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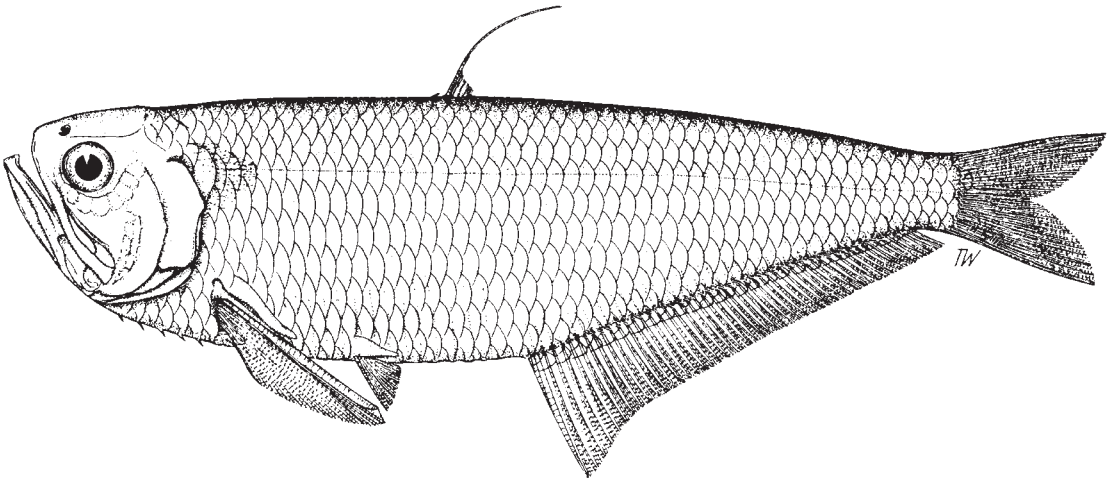
Papuengraulis micropinna Munro, 1964

Frequent synonyms / misidentifications: None / None.

FAO names: En - Littlefin anchovy.

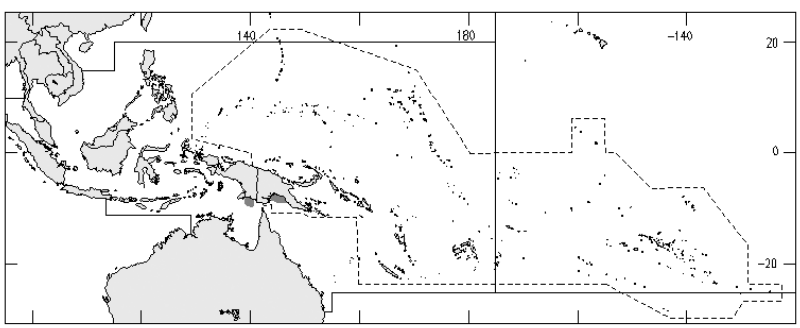


Diagnostic characters: Body somewhat elongate, but strongly compressed, **abdomen with 5 or 6 reduced needle-like prepelvic scutes from isthmus to pectoral-fin base only, no prepelvic scutes posterior to pectoral-fin base, and a series of membrane-like postpelvic scutes more or less concealed by scales. A small spine-like scute just anterior to dorsal-fin origin. Mouth greatly upturned, tip of lower jaw distinctly prominent**. Maxilla short, just reaching posteriorly to anterior margin of preopercle, tip blunt; its posterior end reaching slightly beyond second supramaxilla. **Jaw teeth small, villiform. Two supramaxillae**; first large, elongate, more than twice length of second. Lower gill rakers 25 to 27. Branchiostegal rays 10 or 11. Pseudobranch moderate, with 14 to 16 filaments. **Dorsal fin minute (only ii unbranched and 3 or 4 branched fin rays, the second unbranched fin ray a long filament, about equal to head length, but often broken)**; dorsal-fin origin well before body midpoint. **Anal fin long and broad, with iii unbranched and 51 to 57 branched fin rays**, its origin distinctly posterior to vertical through base of posteriormost dorsal-fin ray. Pectoral fins relatively long, wing-like; tips reaching posteriorly almost to tips of pelvic-fin rays; first pectoral-fin ray strongly ossified and **not extended as a filament**. Pelvic fins small. Scales moderate, 50 or 51 in lateral series; with many radii. **Colour:** body dusky pale yellow above shading to silver-white below; dark brown stripe middorsally from head to upper part of caudal-fin base; **a distinct dark blotch posterior to upper part of gill opening** followed by faint stripe along body to caudal peduncle; fins yellow; dorsal and caudal fins stippled dusky at margins; anal, pectoral, and pelvic fins very pale.

Size: Maximum standard length 12 cm, perhaps more.

Habitat, biology, and fisheries: Presumed to be estuarine, but perhaps ascends rivers or migrates into coastal waters. Minute teeth and rather numerous gill rakers suggest diet of small planktonic animals. Apparently not a common species, known only from 4 preserved specimens. Considering its rarity, probably of little interest to fisheries.

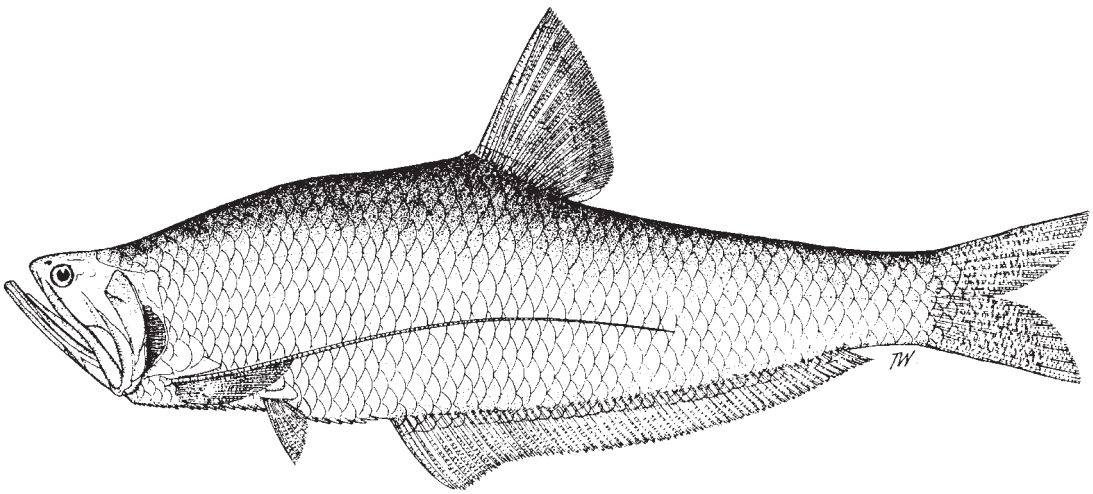
Distribution: Gulf of Papua (off Port Romilly; in mouths of rivers flowing into Gulf); Arafura Sea, but no indication if Australian or Irian Jaya coasts.



Setipinna breviceps (Cantor, 1849)

Frequent synonyms / misidentifications: *Engraulis pfeifferi* Bleeker, 1852; *Heterothrissa breviceps* (Cantor, 1849) / None.

FAO names: En - Shorthead hairfin anchovy.

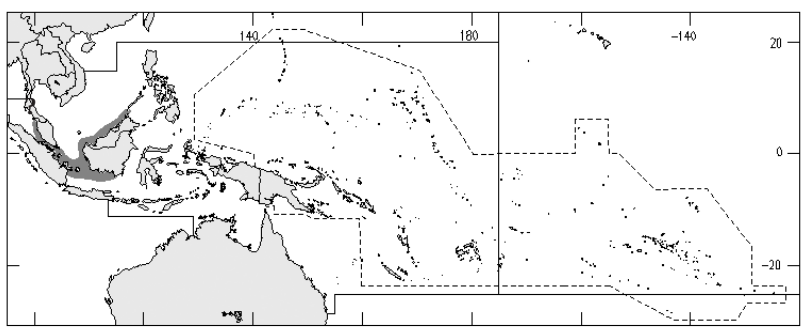


Diagnostic characters: Body compressed, **head (snout to occiput) very short; abdomen with complete series of sharply-keeled scutes from isthmus to anus; 17 to 23 prepelvic and 9 to 11 postpelvic scutes; total number of keeled scutes 27 to 32. A small spine-like scute just anterior to dorsal-fin origin. Mouth strongly oblique, jaws slender, lower jaw projecting beyond tip of snout. First supramaxilla absent**; second supramaxilla almost 1/2 length of maxilla. **Jaw teeth small, even**. Gill rakers fairly stout; **lower gill rakers 11 or 12**; without clumped serrae except some enlarged and spiky at either end of each raker. Branchiostegal rays 20. **Dorsal fin moderately long, its origin slightly anterior to body midpoint, or between verticals through base of eleventh and fifteenth anal-fin rays; dorsal fin with iii unbranched and 14 or 15 branched fin rays. Anal fin long, with iii unbranched and 56 to 61 branched fin rays, its origin anterior to vertical through dorsal-fin origin. Pectoral fins with first fin ray produced as a filament; pectoral filament long, greatly exceeding head length, reaching posteriorly to base of 35th to 41st anal-fin ray**. Scales moderate, with 49 to 53 scales in lateral series; striae on anterior part of scales with many radii. **Colour:** no distinctive colour pattern.

Size: Maximum standard length 24 cm.

Habitat, biology, and fisheries: Marine or estuarine, perhaps also ascending into fresh water. More data needed. Apparently a highly esteemed foodfish at the Rokan River mouth, Sumatra, and presumably also in similar localities elsewhere in Thailand, Indonesia, Malaysia, and Sarawak.

