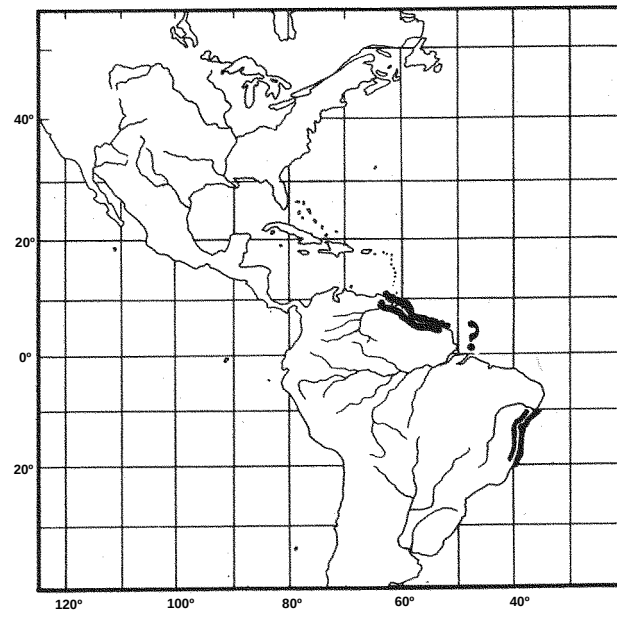
click for previous page

Diagnostic Features : Body elongate, slightly compressed, its depth about 5.5 times in standard length. Snout moderate, about l/2 eye diameter; maxilla short, tip evenly rounded, failing to reach pre-operculum by l/2 pupil diameter; lower gillrakers 29 to 35; pseudobranch short,about 3/4 eye diameter; gill cover canals of panamensis-type. Pectoral finrays i 14 to 15; anal fin short, with iii 12 to 14 finrays, its origin slightly behind base of last dorsal finray. A bright silver stripe along flank, about 3/4 eye diameter, dark bordered above. Closely resembles A. oerfasciata. which has 24 to 30 lower gillrakers and occurs north and west from Trinidad. No other Atlantic Anchoviella has more than 21 gillrakers. Engraulis also has a short, blunt maxilla, but pseudobranch at least equal to eye diameter.

Geographical Distribution : Western central and South Atlantic (French Guiana south to at least 20°S, i.e., Victoria, Brazil).



Habitat and Biology : Estuarine, presumably tolerating a range of salinities, but no data on penetration into freshwater or fully marine habitats. More data needed.

Size : To 12 cm standard length.

Interest to Fisheries : Presumably contributes to artisanal anchovy catches, but museum collections imply that it is not abundant.

Local Names :

Literature :

Remarks : The very close resemblance to A. perfasciata and the apparently clear geographical separation of the two suggests that cayennensis may in the future be considered merely a subspecies of perfasciata.

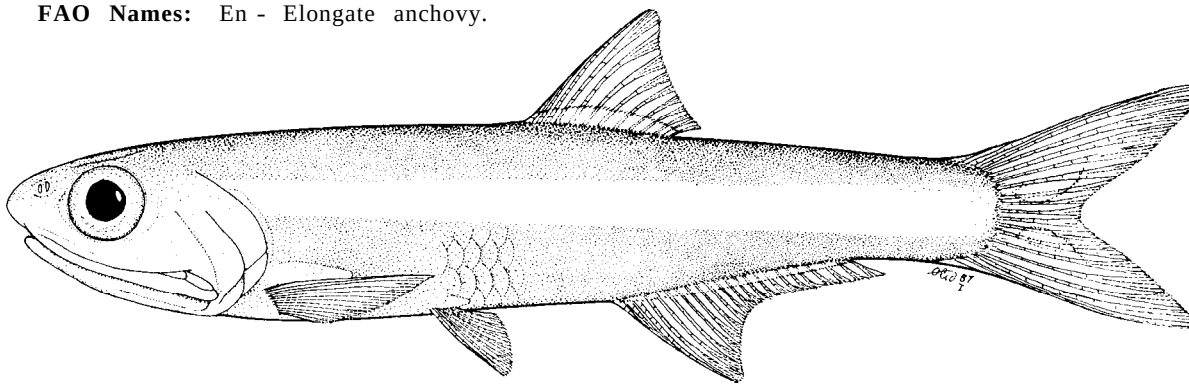
Anchoviella elongata (Meek & Hildebrand, 1923)

ENGR Anchoviel 15

Anchovia elongata Meek & Hildebrand, 1923, Publs Field Mus.nat.Hist., (zool.Ser.), 15(215):198, p1.12, fig.2 (Mindi Cut, Canal Zone, Panama).

Synonyms : Anchoviella elongata-Hildebrand, 1943:126, fig.54 (Mindi near Gatun, Canal Zone, and Porto Bello and Puerto Pilon, Panama); FWNA, 1964:223, fig.49 (synopsis); Gilbert & Kelso, 1971:23 (Tortuguero Lagoon, Costa Rica; also earlier specimens identified as Anchoa lamprotaenia by Caldwell, Ogren & Giovannoli, 1959); Dahl, 1971:165, fig.203 (Pasacaballos at mouth of Canal de1 Dique, Colombia).

FAO Names: En - Elongate anchovy.



