

**Geographical Distribution** : Gulf of California to Peru (at least to Callao).

**Habitat and Biology** : Coastal, pelagic, schooling. More data needed.

**Size** : To 8 cm standard length, usually to 5 cm.

**Interest to Fisheries** : Probably little.

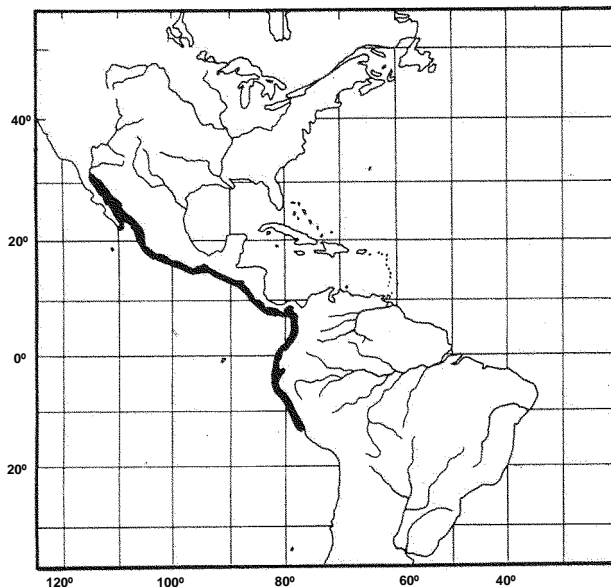
**Local Names** : USA: Flatiron herring (AFS list).

**Literature** : See under synonyms.

**Remarks** : Rivas (1950:286-7, also 1964:387, i.e. FWNA) recognized *H. peruana* as a distinct species, but it seems more likely a subspecies or perhaps merely a southern form:

*H. thrissina thrissina*: 42 to 44, usually 43 scales in lateral series, 15 to 19 pre-dorsal scales; Gulf of California to Panama

*H. thrissina peruana*: 38 to 42, usually 39 to 41 scales in lateral series, 11 to 14 pre-dorsal scales; Panama to Peru.



**Opisthonema** Gill, 1861

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*Opisthonema* Gill, 1861, Proc.Acad.nat.Sci.Philad.:37 (type: *Oisthonema thrissa* Gill = *Megalops oglina* LeSueur). *Filialosa* Fowler, 1944, Monagr.Acad.nat.Sci.Philad., (6):207 (type: *Meletta libertate* Günther).

**Diagnostic Features** : The filamentous last dorsal finray distinguishes *Opisthonema* from all other genera of the Clupeinae; it otherwise resembles *Sardinella* (but pelvic finrays i 7, cf. i 8 in all New World *Sardinella*) and *Harengula* (which has a small toothed hypo-maxilla between the hind tip of the pre-maxilla and the expanded blade of the maxilla). A filamentous last dorsal finray occurs in *Dorosoma* and certain other gizzard shads, but mouth inferior.

**Biology, Habitat and Distribution** : Marine, pelagic and schooling. New World only (Atlantic and Pacific coasts), mainly in tropical and subtropical waters.

**Interest to Fisheries** : Moderate catches of both Atlantic and Pacific species (45 745 tons combined in 1983).

**Species** : The most recent revision (Berry & Barrett, 1963), recognized 1 Atlantic and 4 Pacific species, to which Rivas (1972) added another Atlantic species (*O. captivai*) which is here considered merely a subspecies (see remarks):

- O. oglinum* (LeSueur, 1818), western Atlantic
- O. berlangai* Berry & Barrett, 1963, eastern Pacific
- O. bulleri* (Regan, 1904), eastern Pacific
- O. libertate* (Günther, 1867), eastern Pacific
- O. medirastre* Berry & Barrett, 1963, eastern Pacific.

**Remarks** : The 4 eastern Pacific species are only distinguished by numbers of lower gillrakers, which increase with size of fish; by excluding the Galapagos species (*O. berlangai*), there is little or no overlap in adult gillraker counts.

