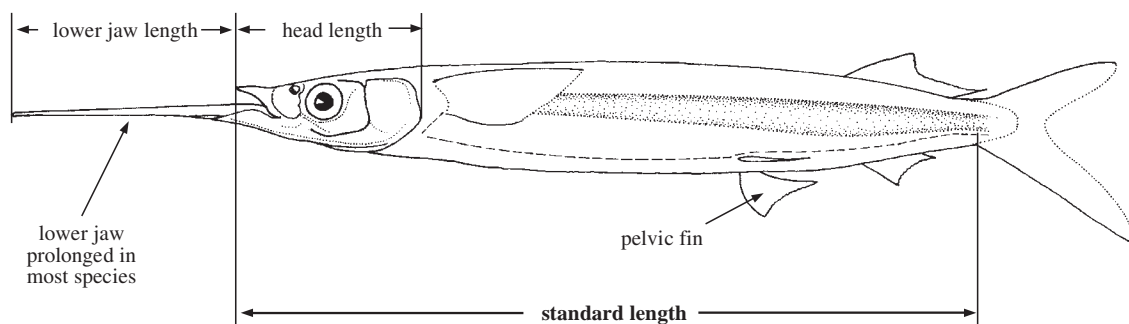


HEMIRAMPHIDAE

Halfbeaks

by B.B. Collette

Diagnostic characters: Elongate fishes with **prolonged lower jaw** (except in *Oxyporhamphus*, *Arrhamphus*, and *Melapedalion*) and **short triangular upper jaw** (except in *Oxyporhamphus*). Nostrils in pit anterior to eyes. No spines in fins; dorsal and anal fins posterior in position; pelvic fins abdominal in position, with 6 soft rays; pectoral fins usually short. Lateral line running down from pectoral-fin origin and then backwards along ventral margin of body. Scales moderately large, cycloid (smooth), easily detached. **Colour:** these fishes live near the surface and are protectively coloured for this mode of life by being green or blue on the back and silvery white on the sides and ventrally; tip of lower jaw bright red or orange in most species.

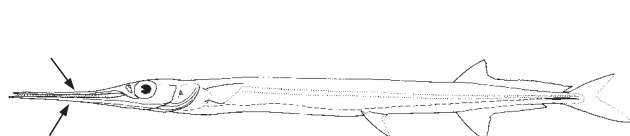


Habitat, biology, and fisheries: Most species are marine, but some inhabit fresh waters. Omnivorous, feeding on floating sea grass, crustaceans, and small fishes. They are prone to leap and skitter at the surface and 3 offshore species, *Euleptorhamphus viridis* and *Oxyporhamphus* spp. leap out of the water and glide like a flyingfish. Although at present these fishes are not of great commercial importance, many species are regularly found in local markets. The flesh is excellent and halfbeaks are utilized as food in many parts of the world. From 1990 to 1995, FAO's Yearbook of Fishery Statistics reports a range of yearly catch of Hemiramphidae (and Exocoetidae) of around 25 900 to 67 200 t from the Western Central Pacific. They are mainly caught with seines and pelagic trawls, and dipnetted under lights at night. They are utilized fresh, dried salted, or smoked.

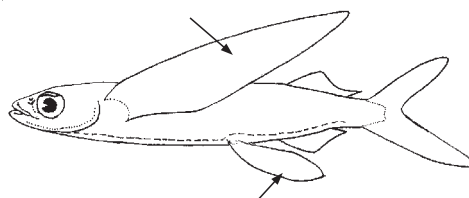
Similar families occurring in the area

Belonidae (needlefishes): both upper and lower jaws elongate and armed with needle-sharp teeth.

Exocoetidae (flyingfishes): lack the prolonged lower jaw characteristic of most halfbeaks; pectoral fin or both pectoral and pelvic fins enlarged and used for aerial gliding.



Belonidae



Exocoetidae

Key to the species of Hemiramphidae occurring in the area

Note: out of about 12 genera and 100 species in the family, 20 species belonging to 7 genera, occur in the marine waters of the Western Central Pacific. The small species of the fresh-water and estuarine genera *Dermogenys*, *Nomorhamphus*, *Hemirhamphodon*, and *Zenarchopterus* are not included in the following key.

- 1a. Lower jaw not noticeably elongate in adults (Fig.1); anterior margin of upper jaw straight, not forming a prominent triangular anterior projection; pectoral fins long, 30 to 35% of standard length (*Oxyporhamphus*) → 2
- 1b. Lower jaw elongate (Fig. 2) or not; anterior margin of upper jaw forming a prominent triangular anterior projection; pectoral fins not more than 28% of standard length → 3

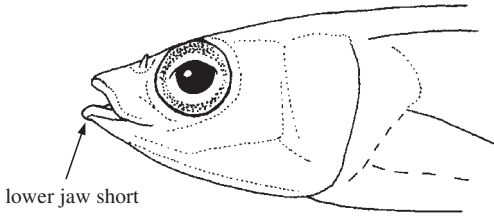


Fig. 1 *Oxyporhamphus*

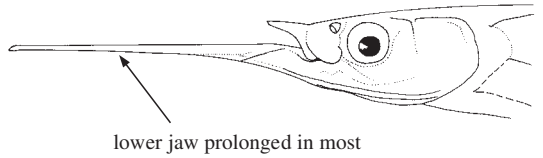


Fig. 2 lateral view of head

- 2a. Swimbladder cellular (multi-chambered) in specimens longer than 12 cm; pelvic fins in juveniles (3 to 9 cm standard length) intensely pigmented on distal margins; distance from pelvic-fin origin to caudal-fin base contained 1.05 to 1.35 times in distance from pectoral-fin origin to pelvic-fin origin *Oxyporhamphus convexus convexus*
- 2b. Swimbladder simple (single-chambered) at all sizes; pelvic fins in juveniles unpigmented or with slight pigmentation on outer rays; distance from pelvic-fin origin to caudal-fin base contained 0.9 to 1.2 times in distance from pectoral-fin origin to pelvic-fin origin *Oxyporhamphus micropterus micropterus*
- 3a. Nasal papilla rounded, fan-shaped, or fimbriate; not projecting far beyond nasal fossa (Fig. 3a, b); caudal fin emarginate or forked, frequently with an elongate lower lobe; anal fin of males not different from those of females → 4
- 3b. Nasal papilla elongate and pointed, not fimbriate; projecting well beyond nasal fossa (Fig. 3c); caudal fin rounded or truncate, with the longest rays in middle of fin; anal fin of males modified, some rays widened and elongate **freshwater and estuarine genera**

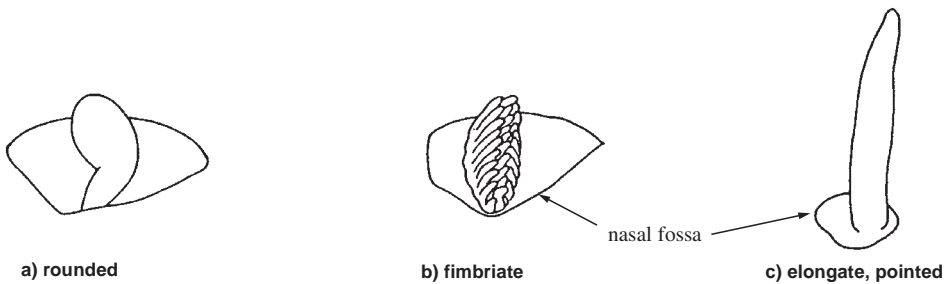


Fig. 3 nasal papilla

- 4a. Body compressed and ribbon-shaped; dorsal-fin rays 20 to 25; anal-fin rays 20 to 25 (Fig. 4a); pectoral fins long, 25 to 28% of standard length; pectoral-fin rays usually 7 to 9 *Euleptorhamphus viridis*
- 4b. Body not ribbon-shaped; dorsal-fin rays 12 to 18; anal-fin rays 10 to 19 (Fig. 4b); pectoral fins short, less than 20% of standard length; pectoral-fin rays 10 to 14 → 5

