

**Diagnostic Features:** Body depth 3.2 to 4.0 in SL; snout length equal to or less than diameter of eye; diameter of eye 2.3 to 3.2 in head length; lower margin of eye tangent to or just below a line from tip of snout to upper base of pectoral fin; interorbital width 1.4 to 2.4 in eye; suborbital depth 2.6 to 5.4 in eye diameter; a line drawn upwards from the posterior edge of suborbital reaching the dorsal profile 2 to 5 scale rows before origin of dorsal fin; preopercle naked width 1.5 to 2.7 in scaly width; pectoral fins long, 1.1 to 1.2 in head length, reaching to or almost to level of origin of anal fin; pelvic fins moderately long, 1.4 to 1.7 in head length, reaching to or just beyond anus; caudal fin forked, upper lobe produced into a short trailing filament; 3 or 4 pairs of small recurved canines anteriorly in upper jaw; gill rakers 11 to 15.

**Colour:** upper part of body pinkish, becoming pearly white below; 2 yellow lateral stripes; the upper stripe fainter and more diffuse, from beneath lateral line behind opercle to upper caudal base, the lower narrow and with a golden sheen from just above pectoral base to middle of caudal base; a pair of lemon-yellow stripes, united anteriorly, from the isthmus to the lower caudal base, passing just outside the bases of the pelvic and anal fins; dorsal fin faintly yellow-suffused, edged with sulphur-yellow and a dusky mauve submarginal stripe; anal fin transparent; caudal fin pinkish-yellow, tip of upper lobe and filament brilliant yellow, edged with red below; pectoral and pelvic fins translucent pink; base of pelvic fins bright yellow.

**Geographical Distribution:** Southern Indonesia, Sumatra to Flores (Fig. 55).

**Habitat and Biology:** A benthic species, found on sand or mud bottoms in depths of 50 to 150 m.

**Size:** Maximum size is 18 cm SL, commonly 12 cm SL.

**Interest to Fisheries:** Occasionally taken by trawling in inshore waters, but taken mainly by handline. Appears in small numbers in local markets. No major fishery exists.

**Local names:** INDONESIA: Kurisi.

**Literature:** Gloerfelt-Tarp & Kailola (1984); Allen & Swainston (1988).

**Remarks:** This species is very similar to *N. bathybius*, with which it has probably been confused in the past. *N. balinensis* has a more or less straight caudal filament; is more slender (depth 3.2 to 4.0 in SL, versus 2.9 to 3.6) and differs also in colour pattern: the lower lateral stripe originates from above the pectoral-fin base; the dorsal fin lacks undulating yellow lines; and the upper caudal fin and filament is red-edged.

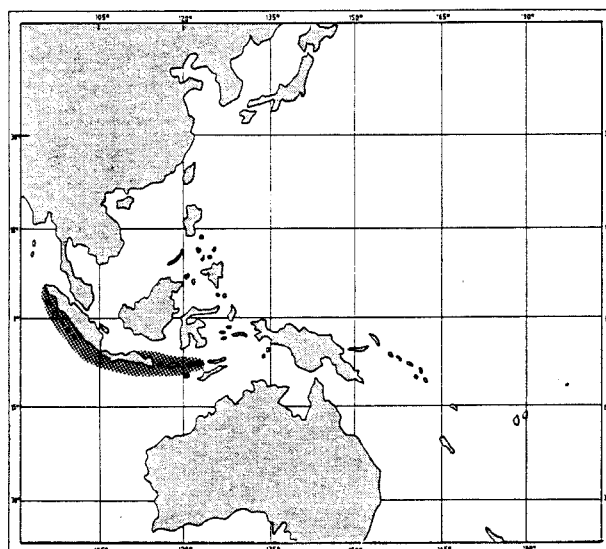


Fig. 55

*Nemipterus balinensoides* (Popta, 1918)