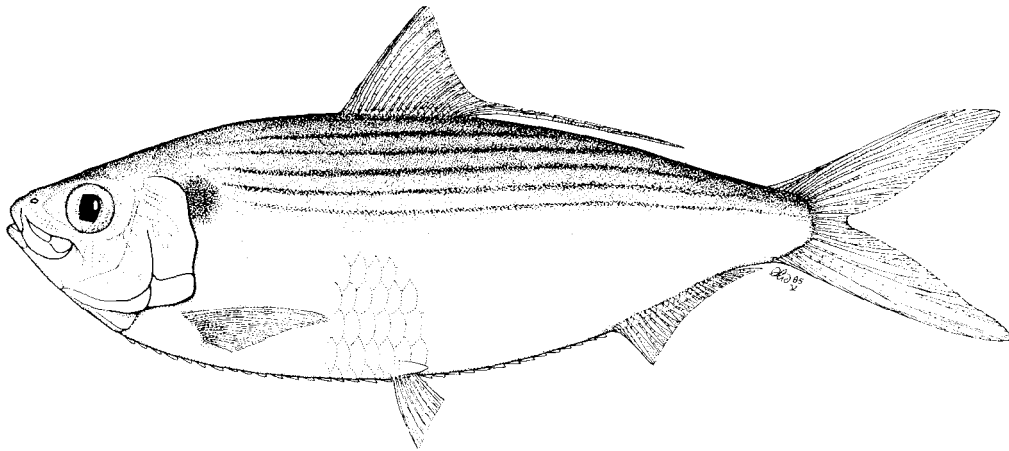
**Opisthonema berlangai** Berry & Barrett, 1964

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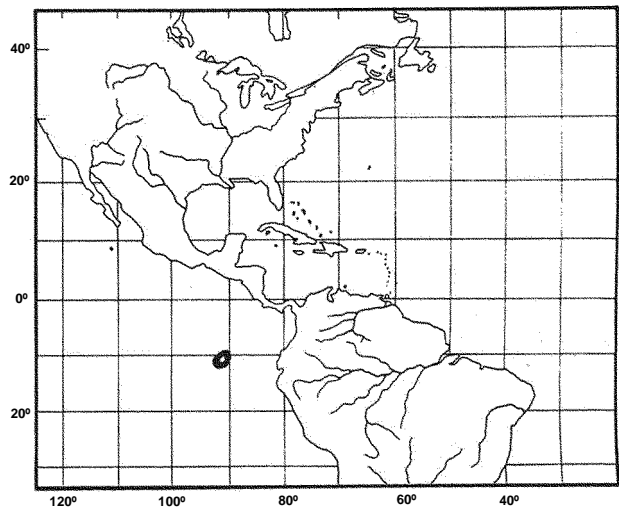
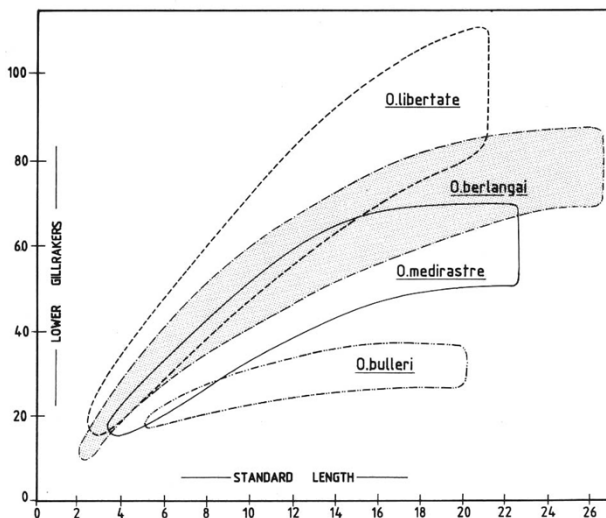
Opisthonema berlangai Berry & Barrett, 1964, Bull.inter-Am.trop.Tuna Comm., 7(2):119, fig. 1B (Galapagos Islands).

**Synonyms :** Opisthonema libertate: all Galapagos accounts.

**FAO Names :** En - Galapagos thread herring.



**Diagnostic Features :** The filamentous last dorsal finray distinguishes it from members of any other eastern Pacific clupeoid genus. Lower gillrakers 50 to 87 in fishes over 14 cm standard length (intermediate between O. medirastre with 41 to 69 and O. libertate with 63 to 110, but neither of these occur in the Galapagos Islands).