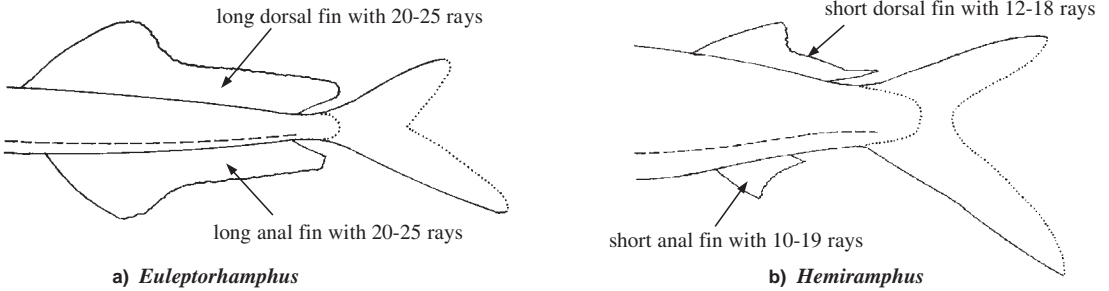


Fig. 4 posterior part of body

- 5a. Scales absent on upper jaw; preorbital ridge absent (Fig. 5a) (*Hemiramphus*) → 6
- 5b. Scales present on upper jaw; preorbital ridge well developed (Fig. 5b) → 9

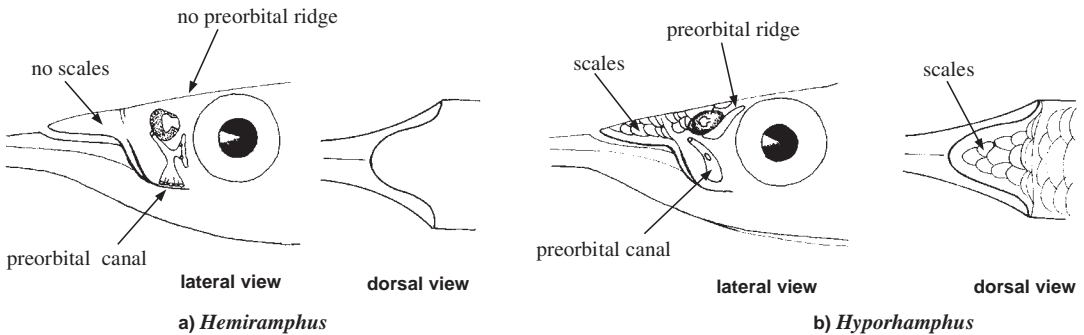


Fig. 5 detail of head

- 6a. Pectoral fins relatively long, 4.5 to 5.4 times in standard length (length greater than distance from their origin to anterior margin of nasal fossa); gill rakers on first arch 33 to 46, usually 36 or more; predorsal scales 35 to 43, usually more than 37. *Hemiramphus lutkei*
- 6b. Pectoral fins short, 5.2 to 6.8 times in standard length (length less than distance from their origin to anterior margin of nasal fossa); gill rakers on first arch 25 to 36, usually fewer than 34; predorsal scales 29 to 39, usually fewer than 37 → 7
- 7a. Dorsal fin without well-developed anterior lobe, pigmented on margins; body width contained 1.8 to 2 times in its depth; adults without spots on side of body *Hemiramphus archipelagicus*
- 7b. Dorsal fin with well-developed anterior lobe, pigmented on anterior part; body width contained 1.3 to 1.8 times in its depth; adults usually with short vertical bars on side of body → 8
- 8a. Adults usually with 3 to 9 (usually 4 to 6), short dark vertical bars on sides of body; anal-fin rays 9 to 12, usually 11. *Hemiramphus far*
- 8b. Adults usually with 1 dark spot on sides of body; anal-fin rays 11 to 14, usually 12 or 13 *Hemiramphus robustus*

- 9a. Nasal papillae fimbriate; upper jaw arched; gill rakers on first arch 47 to 78; lateral line with 2 branches ascending behind opercle and pectoral-fin origin (Fig. 6a) (*Rhynchorhamphus*) → 10
- 9b. Nasal papillae not fimbriate; upper jaw flat or nearly flat; gill rakers on first arch 19 to 47; lateral line with 1 branch ascending toward pectoral-fin origin (Fig. 6b) → 11

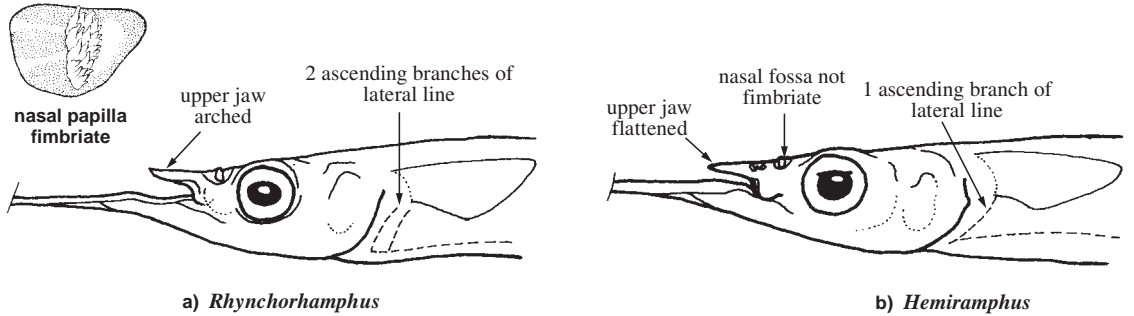


Fig. 6 anterior part of body

- 10a. Gill rakers on first arch 47 to 67, usually 56 to 63; on second arch 41 to 63 *Rhynchorhamphus georgii*
- 10b. Gill rakers on first arch 47 to 59, usually 50 to 55; on second arch 39 to 53 *Rhynchorhamphus naga*
- 11a. Lower jaw slightly elongate, less than 1/5 head length → 12
- 11b. Lower jaw longer, at least 1/2 head length (*Hyporhamphus*) → 13
- 12a. Preorbital canal without posterior branch (Fig. 7a); caudal fin emarginate or slightly forked *Arrhamphus sclerolepis*
- 12b. Preorbital canal T-shaped, with posterior branch (Fig. 7b); caudal fin deeply forked *Melapedalion breve*
- 13a. Preorbital canal simple, without posterior branch (Fig. 7a); caudal fin emarginate or slightly forked *Hyporhamphus* (*Hyporhamphus*) → 14
- 13b. Preorbital canal T-shaped, with posterior branch (Fig. 7b); caudal fin distinctly forked *Hyporhamphus* (*Reporhamphus*) → 17