Diagnostic Features : Body slender, moderately compressed, its depth 5 to 5.5 times in standard length. Snout moderate, about 2/3 eye diameter; maxilla relatively long, tip bluntly rounded, reaching to and a little beyond front margin of pre-operculum; lower gillrakers 21 to 24; gill cover canals of panamensis-type. Anal fin fairly long, with iii 18 to 22 finrays, its origin below about middle of dorsal fin base. A silver stripe along flank, less than eye diameter. Atlantic Anchoviella species that overlap in both gillraker and anal finray counts are: A. alleni (Upper Amazon) and A. guianensis (Guianas region), both with the anal fin origin below or behind base of last dorsal finray), and A. lepidentostole (not north of Trinidad; also, walkeri-type gill cover canals).

Geographical Distribution : Southwestern Caribbean (Belize south to Panama and northeastern Colombia).

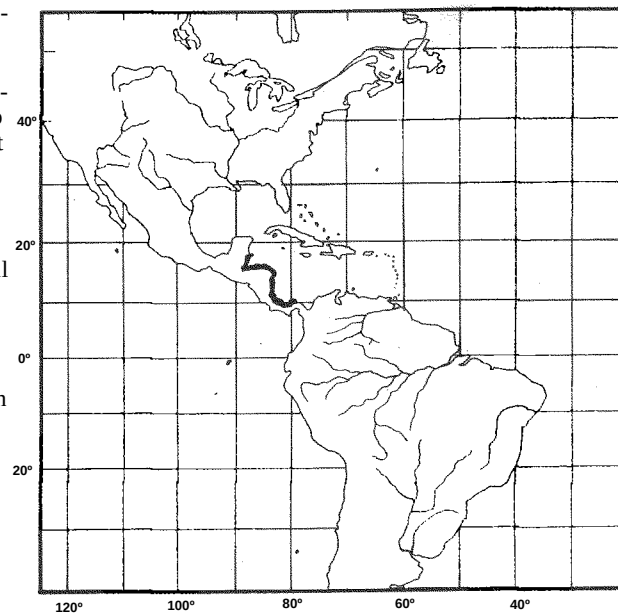
Habitat and Biology : Along beaches and in estuaries, lagoons or other brackish habitats, apparently able to tolerate a wide range of salinities, but perhaps not entering freshwater.

Size : To 8.2 cm standard length.

Interest to Fisheries : May contribute to artisanal anchovy catches.

Local Names :

Literature : Gilbert & Kelso (1971 - ecology in Costa Rica lagoons).



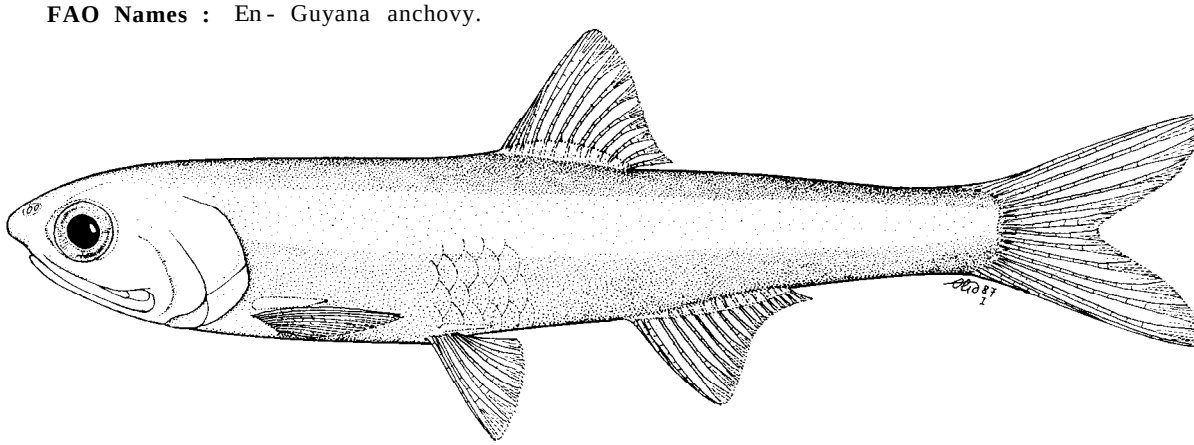
Anchoviella guianensis (Eigenmann, 1912)

ENGR Anchoviel 6

Stolephorus guianensis Eigenmann, 1912, Mem.Carnegie Mus., 5:447, p1.62, fig.5 (Bartica Rocks and Morawhanna, Demerara River, Guayana).

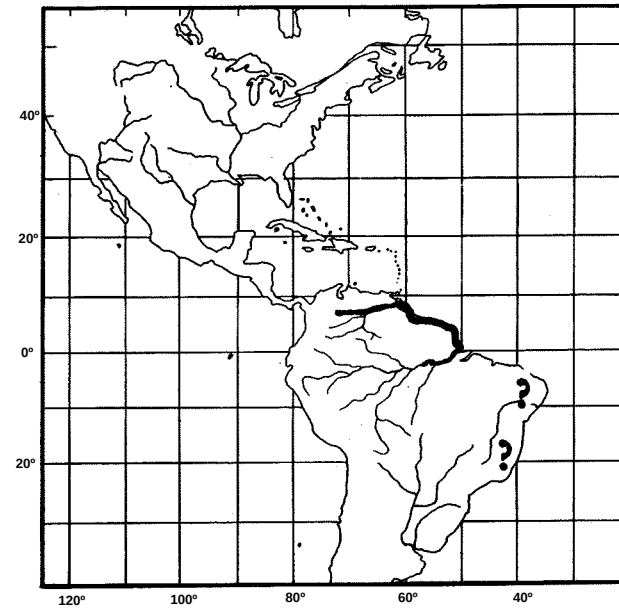
Synonyms : ? Stolephorus brownii:Puyo, 1949:154, fig.77 (French Guiana); Amplova guianensis:Myers, 1940:440 (Lagoa Grande, lower. Amazon near Obidos; not brevirostris specimens of Pearson, 1925 from Lake Rogoagua, Bolivia); Anchoviella guianensis-Fowler, 1931b:392, 406 (La Brea Beach, Trinidad; also Caño de Guanoco, Venezuela); Hildebrand, 1943:122, fig.52 (Guyana; also Itacoatiara, Amazonas); Fowler, 1948:20 (listed); Carvalho, 1951:53, p1.1, fig.3 (Itacoatiara, Lagoa Grande); FWNA, 1964:217, fig.47 (synopsis); Cervigón, 1966:146 (no Venezuelan specimens); Whitehead, 1973a:157, figs 59, 60 (the Guianas; alleni wrongly included in synonymy); Cervigón, 1982:218, fig.14A (Orinoco delta).