**Geographical Distribution :** Galapagos Islands only.

**Habitat and Biology :** Coastal, pelagic, schooling.

**Size :** To 26 cm standard length, usually to 18 cm.

**Interest to Fisheries :** Of little interest.

**Local Names :** Not distinguished from other eastern Pacific species.

**Literature :** Berry & Barrett (1964 - taxonomy only).

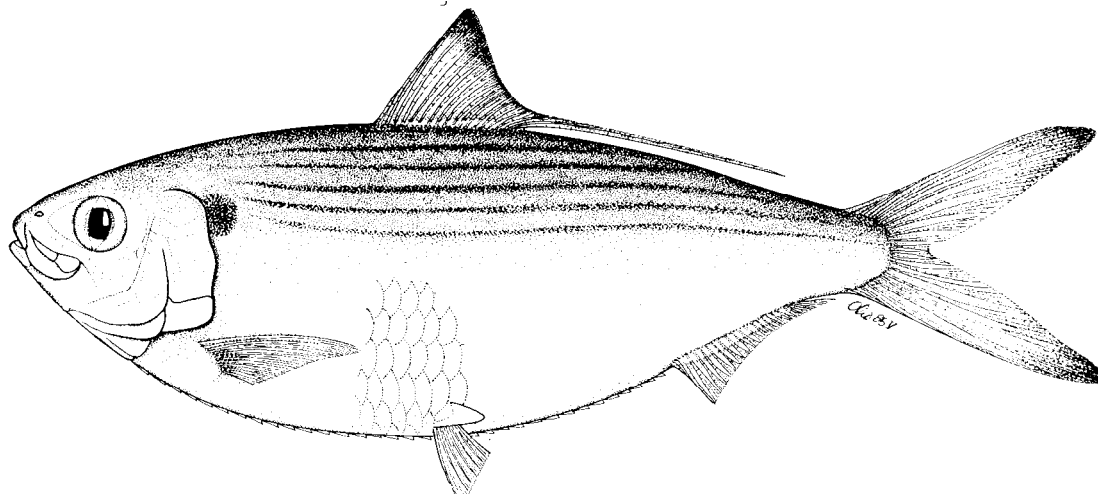
**Opisthonema bulleri** (Regan, 1904)

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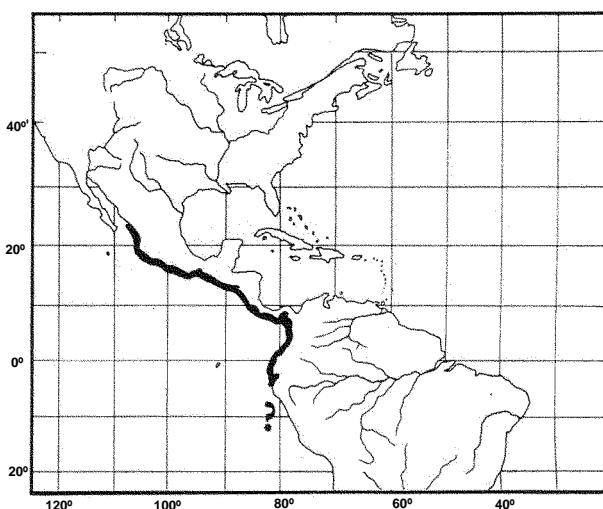
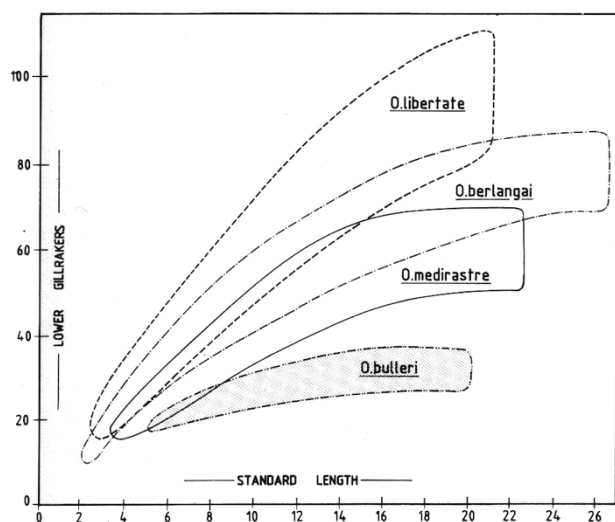
*Clupea (Opisthonema) bulleri* Regan, 1904, *Ann.Mag.nat.Hist.*, (7)8:255 (Las Peñas (Puerto Vallarta), Jalisco, Mexico - but mixed with a specimen of *O. libertate*).