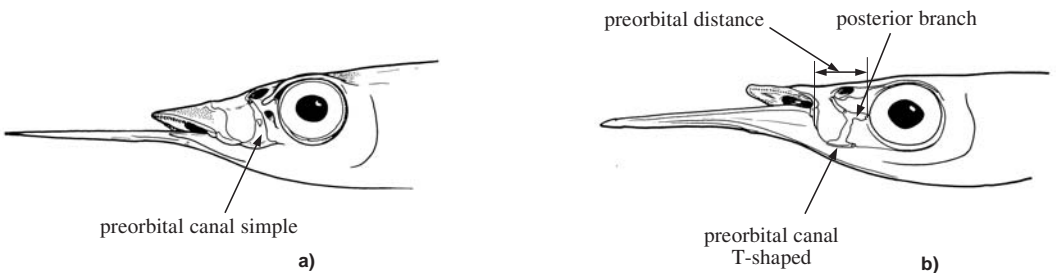


Fig. 7 lateral view of head

(scale removed in front of eye to expose preorbital canal)

- 14a. Distinct black spots on tips of dorsal fin and upper and lower lobes of caudal fin; caudal fin forked *Hyporhamphus melanopterus*
- 14b. No distinct black spots on dorsal fin or caudal fin; caudal fin emarginate, not forked → 15

- 15a.** Lower jaw usually longer than head length in adults, its length contained 0.7 to 1.3 times in head length *Hyporhamphus limbatus*
- 15b.** Lower jaw usually not as long as head length in adults, its length contained 0.9 to 1.8 times in head length → **16**
- 16a.** Preorbital distance (distance from the anterior margin of the orbit to the posterior vertical margin of the upper jaw; see Fig. 7b) contained 1.4 to 2 times in orbit diameter and 0.8 to 1.35 times in upper-jaw length *Hyporhamphus neglectus*
- 16b.** Preorbital distance contained 1.05 to 1.35 times in orbit diameter and 0.6 to 0.8 times in upper-jaw length *Hyporhamphus neglectissimus*
- 17a.** Width of triangular portion of upper jaw about equal to its length (0.8 to 1.05 times in its length); preorbital canal narrow, not enlarged ventrally; anterior branch on a straight line with posterior branch (Fig. 8a) *Hyporhamphus acutus*
- 17b.** Width of triangular portion of upper jaw usually wider than its length (0.5 to 0.85 times in its length); preorbital canal enlarged ventrally; anterior branch at an angle with posterior branch (Fig. 8b) → **18**

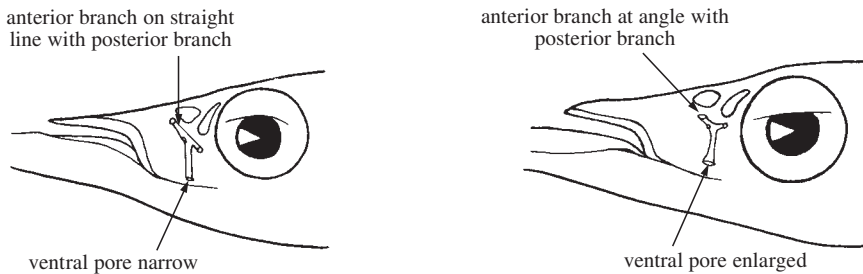


Fig. 8 lateral view of head
(scale removed in front of eye to expose preorbital canal)

- 18a.** Preorbital bone contained 1 to 1.2 times in orbit diameter and 0.65 to 1 times in upper-jaw length; lower jaw long, its length contained 0.7 to 0.9 times in head length *Hyporhamphus balinensis*
- 18b.** Preorbital bone contained 1.35 to 2.15 times in orbit diameter and 0.85 to 1.4 times in upper-jaw length; lower jaw shorter, its length contained 0.8 to 2 times in head length → **19**
- 19a.** Preorbital bone contained 1.35 to 1.9 times in orbit diameter; pectoral-fin length contained 7.7 to 10 times in standard length *Hyporhamphus affinis*
- 19b.** Preorbital bone contained 1.7 to 2.15 times in orbit diameter; pectoral-fin length contained 6.8 to 8.2 times in standard length → **20**
- 20a.** Upper-jaw tip pointed; gill rakers on first gill arch 36 to 47, as few as 33 in eastern Australian populations; distance from pelvic-fin origin to caudal-fin base contained 1 to 1.3 times in distance from pectoral-fin origin to pelvic-fin origin; lower jaw length moderate, in large fishes contained up to 1.4 times in head length . . . *Hyporhamphus dussumieri*
- 20b.** Upper-jaw tip blunt and rounded; gill rakers on first gill arch 26 to 34, up to 36 to 39 in Australian populations; distance from pelvic-fin origin to caudal-fin base contained 0.9 to 1.05 times in distance from pectoral-fin origin to pelvic-fin origin; lower jaw short, in large fishes contained up to 2 times in head length *Hyporhamphus quoyi*

List of species occurring in the area

The symbol ➡ is given when species accounts are included.

- ➡ *Arrhamphus sclerolepis sclerolepis* (Günther 1866)
- ➡ *Euleptorhamphus viridis* (van Hasselt, 1823)
- ➡ *Hemiramphus archipelagicus* Collette and Parin, 1978
- ➡ *Hemiramphus far* (Forsskål, 1775)
- ➡ *Hemiramphus lutkei* (Valenciennes, 1846)
- ➡ *Hemiramphus robustus* Günther, 1866
- ➡ *Hyporhamphus* (*Reporhamphus*) *acutus acutus* (Günther, 1871)
- ➡ *Hyporhamphus* (*R.*) *affinis* (Günther, 1866)
- ➡ *Hyporhamphus* (*R.*) *balinensis* (Bleeker, 1858)
- ➡ *Hyporhamphus* (*R.*) *dussumieri* (Valenciennes, 1846)
- ➡ *Hyporhamphus* (*Hyporhamphus*) *limbatus* (Valenciennes, 1846)
- ➡ *Hyporhamphus* (*H.*) *melanopterus* Collette and Parin, 1978
- ➡ *Hyporhamphus* (*H.*) *neglectissimus* Parin, Collette, and Schcherbachev, 1980
- ➡ *Hyporhamphus* (*H.*) *neglectus* (Bleeker, 1866)
- ➡ *Hyporhamphus* (*Reporhamphus*) *quoyi* (Valenciennes, 1846)
- ➡ *Melapedalion breve* (Seale, 1909)
- ➡ *Oxyporhamphus convexus convexus* (Weber and de Beaufort, 1922)
- ➡ *Oxyporhamphus micropterus micropterus* (Valenciennes, 1846)
- ➡ *Rhynchorhamphus georgii* (Valenciennes, 1846)
- ➡ *Rhynchorhamphus naga* Collette, 1976

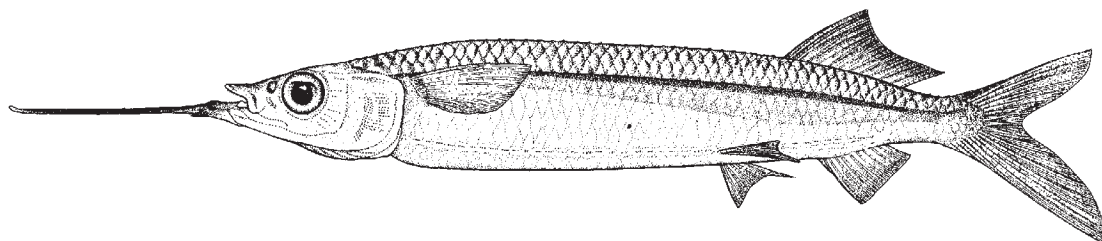
References

- Collette, B.B. 1974. The garfishes (Hemiramphidae) of Australia and New Zealand. *Rec. Australian Mus.*, 29(2):11-105.
- Collette, B.B. and J. Su. 1986. The halfbeaks (Pisces, Beloniformes, Hemiramphidae) of the Far East. *Proc. Acad. Nat. Sci. Philad.*, 138(1):250-301.
- Parin, N.V., B.B. Collette, and Y.N. Shcherbachev. 1980. Preliminary review of the marine halfbeaks (Hemiramphidae, Beloniformes) of the tropical Indo-West Pacific. *Trudy Inst. Okean.*, 97:7-173 [In Russian with English abstract].