FAO Names : En - Guyana anchovy.



Diagnostic Features : Body fairly slender, moderately compressed, its depth 4 to 5 times in standard length. Snout short, a little over l/2 eye diameter; maxilla moderate, tip bluntly rounded, failing to reach pre-operculum by l/3 to l/2 pupil diameter; lower gillrakers 20 to 26; gill cover canals of walkeri-type. Anal fin short, with iii 14 to 18 finrays, its origin a little behind base of last dorsal finray. A silver stripe along flank, widening to about l/2 eye diameter over anal fin base. Atlantic Anchoviella species that overlap in gillraker and anal finray counts are: A. carrikeri (upper Amazon; maxilla longer, failing to reach pre-operculum by l/4 pupil diameter), A. brevirostris (lower jaw longer than upper, its symphysis almost at tip of snout, also panamensis-type gill cover canals), and A. jamesi (anal origin below about middle of dorsal fin base); A. alleni occurs in the upper Amazon system and A. perfasciata usually has more gillrakers, but fewer anal finrays.

Geographical Distribution : Western central and South Atlantic (Orinoco system, as far up as Puerto Gaitan on Manacacias River in Colombia, certainly in delta; lower parts of rivers of Guyana, Surinam and French Guiana; lower part of Amazon, but lower limits not known; upper Amazon specimens not this species.



Habitat and Biology : Estuarine and riverine, apparently tolerating only very low salinities. Breeding in December, a female of 58 mm standard length having 1 980 eggs (Cervigón, 1982:219 - Orinoco mouth).

Size : To 6 cm standard length, perhaps larger.

Interest to Fisheries : Probably contributes to riverine artisanal fisheries.

Local Names :

Literature : Cervigón (1982 - notes on ecology and breeding).

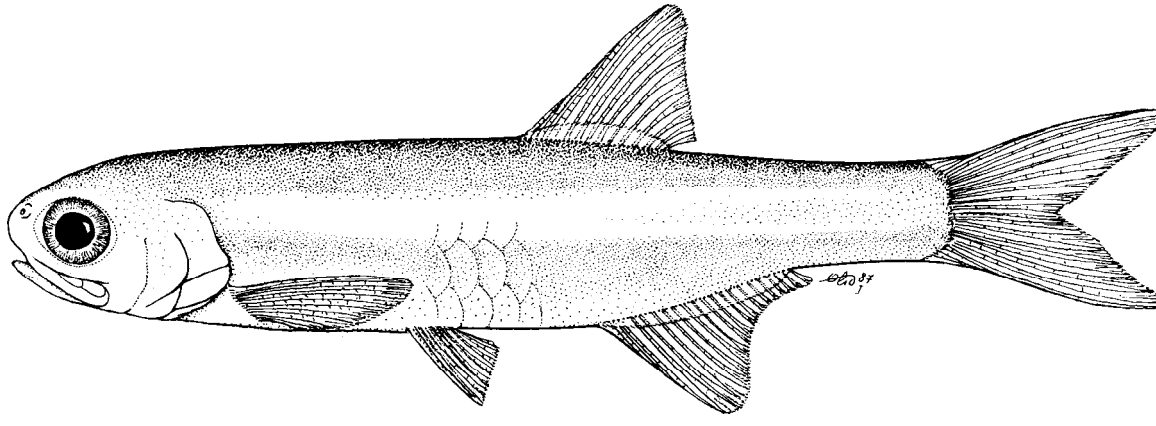
Anchoviella jamesi (Jordan & Seale, 1926)

ENGR Anchoviel 7

Amplova jamesi Jordan & Seale, 1926, Bull.Mus.comp.Zool., 67:410 (Jutai River and Lago Alexo, Brazil).

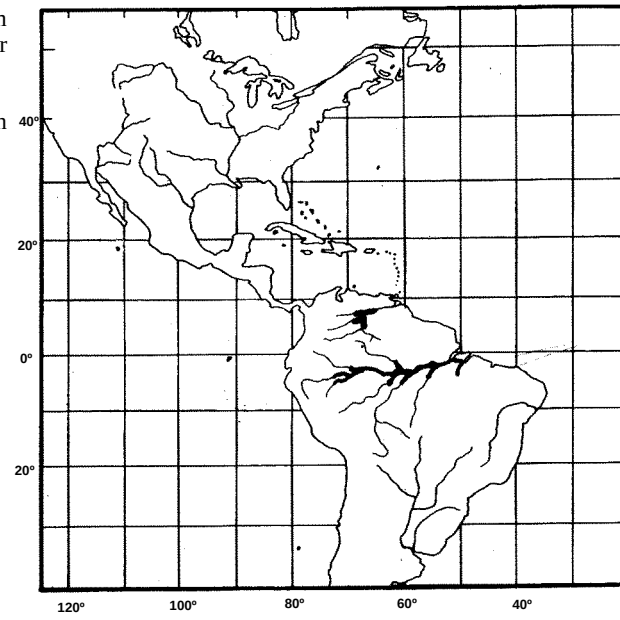
Synonyms : Amplova jamesi Myers, 1940:441 (on Jordan & Seale); Anchoviella jamesi-Hildebrand, 1943:137, fig.61 (Lago Alexo, Brazil); Fowler, 1948:22, fig.14 (listed); Carvalho, 1951:60, p1.2, fig.3 (Lake Aleixo, Amazon); Lüling, 1969:577 (Yarina Cocha at Pucallpa, Ucayali River, Brazil).