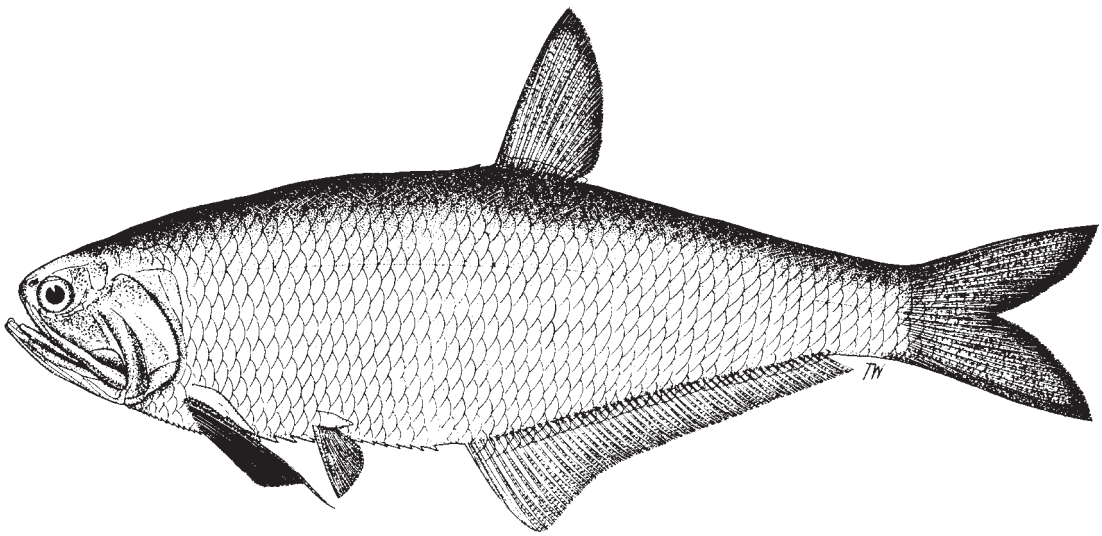
Distribution: Western Central Pacific (river mouths of Sumatra, Kalimantan, and Sarawak, presumably also Java) and Indian Ocean (Penang, Selangor, Myanmar).



Setipinna melanochir (Bleeker, 1849)

Frequent synonyms / misidentifications: None / None.

FAO names: En - Dusky-hairfin anchovy.

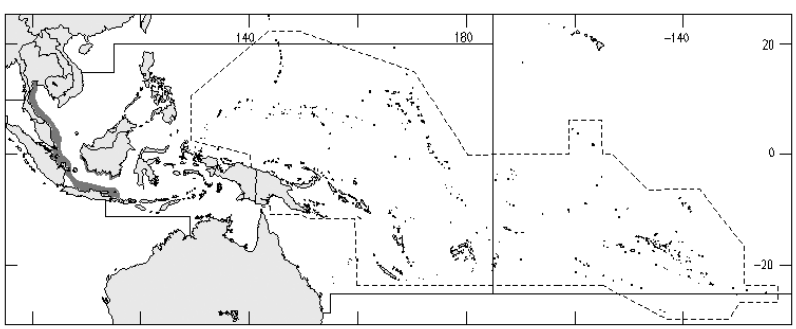


Diagnostic characters: Body compressed, **abdomen with complete series of keeled scutes from isthmus to anus; 21 to 26 prepelvic and 8 to10 postpelvic scutes; total number of scutes 30 to 35. A small spine-like scute just anterior to dorsal-fin origin**. Mouth slightly oblique, jaws slender, lower jaw slightly projecting beyond tip of snout. **First supramaxilla absent**; second supramaxilla relatively small, rounded. **Jaw teeth small, even**. Gill rakers fairly stout; **lower gill rakers 9 to 12**; their serrae moderately large, spiky, but not distinctly clumped. Dorsal fin moderately long, its origin slightly posterior to body midpoint, between verticals through bases of third to fifth anal-fin rays. **Anal fin long, with iii unbranched and 45 to 50 branched fin rays, its origin anterior to vertical through dorsal-fin origin. Pectoral filament short or even absent, never reaching posteriorly even to anus**; total fin rays usually 14 or 15 (rarely 13). Scales moderate, 45 to 51 in lateral series; striae on anterior part of scales with many radii. **Colour:** dorsum brown or blue, flanks silvery; **gill cover and main part of pectoral and pelvic fins often dusky or jet black**; other fins pale to bright yellow; posterior margins of dorsal and caudal fins blackish.

Size: Maximum standard length 23 cm, commonly between 18 and 19 cm.

Habitat, biology, and fisheries: Marine, estuarine, and fresh water; sometimes as far as 310 km from the sea or even more in the Mekong River. These are undoubtedly permanent fresh-water populations. At least small numbers enter artisanal river and lake fisheries. Caught mainly with beach seines and bamboo-stake traps, also incidentally with bottom trawls. Marketed fresh, dried, dried-salted, or made into fish sauce and fish balls.

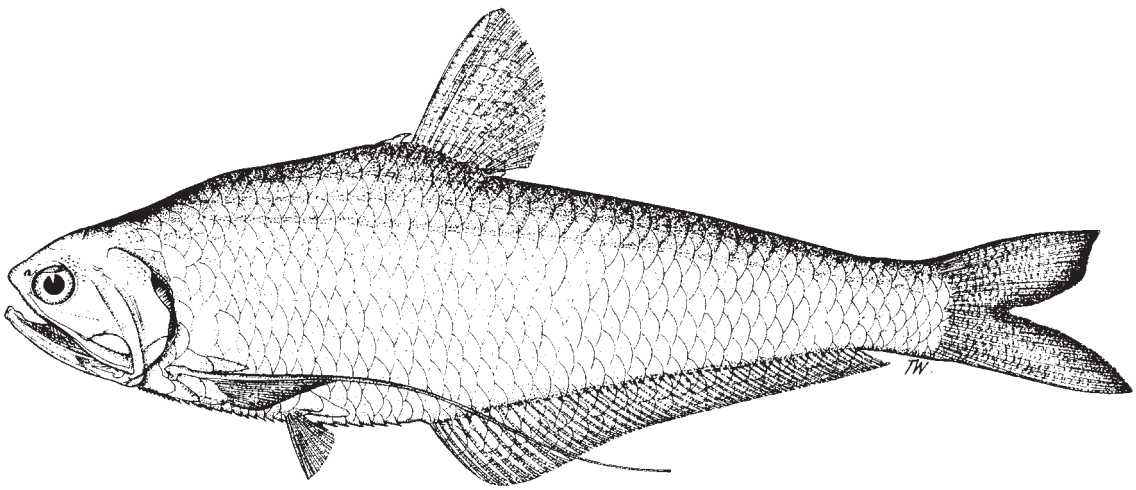
Distribution: Western Central Pacific (Thailand south to Java, including rivers, e.g. the Chao Praya and Mekong in Thailand and the Rokan, Kapuas and Barito in Indonesia).



Setipinna taty (Valenciennes, 1848)

Frequent synonyms / misidentifications: None / *Setipinna tenuifilis* (non Valenciennes in Cuvier, 1848).

FAO names: En - Scaly hairfin anchovy.

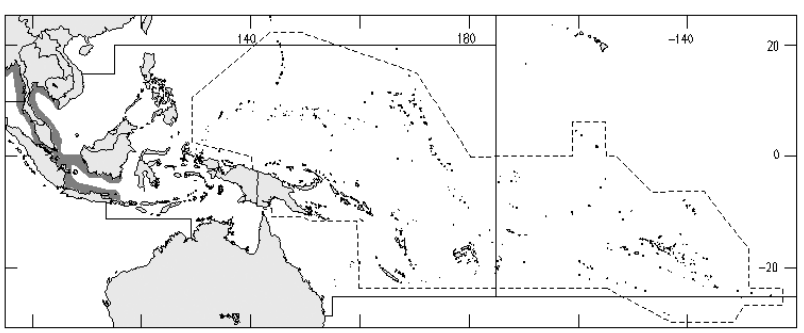


Diagnostic characters: Body strongly compressed, **abdomen with complete series of keeled scutes from isthmus to anus; 20 to 29 (mostly 22 to 27) prepelvic and 9 to 14 (mostly 11 or 12) postpelvic scutes; total number of scutes 32 to 40 (mostly 33 to 39). A spine-like scute (rather strongly ossified) just anterior to dorsal-fin origin. Mouth nearly horizontal**, jaws slender, lower jaw scarcely projecting beyond tip of snout. **First supramaxilla absent**; second supramaxilla relatively small, rounded. **Jaw teeth small, even**. Gill rakers fairly stout; **lower gill rakers 17 to 21 (mostly 18 to 20)**, their **serrae distinctly clumped**. **Dorsal-fin origin distinctly anterior to body midpoint, its origin slightly in advance of vertical through anal-fin origin. Anal fin long, with iii unbranched and 45 to 57 branched fin rays, its origin about at vertical through middle of dorsal-fin base. Pectoral fins with first fin ray produced as a long filament with its tip reaching posteriorly to base of 23rd to posteriormost anal-fin ray. Upper lobe of caudal fin truncated (shorter than lower lobe)**. Scales on body moderate, 40 to 48 scales in lateral series; striae on anterior part of scales forming a fine reticulate pattern. **Scales present on dorsal and anal fins**. **Colour:** dorsum brown or blue, flanks silvery; otherwise no distinctive colour pattern.

Size: Maximum standard length 14 cm, commonly to about 10 cm.

Habitat, biology, and fisheries: Marine, pelagic, and schooling; mainly coastal, but also entering estuaries. More data needed, based on certain identifications, since at least some records may be based on *Setipinna tenuifilis*. One of the most common species of *Setipinna* and thus making a significant contribution to artisanal catches of *Setipinna* in certain areas. Caught mainly with purse seines, beach seines, and bamboo-stake traps, also incidentally with bottom trawls. Marketed fresh, dried, dried-salted, or made into fish sauce and fish balls.