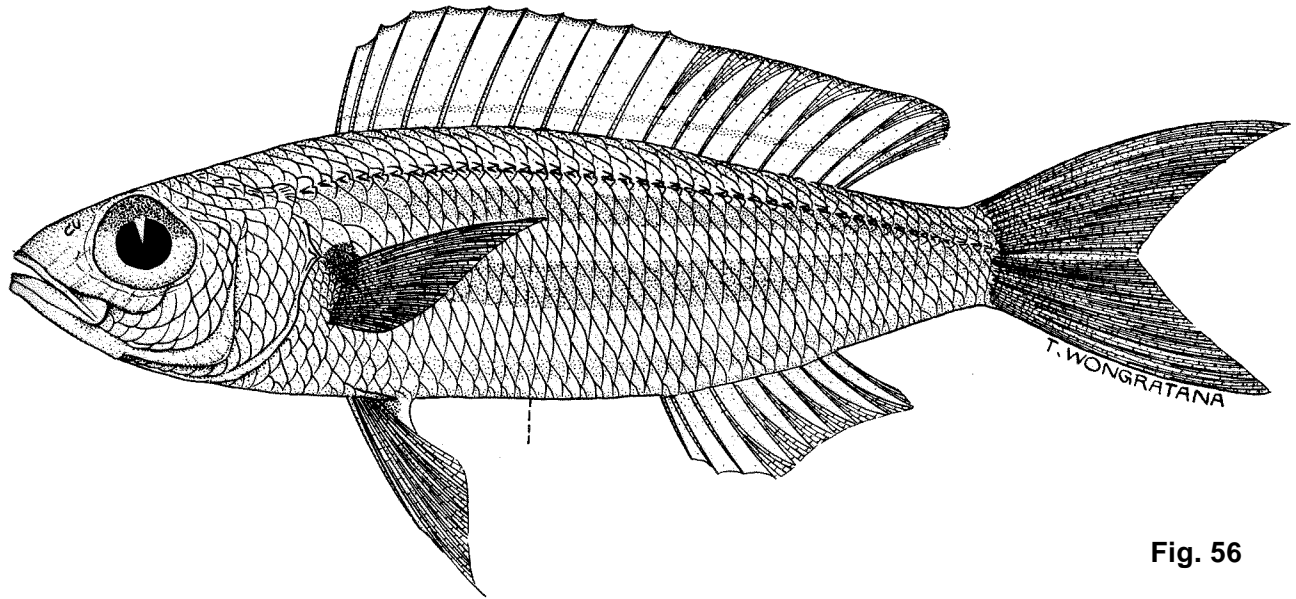
Fig. 56, Plate I, b

NEMIP Nem 16

*Synagris balinensoides* Popta, 1918, Zweite Fortsetzung Beschr. neue Fisharten der Sunda Exp. Leiden: 7 ("Brang Nee Fluss, aus Süßwasser").

**Synonyms:** None.

**FAO Names:** En - Dwarf threadfin bream.



**Fig. 56**

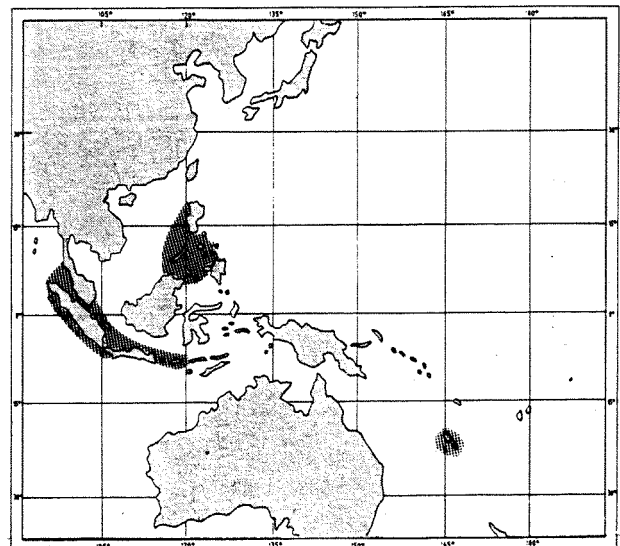
**Diagnostic Features:** Body depth 3.8 to 4.4 in SL; snout length equal to or less than diameter of eye; diameter of eye 2.5 to 3.1 in head length; lower margin of eye below a line from tip of snout to upper base of pectoral fin; interorbital width 1.2 to 1.7 in eye; suborbital depth 3.6 to 6.7 in eye diameter; a line drawn up from the posterior edge of suborbital reaching the dorsal profile behind origin of dorsal fin; preopercle naked width 1.3 to 2.4 in scaly width; pectoral fins short, 1.4 to 1.7 in head length, not reaching to anus; pelvic fins moderately long, 1.3 to 1.7 in head length, reaching to or just beyond anus; caudal fin forked, upper lobe slightly longer than lower lobe; 3 or 4 pair of small, recurved canines anteriorly in upper jaw; 4 or 5 pairs of smaller, recurved canines anteriorly in lower jaw, flared outward in larger specimens; gill rakers 15 to 17. **Colour:** pale silvery-rose on upper part of body, silvery below; 2 or 3 pale yellowish stripes along sides, the first just below lateral line, second from behind pectoral-fin base to caudal fin, third (often indistinct) from below pectoral base to lower part of caudal peduncle; a distinct golden-yellow spot, edged red above and below, just above upper pectoral-fin base at beginning of second stripe; opercle silvery; dorsal fin pinkish, edged with greenish-yellow, an indefinite greenish-yellow stripe at base of fin; anal fin translucent whitish; pectoral fins rosy; pelvic fins pale yellow; caudal fin pale yellowish-pink, upper tip dark pink in some specimens.

**Geographical Distribution:** West Pacific, including the Philippines, Indonesia, New Caledonia, and Phuket Island, Andaman Sea (Fig. 57).

