae				
Chauliodus Bloch & Schneider, 1801				
C. danae Regan & Trewavas, 1929		**e**		
C. minimus Parin & Novikova, 1974	**f**		**x**	
C. sloani Bloch & Schneider, 1801		**e**		
Stomiidae - Stomiinae				
Stomias Cuvier 1816				
S. boa (Risso, 1810)		**e**		
S. gracilis Garman, 1899	**e**	**f**		**x**
Stomiidae - Astronesthinae				
Borostomias Regan, 1908				
B. antarcticus (Lönnberg, 1905)		**f**		**x**
Neonesthes Regan & Trewavas 1929				
N. capensis (Gilchrist & von Bonde, 1924)		**e**		
N. microcephalus Norman, 1930		**f**		

Tab. 2: Continued.
Tab. 2: Fortsetzung.

Taxon	AR	UY	FK	GS
Stomiidae - Melanostomiinae				
Bathophilus Giglioli, 1882				
B. nigerrimus Giglioli, 1882		**e**		
Melanostomias Brauer, 1902				
M. tentaculatus (Regan & Trewavas, 1930)	**e**	**e**		
Opostomias Günther 1887				
O. micripnus (Günther, 1878)		**f**		
Trigonolampa Regan & Trewavas 1930				
T. miriceps Regan & Trewavas, 1930		**e**		
Stomiidae - Malacosteinae				
Malacosteus Ayres, 1848				
M. australis Kenaley, 2007		**f**		
Stomiidae - Idiacanthinae				
Idiacanthus Peters, 1877				
I. atlanticus Brauer, 1906	**e**	**e**	**x**	



3. Results

3.1. Vincigueriidae – lighthousefishes

***Pollichthys mauli* (Poll, 1953)**
(Fig. 2A-B)
Identified following Whitehead et al. (1984).

EEZ-UY. ZMH-ICH-0103695 (7, 3.4-4.9), ex ISH 945-1966, WH 197/66.

Previously mentioned from Uruguay by Nion et al. (2002, 2016), Cousseau et al. (2010), and Villarins et al. (2022), without information on distinct localities or voucher specimens.

All these authors have probably relied on Menni et al. (1984), who mentioned this species erroneously for 'Uruguay' referring to 33°58'S 51°32'W as indicated by Menezes & Benvegnú (1976). This position mirrors station 1890 of the Brazilian research vessel *Besnard* (Bes-1890 in fig. 1) and is well located in the EEZ of Brazil, some 45 nm NE from the nearest point of the Brazilian-Uruguayan maritime border. Menni et al. (1984) possibly fell victims to the 'reading-maps-horizontally-effect' described by Koerber (2024). This is an evidence-based confirmation from the EEZ of Uruguay.

***Vinciguerria poweriae* (Cocco, 1838)**
(Fig. 2C-D)
Identified following Gorbunova (1972) and Whitehead et al. (1984).

EEZ-UY. ZMH-ICH-0103711 (1, 36), ex ISH 944-1966, WH 197/66.

This is the first record of this species from the EEZ of Uruguay.

3.2. Diplophidae – portholefishes

***Diplophos australis* Ozawa, Oda & Ida, 1990**
(Fig. 2E-F)
Identified following Ozawa et al. (1990) with X-ray image.

EEZ-UY. ZMH-ICH-0103283 (2, 7.2-8.4), ex ISH 947-1966, WH 197/66; ZMH-ICH-0106300 (4, 162-212), ex ISH 1666-1968, WH 30/68.

This is the first record of this species from the EEZ of Uruguay.

3.3. Gonostomatidae – bristlemouths

***Cyclothone microdon* (Günther, 1878)**
(Fig. 3A-B)
Identified following Mukhacheva (1974) and Badcock (1982).

EEZ-AR. ZMH-ICH-0108109 (1, 54.0), ex ISH 339-1971, WH 239/71.

The specimen is in poor condition, yet all available characters are in consistence with *C. microdon*. Comparison with the below listed specimens, however, does not show any contradiction to a correct identification.

This is the first record of this species from the EEZ of Argentina.

EEZ-UY. ZMH-ICH-0106339 (88, 35.3-66.5), ex ISH 1663-1968, WH 30/68.

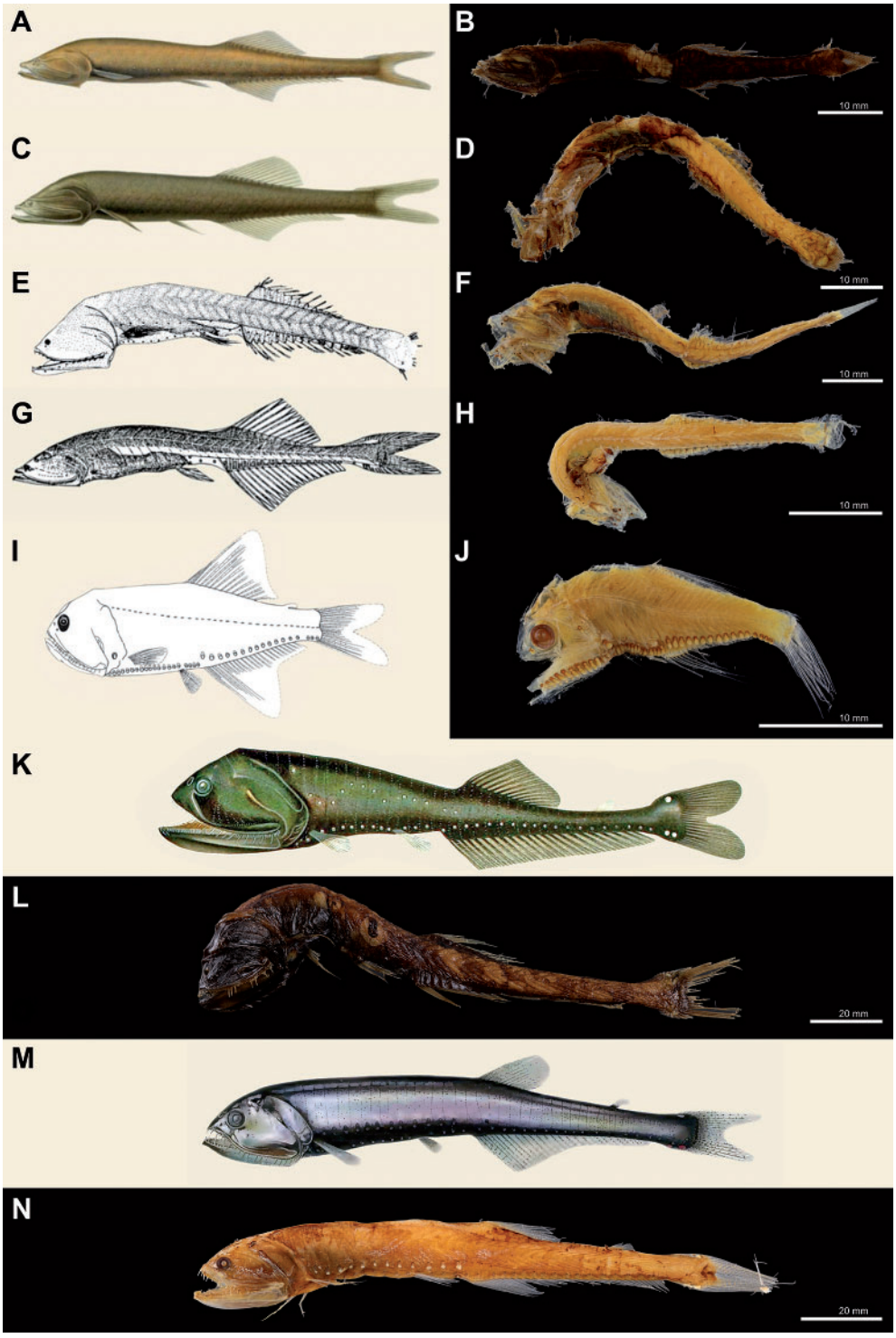
This is the first record of this species from the EEZ of Uruguay.