**Synonyms** : Probably included in at least some accounts of *O. libertate*.

**FAO Names** : En - Slender thread herrina.



**Diagnostic Features** : The filamentous last dorsal finrays distinguishes it from members of any other eastern Pacific genus. Separated from other eastern Pacific *Opisthonema* by having only 25 to 36 lower gillrakers in fishes over 14 cm standard length (41 to 69 in *O. medirastre*, 63 to 110 in *O. libertate*; in *O. berlangai* there are 50 to 87 and it occurs only in the Galapagos Islands.



**Geographical Distribution** : Eastern Pacific (Mazatlan, Sinaloa, Mexico southward to Pta Sal and Pta Picos, Peru).

**Habitat and Biology** : Coastal, pelagic, schooling. Apparently the least abundant of the eastern Pacific species of *Opisthonema*. Feeds on crustaceans and pteropods.

**Size** : To 19.6 cm standard length, usually to 18 cm.

**Interest to Fisheries** : Presumably contributes to the total *Opisthonema* catch in the eastern Pacific of 40 081 tons in 1983.

**Local Names** : Not distinguished from other eastern Pacific species.

**Literature** : Berry & Barret (1964 - taxonomy), otherwise uncertain since not separated from *O. libertate*.

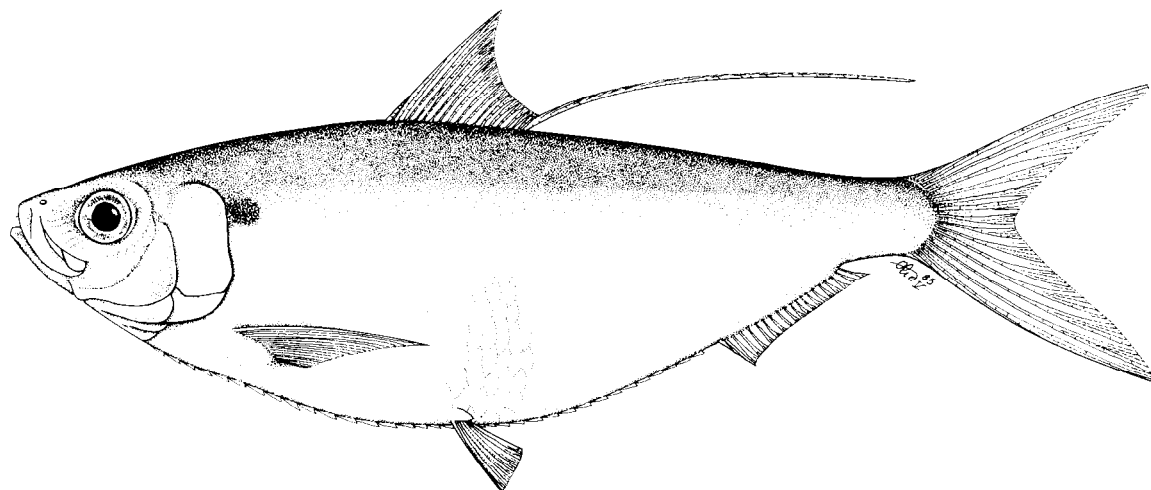
**Opisthonema libertate** (Günther, 1867)