**Habitat and Biology:** A benthic species, found on sand or mud bottoms in depths between 30 and 80 m.

**Size:** Maximum size is 12.5 cm SL, commonly 9 cm SL.

**Interest to Fisheries:** Occasionally taken by trawling in shallow inshore waters. Rarely seen in markets. No major fishery exists.



**Fig. 57**

**Local Names:** THAILAND: Pla Sai Dang.

**Literature:** Wongratana (1974, as *N. balinensis*); Gloerfelt-Tarp & Kailola (1984, as *Nemipterus* sp 2 and *N. sp 4*).

**Remarks:** This species has been confused with *N. balinensis*, but can be distinguished from that species by its shallower suborbital depth (4.1 to 6.7 in eye) and shorter pectoral fin.

*Nemipterus bathybius* Snyder, 1911

Fig. 58, Plate I, c

NEMIP Nem 1

*Nemipterus bathybius* Snyder, 1911, Proc. U.S. Natn. Mus., 40: 532, fig. 6 (Kagoshima, Japan).

**Synonyms:** None.

**FAO Names:** En - Yellowbelly threadfin bream.

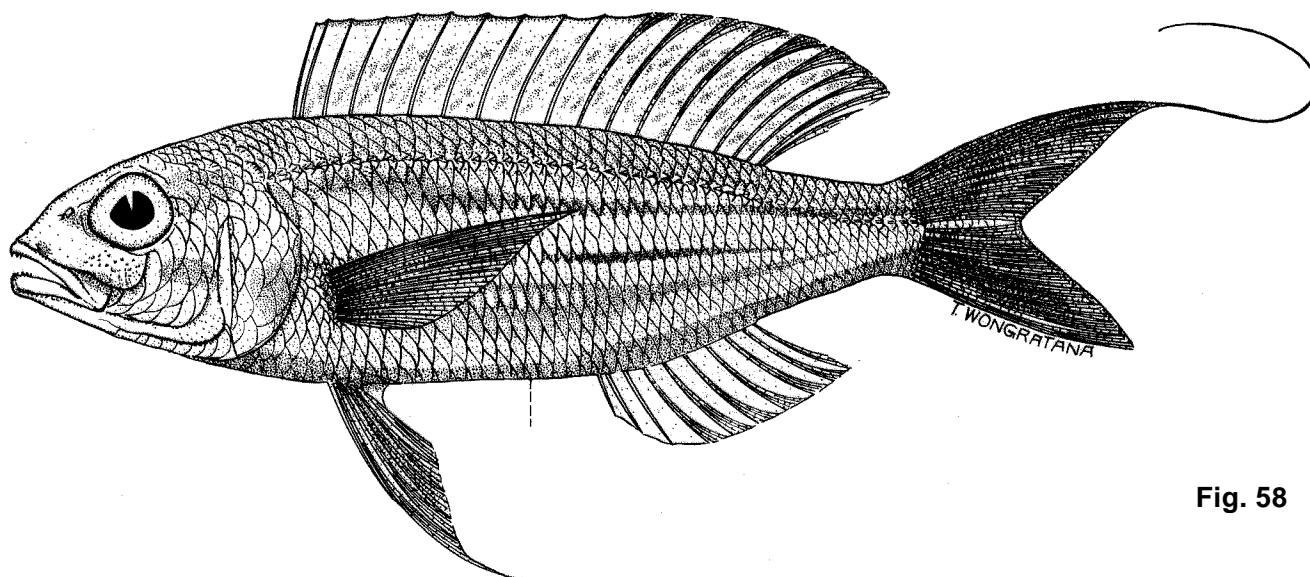


Fig. 58

**Diagnostic Features:** Body depth 2.9 to 3.6 in SL; snout length equal to or a little less than diameter of eye; diameter of eye 2.7 to 3.6 in head length; lower margin of eye tangent to or just below a line from tip of snout to upper base of pectoral fin; interorbital width 1.3 to 1.9 in eye; suborbital depth 1.9 to 4.7 in eye diameter; a line drawn upwards from the posterior edge of suborbital reaching the dorsal profile in front of origin of dorsal fin; preopercle naked width 1.6 to 2.2 in scaly width; pectoral fins long, 1.0 to 1.4 in head length, reaching almost to level of origin of anal fin; pelvic fins moderately long, 1.1 to 1.6 in head length, reaching beyond anus; caudal fin forked, upper lobe falcate, usually long and ribbon-like in adult specimens; 3 or 4 pairs of small recurved canines anteriorly in upper jaw; gill rakers 13 to 16. **Colour:** upper part of body pinkish, silvery below; 2 yellow lateral stripes, the first beneath lateral line from behind opercle to upper caudal base, the second from behind upper part of pectoral-fin base to middle of caudal base; a pair of yellow stripes, united anteriorly, from the isthmus to the lower caudal base, passing just outside the bases of the pelvic and anal fins; dorsal fin pink, edged with yellow, with a median stripe of yellowish undulating lines; anal fin transparent, pinkish near outer margin; caudal fin pink, upper lobe and filament yellow; other fins hyaline; bases of pelvic fins bright sulphur-yellow.