FCZ-FK. ZMH-ICH-107936 (4, 44.8-58.5), ex ISH 213-1971, WH 227/71.

Previously mentioned from the FCZ-FK by Mukhacheva (1974) and Parin et al. (1974), both from *Kurchatov* 926/71 (Kur-926 in fig. 2), without information on possible voucher specimens.

***Cyclothone obscura* Brauer, 1902**
(Fig. 3C-D)
Identified following Mukhacheva (1974) and Badcock (1982).

Fig. 2: Species of Vincigueriidae and Diplophidae. **A-B** *Pollichthys mauli*, drawing from original description (Poll 1953: fig. 24) (A) and ZMH-ICH-0103695 (B). **C-D** *Vinciguerria poweriae*, modified drawing by E. D'Antoni from Sutton et al. (2020) (C) and ZMH-ICH-0103711 (D). **E-F** *Diplophos australis*, drawn after original description (Ozawa et al. 1990: fig. 11) (E) and ZMH-ICH-0106300 (F).
Abb. 2: Arten der Familien Vincigueriidae and Diplophidae. **A-B** *Pollichthys mauli*, Zeichnung der Originalbeschreibung (Poll 1953: fig. 24) (A) und ZMH-ICH-0103695 (B). **C-D** *Vinciguerria poweriae*, veränderte Zeichnung von E. D'Antoni aus Sutton et al. (2020) (C) und ZMH-ICH-0103711 (D). **E-F** *Diplophos australis*, Zeichnung nach der Originalbeschreibung (Ozawa et al. 1990: fig. 11) (E) und ZMH-ICH-0106300 (F).


A
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N
20 mm

EEZ-UY. ZMH-ICH-0106353 (2, 54.5-61.6), ex ISH 1664-1968, WH 30/68.

The specimen is in bad condition, but identification was possible.

This is the first record of this species from the EEZ of Uruguay.

***Cyclothone parapallida* Badcock, 1982**
(Fig. 3E-F)
Identified following Badcock (1982).

EEZ-UY. ZMH-ICH-0106346 (1, 58.2), ex ISH 1665-1968, WH 30/68.

This is the first record of this species from the EEZ of Uruguay.

***Cyclothone pseudopallida* Mukhacheva, 1964**
(Fig. 3G-H)
Identified following Mukhacheva (1974) and Badcock (1982).

EEZ-AR. ZMH-ICH-0108194 (1, 28.2), ex ISH 3061-1971, WH 348/71.

This is the first record of this species from the EEZ of Argentina.

***Margrethia valentinae* Parin, 1982**
(Fig. 3I-J)
Identified following Parin (1982), Sutton et al. (2020), and Villarins et al. (2024). The two species of *Margrethia* are diagnosed on the base of the pattern of their pre-anal light organs. Following the presently accepted scheme (e.g., Parin 1982; Sutton et al. 2020) our specimen shows the character of *M. valentinae*. However, this distinguishing character does not fit the figure of the original description of *M. obtusirostra* by Jespersen & Táning (1919: fig. 11) which shows the same status as commonly accepted for *M. valentinae*. Further studies should clarify this issue.

EEZ-UY. ZMH-ICH-0103956 (1, 23.3), ex ISH 946-1966, WH 197/66.

This is the first record of this species from the EEZ of Uruguay.

***Sigmops bathyphilus* (Vaillant, 1884)**
(Fig. 3K-L)
Identified following Sutton et al. (2020).

EEZ-UY. ZMH-ICH-0106323 (4, 110-146), ex ISH 1667-1968, WH 30/68.

This is the first record of this species from the EEZ of Uruguay.

***Sigmops elongatus* (Günther, 1878)**
(Fig. 3M-N)
Identified following Sutton et al. (2020).

EEZ-UY. ZMH-ICH-0103920 (3, 123-164), ex ISH 943-1966, WH 197/66; ZMH-ICH-0106162 (3, 82.5-121), ex ISH 1668-1968, WH 30/68.

Previously mentioned from Uruguay by Villarins et al. (2022), without information on a distinct locality or voucher specimens. This is an evidence-based confirmation from the EEZ of Uruguay.

3.4. Sternoptychidae, Sternoptychinae - marine hatchetfishes

***Argyropelecus aculeatus* Valenciennes, 1850**
(Fig. 4A-B)

Fig. 3. Species of Gonostomatidae. **A-B** *Cyclothone microdon*, drawing from Brauer (1906: pl.2, fig. 2) (A) and ZMH-ICH-0106339 (B). **C-D** *C. obscura*, drawing from Brauer (1906: pl. 6, fig. 3) (A) and ZMH-ICH-0106353 (D). **E-F** *C. parapallida*, drawing of holotype (Badcock 1982: fig. 2) (E) and ZMH-ICH-0106346 (F). **G-H** *C. pseudopallida*, drawing from original description (Mukhacheva 1964: fig. 7a) (G) and ZMH-ICH-0108194 (H). **I-J** *Margrethia valentinae*, drawing by E. D'Antoni after Parin (1982) (I) and ZMH-ICH-0103956 (J). **K-L** *Sigmops bathyphilus*, drawing by E. Kissling from Zugmayer (1911: pl. 2, fig. 1) (K) and ZMH-ICH-0106323 (L). **M-N** *S. elongatus*, drawing from Brauer (1906: pl.4, fig. 4) (M) and ZMH-ICH-0106162 (N).