Hemiramphus archipelagicus Collette and Parin, 1978

Frequent synonyms / misidentifications: None / *Hemiramphus marginatus* Forsskål, 1775.

FAO names: En - Jumping halfbeak; Fr - Demi-bec saltou; Sp - Agujeta saltona.



8° 21'N, 104° 38'E, 19 cm standard length

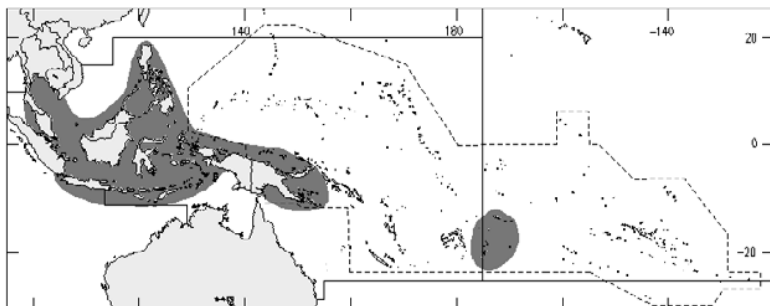
(from Collette and Parin, 1973)

Diagnostic characters: An elongate fish with **greatly prolonged, beak-like lower jaw; upper jaw short, triangular and scaleless; preorbital ridge** (bony ridge behind nostril) **absent**. **Total number of gill rakers on first gill arch 25 to 32**; 6 to 8 on upper, and 19 to 24 on lower limb of arch. **Dorsal fin without well-developed anterior lobe**; dorsal-fin rays 12 to 15; anal-fin rays 10 to 13; **pectoral fins short, not reaching past nasal pit when folded forward** and with 11 to 13 rays (usually 12); caudal fin deeply forked, lower lobe much longer than upper. Predorsal scales 32 to 37 (usually 34 to 36). **Colour:** dark bluish above, silvery white below, **without any vertical bars on sides**; beak dark with a bright red fleshy tip; upper lobe of caudal fin yellow, tip of dorsal-fin lobe with some yellow.

Size: Maximum total length about 34 cm; maximum standard length 23 cm (from tip of upper jaw to base of caudal fin).

Habitat, biology, and fisheries: Inhabits the immediate vicinity of coasts, but juveniles of this species may sometimes be found with floating plants carried out to sea. Taken with purse seines at Karwar on the west coast of India and by dol nets at Bombay. Marketed fresh and dried salted.

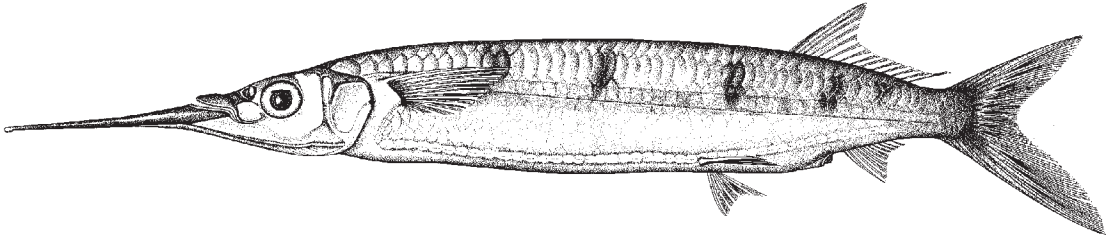
Distribution: An Indo-West Pacific species known from the western part of the Indian Ocean and western Central Pacific. Within the area, known from the Gulf of Thailand, Philippines, and Indonesia eastward to New Guinea and western Polynesia.



Hemiramphus far (Forsskål, 1775)

Frequent synonyms / misidentifications: *Hemiramphus commersonii* Cuvier, 1829 / None.

FAO names: En - Black-barred halfbeak; Fr - Demi-bec bagnard; Sp - Agujete manchada.



Philippines, 26.3 cm standard length

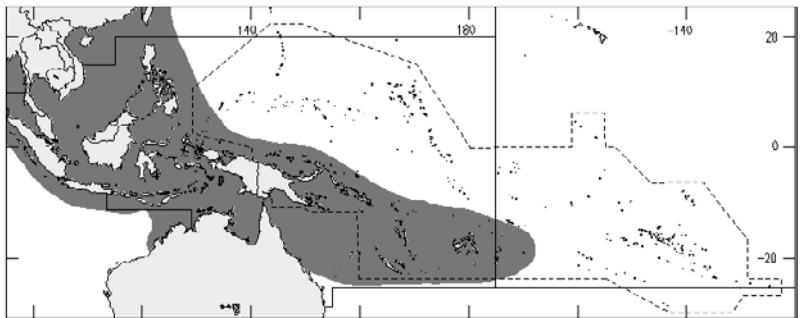
(from Collette, 1974)

Diagnostic characters: An elongate fish with **greatly prolonged, beak-like lower jaw; upper jaw short, triangular and scaleless; preorbital ridge** (bony ridge behind nostril) **absent**. **Total number of gill rakers on first gill arch 25 to 36** (usually 29 to 33); 6 to 10 on upper and 19 to 26 on lower limb of arch. Dorsal fin with well-developed anterior lobe; dorsal-fin rays 12 to 14; **anal-fin rays 10 to 12** (usually 11); **pectoral fins short, not reaching past nasal pit when folded forward** and with 11 to 13 rays (usually 12); caudal fin deeply forked, lower lobe much longer than upper. Predorsal scales 32 to 39 (usually 34 to 37). **Colour:** dark bluish above, silvery white below, with **3 to 9 (usually 4 to 6) vertical bars on sides**; beak dark, with a bright red fleshy tip.

Size: Maximum total length about 44 cm; maximum standard length 33 cm (from tip of upper jaw to base of caudal fin), commonly to 27 cm.

Habitat, biology, and fisheries: Found in proximity of continental coasts and islands, chiefly in areas of rich submerged vegetation. Adults feed mainly on sea grasses, to a lesser extent on green algae and diatoms. Taken with gill nets, shore seines, drag nets, or by drifting a fine line with tiny hooks baited with shrimp. Marketed mostly fresh and dried salted.

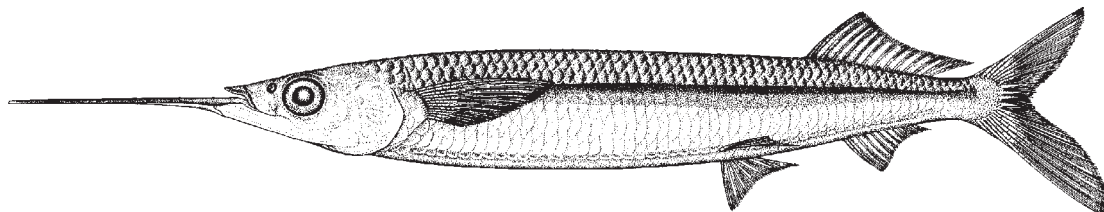
Distribution: An Indo-West Pacific species found in tropical waters of the Indian and western parts of the Pacific oceans. In the area, extends eastward to the Philippines, Palau, Fiji, Samoa, and Tonga south to New Guinea, New Caledonia, and northern Australia; north to the Izu Peninsula of Japan.



Hemiramphus lutkei (Valenciennes, 1846)

Frequent synonyms / misidentifications: None / *Hemiramphus marginatus* Forsskål, 1775.