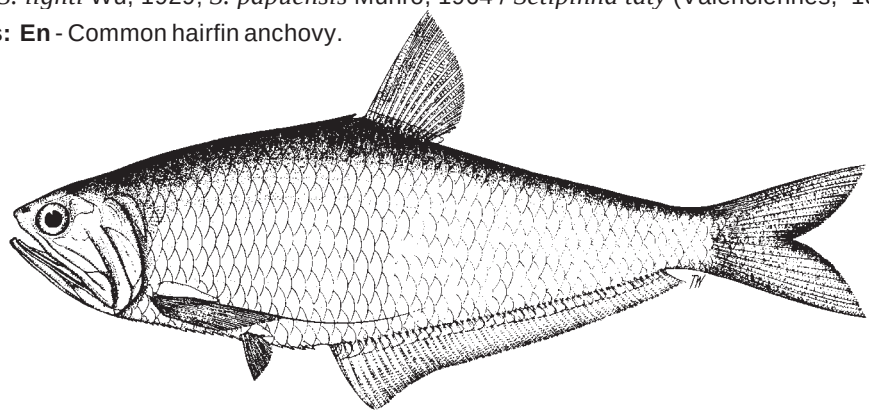
Distribution: Western Central Pacific (Gulf of Thailand south to Java and southern Kalimantan, but no certain records from the Philippines, Sulawesi, or Papua New Guinea), and Indian Ocean (Bay of Bengal south to Penang). Records from about Hong Kong northward refer to *S. tenuifilis*, while at least some records from further south or in Bay of Bengal will also be misidentifications.



Setipinna tenuifilis (Valenciennes, 1848)

Frequent synonyms / misidentifications: *Setipinna gilberti* Jordan and Starks, 1905; *S. godavari* Babu Rao, 1962; *S. lighti* Wu, 1929; *S. papuensis* Munro, 1964 / *Setipinna taty* (Valenciennes, 1848).

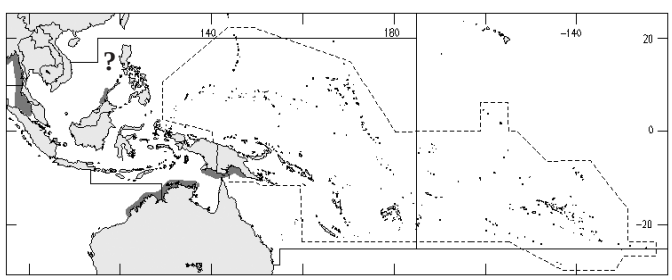
FAO names: En - Common hairfin anchovy.



Diagnostic characters: Body strongly compressed (depth 27 to 33% of standard length), abdomen with complete series of keeled scutes from isthmus to anus; 18 to 20 (rarely 17 or 21) prepelvic and 7 (sometimes 8) postpelvic scutes; total number of scutes 25 to 27. A small spine-like scute just anterior to dorsal-fin origin. Mouth slightly oblique, jaws slender, lower jaw projecting slightly beyond snout tip. **First supramaxilla absent**; second supramaxilla relatively small, rounded. **Jaw teeth small, even**. Gill rakers fairly stout; **lower gill rakers 13 to 17**, their serrae uneven, with slight or sometimes distinct clumps of larger serrae. **Dorsal-fin moderately long, its origin about at body midpoint, between verticals through fourth and sixth anal-fin rays. Anal fin long, with iii unbranched and 46 to 56 branched fin rays, its origin anterior to vertical through dorsal-fin origin. Pectoral fins with first fin ray produced as a long filament which reaches posteriorly to base of first to 31st anal-fin ray, total pectoral-fin rays 11 to 13 (mostly 12). Upper lobe of caudal fin not noticeably shorter than lower lobe. Pelvic fins not reaching posteriorly to anus**. Scales moderate, 42 to 46 in lateral series; striae on anterior part of scales with many radii. **No scales on dorsal or anal fins**. **Colour:** head gold, body yellow and stippled above; silver-white below; charcoal borders on scales along dorsal profile; dorsal and caudal fins yellow, stippled charcoal; heavy stippling on borders of fins; anal, pectoral, and pelvic fins pale yellow.

Size: Maximum standard length about 14 cm, perhaps 16 to 22 cm (records of some previous authors possibly refer to total length).

Habitat, biology, and fisheries: Marine, pelagic, presumably schooling and mostly coastal, but also entering estuaries and penetrating at least 20 km upriver, tolerating salinities as low as 8.7l. Feeds on prawns, copepods, crustacean larvae, molluscs, and fishes. Fairly common in some areas, and certainly makes a significant contribution to artisanal catches of *Setipinna* in the Hooghly and Godavari estuaries.



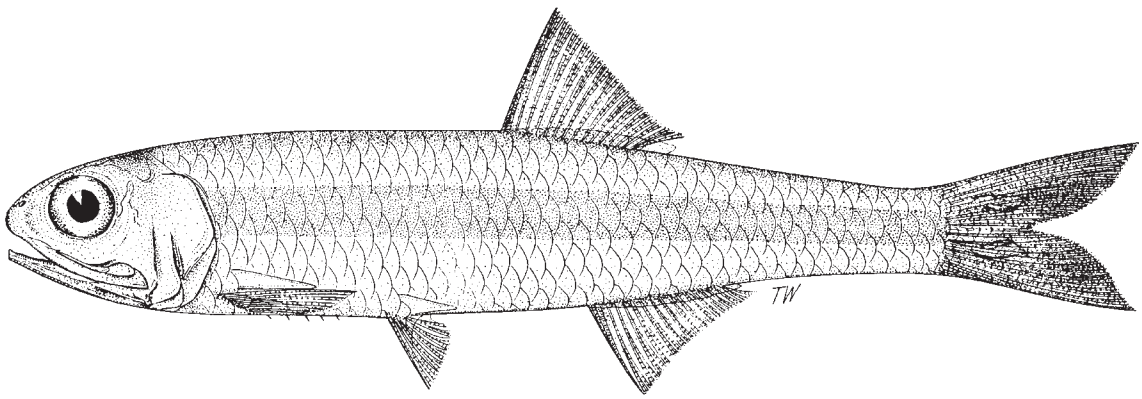
Distribution: Western Pacific (northern coast of Australia, Gulf of Papua, Sarawak, presumably the Philippines and Hong Kong, certainly China coast from around Taiwan Province of China north to Yellow Sea and to southern part of Sea of Japan) and in Indian Ocean (off northwestern Australia, northern and eastern coasts of Bay of Bengal, including Myanmar and the Andaman Islands; perhaps southward from Godavari river, but no certain records). Since only a single species of *Setipinna* occurs off China and Japan, references to it and its distribution must refer to this species.

Remarks: Two subspecies, based on gill raker numbers, pectoral filament length and body depth have been recognized: (a) *S. tenuifilis tenuifilis*: lower gill rakers 13 or 14; pectoral-fin rays usually 12, the filament reaching posteriorly to base of 11th to 21st anal-fin ray; body depth 28 to 33% of standard length; Bay of Bengal, South China Sea; (b) *S. tenuifilis gilberti*: lower gill rakers 16 or 17; pectoral-fin rays 13, the filament reaching posteriorly to base of 9th anal-fin ray; body depth 27 to 30% of standard length; East China Sea to Japan.

Stolephorus advenus Wongratana, 1987

Frequent synonyms / misidentifications: None / *Stolephorus indicus* (van Hasselt, 1823).

FAO names: En - False Indian anchovy.

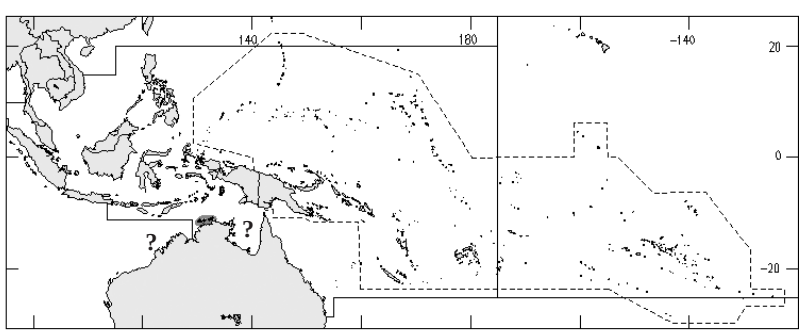


Diagnostic characters: Body slender, elongate, nearly round in cross-section, **abdomen rounded, with 5 small needle-like prepelvic scutes; no postpelvic scutes. Pelvic scute without spine. Predorsal spine-like scute not present. Posterior frontal fontanelles (on top of head) remaining open in adults. Maxilla tip pointed, reaching posteriorly only to anterior border of preopercle; maxilla extending posteriorly beyond second supramaxilla. No tooth patches on upper margin of hyoid bones. Isthmus muscle tapering evenly anteriorly to posterior border of branchial membrane. Posterior border of preopercle convex, rounded (not indented). Branches of preopercular canal extending onto opercle**. Gill rakers slender; **lower gill rakers 24**. Dorsal-fin origin about at body midpoint. **Anal fin short, with iii unbranched and 16 branched fin rays, its origin about at vertical through midpoint of dorsal-fin base**. Pelvic-fin tips presumably not reaching posteriorly to vertical through dorsal-fin origin (fins missing in the holotype). Scales moderate, about 40 in lateral series. **Colour: a faint silver stripe down flank; no dark pigment lines on dorsum between head and dorsal fin; no markings on post-temporal region or bases of dorsal and anal fins**.

Size: Maximum standard length 7.2 cm (holotype).

Habitat, biology, and fisheries: Presumed coastal, pelagic, and schooling, but more material and data needed. No commercial importance.