**Geographical Distribution:** West Pacific, including southern Japan, South China Sea, Philippines, Indonesia, and northwestern Australia (Fig. 59).

**Habitat and Biology:** A benthic species, found on sand or mud bottoms in depths of 35 to 300 m, but most common in depths between 45 and 90 m. Larger fish generally occur in depths greater than 110 m. This species is a rudimentary hermaphrodite, in which all males have functional testes with rudimentary ovarian portions throughout their life. In the S. China Sea, spawning is reported from June to October. The diet of larger fish consists mainly of crustaceans, fish and cephalopods. Young fish (< 120 mm) eat copepods, ostracods and amphipods. Males grow more quickly and to a larger size than females. (Eggleston 1973).

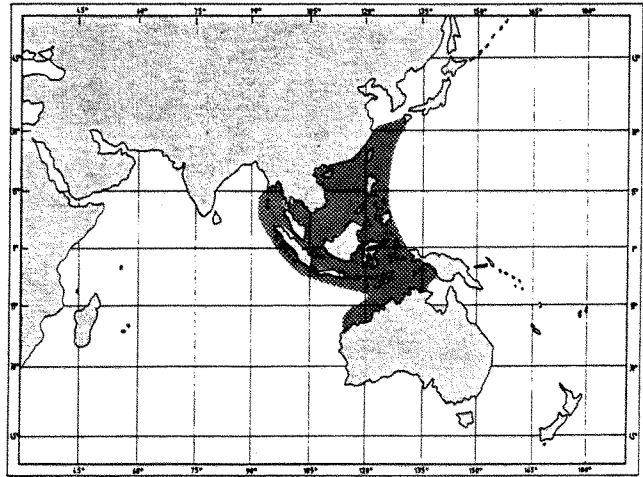


Fig. 59

Estimates of the parameters of the von Bertalanffy growth curve made for the population (males) from off Hong Kong (Eggleston, 1973) are:  $L_{\infty} = 30.2$  cm TL,  $K = 0.32$ ,  $t_0 = -0.80$ .

**Size:** Maximum size is 20 cm SL, commonly 16 cm SL.

**Interest to Fisheries:** Taken in commercial quantities in the South China Sea by longline and bottom trawl. Catch rates are higher in the day-time. Marketed mainly fresh.

**Local Names:** AUSTRALIA: Yellow-bellied threadfin-bream. JAPAN: Soko-itoyori. PHILIPPINES: Lagao, Silay, Bisugo, Bisugong maylawi.

**Literature:** Fischer & Whitehead (1974); Masuda *et al.* (1975, 1984); Rau & Rau (1980); Kyushin *et al.* (1982); Gloerfelt-Tarp & Kailola (1984); Sainsbury *et al.* (1984); Shen (1984, as *N. bathybius* and *N. marginatus*), Allen & Swainston (1988).

*Nemipterus bipunctatus* (Ehrenberg, 1830)