FAO Names : En - James's anchovy.



Diagnostic Features : Body fairly slender, somewhat compressed, its depth 4.5 to 6 times in standard length. Snout very short, about l/2 eye diameter; maxilla very short, tip bluntly rounded, reaching only a little beyond hind rim of eye; lower gillrakers 17 to 21; gill cover canals of panamensis-type. Anal fin moderate, with iii 16 to 21 finrays, its origin below about middle of dorsal fin base. A silver stripe along flank. Atlantic Anchoviella species that overlap in both gillraker and anal finray counts are: A. elongata (Panama region) and A. manamensis (vertebrae 34 to 36, cf. 40 in A. jamesi; also, unbranched dorsal finrays always iii, cf. often ii in A. jamesi); A. guianensis (snout also short, but gillrakers not less than 20), A. carrikeri, A. vaillanti and A. lepidentostole all have the walkeri-type gill cover canals.

Geographical Distribution : Amazon system (Ucayali, Jutai, Tapajbs, Tocantins and probably other tributaries, also Rio Negro) and Orinoco (middle reaches).



Habitat and Biology : Freshwater, riverine, in middle and upper reaches. More data needed.

Size : To about 4 cm standard length.

Interest to Fisheries : Little or none.

Local Names :

Literature :

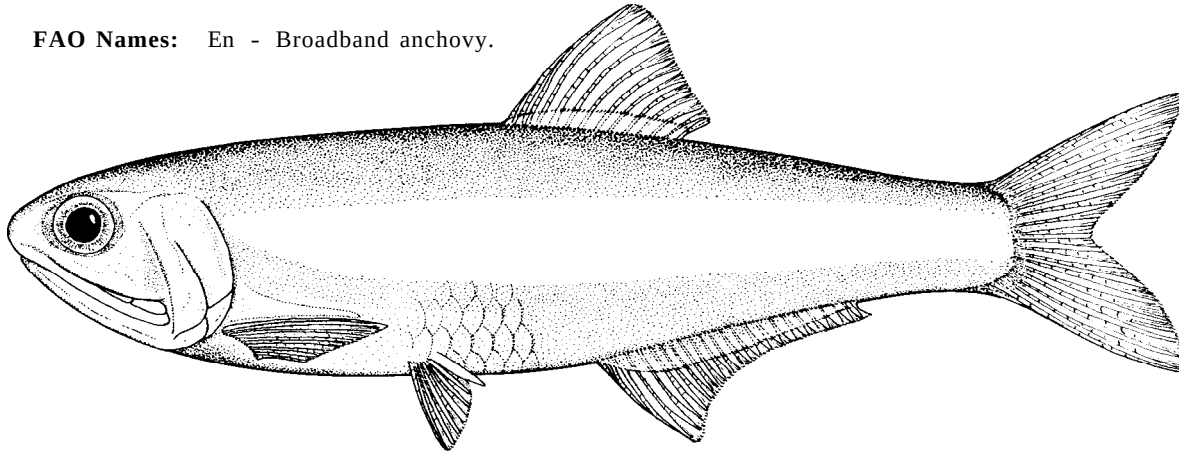
Anchoviella lepidentostole (Fowler, 1911)

ENGR Anchoviel 1

Anchovia lepidentostole Fowler, 1911, Proc.Acad.nat.Sci.Philad., 63:214, fig.3 ('Surinam').

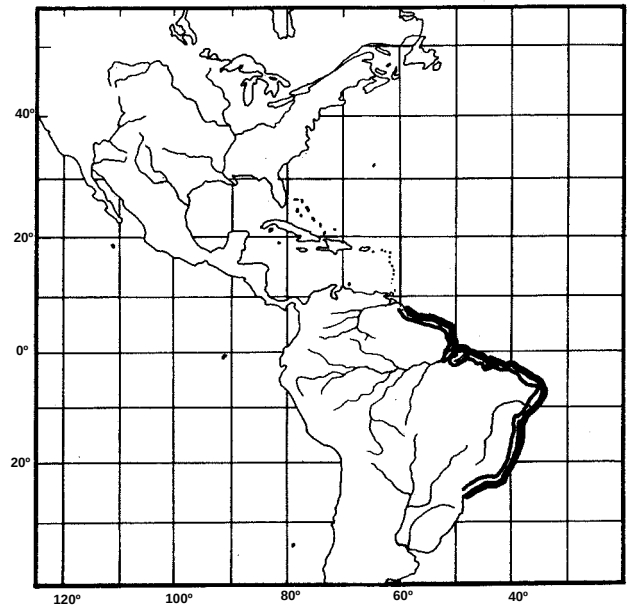
Synonyms : Anchoviella iheringi Fowler, 1941b:124, fig.2 (Rio Jaguaribe, Brazil); Idem, 1948:22, fig.13 (distinguished from lepidentostole); Hildebrand & Carvalho, 1948:292 (on Hubbs); Carvalho, 1951:55, p1.1, fig.4 (Rio Jaguaribe, Ceara ; Anchoviella hubbsi Hildebrand, 1943:128, fig.56 (Rio Ribeira de Iguape, Sao Paulo, Brazil); Fowler, 1948:20.(listed); Carvalho, 1951:57, p1.2, fig.1 (Rio Ribeira de Iguape up to about Xiririca and Cananéia); Nomura & Menezes, 1964:352 (synopsis and references); Anchoviella nitida Hildebrand & Carvalho, 1948:294, fig.4 (Victoria, Brazil); Carvalho, 1951:56,p1.1, fig.5 (Vitória); Menezes, 1974:216 (nitida types); Cervigón, 1980:227, fig.2.77 (listed); Amplova lepidentostole:Myers, 1940:439 (on Fowler); Anchoviella lepidentostole- Hildebrand, 1943:127, fig.55 (`Surinam', the types); Boeseman, 1963:296 (Surinam); FWNA, 1964:224, fig.50 (synopsis); Whitehead, 1973a:149, fig.56 (Venezuela, Guyana,Surinam, northern Brazil); Figueiredo & Menezes, 1978:28, fig.35 (Brazil, abundance); Cervigon, 1982:215, figs 2, 3 (Orinoco delta, ecology, biology); Nelson, 1984:86, fig.1 (rostral organ).