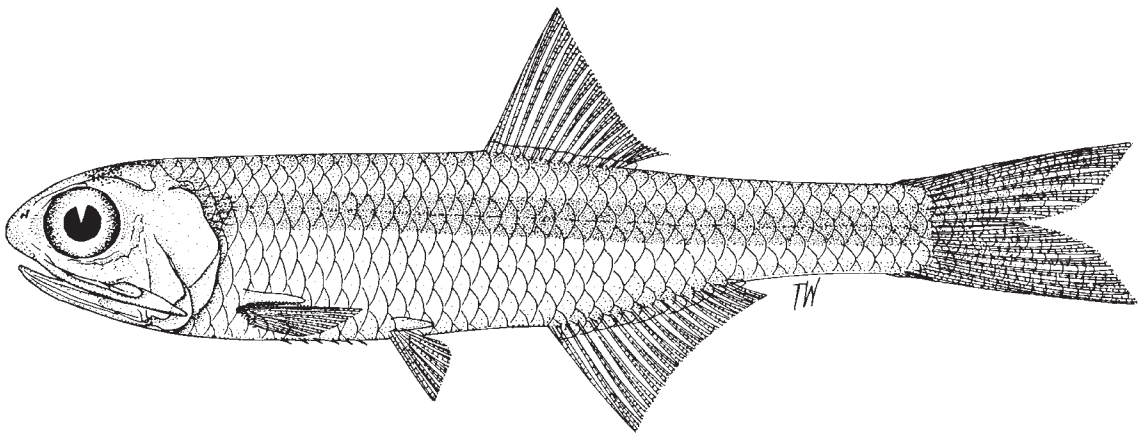
Distribution: Known from a single specimen collected off Northern Australia (Coburg Peninsula, Northern Territory, Australia).



Stolephorus andhraensis Babu Rao, 1966

Frequent synonyms / misidentifications: None / None.

FAO names: En - Andhra anchovy.

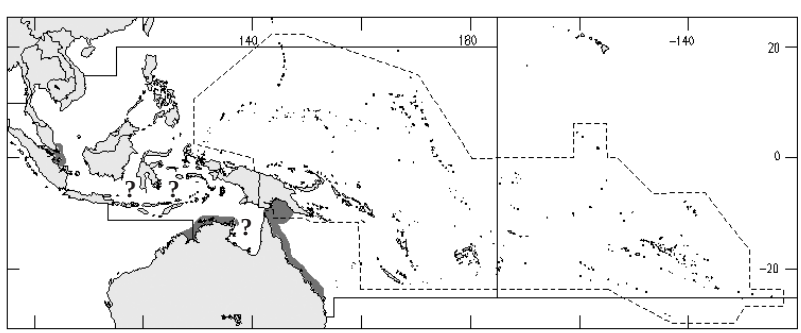


Diagnostic characters: Body somewhat compressed, **abdomen with 6 or 7 (usually 6) small needle-like prepelvic scutes; no postpelvic scutes. Pelvic scute without spine. Predorsal spine-like scute not present. Posterior frontal fontanelles (on top of head) remaining open in adults. Maxilla tip pointed, reaching posteriorly to or beyond posterior border of preopercle; maxilla extending well beyond second supramaxilla. No tooth patches on upper margin of hyoid bones. Isthmus muscle tapering evenly anteriorly to posterior border of branchial membrane. Posterior border of preopercle concave, indented near maxilla tip. Branches of preopercular canal extending onto opercle**. Gill rakers slender; **lower gill rakers 20 or 21**. Dorsal fin about at body midpoint. **Anal fin short, usually with iii unbranched and 17 or 18 branched fin rays, its origin at vertical through middle of dorsal-fin base**. **Pelvic-fin tips not reaching beyond vertical through dorsal-fin origin**. Scales moderate, about 37 to 39 in lateral series. **Colour:** with a silver stripe along flanks; no double pigment line on dorsum posterior to dorsal fin; otherwise no distinctive colour patterns.

Size: Maximum standard length about 5 cm.

Habitat, biology, and fisheries: Coastal, pelagic, and schooling; egg oval, without knob; more material and data needed. This species appears not to be very abundant in the Western Central Pacific.

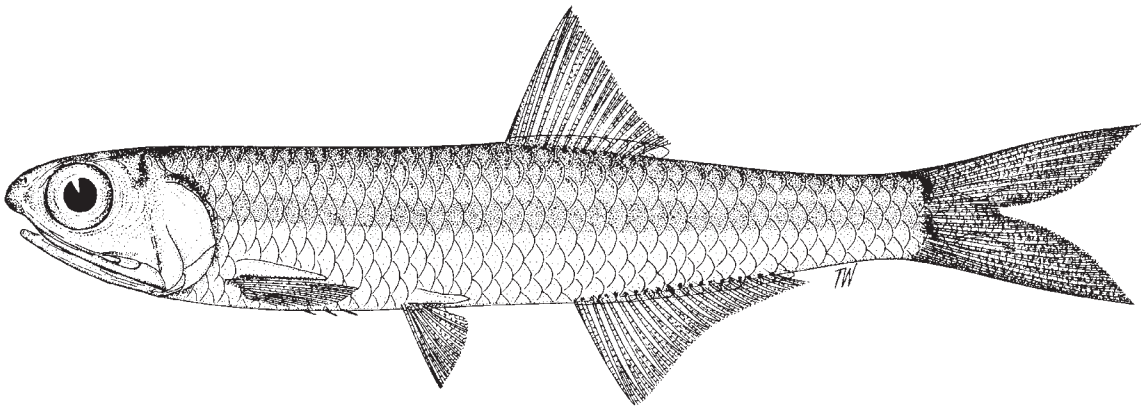
Distribution: Western Pacific (Singapore and Gulf of Papua, but presumably between), north and north-eastern coasts of Australia to Fitzroy River, Queensland, and eastern Indian Ocean (eastern coasts of India around Waltair, but perhaps along most of coast).



Stolephorus apiensis (Jordan and Seale, 1906)

Frequent synonyms / misidentifications: None / *Stolephorus commersonii* Lacepède, 1803.

FAO names: En - Samoan anchovy.

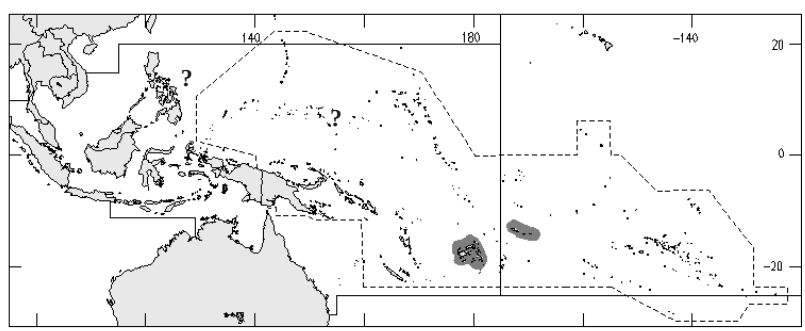


Diagnostic characters: Body somewhat compressed, abdomen slightly rounded, **with 0 to 5 (usually 3 to 5) small needle-like prepelvic scutes; no postpelvic scutes. Pelvic scute without spine. Predorsal spine-like scute not present. Posterior frontal fontanelles (on top of head) remaining open in adults. Maxilla tip pointed, reaching posteriorly to or slightly beyond posterior border of preopercle; maxilla extending beyond second supramaxilla. Small tooth patches on upper margin of hyoid bones. Isthmus muscle tapering evenly anteriorly to posterior border of branchial membrane. Posterior border of preopercle convex, rounded, not indented near maxilla tip. Branches of preopercular canal extending onto opercle**. Gill rakers slender; **lower gill rakers 27 to 31**. Dorsal fin at about body midpoint. **Anal fin short, usually with iii unbranched and 18 or 19 branched fin rays, its origin at vertical through middle of dorsal-fin base. Pelvic-fin tips reaching posteriorly to vertical through dorsal-fin origin**. Scales moderate, about 34 to 42 in lateral series. **Colour:** body light transparent fleshy brown, with a silver stripe down flank; **no paired dark patches posterior to occiput or paired dark lines anterior to dorsal fin**.

Size: Maximum standard length at least 6 cm.

Habitat, biology, and fisheries: Coastal, pelagic, in shallow water, schooling. More data needed. Recorded as a tuna baitfish, but rare in bait catches in Fiji and Samoa.

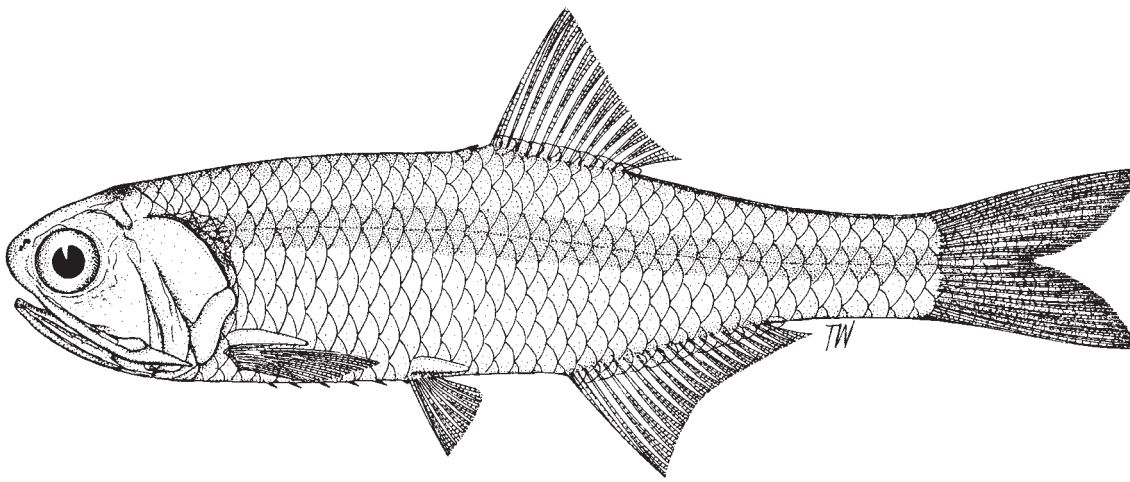
Distribution: Western Pacific (Fiji and Samoa; possibly also Caroline Islands and the Philippines).