Abb. 3. Arten der Familie Gonostomatidae. **A-B** *Cyclothone microdon*, Zeichnung aus Brauer (1906: pl.2, fig. 2) (A) und ZMH-ICH-0106339 (B). **C-D** *C. obscura*, Zeichnung aus Brauer (1906: pl. 6, fig. 3) (A) und ZMH-ICH-0106353 (D). **E-F** *C. parapallida*, Zeichnung des Holotyps (Badcock 1982: fig. 2) (E) und ZMH-ICH-0106346 (F). **G-H** *C. pseudopallida*, Zeichnung aus der Originalbeschreibung (Mukhacheva 1964: fig. 7a) (G) und ZMH-ICH-0108194 (H). **I-J** *Margrethia valentinae*, Zeichnung von E. D'Antoni nach Parin (1982) (I) und ZMH-ICH-0103956 (J). **K-L** *Sigmops bathyphilus*, Zeichnung von E. Kissling aus Zugmayer (1911: pl. 2, fig. 1) (K) und ZMH-ICH-0106323 (L). **M-N** *S. elongatus*, Zeichnung aus Brauer (1906: pl.4, fig. 4) (M) und ZMH-ICH-0106162 (N).

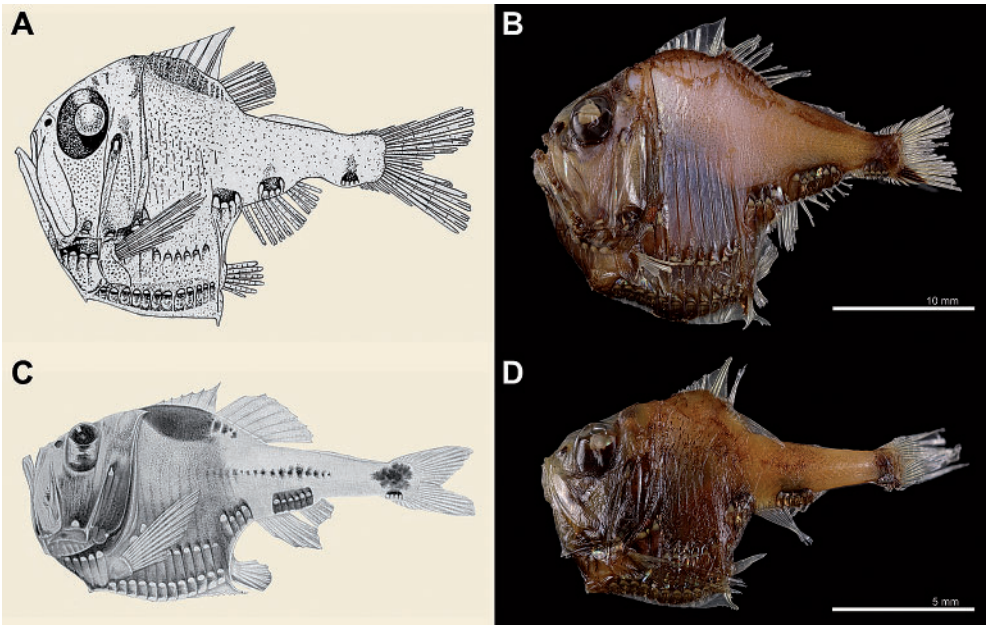

Fig. 4: Species of Sternoptychidae. **A-B** *Argyropelecus aculeatus*, drawing from Parr (1937: fig. 21, as *A. micracanthus*) (A) and ZMH-ICH-0106579 (B). **C-D** *A. hemigymnus*, drawing from Gilbert (1905: pl. 72, fig. 1, as *A. heathi*) (C) and ZMN-ICH-0103689 (D).
Abb. 4: Arten der Familie Sternoptychidae. **A-B** *Argyropelecus aculeatus*, Zeichnung aus Parr (1937: fig. 21, als *A. micracanthus*) (A) und ZMH-ICH-0106579 (B). **C-D** *A. hemigymnus*, Zeichnung aus Gilbert (1905: pl. 72, fig. 1, als *A. heathi*) (C) und ZMN-ICH-0103689 (D).

Identified following Borodulina (1978) and Whitehead et al. (1984).

EEZ-UY. ZMH-ICH-0103857 (7, 57.1-68.0), ex ISH 948-1966, WH 197/66; ZMH-ICH-0106579 (5, 66.6-106), ex ISH 1669-1968, WH 30/68.

Previously mentioned from Uruguay by McEachran & Fechhelm (1998) and Villarins et al. (2022), without information on distinct localities or voucher specimens. This is an evidence-based confirmation from the EEZ of Uruguay.

***Argyropelecus hemigymnus* Cocco, 1829**
(Fig. 4C-D)
Identified following Borodulina (1978) and Whitehead et al. (1984).

EEZ-UY. ZMH-ICH-0103689 (7, 55.6-65.0), ex ISH 950-1966, WH 197/66.

Previously mentioned from Uruguay by Briggs (1958) and Villarins et al. (2022), without information on distinct localities or voucher specimens. This is an evidence-based confirmation from the EEZ of Uruguay.

3.5. Stomiidae, Chauliodontinae – viperfishes

***Chauliodus danae* Regan & Trewavas, 1929**
(Fig. 5A-B)
Identified following Parin & Novikova (1974).

EEZ-UY. ZMH-ICH-0106990 (6, 138-238), ex ISH 1673-1968, WH 30/68; ZMH-ICH-0115218 (7, 50.8-234), ex ISH 63-1978, WH thUY/77.

Previously mentioned from Uruguay by Nion et al. (2002, 2016), without information on a distinct locality or voucher specimens. This is an evidence-based confirmation from the EEZ of Uruguay.

***Chauliodus minimus* Parin & Novikova, 1974**
(Fig. 5C-D)
Identified following Parin & Novikova (1974).

EEZ-AR. ZMH-ICH-0108161 (1, 219), ex ISH 320-1971, WH 239/71.

This is the first record of this species from the EEZ of Argentina.