FAO Names: En - Broadband anchovy.



Diagnostic Features : Body moderately elongate and compressed, its depth 4 to 5 times in standard length. Snout short, about 2/3 eye diameter; maxilla relatively long, tip bluntly but obliquely rounded, reaching to pre-operculum; lower gillrakers 18 to 25; gill cover canals of walkeri-type. Anal fin fairly long, with iii 19 to 23 finrays, its origin below about middle of dorsal fin base. A broad silver stripe along flank, equal or greater than eye diameter below dorsal fin. Atlantic Anchoviella species that overlap in gillraker and anal finray counts are: A. blackburni (gillrakers not more than 18, branched anal finrays not less than 22; also, walkeri-type gill cover canals, as also in A. jamesi) and A. vaillanti (maxilla not reaching to pre-operculum, gillrakers 14 to 19), and A. elongata (Panama area, panamensis - type canals). See ENGR Anchoviel 1, Fishing Area 31.

Geographical Distribution : Western central and South Atlantic (Orinoco delta south to Ponta da Cotinga, Paraná coast of Brazil).



Habitat and Biology : Coastal, pelagic, inshore and down to 50 m depth, schooling, but most likely anadromous, entering estuaries and penetrating into fresh water (to 100 km from the Orinoco mouth fide Cervigón, 1982: 216). Orinoco specimens caught in March had fed on brachyuran megalops (Cervigón, loc.cit.). Spawns apparently in May in the Orinoco delta, perhaps migrating into fresh water from the estuary; males mature at 4.8 cm standard length, females at 7.2 cm, with about 20 202 eggs in a specimen of 7.7 cm, both sexes at maturity having a large amount of visceral and intermuscular fat (Cervigón, loc.cit.); enters Rio Ribeira de Iguape, Brazil., in October to March (Nomura & Menezes, 1963).

Size : To 11.6 cm standard length.

Interest to Fisheries : Occurs in large numbers during the hot months in the region of Rio Ribeira de Iguape on the Sào Paulo coast of Brazil and is said to be of commercial importance (Figueiredo & Menezes, 1978: 28). Probably makes a significant contribution to artisanal anchovy catches elsewhere.

Local Names : BRAZIL: Manjuba (applied to most anchovies).

Literature : Nomura & Menezes (1963 - excellent summary of Brazilian published data on biology), Cervigón (1982 - biology in Orinoco).

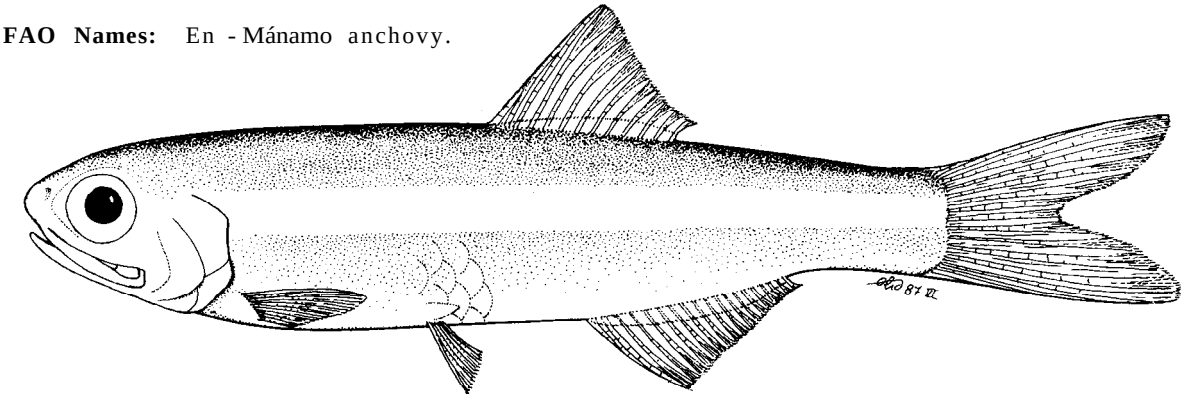
Anchoviella manamensis Cervigón, 1982

ENGR Anchoviel 8

Anchoviella manamensis Cervignon, 1982, Recurs.Pesq.Rio Orinoco:220, figs 5, 6 (Caño Mánamo near Tucupita, Orinoco delta).