FAO names: En - Lutke's halfbeak; Fr - Demi-bec de Lutke; Sp - Agujeta de Lutke.



Sri Lanka, 22.1 cm standard length

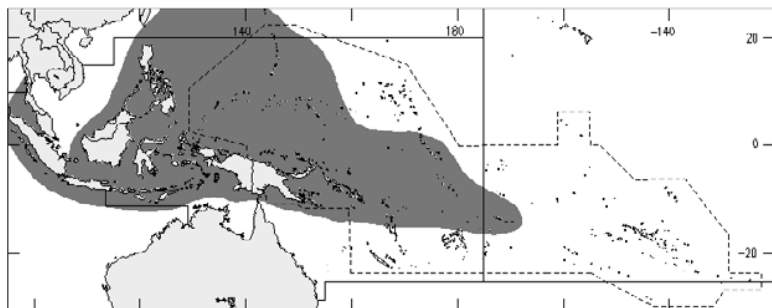
(from Parin et al., 1980)

Diagnostic characters: An elongate fish with **greatly prolonged, beak-like lower jaw; upper jaw short, triangular and scaleless; preorbital ridge** (bony ridge behind nostril) **absent**. **Total number of gill rakers on first gill arch 33 to 46** (usually 36 to 41); 9 to 14 on upper, and 24 to 32 on lower limb of arch. Dorsal-fin rays 12 to 15 (usually 13 or 14); anal-fin rays 10 to 13 (usually 12); **pectoral fins long, reaching beyond anterior margin of nasal pit when folded forward** and contained 4.8 to 5.4 times in standard length, with 10 to 12 rays (usually 11); caudal fin deeply forked, lower lobe much longer than upper. Predorsal scales 35 to 43 (usually 37 to 41). **Colour:** dark bluish above, silvery white below, with **no spots or vertical bars on sides**; beak dark with a bright red fleshy tip; upper lobe of caudal fin bluish.

Size: Maximum total length about 40 cm; maximum standard length 30 cm (from tip of upper jaw to base of caudal fin), commonly to 25 cm.

Habitat, biology, and fisheries: Found more offshore than other species of *Hemiramphus* in the area; juveniles and immature individuals are relatively common far from shore, usually among floating plants. Marketed fresh and dried salted.

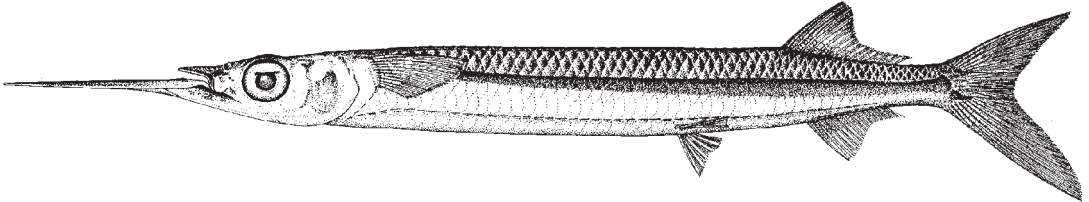
Distribution: Known from Indian and western Central Pacific oceans. Within the area, known from Indonesia, Philippines, and New Guinea; north to southern Japan, and east to Marcus Islands, the Gilbert Islands, and Samoa.



Hyporhamphus (Reporhamphus) dussumieri (Valenciennes, 1846)

Frequent synonyms / misidentifications: None / None.

FAO names: En - Dussumier's halfbeak; Fr - Demi-bec de Dussumier; Sp - Agujeta de Dussumier.



Marshall Is., 20.8 cm standard length

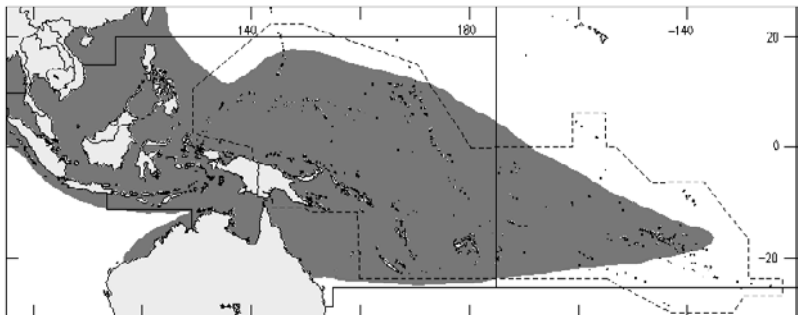
(from Parin et al., 1980)

Diagnostic characters: An elongate fish with a **prolonged, beak-like lower jaw, contained 4.2 to 5.9 times in standard length and 0.95 to 1.4 times in head length**, decreasing with growth; **upper jaw short, triangular, and scaly, its width 0.6 to 0.9 times in its length; length of preorbital bone contained 1.7 to 2.2 times in diameter of orbit and 1 to 1.4 times in length of upper jaw**; preorbital ridge (bony ridge between nasal opening and eye) present; posterior branch to preorbital lateral-line canal present. **Total number of gill rakers on first gill arch 33 to 47**, usually 38 to 43 (except in Queensland, Australia, usually 35 to 37), 10 to 14 on upper and 26 to 32 on lower limb of arch. **Dorsal and anal fin rays 14 to 16**, dorsal rays usually 15 or 16, anal rays usually 14 or 15; pectoral fins short with 11 or 12 rays; pelvic fins located closer to caudal-fin base than to origin of pectoral fins; distance from pelvic-fin origin to caudal-fin base contained 1.05 to 1.3 times in distance from pectoral-fin origin to pelvic-fin origin; **caudal fin forked, with lower lobe longer than upper**. Anterior part of dorsal fin and all of anal fin covered with scales; predorsal scales 37 to 44 (usually 38 to 41). **Colour:** greenish above, silvery white below; fleshy tip of beak red.

Size: Maximum standard length about 29.8 cm (tip of upper jaw to base of caudal fin) plus 5.3 cm beak, commonly to 19.0 cm.

Habitat, biology, and fisheries: Most common around islands and coral reefs. Taken mostly with shore seines. Marketed fresh and dried salted.

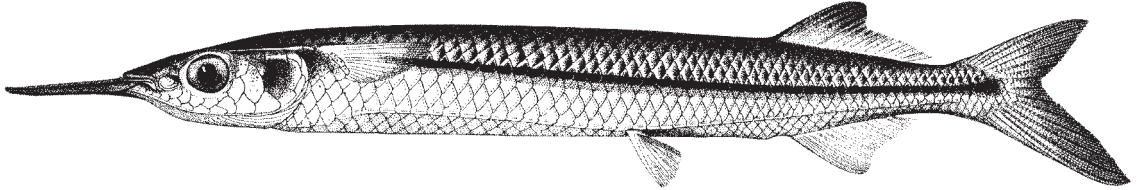
Distribution: Inhabits the tropical Indian and western Pacific oceans. Within the area, known from Indonesia, Borneo, Philippines, New Guinea and eastwards as far as Tuamotu Islands; north to Hong Kong and Okinawa.



Hyporhamphus (Reporhamphus) quoyi (Valenciennes, 1846)

Frequent synonyms / misidentifications: None / None.

FAO names: En - Quoy's halfbeak; Fr - Demi-bec de Quoy; Sp - Agujeta de Quoy.