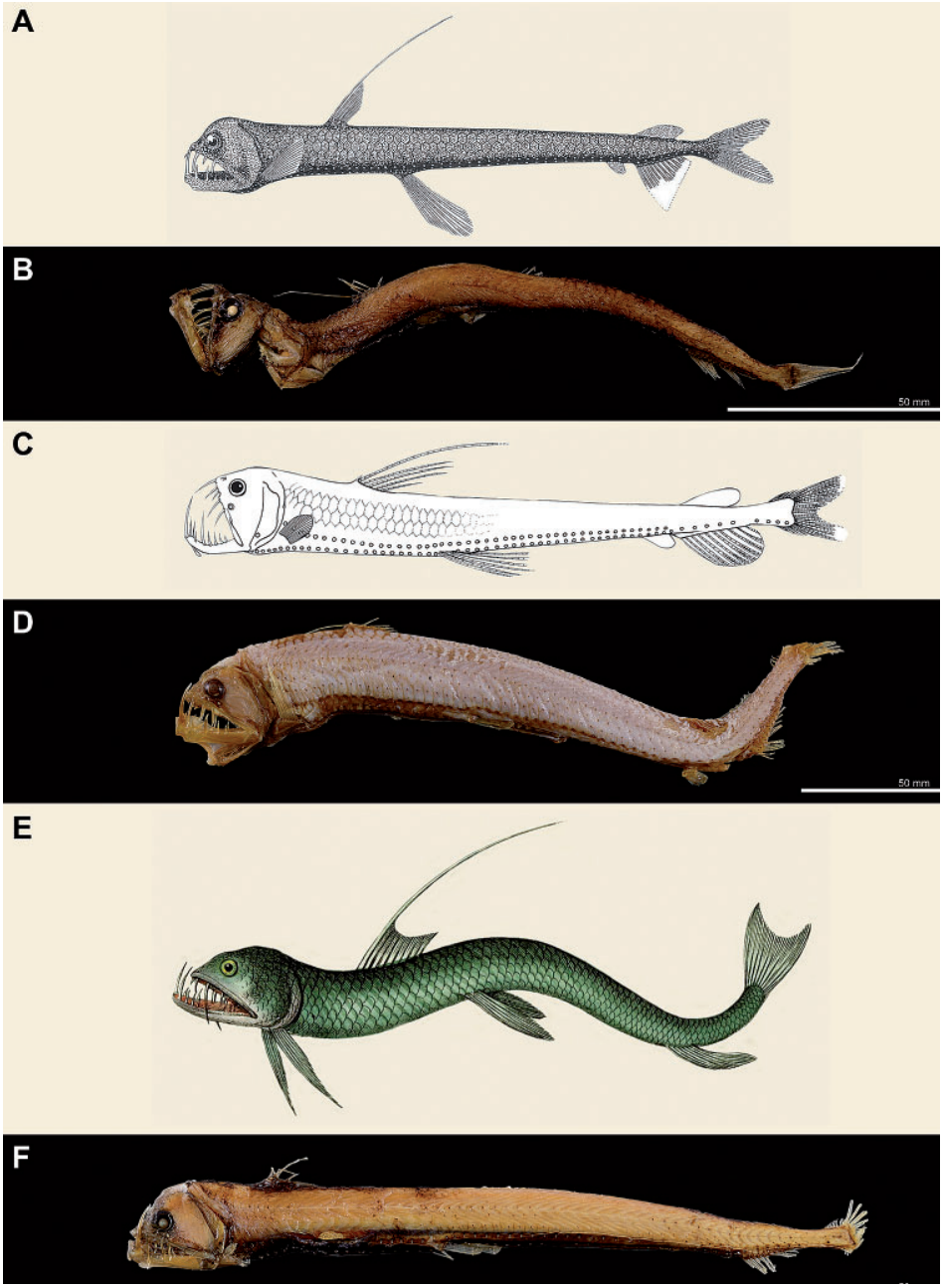

Fig. 5: Species of Chauliodontinae. **A-B** *Chauliodus danae*, drawing from original description (Regan & Trewavas 1929: pl. 7) (A) and ZMH-ICH-0106990 (B). **C-D** *C. minimus*, drawing from Sutton et al. (2020, after original description) (C) and ZMH-ICH-0107992 (D). **E-F** *C. sloani*, drawing from original description (Bloch & Schneider 1801: pl. 85, mirrored) and ZMH-ICH-0107273.

Abb. 5: Arten der Unterfamilie Chauliodontinae. **A-B** *Chauliodus danae*, Zeichnung aus der Originalbeschreibung (Regan & Trewavas 1929: pl. 7) (A) und ZMH-ICH-0106990 (B). **C-D** *C. minimus*, Zeichnung aus Sutton et al. (2020, nach der Originalbeschreibung) (C) und ZMH-ICH-0107992 (D). **E-F** *C. sloani*, Zeichnung aus der Originalbeschreibung (Bloch & Schneider 1801: pl. 85, gespiegelt) und ZMH-ICH-0107273.

FCZ-FK. ZMH-ICH-0104768 (1, 123), ex ISH 1382-1966, WH 331/66; ZMH-ICH-0107992 (1, 233), ex ISH 215-1971, WH 228/71.

***Chauliodus sloani* Bloch & Schneider, 1801**
(Fig. 5E-F)
Identified following Parin & Novikova (1974) and Sutton et al. (2020).

EEZ-UY. ZMH-ICH-0104271 (5, 81.7-223), ex ISH 951-1966, WH 197/66; ZMH-ICH-0107273 (5, 197-237), ex ISH 1674-1968, WH 30/68.

Previously mentioned from Uruguay by Nion et al. (2002, 2016) and Villarins et al. (2022), without information on distinct localities or voucher specimens. This is an evidence-based confirmation from the EEZ of Uruguay.

3.6. Stomiidae, Stomiinae - scaly dragonfishes

***Stomias boa* (Risso, 1810)**
(Fig. 6A-B)
Identified following Gibbs (1969).

EEZ-UY. ZMH-ICH-0107157 (1, 291), ex ISH 1675-1968, WH 30/68.

Previously mentioned from Uruguay by Nion et al. (2002, 2016), without information on a distinct locality or voucher specimens. This is an evidence-based confirmation from the EEZ of Uruguay.