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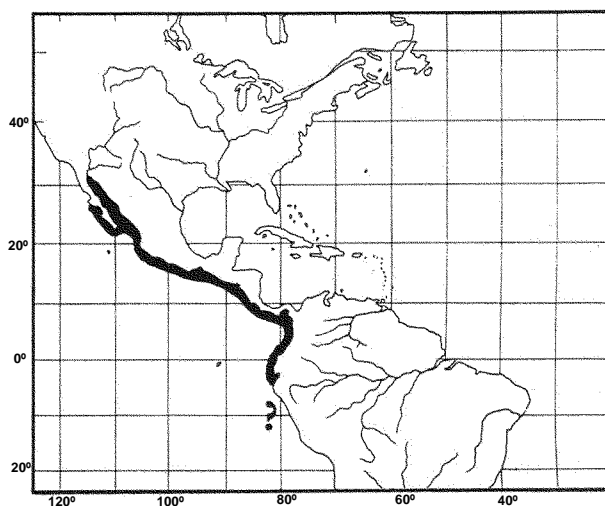
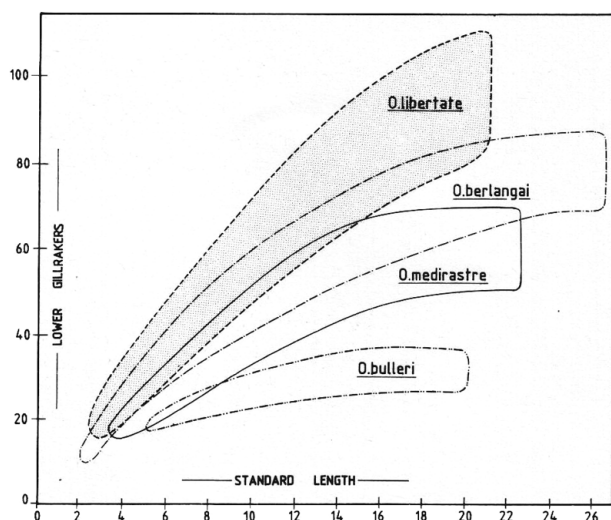
*Meletta libertatis* Günther, 1867, Proc.zool.Soc.Lond.; (3):603 (La Libertad, El Salvador; part 3 issued April 1867, not in 1866).

**Synonyms** : *Opisthonema libertate* - Berry & Barrett, 1964:120, fig. 1c (full synonymy; references to *O. berlangai*, *O. bulleri* and *O. medirastre* excluded); Cobo & Massey, 1949:7, fig. 5 (Ecuador, listed); Peterson, 1956:178 (Gulf of Nicoya, Costa Rica); Chirichigno, 1963:14, fig. 6 (Puerto Pizarro and Puerto Rico, Peru).

**FAO Names** : En - Pacific thread herring.



**Diagnostic Features** : The filamentous last dorsal finray distinguishes it from members of any other eastern Pacific clupeoid genus. Separated from other eastern Pacific *Opisthonema* species by having 63 to 110 lower gillrakers in fishes over 14 cm standard length (41 to 69 in *O. medirastre*, only 25 to 36 in *O. bulleri*; in *O. berlangai* there are 50 to 87, but it occurs only in the Galapagos Islands).



**Geographical Distribution** : Eastern Pacific (Santa Rosalita, Pacific coast of Baja California, Mexico, southward to Pta Sal and Pta Picos, Peru).

**Habitat and Biology** : Coastal, pelagic, schooling. Apparently the most abundant of the eastern Pacific species of *Opisthonema*. Feeds on crustaceans and pteropods.

**Size** : To 25 cm standard length, usually 12 to 18 cm.

**Interest to Fisheries** : Of some importance as a live bait until introduction of purse seines for tuna. Contributed to the total Opisthonema catch in the eastern Pacific of 40 481 tons in 1983 (the major part from Ecuador).

**Local Names** : See Cervigón & Fischer (1979).

**Literature** : Berry & Barrett (1964 - taxonomy only); earlier works probably combined data for O. bulleri and O. medirastre, e.g. Peterson (1956 - biol., etc.).