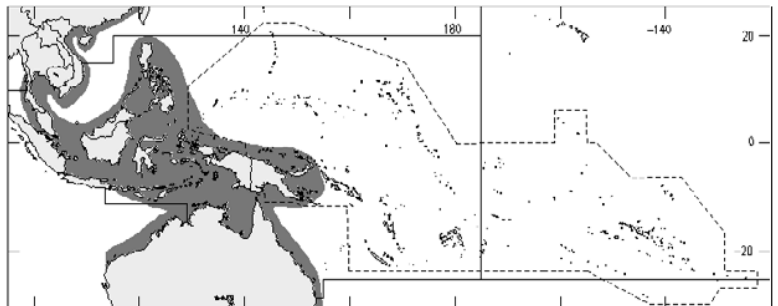
Nagasaki, Japan, 19.5 cm standard length

Diagnostic characters: An elongate fish with a **prolonged, beak-like lower jaw, shorter than head length, its length contained 4.7 to 8.6 times in standard length and 1.1 to 2 times in head length**, decreasing with growth; **upper jaw short, scaly, blunt and rounded, its width contained 0.5 to 0.6 times in its length**; **preorbital bone 1.75 to 2.15 times in diameter of orbit and 0.9 to 1.15 times in length of upper jaw**; **preorbital ridge** (bony ridge between nasal opening and eye) **present**; **posterior branch to preorbital lateral-line canal present**. **Total number of gill rakers on first gill arch 26 to 39**, usually 27 to 31 (except in Australia, usually 31 to 35), 6 to 14 on upper and 18 to 25 on lower limb of arch. **Dorsal-fin rays 14 to 17 (usually 16), anal-fin rays 13 to 17 (usually 15 or 16)**; pectoral fins short with 11 to 13 rays; pelvic fins located approximately half way between origin of pectoral fin and base of caudal fin, distance from pelvic-fin origin to caudal-fin base contained 0.9 to 1.05 times in distance from pectoral-fin origin to pelvic-fin origin; **caudal fin forked, with lower lobe longer than upper**. Anterior part of dorsal fin and all of anal fin covered with scales; predorsal scales 36 to 43 (usually 37 to 40). **Colour:** greenish above, silvery white below; fleshy tip of beak red.

Size: Maximum standard length 31.2 cm (tip of upper jaw to base of caudal fin).

Habitat, biology, and fisheries: Inhabits more turbid and estuarine situations than does *Hyporhamphus dussumieri* and is not found around oceanic islands. Taken mostly with shore seines. Marketed fresh and dried salted.

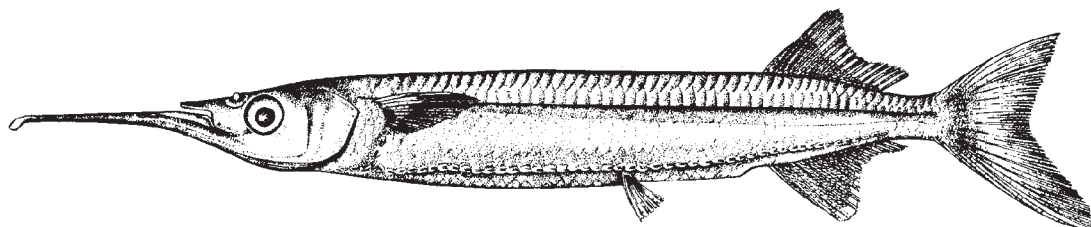
Distribution: Inhabits tropical western Indian and western Pacific oceans. Within the area, known from Thailand, Indonesia, Borneo, and Philippines; north to China and Nagasaki, Japan, south to New Guinea and the northern half of Australia.



Hyporhamphus (Hyporhamphus) limbatus (Valenciennes, 1846)

Frequent synonyms / misidentifications: None / *Hemiramphus gaimardi* Valenciennes, 1846; *Hyporhamphus unifasciatus* (Ranzani, 1847).

FAO names: En - Congaturi halfbeak; Fr - Demi-bec congaturi; Sp - Agujeta congaturi.

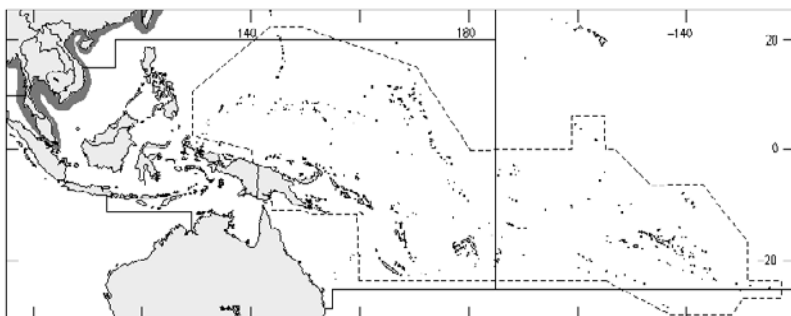


Diagnostic characters: An elongate fish with **greatly prolonged, beak-like lower jaw, equal to, or longer than head length; upper jaw short, triangular and scaly, its width 0.6 to 0.8 times in its length. Preorbital distance 1.3 to 2.1 times in diameter of orbit and 0.75 to 1.2 times in length of upper jaw;** preorbital ridge (bony ridge between nasal opening and eye) present; posterior branch to preorbital lateral-line canal absent. **Total number of gill rakers on first gill arch 23 to 37** (usually 25 to 31), 6 to 11 on upper and 19 to 23 on lower limb of arch. Dorsal-fin rays 13 to 16, usually 13 or 14; **anal-fin rays 13 to 16** (usually 14 or 15); pectoral fins short, with 10 to 12 rays; **caudal fin emarginate, not strongly forked.** Anterior part of dorsal and anal fins covered with scales; predorsal scales (in front of dorsal fin) 30 to 38 (usually 32 to 35). **Colour:** greenish above, the silvery lateral stripe widening posteriorly, white ventrally; fleshy tip of beak reddish.

Size: Maximum total length 22 cm; maximum standard length 17 cm (tip of upper jaw to base of caudal fin), commonly to 13 cm.

Habitat, biology, and fisheries: A coastal species, frequently enters estuaries and even strictly fresh-water. Taken with cast nets on coasts of India. Marketed fresh and dried salted.

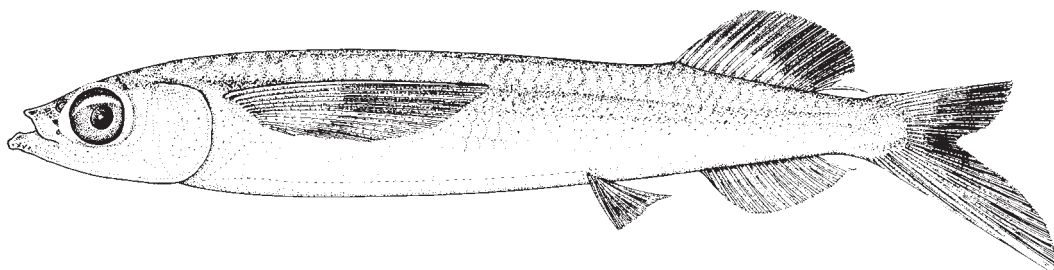
Distribution: Extends from the Persian Gulf to China along the mainland coast of Asia. Within the area, found from Thailand northward to China. Replaced in Indonesia, Borneo, and the Philippines by the closely related *Hyporhamphus neglectus*, and around southern New Guinea and northern Australia by *H. neglectissimus*.



Oxyporhamphus convexus convexus (Weber and de Beaufort, 1922)

Frequent synonyms / misidentifications: *Oxyporhamphus meristocystis* Parin, 1961 / *Oxyporhamphus micropterus* (Valenciennes, 1846).

FAO names: En - Flying halfbeak.