***Stomias gracilis* Garman, 1899**
(Fig. 6C)
Identified following Gibbs (1969).

EEZ-AR. ZMH-ICH-0104755 (1, 208), ex ISH 1242-1966, WH 271/66; ZMH-ICH-0104760 (1, 257), ex ISH 1233-1966, WH 269/66; ZMH-ICH-0108137 (10, 218-232), ex ISH 382-1971, WH 240/71; ZMH-ICH-0108147 (2, 251-272), ex ISH 234-1971, WH 239/71; ZMH-ICH-0108156 (1, 263), ex ISH 179-1971, WH 339/71; ZMH-ICH-0109025 (10, 141-261), ex ISH 406-1971, WH 348/71; ZMH-ICH-0115606 (1, 196), ex ISH 294-1978, WH 692/78; ZMH-ICH-0120209 (2, 189-207), ex ISH 182-1981, WH 318/81.

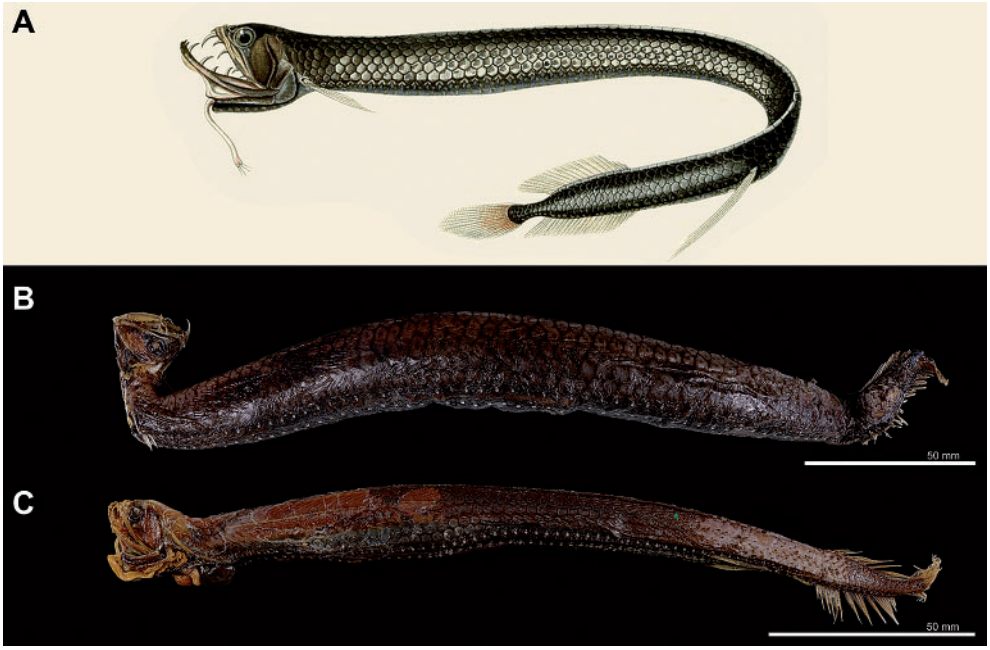

Fig. 6: Species of Stomiinae. **A-B** *Stomias boa*, drawing from Cuvier & Valenciennes (1846: pl. 545) (A) and ZMH-ICH-0107157. **C** *Stomias gracilis*, ZMH-ICH-0115606.
Abb. 6: Arten der Unterfamilie Stomiinae. **A-B** *Stomias boa*, Zeichnung aus Cuvier & Valenciennes (1846: pl. 545) (A) und ZMH-ICH-0107157. **C** *Stomias gracilis*, ZMH-ICH-0115606.