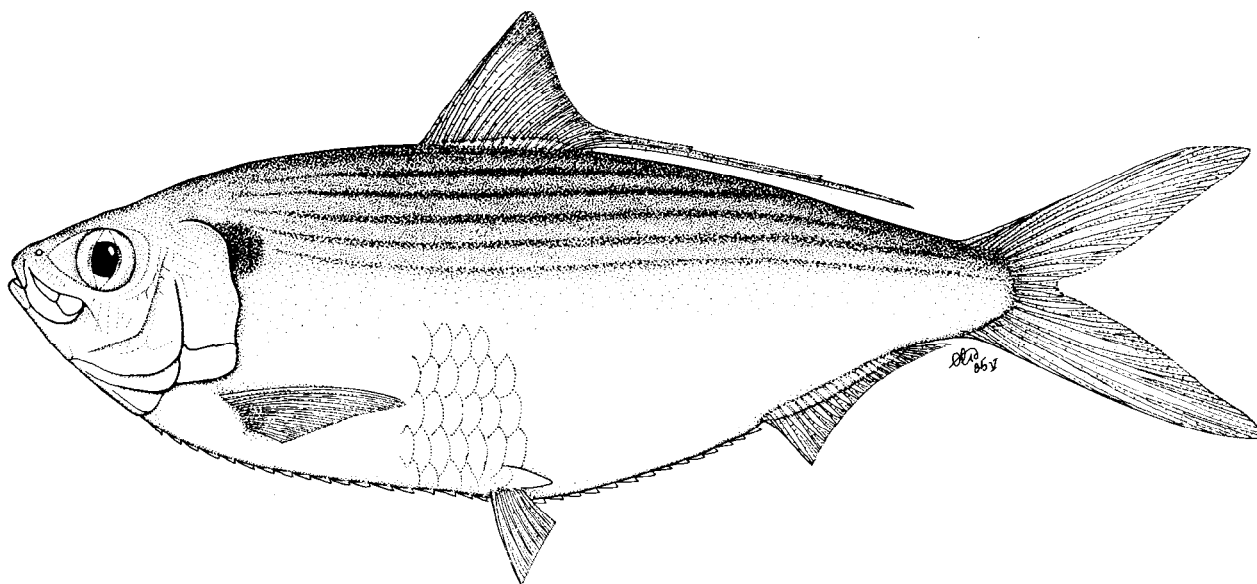
**Opisthonema medirastre** Berry & Barrett, 1964

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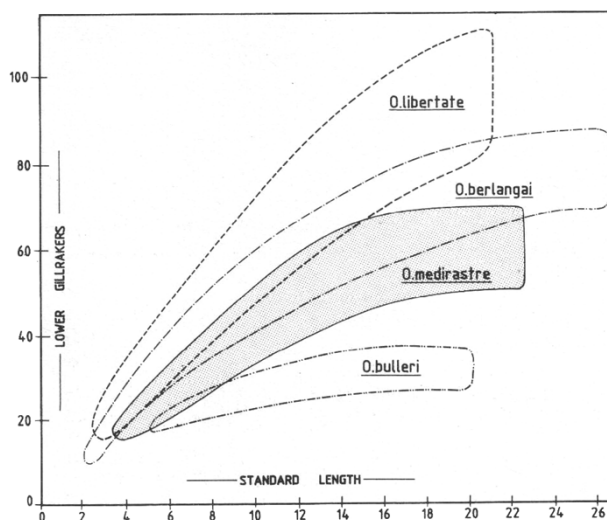
Opisthonema medirastre Berry & Barrett, 1964, Bull.inter-Am.trop.Tuna Comm., 7(2):118, fig. 1a (Gulf of Panama, also various localities from Los Angeles to Sechura Bay, Peru).

**Synonyms** : Included in at least some accounts of O. bulleri and especially O. libertate (the only Pacific species formerly recognized).

**FAO Names** : En - Middling thread herring.



**Diagnostic Features** : The filamentous last dorsal finray distinguishes it from members of any other eastern Pacific clupeoid genus. Separated from other eastern Pacific Opisthonema by having 41 to 69 lower gillrakers in fishes over 14 cm standard length (63 to 110 in O. libertate, only 25 to 36 in O. bulleri; in O. berlangai there are 50 to 87, but it occurs only in the Galapagos Islands).



**Geographical Distribution :** Eastern Pacific (Los Angeles Bay, California southward to Sechura Bay, Peru).

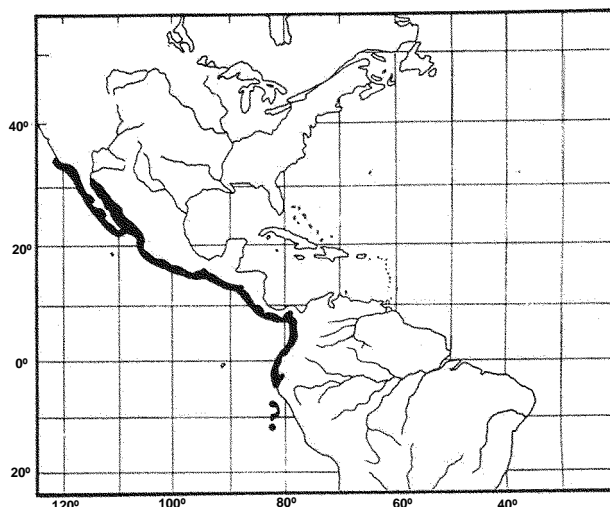
**Habitat and Biology :** Coastal, pelagic, schooling. Feeds on crustaceans and pteropods.