Stolephorus baganensis Hardenberg, 1933

Frequent synonyms / misidentifications: *Stolephorus baganensis macrops* Hardenberg, 1933; *S. baganensis bengalensis* (Dutt and Babu Rao, 1959) / *Anchoviella baganensis* (Hardenberg, 1933); *Stolephorus macrops* Hardenberg, 1933; *S. tri* (non Bleeker, 1852).

FAO names: En - Bagan anchovy.

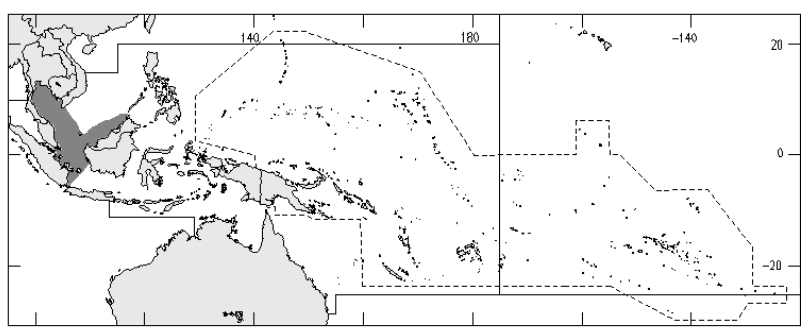


Diagnostic characters: Body somewhat compressed, **abdomen with 6 or 7 (rarely 8) small needle-like prepelvic scutes; no postpelvic scutes. A small predorsal spine-like scute and spine on pelvic scute. Posterior frontal fontanelles (on top of head) remaining open in adults. Maxilla tapering and pointed, reaching posteriorly to or beyond posterior border of preopercle; maxilla extending well beyond second supramaxilla. Isthmus muscle tapering evenly anteriorly to posterior border of branchial membrane. Posterior border of preopercle rounded, indented near maxilla tip. Branches of preopercular canal extending onto opercle**. Gill rakers slender; **lower gill rakers usually 20 to 23 (rarely 18, 19, or 24); 3 to 6 on posterior face of third epibranchial. A few small teeth on upper edge of hyoid bones in some specimens**. Dorsal-fin origin about at body midpoint. **Anal fin short, usually with iii unbranched and 18 or 19 branched fin rays, its origin about at vertical through middle of dorsal-fin base**. Scales moderate, about 34 to 36 in lateral series. **Colour:** with a silver stripe along flanks and **a double pigment line on dorsum posterior to dorsal fin**; inner edge of caudal fin darkish.

Size: Maximum standard length 6.8 cm.

Habitat, biology, and fisheries: Coastal, pelagic, and schooling, but perhaps able to tolerate lowered salinities. More data needed. Presumably contributes to artisanal fisheries, but probably not to any great extent.

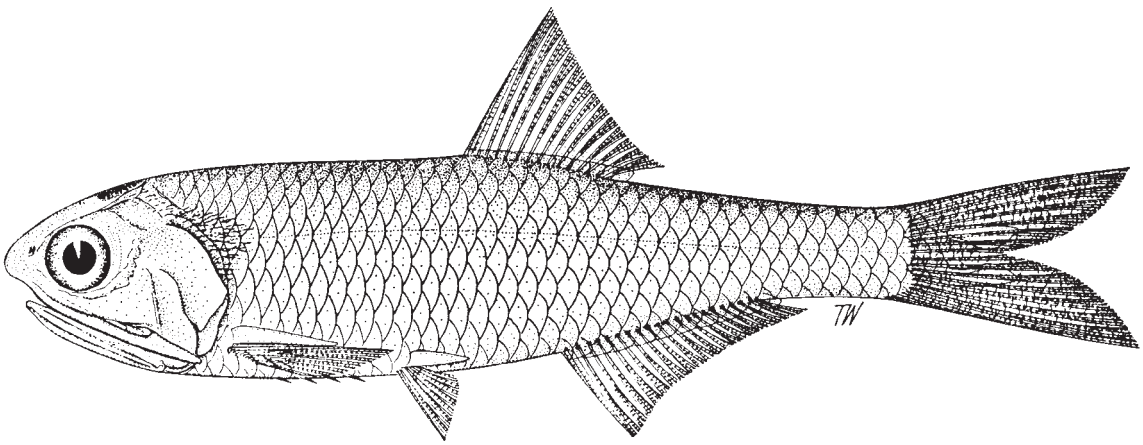
Distribution: Eastern Indian Ocean (Waltair and Kakinada, if the subspecies *bengalensis* is truly this species) and western Pacific (Gulf of Thailand, Singapore, Sumatra, Sarawak).



Stolephorus brachycephalus Wongratana, 1983

Frequent synonyms / misidentifications: None / None.

FAO names: En - Broadhead anchovy.

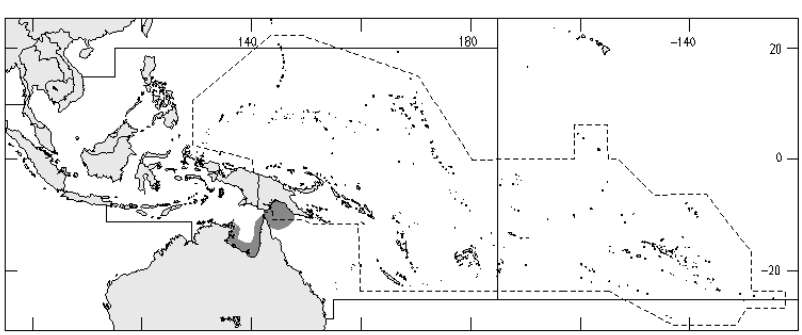


Diagnostic characters: Body somewhat compressed, **abdomen slightly rounded, with 4 or 5 small needle-like prepelvic scutes; no postpelvic scutes. No predorsal spine-like scute, pelvic scute without spine. Posterior frontal fontanelles remaining open in adults. Maxilla tip pointed, reaching posteriorly to or beyond posterior border of subopercle; maxilla extending well beyond second supramaxilla. Isthmus muscle tapering evenly anteriorly to posterior border of branchial membrane. Posterior border of preopercle convex, rounded (not indented). No tooth patches on upper margin of hyoid bones. Branches of preopercular canal extending onto opercle**. Gill rakers slender; **lower gill rakers 20 to 22**. **Branchiostegal rays usually 10 or 11.** Dorsal-fin origin about at body midpoint. **Anal fin with iii unbranched and 19 to 22 (usually 20 or 21) branched fin rays, its origin at vertical through middle of dorsal-fin base. Pelvic-fin tips extending posteriorly beyond vertical through dorsal-fin origin**. Scales moderate, about 34 or 35 in lateral series. **Colour: no dark line (or paired lines) on the dorsum anterior to dorsal fin**.

Size: Maximum standard length 4.2 cm (juveniles; adults not yet known).

Habitat, biology, and fisheries: Presumably coastal, pelagic, and schooling. More specimens and data needed. Probably little or no commercial importance, data included with other *Stolephorus* species in combined catches.

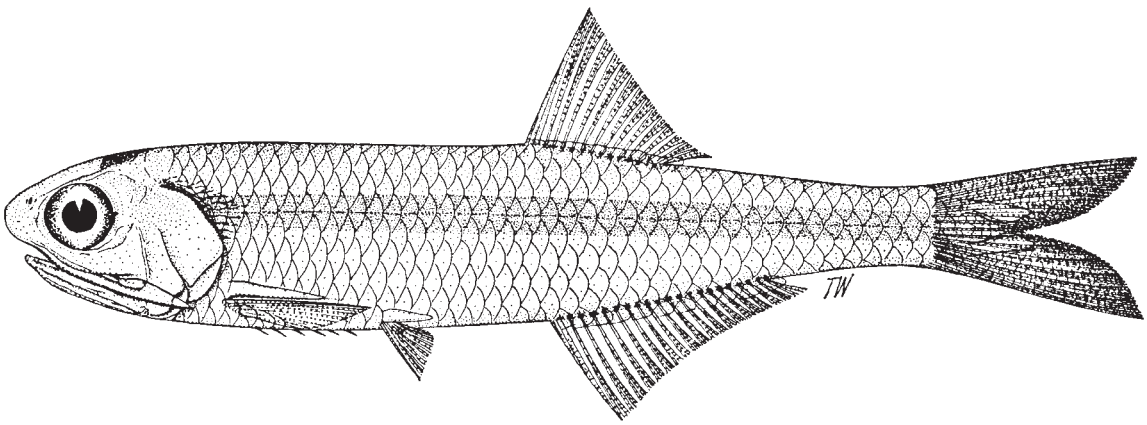
Distribution: Western Pacific (Gulf of Papua and off northern Australia in Gulf of Carpenteria).



Stolephorus carpenteriae (de Vis, 1883)

Frequent synonyms / misidentifications: *Stolephorus tysoni* Wongratana, 1983 / None.

FAO names: En - Gulf of Carpenteria anchovy.