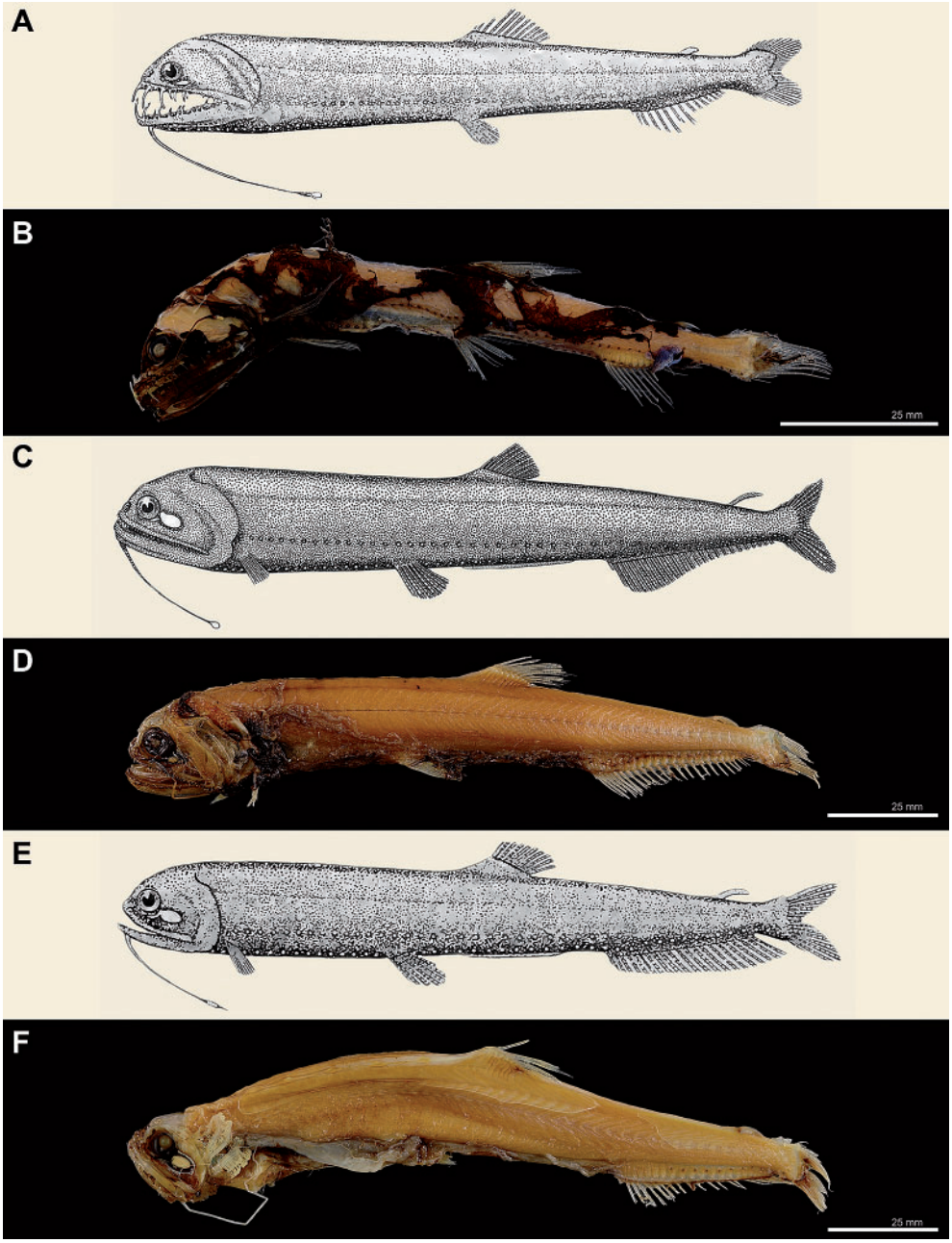

Fig. 7: Species of Astronesthinae. **A-B** *Borostomias antarcticus*, drawing from Norman (1930: fig. 15) (A) and ZMH-ICH-0114932 (B). **C-D** *Neonesthes capensis*, drawing from Regan & Trewavas (1929: pl. 6, fig. 2 as *N. macrolynchus*) (C) and ZMH-ICH-0104042. **E-F** *N. microcephalus*, drawing from original description (Norman 1930: fig. 16) (E) and ZMH-ICH-0107034.

Abb. 7: Arten der Unterfamilie Astronesthinae. **A-B** *Borostomias antarcticus*, Zeichnung aus Norman (1930: fig. 15) (A) und ZMH-ICH-0114932 (B). **C-D** *Neonesthes capensis*, Zeichnung aus Regan & Trewavas (1929: pl. 6, fig. 2 als *N. macrolynchus*) (C) und ZMH-ICH-0104042. **E-F** *N. microcephalus*, Zeichnung aus der Originalbeschreibung (Norman 1930: fig. 16) (E) und ZMH-ICH-0107034.

Previously mentioned from Argentina by Chebez & Padilla (1999), Cousseau & Rosso (2019), and Mabragaña & Cousseau (2021), without information on distinct localities or voucher specimens. Figueroa et al. (1998) reported the species from 43°05'S 54°39'W, a locality in international waters some 120 nm SE beyond the external limit of the EEZ-AR, later substantiated by Cousseau et al. (2012) for collection lot INIDEP 507. This is an evidence-based confirmation from the EEZ of Argentina.

EEZ-UY. ZMH-ICH-0115210 (4, 211-288), ex ISH 64-1978, WH thUY/77.

This is the first record of this species from the EEZ of Uruguay.

EEZ-GS. ZMH-ICH-0114880 (5, 178-223), ex ISH 389-1976, WH 97-II/76.

Previously mentioned from South Georgia Island by Collins et al. (2008) and for the South Sandwich Islands by Queirós et al. (2024), without information on distinct localities or voucher specimens.

3.7. Stomiidae, Astronesthinae – snaggletooths

***Borostomias antarcticus* (Lönnberg, 1905)**
(Fig. 7A-B)
Identified following Gibbs (1964) and Whitehead et al. (1984).

EEZ-UY. ZMH-ICH-0115221 (1, 92.1), ex ISH 65-1978, WH thUY/77

This is the first record of this species from the EEZ of Uruguay.

EEZ-GS. ZMH-ICH-0114932 (3, 98.9-133), ex ISH 390-1976, WH 97-II/76.

***Neonesthes capensis* (Gilchrist & von Bonde, 1924)**
(Fig. 7C-D)
Identified following Gibbs (1986).

EEZ-UY. ZMH-ICH-0104042 (1, 144), ex ISH 959-1966, WH 197/66.

Previously mentioned from Uruguay by Nion et al. (2002, 2016), without information on distinct localities or voucher specimens. This is an evidence-based confirmation from the EEZ of Uruguay.

***Neonesthes microcephalus* Norman, 1930**
(Fig. 7E-F)
Identified following Gibbs (1986).

EEZ-UY. ZMH-ICH-0107034 (1, 153), ex ISH 1677-1968, WH 30/68.

This is the first record of this species from the EEZ of Uruguay.

3.8. Stomiidae, Melanostomiinae – scaleless black dragonfishes

***Bathophilus nigerrimus* Giglioli, 1882**
(Fig. 8A-B)
Identified following Barnett & Gibbs (1968) and Whitehead et al. (1984).

EEZ-UY. ZMH-ICH-0104316 (1, 118), ex ISH 961-1966, WH 197/66.

Previously mentioned from Uruguay by Nion et al. (2002, 2016) and Villarins et al. (2022), without information on distinct localities or voucher specimens. This is an evidence-based confirmation from the EEZ of Uruguay.

***Melanostomias tentaculatus* (Regan & Trewavas, 1930)**
(Fig. 8C-D)
Identified following Whitehead et al. (1984) and Villarins et al. (2023).

EEZ-AR. ZMH-ICH-0109331 (3, 177-238), ex ISH 408-1971, WH 348/71.

Previously mentioned from Argentina by Villarins et al. (2022), without information on distinct localities or voucher specimens. This is an evidence-based confirmation from the EEZ of Argentina.

Fig. 8: Species of Melanostomiinae. **A-B** *Bathophilus nigerrimus*, drawing from Regan & Trewavas (1930: pl. 3, fig. 2) (A) and ZMH-ICH-0104316 (B). **C-D** *Melanostomias tentaculatus*, drawing from original description (Regan & Trewavas 1930: pl. 11, fig. 1) (C) and ZMH-ICH-0115212 (D). **E-F** *Opostomias micripnus*, drawing from Hickson (1893: pl. 78) (E) and ZMH-ICH-0106969 (F). **G-H** *Trigonolampa miriceps*, drawing from original description (Regan & Trewavas 1930: pl. 1, fig. 2) (G) and ZMH-ICH-0115222.