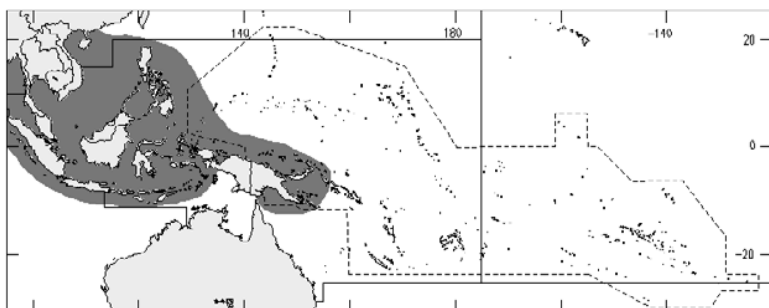


Diagnostic characters: An elongate fish; **adults without the prolonged lower jaw characteristic** of most halfbeaks, but lower jaw up to 4 times in standard length in young (specimens between 3.5 and 4.5 cm standard length); **anterior margin of upper jaw straight, not forming a prominent triangular anterior projection** as in other halfbeaks; preorbital ridge (bony ridge behind nostril) absent. Total number of gill rakers on first gill arch 26 to 33 (usually 27 to 31). Dorsal fin without well-developed anterior lobe; dorsal-fin rays 12 to 15; anal-fin rays 13 to 17; **pectoral fins elongate, 2.8 to 3.3 times in standard length**, barely reaching origin of pelvic fins, with 11 to 13 rays; pelvic fins short, 7.5 to 11.1 times in standard length, located about midway between origin of pectoral fins and caudal-fin base; **distance from pelvic-fin origin to caudal-fin base contained 1.05 to 1.35 times in distance from pectoral-fin origin to pelvic-fin origin**; caudal fin forked, with lower lobe much longer than upper. Fins not covered with scales; predorsal scales large, 28 to 34. Swimbladder in adults (greater than 12 cm standard length) alveolar, composed of many small cells. **Colour:** pelvic fins intensively pigmented, with exception of innermost ray; pelvic fins always intensively pigmented distally in young at 2.5 to 3 cm standard length and larger; skin folds along sides of lower jaw black in juveniles, with expanded lobes anteriorly (noticeably only in undamaged fish).

Size: Maximum standard length 17.6 cm, commonly to 13 cm.

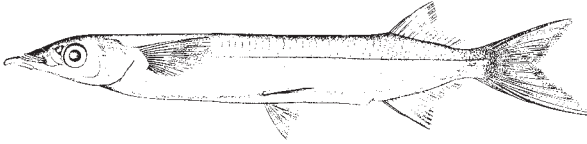
Habitat, biology, and fisheries: More coastal than *Oxyporhamphus micropterus* and frequently found near islands. Marketed fresh with flyingfishes in the markets of Cebu (Philippines) and elsewhere.

Distribution: Widespread in the Indo-West Pacific in somewhat warmer waters than *Oxyporhamphus micropterus* and extending east only to the Philippines, New Guinea, New Britain, and New Ireland. Replaced by *O. convexus bruuni* Parin, Collette, and Scherbachv, 1980, in the Red Sea, Arabian Sea, and coastal waters in between.



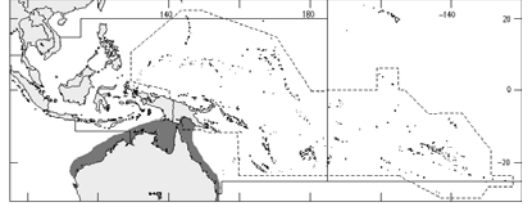
Arrhamphus sclerolepis sclerolepis* Günther, 1866*En** - Northern snubnose garfish.

Maximum standard length 21.8 cm. A coastal species that extends into fresh water. Considered an excellent food fish and taken by commercial and recreational fishermen in Queensland. Confined to northern Australia and southern Papua New Guinea. Known south along the coast of Western Australia to the Gascoyne River and along the coast of eastern Australia to Lindeman Island and Bowen, Queensland. Replaced south of Rockhampton, Queensland, by a southern subspecies, *Arrhamphus s. krefftii* (Steindachner, 1867) which extends to Sydney.



(from Collette, 1974)

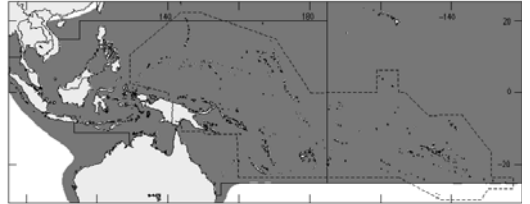
Clarence River, North South Wales, 22 cm standard length
(figure of *A. s. krefftii*)

***Euleptorhamphus viridis* (van Hasselt, 1823)****En** - Longfinned halfbeak.

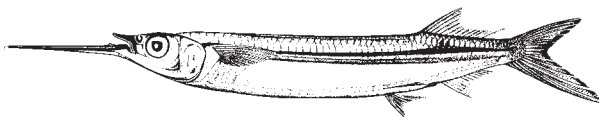
Maximum standard length 40.5 cm. An oceanic species found throughout the tropical and subtropical waters of the Indo-Pacific. Not known to be of importance to fisheries.



juvenile

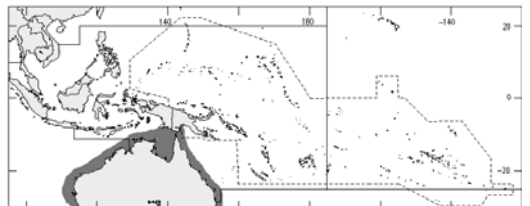
***Hemiramphus robustus* Günther, 1866****En** - Three-by-two garfish.

Maximum standard length 31.5 cm. A coastal species mostly found in more turbid inshore waters replacing *Hemiramphus far*, which is more common in more oceanic waters. A high quality food fish well known in markets of Brisbane, Queensland. Its common name is an allusion to its similarity to a 3-inch by 2-inch plank of wood. An Australian endemic extending south to Sydney on the east coast and to Perth in Western Australia.



Perth, Western Australia, 26.5 cm standard length

(from Collette, 1974)



***Hyporhamphus (Reporhamphus) acutus acutus* (Günther, 1871)**

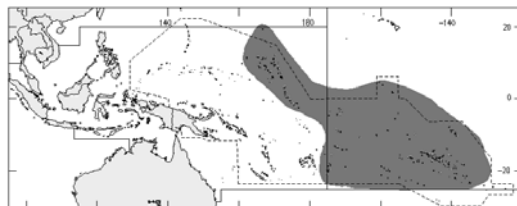
En - Sharpnose halfbeak.

Maximum standard length 18.5 cm. Of no known interest to fisheries. An oceanic species confined to areas around islands on the Pacific Plate of central Oceania, from Marshall Islands to Easter Island. Replaced in Hawaii by *Hyporhamphus a. pacificus* (Steindachner, 1900).



Easter Island, 15.6 cm standard length

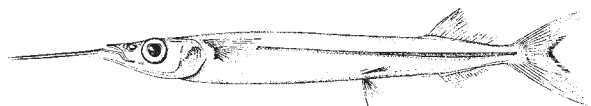
(from Collette, 1974)



***Hyporhamphus (Reporhamphus) affinis* (Günther, 1866)**

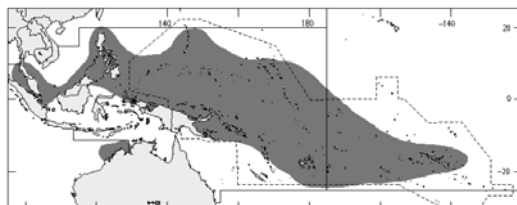
En - Coral reef halfbeak.