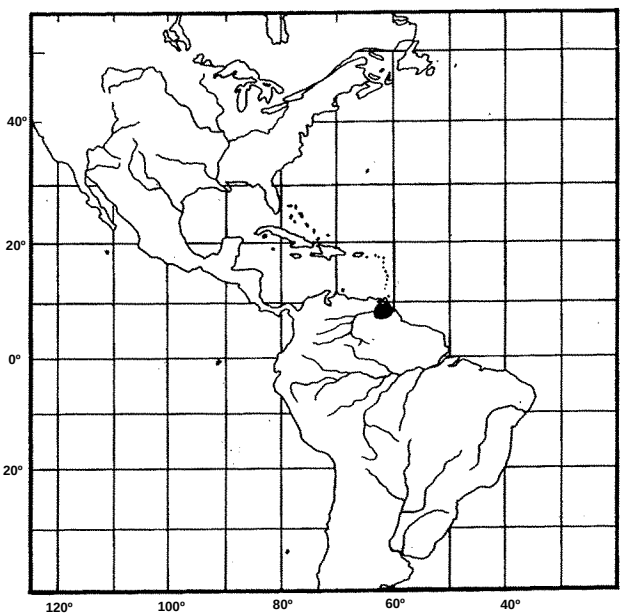
Synonyms : None.

FAO Names: En - Mánamo anchovy.



Diagnostic Features : Body fairly slender, sornewhat compressed, its depth 4.5 to 5 tirnes in standard length. Snout very short, about I/2 eye diameter; maxilla very short, tip bluntly rounded, reaching only a little beyond hind border of eye; lower gillrakers 15 to 16 (rarely 17); gill cover canal pattern not recorded. Anal fin fairly short, with iii 15 to 18 finrays, its origin below about middle of dorsal fin base. Atlantic Anchoviella species that overlap in both gillraker and anal finray counts are: A. jamesi (middle and upper Amazon, middle Orinoco, but vertebrae 40, cf. only 34 to 36 A. manamensis) and A. vaillanti (Sào Francisco River, Brazil; branched anal finrays 17 ta 22, fin origin just behind dorsal fin base).

Geographical Distribution : Orinoco delta, also Guyana and Surinam.



Habitat and Biology : Freshwater, in large schools together with juvenile Anchovia surinamensis and slightly larger juvenile Lycengraulis batesii, which appear to feed on the Anchoviella (Cervigón, 198:221). Mature by about 2 cm standard length; a female of 2.5 cm had 157 large eggs in the ovary (Cervigón, loc.cit.). This is evidently a progenetic species (adult at juvenile stage).

Size : To 2.5 cm standard length.

Interest to Fisheries : Probably too small to make much contribution.

Local Names :

Literature : Cervigón (1982 - notes on biology).

Anchoviella nattereri (Steindachner, 1880)

ENGR Anchoviel 9

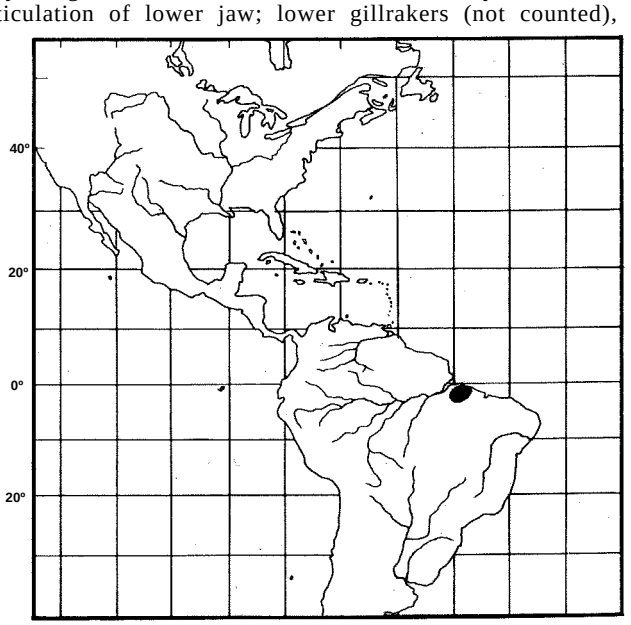
Engraulis nattereri Steindachner, 1880, Sber.Akad.Wiss.Wien, 80:174 (Parà, Brazil); Idem, 1880, Ichthyol. Beitr., (8):56(repeat).

Synonyms : Anchoviella nattereri-Hildebrand, 1943:133 (on Steindachner); Whitehead, 1970:32 (Steindachner type lost; original description summarized).

FAO Names: En- Natterer's anchovy.

Diagnostic Features (from Steindachner): Snout fairly long, 4 times in head but less than eye diameter; maxilla short, tip nearly square, not quite reaching to articulation of lower jaw; lower gillrakers (not counted), about equal to eye diameter. Pectoral fin long, reaching halfway along pelvic fin; anal fin long, with 28 or 29 finrays (probably iii 26 or 27, since first unbranched ray minute), its origin below middle of dorsal fin base. An indistinct silver stripe along flank. The anal fin position and finray count suggest A. blackburni, A. elongata and A. lepidentostole, of which only the last might be expected from Pará (but pectoral fins not to pelvic fin base).

Geographical Distribution : Western South Atlantic drainage (Pará, Brazil - type locality).



Habitat and Biology : Presumably riverine or estuarine. More material and data needed.

Size : To 5 cm (the lost type).