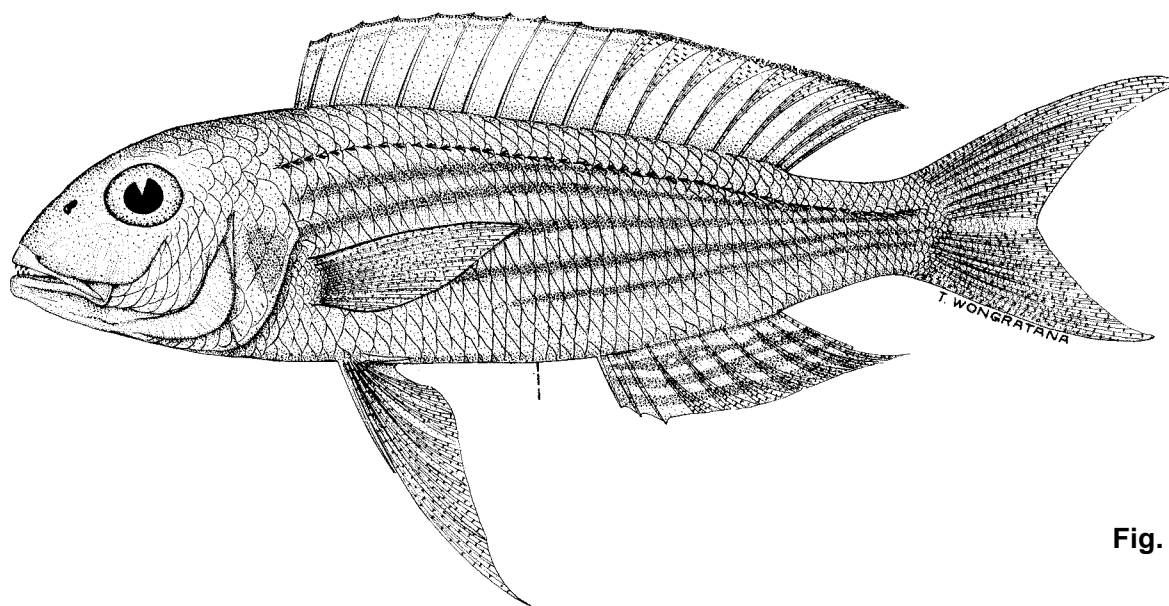
Fig. 60, Plate I, d

NEMIP Nem 2

*Dentex bipunctatus* Ehrenberg in C. & V., 1830b. *Hist. nat. poiss.*, 6: 247 (Djedda, Red Sea).

**Synonyms:** *Synagris bleekeri* Day (1875-77); *Nemipterus mulloides* Smith (1939) (preoccupied name); *Nemipterus delagoae* Smith (1941) (replacement name).

**FAO Names:** En - Delagoa threadfin bream. Fr - Cohana delagoa. Sp - Baga delagoa.



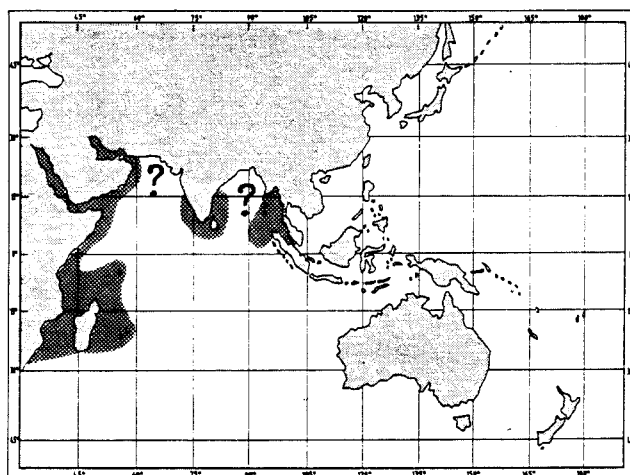
**Fig. 60**

**Diagnostic Features:** Body depth 3.4 to 3.9 in SL; snout length about equal to or a little greater than diameter of eye; diameter of eye 3.1 to 3.9 in head length; lower margin of eye tangent to or above a line from tip of snout to upper base of pectoral fin; interorbital width 1.2 to 1.7 in eye; suborbital depth 1.1 to 2.5 in eye diameter; a line drawn up from posterior edge of suborbital reaching the dorsal profile about 3 to 5 scales before origin of dorsal fin; preopercle naked width 1.1 to 1.8 in scaly width; pectoral fins moderately long, 1.2 to 1.5 in head length, reaching to or just beyond anus; pelvic fins long, 0.9 to 1.3 in head length, reaching to or just beyond level of origin of anal fin; caudal fin forked, upper and lower lobes more or less equal in length; scale rows on body below lateral line upward-curved anteriorly; 3 or 4 pairs of small recurved canines anteriorly in upper jaw; gill rakers 10 to 14 (usually 12 to 13). **Colour:** upper part of body pinkish, shading to silvery on the ventral surface; 5 to 7 greenish-yellow upward-curved stripes on body below lateral line; snout with two indistinct bluish or mauve stripes, the first in front of eye, the second from upper lip to eye; dorsal fin pale pink, with a reddish margin and yellow submarginal stripe (lacking in larger specimens); anal fin pale bluish-white with 2 to 4 irregular longitudinal yellow stripes; caudal fin yellowish-pink; other fins translucent.

**Geographical Distribution:** Indian Ocean, including the Persian Gulf, Red Sea, east Africa south to Delagoa Bay, Mauritius; Seychelles; Madagascar; Arabian Sea, Sri Lanka, Bay of Bengal, Andaman Sea, Strait of Malacca (Fig. 61).

**Habitat and Biology:** A benthic species, found on sand or mud bottoms in depths between 18 and 100 m. Feeds mainly on crustaceans, cephalopods (*Loligo*), small fish and polychaetes.

**Size:** Maximum size is 20 cm SL, commonly 15 cm.



**Fig. 61**

**Interest to Fisheries:** Taken by handline and bottom trawl. Appears in small numbers in local markets. No major fishery exists.

**Local Names:** SOUTH AFRICA: Butterfly bream, Vlinderbras; BAHRAIN: Bassi, Bassij; THAILAND: Pla Sai Dang; SEYCHELLES: Mamila; MADAGASCAR: Koana; TANZANIA: Koana; PAKISTAN: Katti (Sindhi), Kolonto (Baluchi).