Maximum standard length 24.3 cm. Found chiefly around coral reefs and islands but extends a little further from shore than *Hyporhamphus (R.) dussumieri* which has a similar range. Widely distributed in tropical Indo-West Pacific from Madagascar and Red Sea through western Central Pacific east to Tuamotu Archipelago.



Marshall Islands, 24.4 cm standard length

(from Parin et al., 1980)



***Hyporhamphus (Reporhamphus) balinensis* (Bleeker, 1859)**

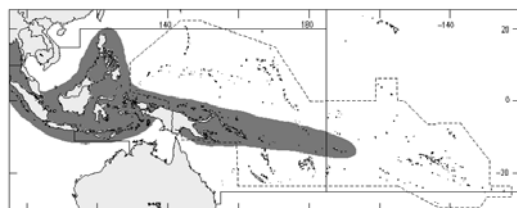
En - Bali halfbeak.

Maximum standard length 16.5 cm. Widely distributed in the tropical Indo-West Pacific from Mozambique Channel and southern part of the Red Sea through the western Central Pacific east to Samoa.



New Guinea, 13.8 cm standard length

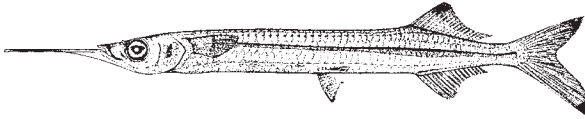
(from Parin et al., 1980)



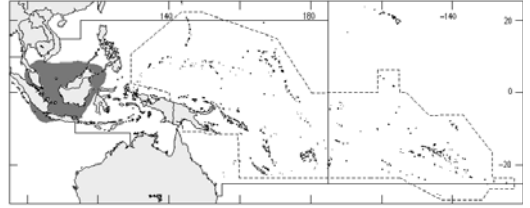
***Hyporhamphus (Hyporhamphus) melanopterus* Collette and Parin, 1978**

En - Blackfinned halfbeak.

Maximum standard length 17 cm. Confined to the Gulf of Thailand, Java Sea, and Sulu Sea.



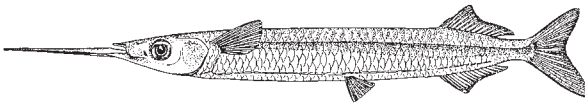
Gulf of Thailand, 13.4 cm standard length
(from Collette and Parin, 1978)



***Hyporhamphus (Hyporhamphus) neglectissimus* Parin, Collette, and Schcherbachev, 1980**

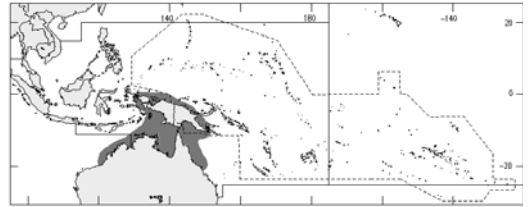
En - Australian neglected halfbeak.

Maximum standard length 14.4 cm. A coastal species that replaces *Hyporhamphus (Hyporhamphus) neglectus* in waters around New Guinea and northern Australia.



New Guinea, 13.7 cm standard length

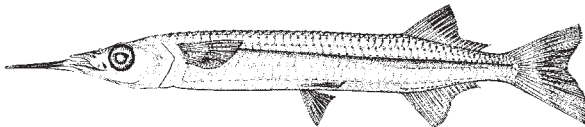
(from Parin et al., 1980)



***Hyporhamphus (Hyporhamphus) neglectus* (Bleeker, 1866)**

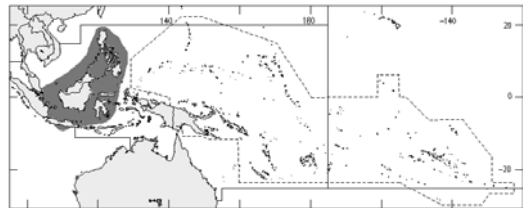
En - Neglected halfbeak.

Maximum known size 16.5 cm standard length. Replaces the coastal *Hyporhamphus (Hyporhamphus) limbatus* in waters around Java, Sumatra, Borneo, Sulawesi (Celebes), and the Philippines.



Kalimantan, 13.9 cm standard length

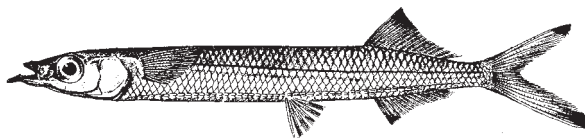
(from Parin et al., 1980)



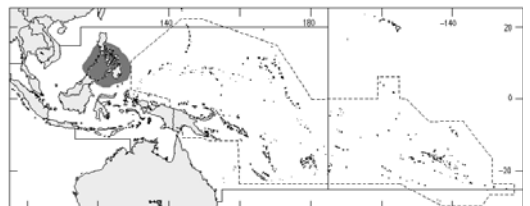
***Melapedalion breve* (Seale, 1909)**

En - Philippine snubnose halfbeak.

Maximum standard length 22.7 cm. A coastal species limited to waters of South China and Sulu seas.



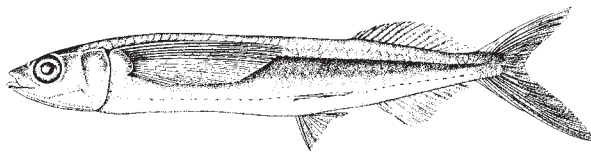
(from Seale, 1909)



***Oxyporhamphus micropterus micropterus* (Valenciennes, 1846)**

En - Oceanic flying halfbeak.

Maximum standard length 18.5 cm. A true oceanic fish, not bound to coastal waters at any period of its life. Widespread throughout the Indo-Pacific from 20°N to 20°S and extending north to southern Japan in the western Pacific. Replaced in the Atlantic by *Oxyporhamphus m. similis* Bruun, 1935.



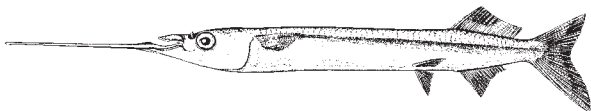
Gulf of Mexico, 14.6 cm standard length
(figure of *O. m. similis*)



***Rhynchorhamphus georgii* (Valenciennes, 1846)**

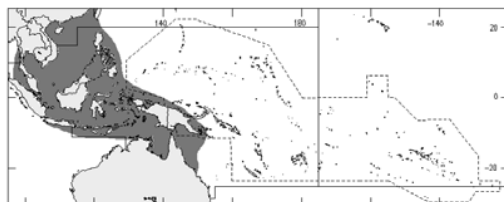
En - George's halfbeak.

Maximum standard length 23.1 cm. The most widespread of the 4 species of *Rhynchorhamphus*, found from the Persian Gulf through the Arabian Sea and Bay of Bengal through the western Central Pacific north to Taiwan Province of China and Hong Kong and east to New Guinea and northern Australia.



(from Collette, 1974)

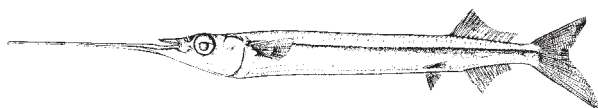
N. Borneo, 16.2 cm standard length



***Rhynchorhamphus naga* Collette, 1976**

En - Naga halfbeak.

Maximum standard length 17.7 cm. Restricted to the Gulf of Thailand, South China Sea, and western Java Sea



Gulf of Thailand, 16.5 cm standard length

(from Collette, 1976)