Interest to Fisheries : No data.

Local Names :

Literature : Apparently not seen since first described.

Remarks : Possibly this is a senior synonym for A. lepidentostole, but only if Steindachner exaggerated the length of the pectoral fins (not even to pelvic fin base in most or all Anchoviella).

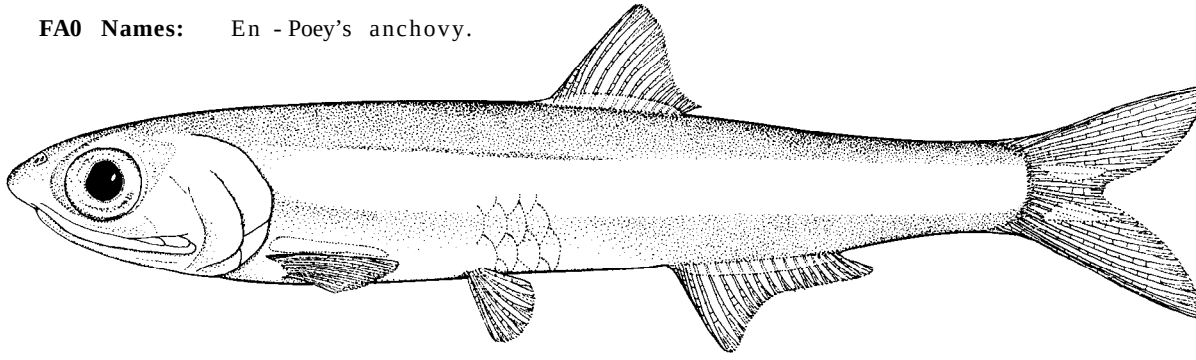
Anchovia nattereri of Jordan & Seale (1926:413), also from Pará had long pectorals, but also 98 gillrakers (as in Anchovia surinamensis) and a triangular point on the sub-operculum border (not in the Atlantic drainage A. surinamensis, but found in the Pacific A. macrolepidota; also in Anchoa spinifer, which however has only 12 to 19, lower gillrakers). Hildebrand (194327) suggested Anchovia clupeoides, but this lacks the triangular point on the sub-operculum.

Anchoviella perfasciata (Poey, 1860) | ENGR Anchoviel 12

Engraulis perfasciatus Poey, 1860, Memorias hist.nat.Cuba, 2:312 (Cuba).

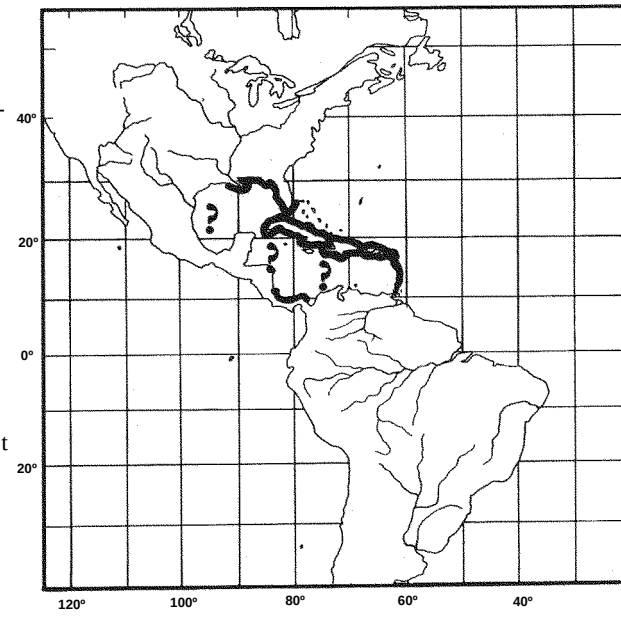
Synonyms : Engraulis perfasciatus:Günther, 1868:391 (San Domingo, Cuba); Stolephorus perfasciatus:Swain & Meek, 1885:34 (Florida, Cuba); Anchovia perfasciata:Jordan & Thompson, 1905233 (Florida); Fowler, l911:211 (Puerto Rico); Hildebrand, 1941224 (Beaufort, North Carolina); Anchoviella perfasciata-Jordan & Seale, 1926:394 (Cuba, Poey specimens); Hildebrand, 1943:116, fig.49 (Cuba, Jamaica, Puerto Rico, St. Lucia); FWNA,1964:213, fig.46 (synopsis; large synonymy and notes on it); Daly, 1970:88, figs 5,6f (photos), tabs 2-7 (Florida); Whitehead, 1973a:149 (key only).

FA0 Names: En - Poey's anchovy.



Diagnostic Features : Body elongate, slightly compressed, its depth about 5.5 times in standard length. Snout moderate, about 3/4 eye diameter; maxilla short, tip bluntly rounded, failing to reach pre-operculum by l/2 pupil diameter; lower gillrakers 24 to 30; pseudobranch short, about 3/4 eye diameter; gill cover canals of panamensis-type. Pectoral finrays i 13 to 15; anal fin short, with iii 10 to 15 finrays, its origin slightly behind base of last dorsal finray. A bright silver stripe along flank, about 3/4 or almost equal to eye, dark bordered above. Closely resembles A. cayennensis, which has 29 to 35 lower gillrakers and occurs to the south of Trinidad. Anchoviella alleni, A. brerostris and A. guianensis may occasionally overlap in gillraker and anal finray counts, but none occurs to the north of Trinidad: Engraulis has a short and blunt maxilla, but pseudobranch at least equal to eye diameter.