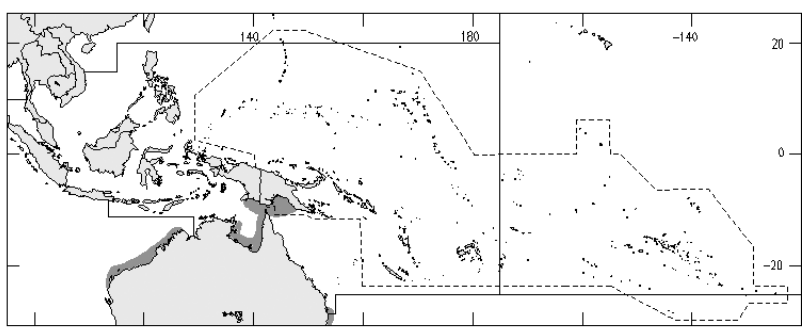


Diagnostic characters: Body somewhat compressed, **abdomen with 5 to 7 (usually 6) small needle-like prepelvic scutes; no postpelvic scutes. No predorsal spine-like scute and pelvic scute without spine. Posterior frontal fontanelles (on top of head) remaining open in adults. Maxilla tip pointed, reaching posteriorly to or beyond posterior border of preopercle; maxilla extending well beyond second supramaxilla. Isthmus muscle tapering evenly anteriorly to posterior border of branchial membrane. Fine teeth on upper edge of hyoid bones. Posterior border of preopercle concave, indented near maxilla tip. Branches of preopercular canal extending onto opercle**. Gill rakers slender; **lower gill rakers 22 to 25 (rarely 21)**. **Knob-like tooth patches at bases of anterior epibranchial gill rakers**. Dorsal-fin origin about at body midpoint. **Anal fin short, usually with iii unbranched and 19 or 20 branched fin rays, its origin rather far forward, at point equal with verticals between bases of second to sixth dorsal-fin rays**. Scales moderate, about 37 to 39 in lateral series. **Colour:** body with a lateral silver stripe along flank; **no double pigment line on dorsum posterior to dorsal fin**.

Size: Maximum standard length about 5 cm.

Habitat, biology, and fisheries: Presumed coastal, pelagic, and schooling, but more material needed; probably tolerates lowered salinities, judging from the type locality and its occurrence in bays and inlets. Apparently not abundant, data included with that for other *Stolephorus* species in combined catches.

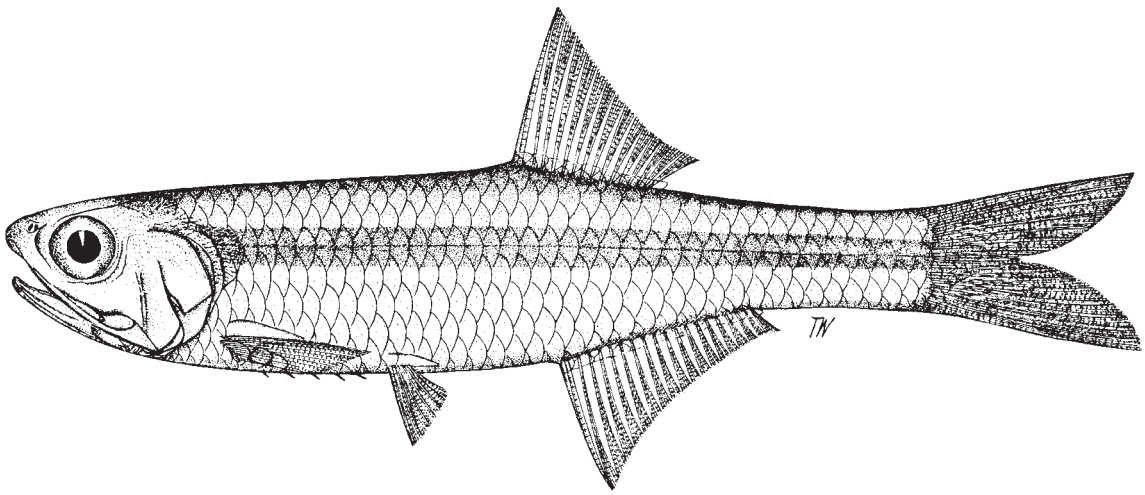
Distribution: Western Pacific (Gulf of Carpenteria, southern coast of Papua New Guinea; also Moreton Bay near Brisbane, Queensland), and in Indian Ocean on northwest Australian shelf.



Stolephorus chinensis (Günther, 1880)

Frequent synonyms / misidentifications: *Anchoviella chinensis* (Günther, 1880) / *Stolephorus commersonii* Lacepède, 1803.

FAO names: En - China anchovy.

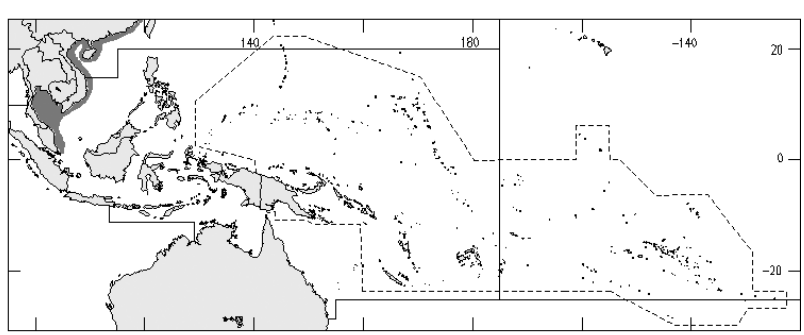


Diagnostic characters: Body somewhat compressed, **abdomen with 4 to 7 (usually 5 or 6) small needle-like prepelvic scutes; no postpelvic scutes. No predorsal spine-like scute and pelvic scute without spine. Posterior frontal fontanelles (on top of head) remaining open in adults. Maxilla tip pointed, reaching posteriorly to posterior border of preopercle; maxilla extending well beyond second supramaxilla. Isthmus tapering evenly anteriorly to posterior border of branchial membrane. Small teeth present on upper edge of hyoid bones. Preopercle convex, rounded. Branches of preoperculur canal extending onto opercle**. Gill rakers slender; **lower gill rakers 24 to 28 (usually 26 or 27)**. **Anal fin short, usually with iii unbranched and 18 to 20 branched fin rays, its origin at point equal with vertical through anterior half of dorsal fin. Tips of pelvic-fin rays not reaching posteriorly to vertical through dorsal-fin origin**. Scales moderate, about 36 to 39 in lateral series. **Colour:** body light transparent fleshy brown, with a silver stripe along flanks; **a pair of dark patches behind occiput, no dark lines on dorsum.**

Size: Maximum standard length 9 cm.

Habitat, biology, and fisheries: Presumably coastal, pelagic, and schooling, but more data needed. Contributes to *Stolephorus* catches, but to an unknown extent.

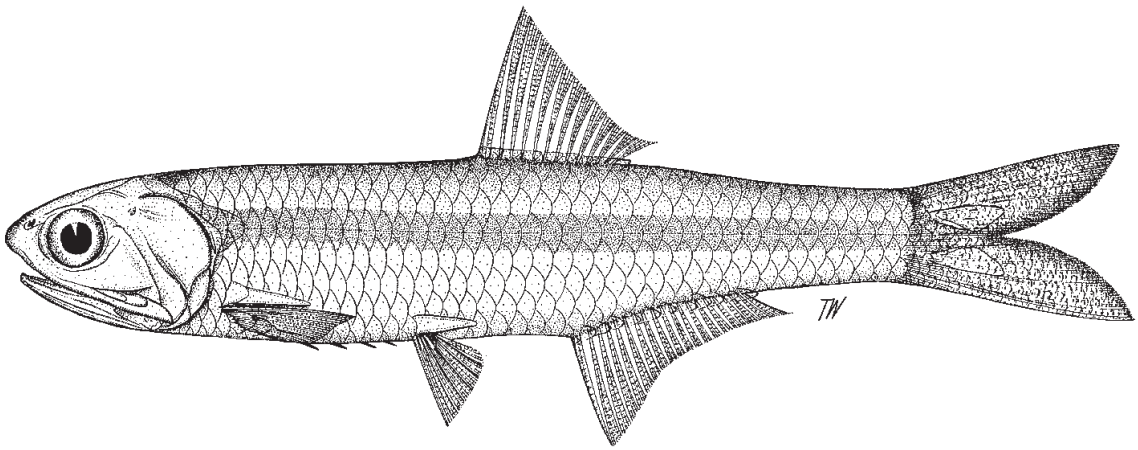
Distribution: Western Pacific (Singapore northward to Amoy = Xiamen).



Stolephorus commersonii Lacepéde, 1803

Frequent synynyms / misidentifications: *Anchoviella commersonii* (Lacepède, 1803); *Stolephorus commersonianus* Lacepède, 1803; *S. rex* Jordan and Seale, 1926 / None.

FAO names: En - Commerson's anchovy; **Fr** - Anchois bombra; **Sp** - Boquerón bombra.

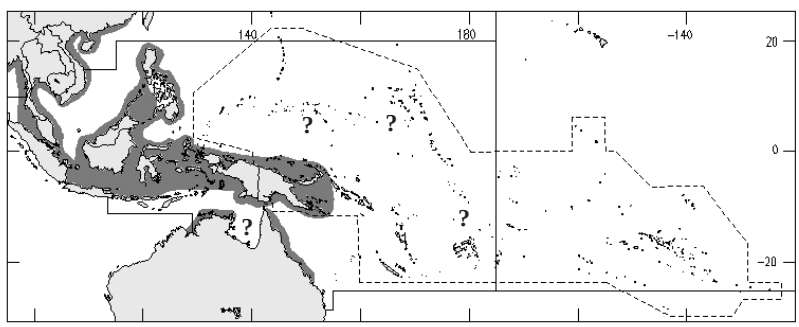


Diagnostic characters: Body somewhat compressed, **abdomen slightly rounded, with 0 to 5 (more often 1 to 4, and mostly 2 or 3) small needle-like prepelvic scutes; no postpelvic scutes. No predorsal spine-like scute and pelvic scute without spine. Posterior frontal fontanelles (on top of head) remaining open in adults. Maxilla tip pointed, reaching posteriorly to or slightly beyond posterior border of preopercle; maxilla extending posteriorly beyond second supramaxilla. Isthmus muscle tapering evenly anteriorly to posterior border of branchial membrane. Small teeth present on upper edge of hyoid bones. Posterior border of preopercle convex, rounded. Branches of preopercular canal extending onto opercle**. Gill rakers slender; **lower gill rakers usually 23 to 28**. **Anal fin short, usually with iii unbranched and 18 or 19 branched fin rays, its origin below posterior half of dorsal fin. Tips of pelvic-fin rays reaching posteriorly to vertical through anterior dorsal-fin rays**. Scales moderate, about 35 to 38 (usually 36 or 37) in lateral series. **Colour:** body light transparent fleshy brown, with a silver stripe down flank; **a pair of dark patches posterior to occiput, followed by a pair of dark lines on dorsum to dorsal-fin origin**.