**Literature:** Fischer & Whitehead (1974, as *N. delagoae*); Smith & Smith (1963, as *N. peronii*); Randall *et al.* (1978, as *N. delagoae*); Fischer & Bianchi (1984, as *N. delagoae*); Bianchi (1985a, as *N. bleekeri*, 1985b); Bauchot & Bianchi (1984, as *N. bleekeri*); Kuronuma & Abe (1986, as *N. delagoae*); Al-Baharna (1986, as *N. bleekeri*); Smith & Heemstra (1986).

**Remarks:** This species has generally been reported under the name *N. delagoae* or *N. bleekeri*, both of which are synonyms of *N. bipunctatus*. The name *N. bipunctatus*, previously regarded as a synonym of *N. japonicus*, was resurrected by Russell (1986b).

*Nemipterus celebicus* (Bleeker, 1854)

Fig. 62, Plate I, e

NEMIP Nem 17

*Dentex celebicus* Bleeker, 1854, *Nat. Tijdschr. Ned.-Indië*, 7: 245 (Macassar).

**Synonyms:** None.

**FAO Names:** En - Celebes threadfin bream.

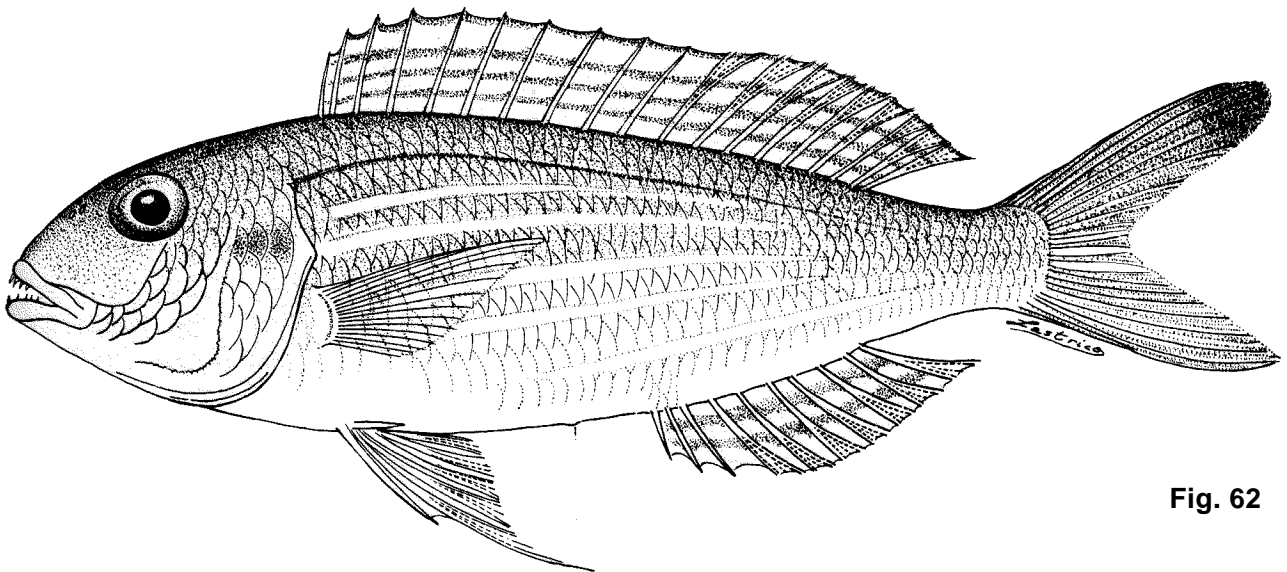


Fig. 62

**Diagnostic Features:** Body depth 2.9 to 4.2 in SL; snout length about equal to or greater than diameter of eye; diameter of eye 3.0 to 4.0 in head length; lower margin of eye tangent to or just above a line from tip of snout to upper base of pectoral fin; interorbital width 1.2 to 1.8 in eye; suborbital depth 1.0 to 3.0 in eye diameter; a line drawn up from posterior edge of suborbital reaching the dorsal profile about 2 to 4 scales before origin of dorsal fin; preopercle naked width 1.1 to 1.8 in scaly width; pectoral fins long, 1.1 to 1.4 in head length, reaching to between level of anus and origin of anal fin; pelvic fins very long, 0.9 to 1.4 in head length, reaching to or beyond level of origin of anal fin; caudal fin forked, upper lobe slightly rounded, without filament; scale rows on body below lateral line upward-curved anteriorly; 3 pair of small recurved canines anteriorly in upper jaw; gill rakers 10 to 14. **Colour:** upper part of head and body pinkish, paling to silvery white on ventral surface; violet and reddish reflections on scales above lateral line; indefinite pale golden or yellowish stripe along lateral line and narrow golden stripe on each of 4 scale rows below lateral line, these stripes ascending slightly before level of anal fin; head with golden and mauve reflections; traces of 2 silvery-mauve lines in

front of and below eye; bluish-mauve spot on upper part of opercle; upper lip yellow; dorsal fin translucent pink, with narrow reddish-yellow margin and 2 or 3 narrow yellow stripes along median part of fin; anal fin translucent with 2 narrow pale yellow stripes along median part of fin; caudal fin pale golden, upper tip rosy; pectoral fins pale pink; pelvic fins translucent white.