**Size :** To 22 cm standard length, usually 15 to 20 cm.

**Interest to Fisheries :** Of some importance as a live bait until introduction of purse seines for tuna. Contributed to a total *Opisthonema* catch in the eastern Pacific of 40 481 tons in 1983.

**Local Names :** Not distinguished from the other eastern Pacific species.

**Literature :** Uncertain since not separated from *O. libertate*.



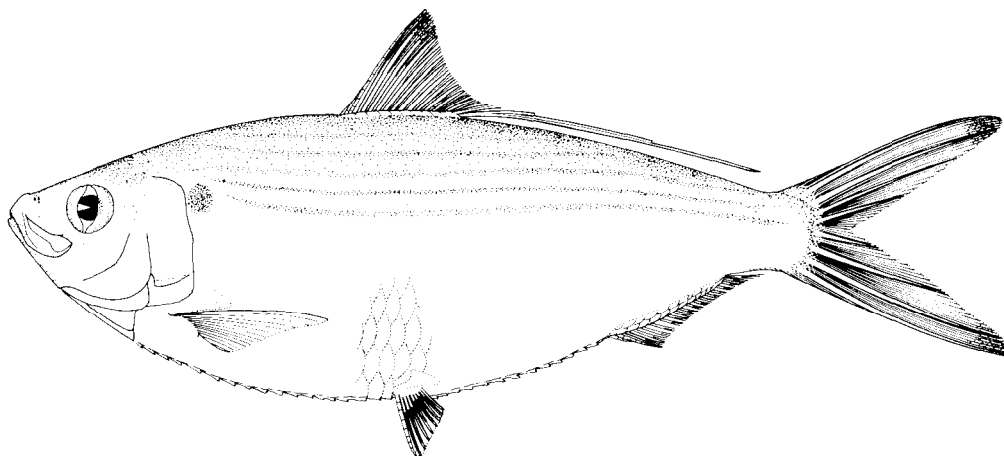
***Opisthonema oglinum*** (LeSueur, 1818)

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*Megalops oglinum* LeSueur, 1818, *J.Acad.nat.Sci.Philad.*, 1:359 (Newport, Rhode Island).

**Synonyms :** *Megalops notata* LeSueur, 1818:361 (Guadeloupe); *Chatoessus signifer* DeKay, 1842:264, pl. 41, fig. 132 (New York); *Meletta thrissa* Valenciennes, 1847:380 (New York, Santo Domingo, Guadeloupe, Martinique; not *Clupea thrissa* Linnaeus, 1758); *Alausa striata* Valenciennes, 1847:429 (Guadeloupe); *Chatoessus eumorphus* Gosse, 1851: 290 (Jamaica); *Opisthonema captivai* Rivas, 1972: (Colombia); *Opisthonema oglinum* - FWNA, 1964:381, fig. 94; Berry & Barrett, 1964:123 (revision); Cervigón, 1966:118, fig. 49; Whitehead, 1967:73, 75 (types of *A. striata*, *M. thrissa*); *Idem*, 1973:46, fig. 12 (Guianas); Figueiredo & Menezes, 1978:22, fig. 25; Whitehead & Bauchot, in press (type of *notata thrissa*).

**FAO Names :** En - Atlantic thread herring.



**Diagnostic Features :** The filamentous last dorsal finray distinguishes it from all other western Atlantic clupeoids except *Dorosoma*, which has an inferior mouth. Otherwise, superficially resembles species of *Sardinella* (but i 8 pelvic finrays in western Atlantic species, cf. i 7 in *Opisthonema*) and *Harengula* (but small toothed hypomaxilla in upper jaw). Lower gillrakers increasing initially with size of fish, but stable at 28 to 46 after 8 cm standard length.