Size: Maximum standard length 10 cm, mostly between 8 and 9 cm.

Habitat, biology, and fisheries: Coastal, pelagic, schooling, and apparently entering brackish water (Madagascar, Comoro Islands); present in Godavari estuary February-June in salinities of 19.6 to 32.0 ppt, but almost absent in subsequent flood season. Feeds on surface plankton, mainly copepods and prawn larvae. Egg oval with a knob. Catch statistics not separately recorded, but undoubtedly part of the total catch of *Stolephorus*. Caught mainly with purse seines, beach seines, and bamboo-stake traps often using light; also incidentally with bottom trawls. Marketed fresh, dried, dried-salted or made into fish meal, fish sauce, or fish balls.

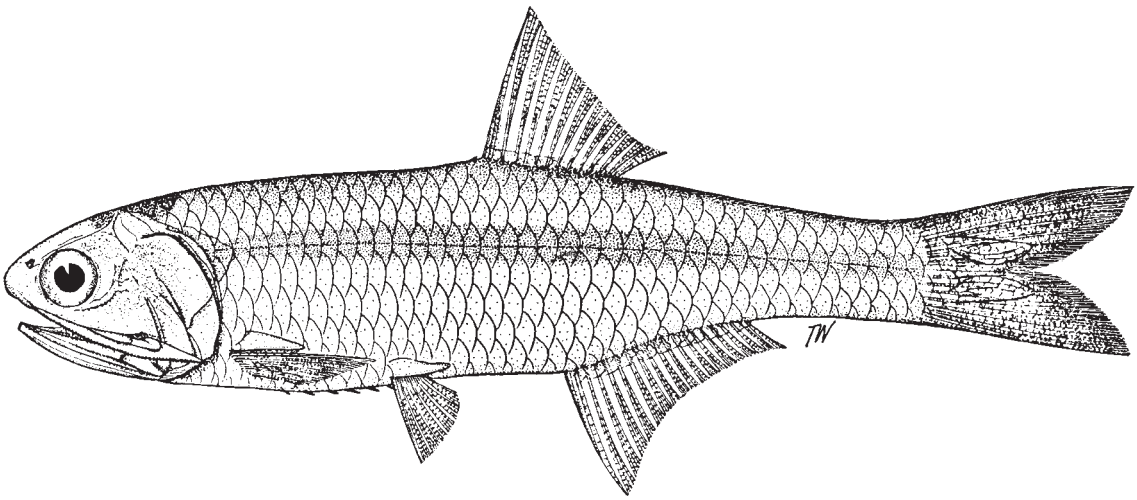
Distribution: Very widespread in western Pacific eastward to Hong Kong, Papua New Guinea, northern and northeastern coasts of Australia southward to Gladstone, Queensland (perhaps also Ponape, Caroline Island, Fiji, and the Philippines) and in Indian Ocean (eastern coast of Africa, from Gulf of Aden, but not Red Sea or the Persian Gulf, to Zanzibar, northern Madagascar, Mauritius, and northwest Australian shelf).



Stolephorus dubiosus Wongratana, 1983

Frequent synonyms / misidentifications: None / None.

FAO names: En - Thai anchovy.

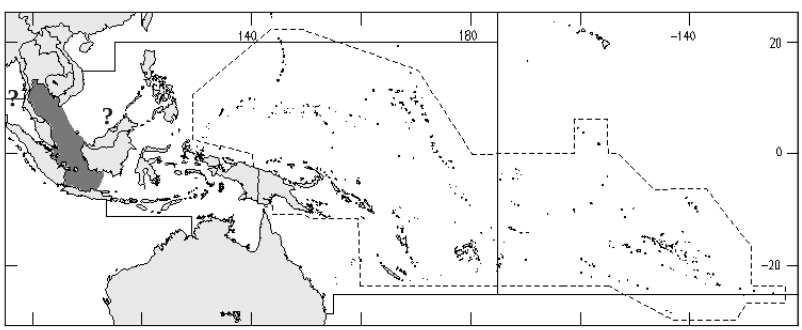


Diagnostic characters: Body somewhat compressed, **abdomen with 4 to 7 (usually 6 or 7) small needle-like prepelvic scutes; no postpelvic scutes; with a small predorsal spine-like scute and spine on pelvic scute. Posterior frontal fontanelles (on top of head) remaining open in adults. Maxilla tapering and pointed, reaching posteriorly to or beyond border of preopercle; maxilla extending beyond the second supramaxilla. Isthmus muscle tapering evenly anteriorly to posterior border of branchial membrane. Preopercle rounded near maxilla tip. Branches of preopercular canal extending onto opercle**. Gill rakers slender; **lower gill rakers 25 to 31 (usually 26 to 28), with 5 to 7 on posterior face of third epibranchial**. **Anal fin short, usually with iii unbranched and 18 or 19 branched fin rays, its origin about equal with vertical through middle of dorsal-fin base**. Scales moderate, about 34 to 38 in lateral series. **Colour: a double pigment line on dorsum posterior to dorsal fin**; inner margin of caudal fin darkish.

Size: Maximum standard length 7.5 cm.

Habitat, biology, and fisheries: Presumed coastal, pelagic, and schooling, but evidently tolerates lowered salinities, and possibly such places are its main habitat. More data needed. Evidently contributes to artisanal fisheries, but perhaps not to any great extent.

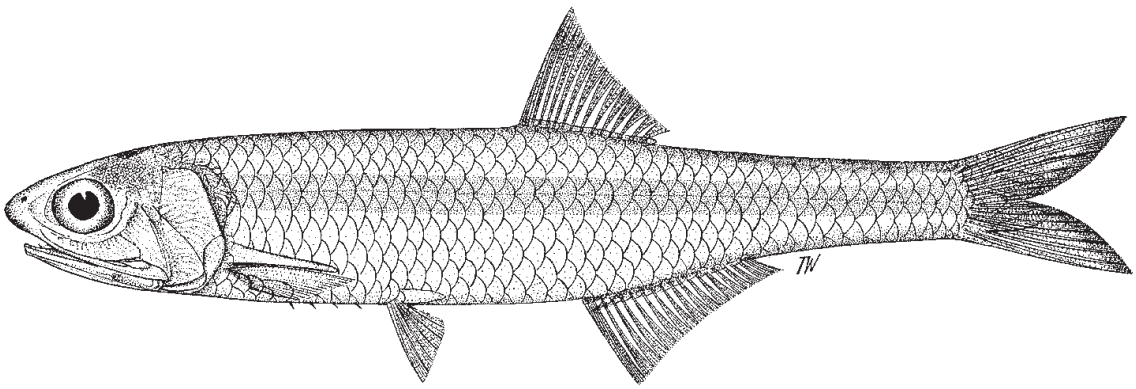
Distribution: Western Pacific (Gulf of Thailand, Java Sea to at least Kalimantan) and Eastern Indian Ocean (northern part of Bay of Bengal).



Stolephorus indicus (van Hasselt, 1823)

Frequent synonyms / misidentifications: *Engraulis indicus* van Hasselt, 1823 / None.

FAO names: En - Indian anchovy; **Fr** - Anchois indien; **Sp** - Boquerón indio.

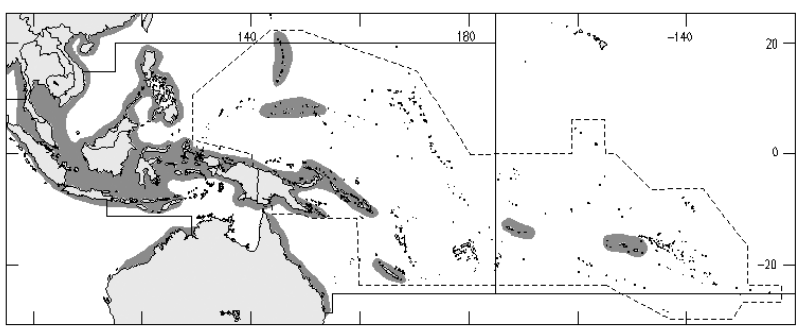


Diagnostic characters: Body slender, elongate, nearly round in cross-section; abdomen rounded, with 2 to 6 (usually 3 to 5, mostly 4) small needle-like prepelvic scutes; no postpelvic scutes. No predorsal spine-like scute and pelvic scute without spine. Posterior frontal fontanelles remaining open in adults. Maxilla tip pointed, reaching posteriorly to or slightly beyond anterior border of preopercle; maxilla extending beyond second supramaxilla. Posterior border of preopercle convex, rounded. Isthmus muscle tapering evenly anteriorly to posterior border of branchial membrane. Branches of preopercular canal extending onto opercle. Gill rakers slender; **lower gill rakers 20 to 28**. **Anal fin short, with usually iii unbranched and 16 to 18 branched fin rays, its origin at vertical through middle of dorsal-fin base. Pelvic-fin tips not reaching posteriorly to vertical through dorsal-fin origin**. Scales moderate, about 38 to 42 in lateral series. **Colour:** body translucent, pale yellow above, silver below; with a broad, bright silver stripe down entire flank; opercle gold, **upper head stippled dark brown**; **no dark pigment lines on dorsum between head and dorsal fin, dorsal and caudal fins dense yellow, densely stippled dark brown; bases of dorsal and anal fins with faintly pigmented melanophores;** other fins pale yellow.

Size: Maximum standard length 15.3 cm, usually between 10 and 12 cm.