**Geographical Distribution:** Indonesia, northern Australia (Fig. 63).

**Habitat and Biology:** A benthic species, found on sand or mud bottoms in depths of 30 to 100 m. Feeds mainly on small crustaceans.

**Size:** Maximum size is 22 cm SL, commonly 15 cm SL.

**Interest to Fisheries:** Taken by line and bottom trawl. Appears in local fish markets in Indonesia; taken commercially by trawlers in northern Australian waters together with other species. No major fishery exists.

**Local Names:** AUSTRALIA: Five-lined threadfin bream. INDONESIA: Kurisi.

**Literature:** Gloerfelt-Tarp & Kailola (1984); Sainsbury *et al.* (1984); Allen & Swainston (1988).

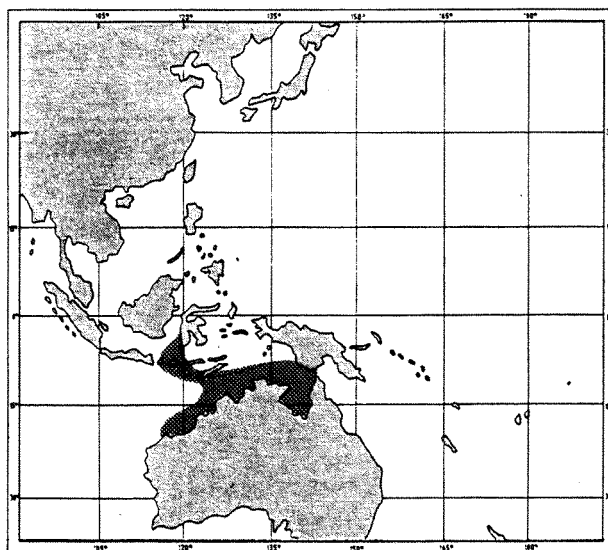


Fig. 63

*Nemipterus furcosus* (Valenciennes, 1830)

Fig. 64, Plate I, f

NEMIP Nem 10

*Dentex furcosus* Valenciennes in C. & V., 1830b, *Hist. nat. poiss.*, 6: 244 (Trinquemalé = Trincomalee, Sri Lanka).

**Synonyms:** *Dentex upeneoides* Bleeker (1852c); *Dentex ovenii* Bleeker (1854); *Dentex hypselognathus* Bleeker (1873); *Dentex sundanensis* Bleeker (1873); ?*Genyorage rubicauda* Saville-Kent (1893) (*nomen nudum* for *Lutianus rubicundus* De Vis *ms fide* Ogilby, 1918); *Nemipterus worcesteri* Evermann & Seale (1907); *Nemipterus robustus* Ogilby (1916) (replacement name for *Synagris furcosus* Günther, not *Dentex furcosus* Valenciennes); *Nemipterus guntheri* Ogilby (1918) (replacement name for *Synagris furcosus* Günther, not *Dentex furcosus* Valenciennes).