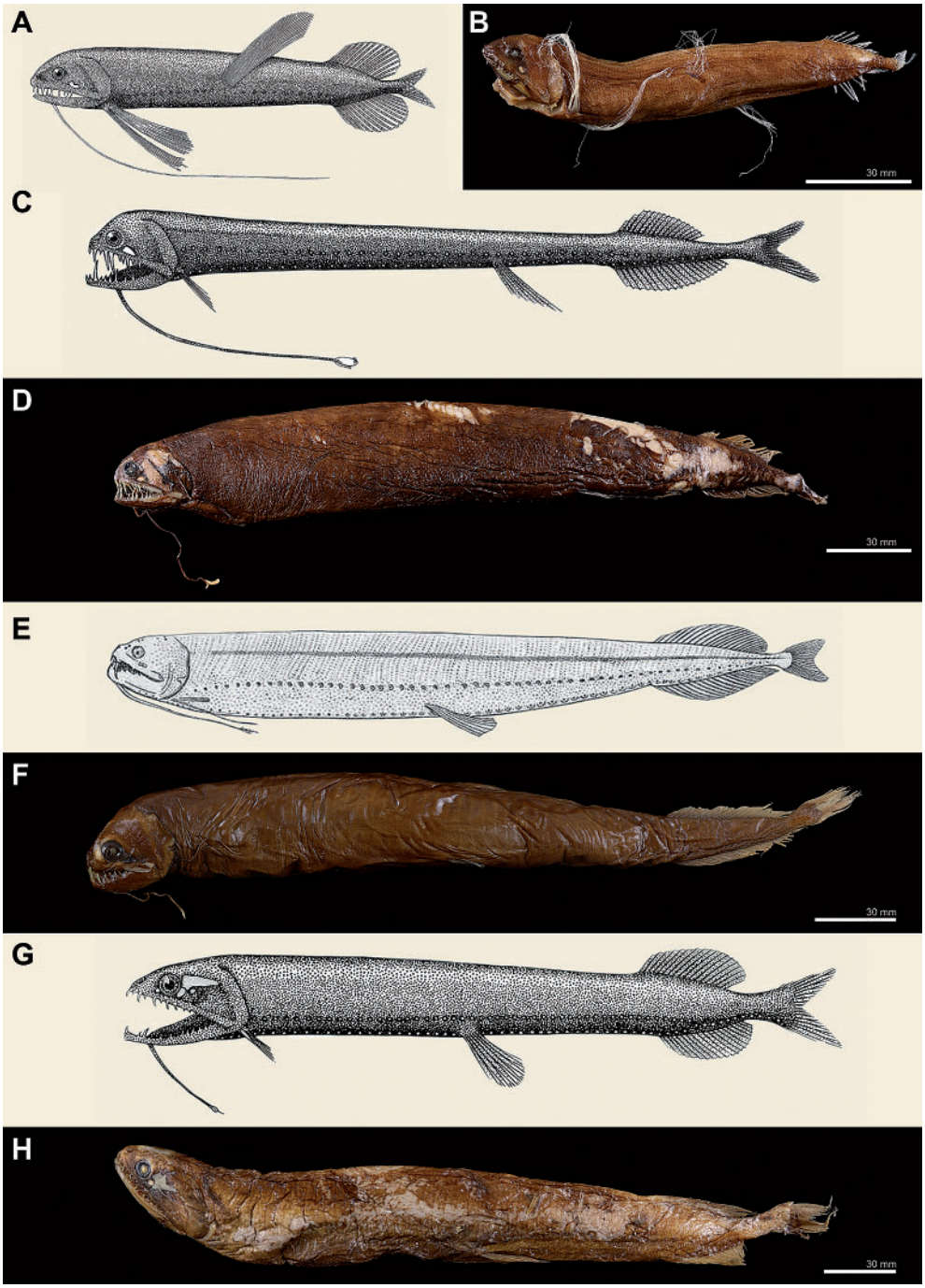

Abb. 8: Arten der Unterfamilie Melanostomiinae. **A-B** *Bathophilus nigerrimus*, Zeichnung aus Regan & Trewavas (1930: pl. 3, fig. 2) (A) und ZMH-ICH-0104316 (B). **C-D** *Melanostomias tentaculatus*, Zeichnung aus der Originalbeschreibung (Regan & Trewavas 1930: pl. 11, fig. 1) (C) und ZMH-ICH-0115212 (D). **E-F** *Opostomias micripnus*, Zeichnung aus Hickson (1893: pl. 78) (E) und ZMH-ICH-0106969 (F). **G-H** *Trigonolampa miriceps*, Zeichnung aus der Originalbeschreibung (Regan & Trewavas 1930: pl. 1, fig. 2) (G) und ZMH-ICH-0115222.