Habitat, biology, and fisheries: Coastal, pelagic, schooling (but probably less so than other *Stolephorus* species); appears to enter at least estuarine parts of rivers and perhaps tolerates brackish water. Feeds most likely on zooplankton, but more data needed. In Manila Bay, migrates out into deeper and more saline water to breed (at about 9 cm standard length and larger), returning inshore immediately after spawning. Eggs oval, with a small knob at one pole. Appears not to form very large schools, thus of minor interest, although the largest *Stolephorus* species. Caught mainly with purse seines, lift nets, beach seines, and fish traps; also incidentally with bottom trawls. Marketed fresh, dried, dried-salted or made into fish meal, fish sauce, or fish balls. Fragile and unsuitable as a tuna baitfish.

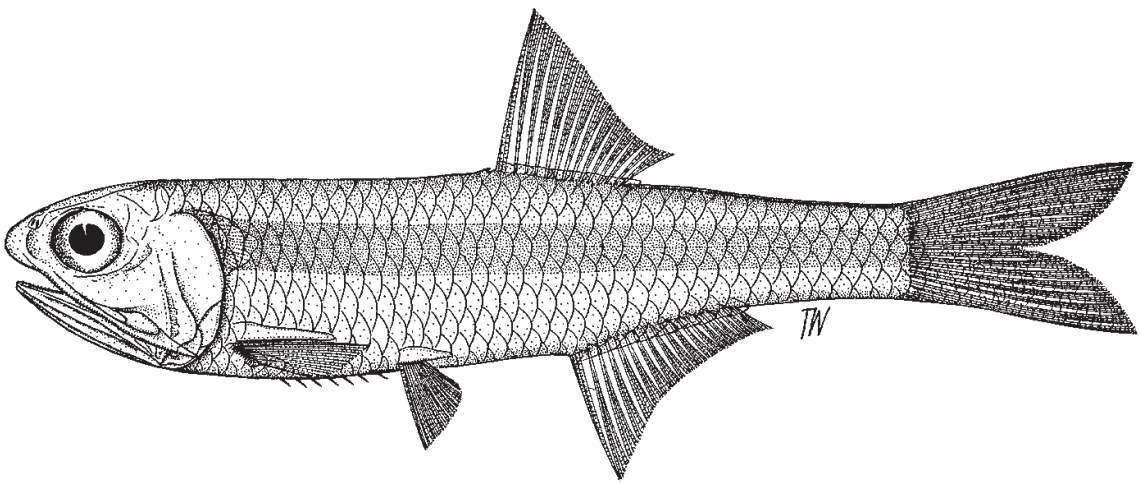
Distribution: Very widespread in western Pacific (Gulf of Thailand eastward to Hong Kong, northern and northeastern coasts of Australia south to Mackenzie Island, Queensland; north to Caroline Islands and Mariana Islands, south to New Caledonia, and further east to Samoa and Tahiti), and widespread in Indian Ocean (northwestern Australia, Sumatra, Java, Lesser Sunda Islands; entire eastern coast of Africa from the Persian Gulf and Red Sea south to Natal, Madagascar, and Mauritius).



Stolephorus insularis Hardenberg, 1933

Frequent synonyms / misidentifications: *Anchoviella baganensis* (non Hardenberg, 1933); *Stolephorus insularis oceanicus* Hardenberg, 1933; *S. macrops* (non Hardenberg, 1933) / *Stolephorus baganensis* Hardenberg, 1933.

FAO names: En - Hardenberg's anchovy.

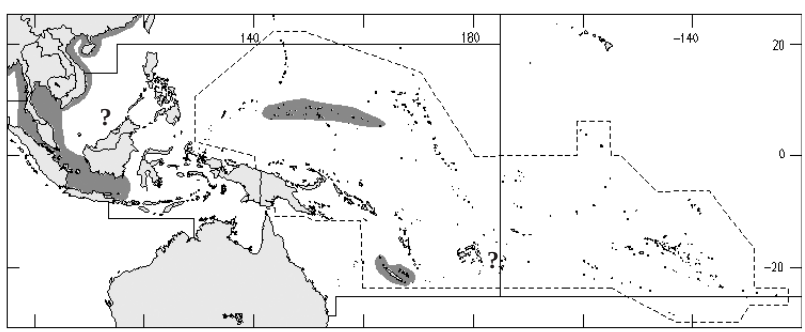


Diagnostic characters: Body somewhat compressed, **abdomen with 4 to 8 (usually 6 or 7) small needle-like prepelvic scutes; no postpelvic scutes; a small predorsal spine in some specimens; no spine on pelvic scute. Posterior frontal fontanelles (on top of head) remaining open in adults. Maxilla tapering and pointed, reaching posteriorly to or beyond posterior border of preopercle; maxilla reaching well beyond second supramaxilla. Isthmus muscle tapering evenly anteriorly to posterior border of branchial membrane. Very fine teeth on upper edge of hyoid bones. Posterior border of preopercle slightly concave, indented near maxilla tip. Branches of preopercular canal extending onto opercle**. Gill rakers slender; **lower gill rakers 21 to 28 (usually 23 to 27)**. **Anal fin short, usually with iii unbranched and 14 to 17 branched fin rays, its origin about equal with vertical through middle of dorsal-fin base**. **Pelvic-fin tips reaching posteriorly to a point equal with vertical through or slightly anterior to dorsal-fin origin**. Scales moderate, about 36 to 38 in lateral series. **Colour: a double pigment line on dorsum posterior to dorsal fin**; tail deep yellow (at least in Indian specimens).

Size: Maximum standard length 6.4 cm.

Habitat, biology, and fisheries: Coastal, pelagic, and schooling; more data needed, based on correct identifications. May tolerate lowered salinities, but identity of material captured in estuaries is uncertain. Appears to be fairly common among small size *Stolephorus* throughout its range and probably contributes a significant proportion to *Stolephorus* catches. May be of some interest as a baitfish, although rather fragile.

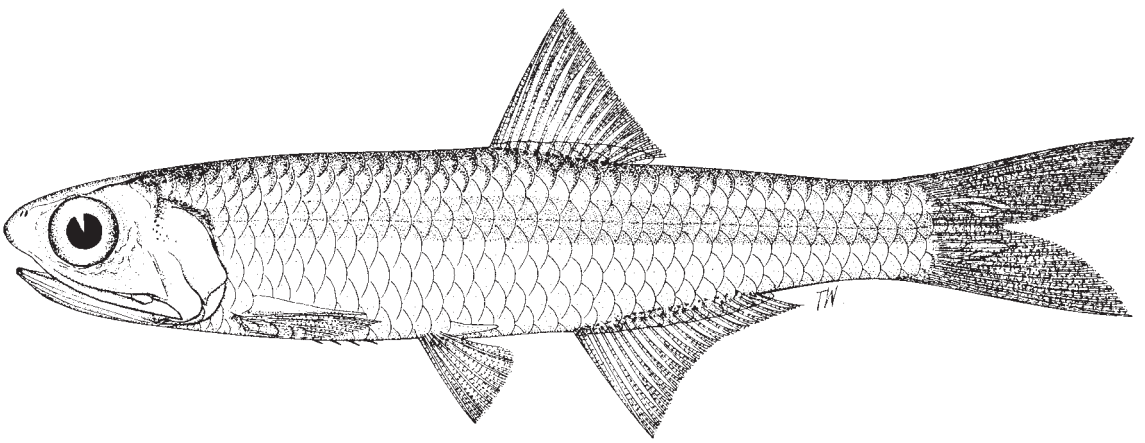
Distribution: Western Pacific (Gulf of Thailand, Java Sea, also Hong Kong, Fujian and Taiwan Province of China; Caroline Islands south to New Caledonia, and east perhaps to Fiji and Samoa) and northern part of Indian Ocean (Gulf of Aden, not Red Sea or the Persian Gulf, eastward to Myanmar).



Stolephorus multibranchus Wongratana, 1987

Frequent synonyms / misidentifications: None / *Stolephorus commersonii* Lacepède, 1803.

FAO names: En - Caroline anchovy.

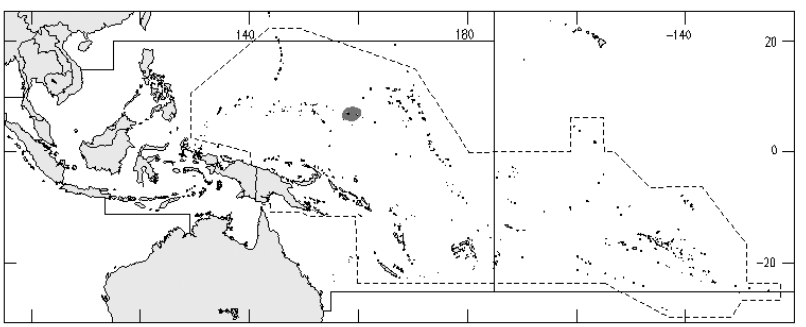


Diagnostic characters: Body fairly elongate, **abdomen rounded, with 2 to 4 small needle-like prepelvic scutes; no postpelvic scutes. No predorsal spine-like scute, pelvic scute without spine. Posterior frontal fontanelles (on top of head) remaining open in adults. Maxilla tip pointed, reaching posteriorly to lower posterior margin of preopercle; maxilla extending well beyond second supramaxilla. No teeth on upper edge of hyoid bones. Isthmus muscle tapering evenly anteriorly to posterior border of branchial membrane. Posterior border of preopercle convex, rounded. Branches of preoperculur canal extending onto opercle**. Gill rakers slender, **lower gill rakers 32 to 35**. **Anal fin short, with iii unbranched and 18 to 20 branched fin rays, its origin equal with vertical through middle of dorsal-fin base. Pelvic-fin tips reaching posteriorly to vertical through bases of anterior dorsal-fin rays**. Scales moderate, about 35 or 36 in lateral series. **Colour:** body with silver stripe down flank; **a pair of dark lines along dorsum from head posteriorly to dorsal-fin origin**.

Size: Maximum standard length 6 cm.

Habitat, biology, and fisheries: Coastal, pelagic, and schooling, but more data needed. Unknown contribution to fisheries.

Distribution: Western Central Pacific (Ponape, Caroline Islands).



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