**FAO Names:** En - Fork-tailed threadfin bream.

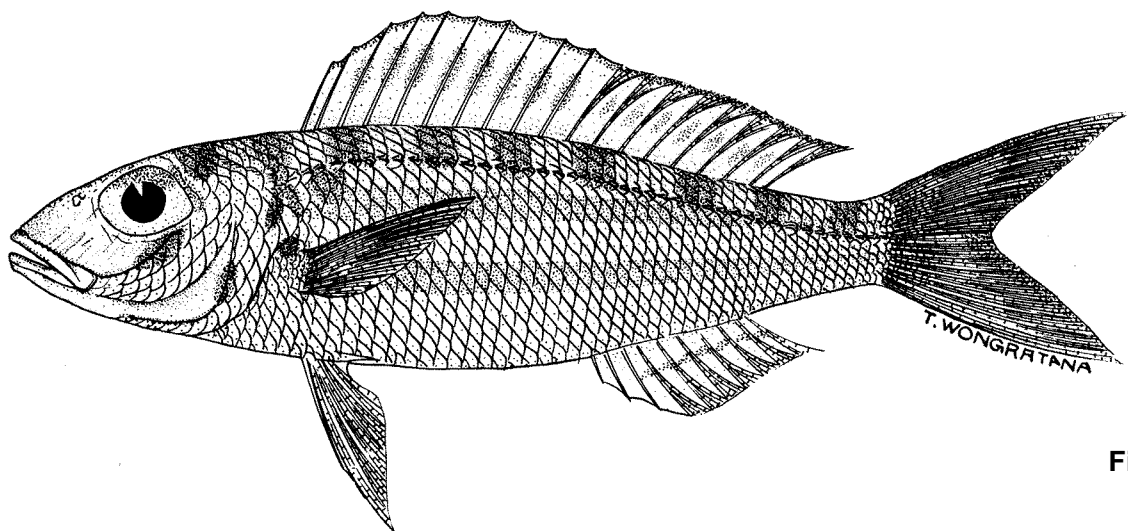


Fig. 64



**Diagnostic Features:** Body depth 3.0 to 3.9 in SL; snout length equal to or greater than diameter of eye; diameter of eye 2.8 to 4.0 in head length; lower margin of eye tangent to or above a line from tip of snout to upper base of pectoral fin; interorbital width 1.1 to 1.7 in eye; suborbital depth 0.9 to 1.9 in eye diameter; a line drawn up from posterior edge of suborbital reaching the dorsal profile at about origin of dorsal fin; preopercle naked width 1.0 to 1.4 in scaly width; pectoral fins moderately long, 0.8 to 1.1 in head length, reaching to or just short of level of anus; pelvic fins moderately long, 1.3 to 1.7 in head length, reaching to or just short of level of anus; caudal fin deeply forked; 2 or 3 pair of small recurved canines anteriorly in upper jaw; gill rakers 9 to 12. **Colour:** head and body pale iridescent pink, paling on sides to silvery-white below; back with 9 indistinct cross bars, extending to just beneath lateral line; third bar somewhat darker and more distinct, forming a reddish shoulder spot behind origin of lateral line in some specimens; traces of indistinct yellowish stripes along body, one above and several below lateral line; cheeks and opercle silvery, upper jaw rosy, lower jaw silvery; eye rosy; dorsal fin pale rosy, sometimes with yellowish tinge, outer margin darker pink; anal fin bluish white, with row of transparent or faint yellowish spots near base; caudal fin pale rosy, with yellow tinge, lower margin of fin white; pelvic fins and axillary scales white; pectoral fins rosy.

**Geographical Distribution:** West Pacific from southern Japan to northeastern Australia, and Indian Ocean including the Gulf of Mannar, Sri Lanka, Andaman Sea, Strait of Malacca and northwestern Australia (Fig. 65).

**Habitat and Biology:** A benthic species, inhabiting sand and mud bottoms in depths of 8 to 110 m. Females predominate at small size classes while males dominate the larger size classes, and there is some evidence of this species being a sequential hermaphrodite (Young & Martin, 1985). Ripe females occur all year round in the population from the northwest shelf of Australia, but a higher proportion of ripe fish is present in November and December. Feeding occurs during the day, with crustaceans and small fishes predominating.

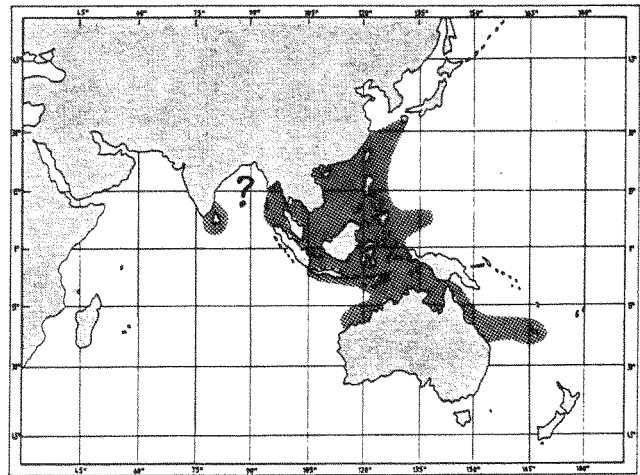


Fig. 65

Estimates of the parameters of the von Bertalanffy growth curve made for the population from the northwest shelf of Australia (Sainsbury & Whitelaw, 1984, as *N. peronii*) are:  $L_{\infty} = 41.9$  cm FL,  $K = 0.25$ ,  $t_0 = 0.74$

**Size:** Maximum size is 22.5 cm SL, commonly 18 cm SL.

**Interest to Fisheries:** Taken by handline and bottom trawl. Appears in local fish markets. Considered a good food fish and fished commercially by trawlers together with other species. *N. furcosus* is the principal catch species in the Taiwanese pair-trawl fishery off the coast of northwestern Australia.

**Local Names:** AUSTRALIA: Rosy threadfin-bream. PHILIPPINES: Lagao.

**Literature:** Fischer & Whitehead (1974, as *N. peronii*); Masuda *et al.* (1975, 1984, as *N. peronii*); Rau & Rau (1980, as *N. peronii*); Grant (1982, as *N. upeneoides*); Gloerfelt-Tarp & Kailola (1984); Sainsbury *et al.* (1984); Allen & Swainston (1988).