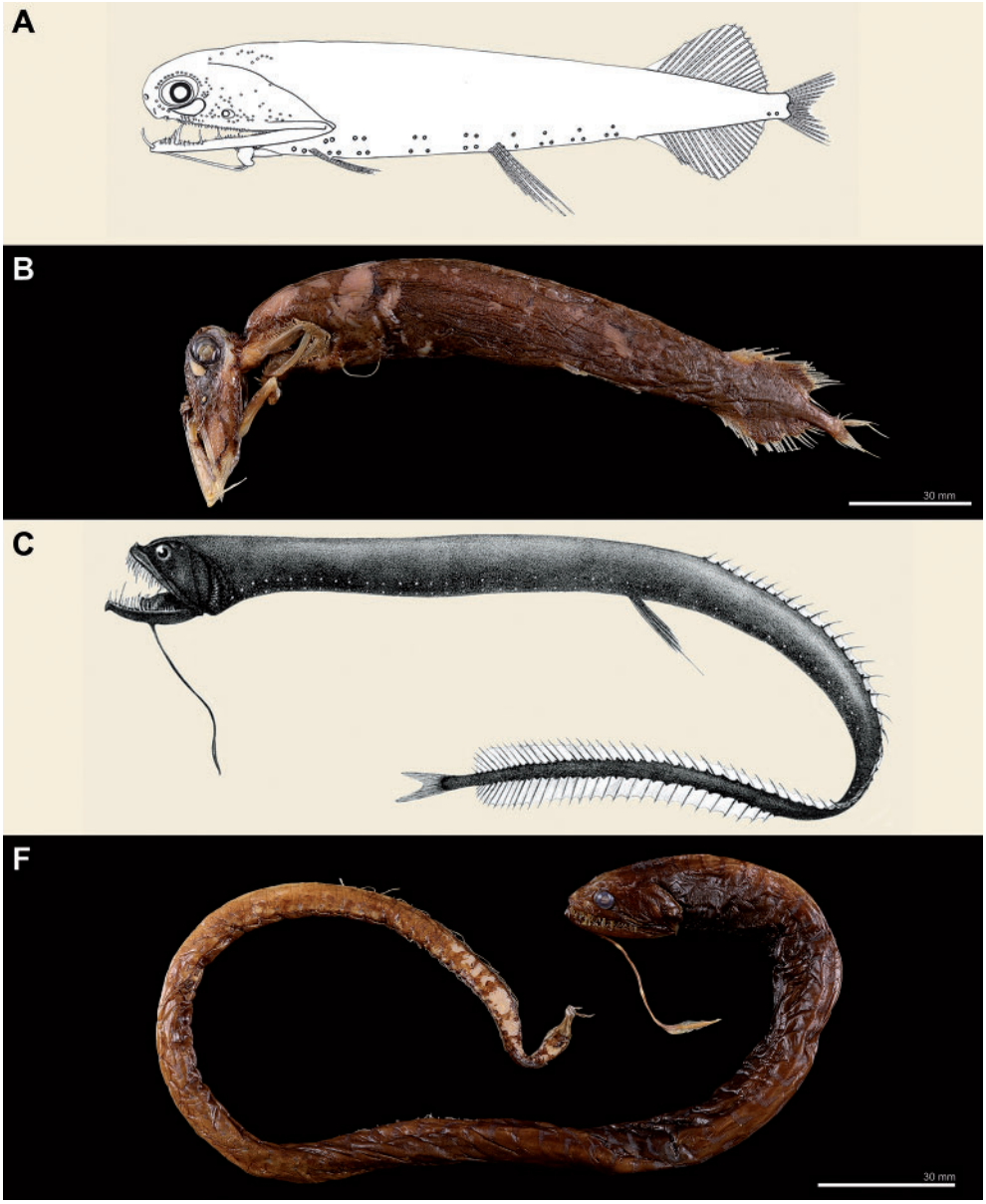

Fig. 9: Species of Malacosteinae and Idiacanthinae. **A-B.** *Malacosteus australis*, drawing by E. D'Antoni after Kenaley (2007) (A) and ZMH-ICH-0107063 (B). **C-D.** *Idiacanthus atlanticus*, drawing from Regan (1914: pl. 10, fig. 2, as *I. niger*) (C) and ZMH-ICH-0109145 (D).
Abb. 9: Arten der Unterfamilien Malacosteinae und Idiacanthinae. **A-B.** *Malacosteus australis*, Zeichnung von E. D'Antoni nach Kenaley (2007) (A) und ZMH-ICH-0107063 (B). **C-D.** *Idiacanthus atlanticus*, Zeichnung aus Regan (1914: pl. 10, fig. 2, als *I. niger*) (C) und ZMH-ICH-0109145 (D).

EEZ-UY. ZMH-ICH-0104231 (1, 141), ex ISH 960-1966, WH 197/66; ZMH-ICH-0106846 (2, 188-193), ex ISH 1679-1968, WH 30/68; ZMH-ICH-0115212 (1, 225), ex ISH 67-1978, WH thUY/77.

Previously mentioned from Uruguay by Villarins et al. (2022), without information on distinct localities or voucher specimens. This is

an evidence-based confirmation from the EEZ of Uruguay.

***Opostomias micripnus* (Günther, 1878)**
(Fig. 8E-F)
Identified following Imai (1941).

EEZ-UY. ZMH-ICH-0104240 (1, 260), ex ISH 962-1966, WH 197/66; ZMH-ICH-0106969 (1, 267), ex ISH 1678-1968, WH 30/68.

This is the first record of this species from the EEZ of Uruguay.

***Trigonolampa miriceps* Regan & Trewavas, 1930**
(Fig. 8G-H)
Identified following Regan & Trewavas (1930) and Whitehead et al. (1984).

EEZ-UY. ZMH-ICH-0115222 (1, 278), ex ISH 66-1978, WH thUY/77.

Previously mentioned from Uruguay by Nion et al. (2002, 2016), without information on a distinct locality or voucher specimens. This is an evidence-based confirmation from the EEZ of Uruguay.

3.9. Stomiidae, Malacosteinae – loosejaws

***Malacosteus australis* Kenaley, 2007**
(Fig. 9A-B)
Identified following Kenaley (2007).

EEZ-UY. ZMH-ICH-0107063 (1, 163), ex ISH 1680-1968, WH 30/68.

This is the first record of this species from the EEZ of Uruguay.

3.10. Stomiidae, Idiacanthinae – black dragonfishes

***Idiacanthus atlanticus* Brauer, 1906**
(Fig. 9C-D)
Identified following Regan & Trewavas (1930), Gibbs (1964), and Sutton et al. (2020).

EEZ-AR. ZMH-ICH-0108152 (2, 367-374), ex ISH 175-1971, WH 340/71; ZMH-ICH-0108153 (1, 538), ex ISH 232-1971, WH 239/71; ZMH-ICH-0109145 (3, 204-427), ex ISH 407-1971, WH 348/71.

Previously mentioned from Argentina by Stehmann & Schulze (1996) from *Walther Herwig* station 340/71 without information on voucher specimens and as listings by Menni et al. (1984), Cousseau & Rosso (2019), Cousseau et al. (2020), and Mabragaña & Cousseau (2021), without information on distinct localities or voucher specimens. Ciechomski (1969) mentioned larvae of *Idiacanthus* sp. from 40°11'S 54°58'W. This is an evidence-based confirmation from the EEZ of Argentina.

EEZ-UY. ZMH-ICH-0107129 (12, 66.0-420), ex ISH 1676-1968, WH 30/68; ZMH-ICH-0115216 (3, 171-330), ex ISH 68-1978, WH thUY/77.

Previously mentioned from Uruguay by Karrer (1968) as *I. niger* from *Ernst Haeckel* station 471/66 at 34°26'S 52°48'W without information on voucher specimens and as listings by Nion et al. (2002, 2016) without information on distinct localities or voucher specimens. Ciechomski (1969) mentioned larvae of *Idiacanthus* sp. from *Walther Herwig* stations 231/66 and 30/68, as well as from two more positions located in the EEZ-UY. This is an evidence-based confirmation from the EEZ of Uruguay.

FCZ-FK. ZMH-ICH-0115503 (1, 418), ex ISH 189-1978, WH 552/78.

4. Conclusion

In the context of the prevailing climate crisis and ongoing biodiversity changes, it is imperative to monitor faunistic changes. The basis for such studies is profound species lists, best secured by specimens in collections. Still museum collections are an indispensable source of diversity data, as shown in this study. We confirmed several species of Stomiiformes for the Exclusive Economic Zones of Argentina and Uruguay. These findings include three first records for Argentina and twelve for Uruguay, based on collections made during cruises of the *Walther Herwig* more than four decades ago. Further material is awaiting processing and revision in museum collections in general, but also for fish records from South America received from

cruises of the *Walther Herwig*, several taxonomic units await scientific reappraisal.

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