Geographical Distributio : Western central Atlantic (Beaufort, North Carolina south to Florida; Antilles from Cuba to St. Lucia, also Trinidad, but not recorded by Cervigón (1966) at Blanquilla and Los Roques off Venezuela; also occurs off Panama).



Habitat and Biology : Marine, pelagic, coastal, apparently not ,entering brackish water (cf. the closely related A. cayennensis); rare in Florida shore seine collections, but in great numbers under a night light", perhaps because it may stay some distance from the shore in daytime (Daly, 1970:92).

Size : To 8.5 cm standard length.

Interest to Fisheries : Probably not sufficiently abundant to contribute much to anchovy catches, at least in daytime shore seines.

Local Names : CUBA: Manjúa; USA: Flat anchovy (FWNA, AFS list).

Literature : FWNA (1964 - large synonymy, but apparently very little on the biology of the species).

Remarks : The marine Anchoviella perfasciata and the estuarine A. cayennensis differ from all other members of the genus in having the anal fin origin behind the dorsal fin base. Possibly cayennensis is merely a southern subspecies.

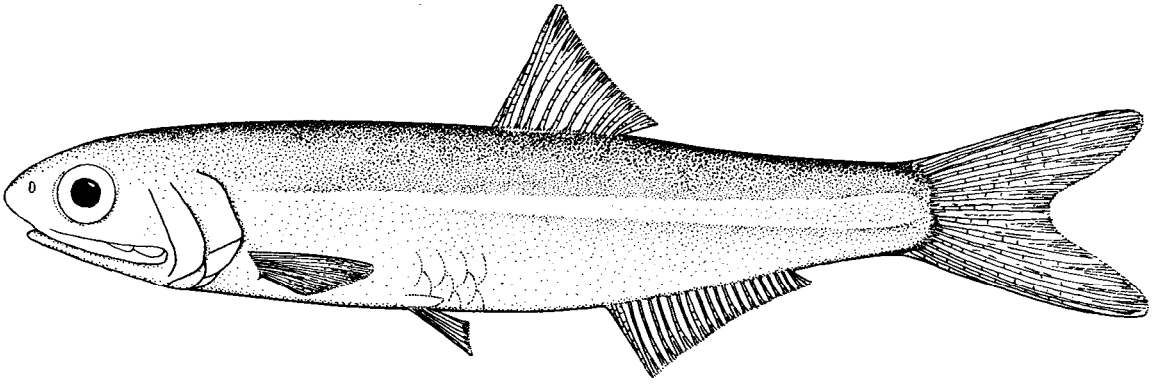
Anchoviella vaillanti (Steindachner, 1908)

ENGR Anchoviel 10

Engraulis vaillanti Steindachner, 1908, Anz.Akad.Wiss.Wien,45:193 (Joazeiro and Barra on Rio Sào Francisco, also Rio Grande do Norte and Rio Preta, Brazil).

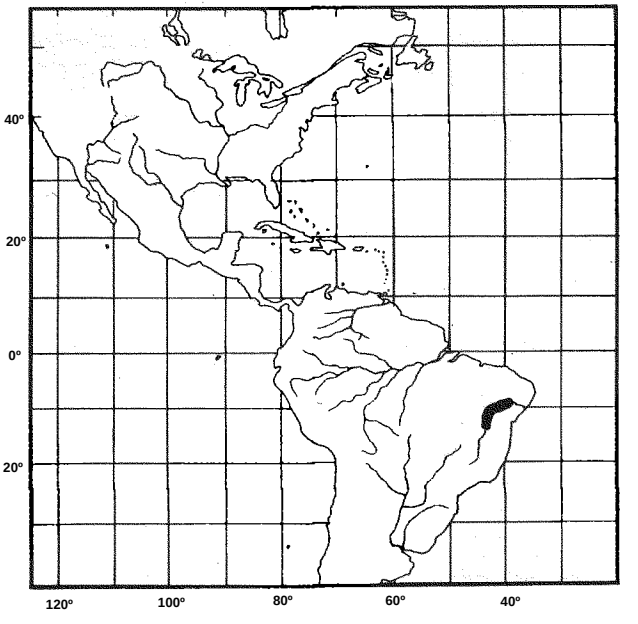
Synonyms : Amplova vaillanti:Myers, 1940:439 (Barra, Rio Sào Francisco); Anchoviella vaillanti-Hildebrand, 1943:125 (on Steindachner); Carvalho, 1951:54, no fig. (compiled); Whitehead,1970:30 (Steindachner types); Idem, 1973a:149 (key only).

FAO Names : En - Vaillant's anchovy.



Diagnostic Features : Body fairly slender, moderately compressed, its depth about 5 times in standard length. Snout moderate, a little less than eye diameter; maxilla moderate, tip bluntly rounded, failing to reach pre-operculum by about 1/2 pupil diameter; lower gillrakers 14 to 19; gill cover canals of walkeri-type. Anal fin moderate, with iii 17 to 22 finrays, its origin just behind base of last dorsal finray. A silver stripe along flank. Atlantic Anchoa species that overlap in both gillraker and anal finray counts are: A. jamesi and A. manamensis (anal fin origin under middle of dorsal fin base): A. carrikeri (upper Amazon), also A. lepidentostle (maxilla to pre-operculum, gillrakers 18 to 24).

Geographical Distribution : Western South Atlantic drainage (Sao Francisco River; the records for Rio Grande do Norte and the Rio Preta by Steindachner (1908) needed to be checked).



Habitat and Biology : Riverine, in middle reaches of rivers. More data needed.

Size : To 6.8 cm standard length.

Interest to Fisheries : No data.

Local Names :

Literature :

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