

valid. Accordingly, *Polynemus salliah* is not available under Articles 11.4 and 11.6 (ICZN-1999) (see Motomura, Senou and Iwatsuki, 2001; Motomura *et al.*, 2002a).

Eleutheronema tetradactylum previously reported from East Asia (e.g. Shen, 1984; Motomura, Senou and Iwatsuki, 2001) is now identified as *E. rhadinum*.

Two patterns of lateral-line squamation on the caudal-fin membrane exist in *E. tetradactylum*. The lateral line of *E. tridactylum* is unbranched, extending from the upper end of the gill opening to the upper end of the lower caudal-fin lobe, whereas it is either branched or unbranched in *E. tetradactylum*. All specimens (18 specimens examined by the author) of *E. tetradactylum* collected from northern and eastern Australia, and southern Papua New Guinea had unbranched lateral lines, whereas all specimens (93 specimens examined by the author), except 2 specimens, of that from other localities had the lateral line divided into 3 lines on the caudal-fin membrane (see Motomura *et al.*, 2002a: fig. 7). Although in *E. tetradactylum*, the relative frequency of specimens with an unbranched lateral line ranged from 100% (from Australia and Papua New Guinea) to 2% (from other localities), there were no other differences apparent. Therefore, the differences in lateral-line squamation are believed to represent intraspecific (geographic) variation. A single example with the lateral line divided into 4 lines on the caudal-fin membrane was observed by the author at Mangalore central fish market in Mangalore, Karnataka, India, but the specimen was not retained because of its large size (about 1.5 m standard length). The existence of 3 or 4 (the latter a malformation?) branches of the lateral line on the caudal-fin membrane of some *E. tetradactylum* is unique among polynemids, although bifurcation of the lateral line on the caudal-fin base is known in some *Polydactylus* species, e.g., *P. approximans*, *P. bifurcus* and *P. virginicus*. Other members of polynemids have an unbranched lateral line, extending to the upper end of the lower caudal-fin lobe, the lower end of the upper caudal-fin lobe or the middistal margin of the caudal-fin membrane.

Eleutheronema tridactylum (Bleeker, 1849)

Fig. 39; Plate Ic

Polynemus tridactylus Bleeker, 1849: 57 [type locality: Jakarta, Java, Indonesia; holotype (RMNH 6012, 255 mm standard length) determined from 11 Bleeker specimens by Motomura *et al.*, 2002a].

Synonyms: None.

FAO Names: En - Threefinger threadfin; Fr - Barbure à trois doigts; Sp - Barbudo de tres dedos.

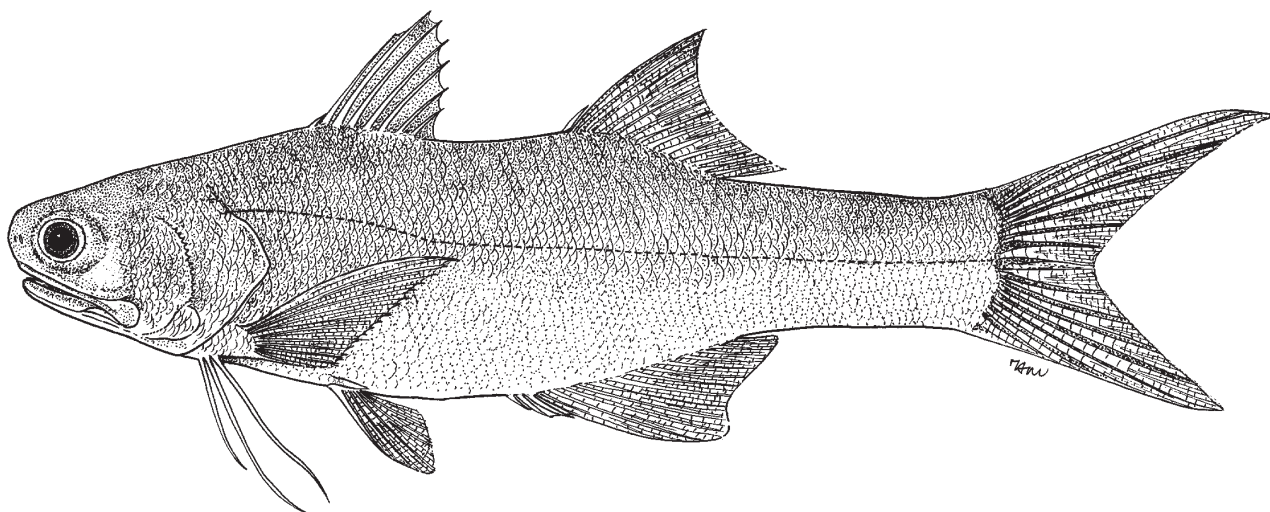


Fig. 39 *Eleutheronema tridactylum*

Diagnostic Features: A medium-sized species. Body elongate, body depth at first dorsal-fin origin 22 to 27% (mean 24%) of standard length; head length 26 to 30% (mean 28%) of standard length. Posterior margin of maxilla extending well beyond level of posterior margin of adipose eyelid; upper-jaw length 14 to 16% (mean 15%) of standard length; depth of posterior margin of maxilla 2 to 3% (mean 2%) of standard length; anterior parts of lower jaw with small teeth extending onto lateral surface, adjacent portion of lip absent; tooth plate extension onto lateral surface of lower jaw 9 to 10% (mean 9%) of standard length; teeth villiform in broad bands on vomer, palatines and ectopterygoids; vomer lacking deciduous tooth plates on both sides throughout life; ectopterygoids becoming wider with continued fish growth. Posterior margin of preopercle serrated. First dorsal fin with VIII spines, all spine bases of similar thickness; second dorsal fin with I spine and 13 (rarely 14) soft rays; anal fin with III spines and 14 or 15 (mode 15) soft rays, anal-fin base longer than second dorsal-fin base; pectoral fin with 16 to 18 (mode 17) unbranched rays, its length 21 to 23% (mean 22%) of standard length, posterior tip just short of

level of posterior tip of pelvic fin; pectoral filaments 3, first filament shortest, reaching to (or extending slightly beyond) level of pelvic-fin origin; second filament extending well beyond level of pelvic-fin origin; third filament longest, its length 21 to 29% (mean 25%) of standard length, not reaching to level of posterior tip of pectoral fin; caudal fin deeply forked, upper and lower caudal-fin lobes not filamentous, upper caudal-fin lobe 29 to 37% (mean 34%) and lower lobe 25 to 33% (mean 30%) of standard length. Pored lateral-line scales 72 to 79 (mode 75); lateral line simple, extending from upper end of gill opening to upper end of lower caudal-fin lobe; scale rows above lateral line 8 to 10 (mode 9), below 12 to 16 (mode 14). Gillrakers 2 to 4 (mode 3) on upper limb, 2 to 6 (mode 5) on lower limb, 4 to 10 (mode 8) total; gillrakers on anterior parts of upper and lower limbs replaced during fish growth by tooth plates with villiform teeth, each gillraker on both upper and lower limbs becoming shorter with fish growth. Vertebrae 10 precaudal and 15 caudal; supraneural bones 0 to 2. Swimbladder absent. **Colour:** Upper sides of head and trunk green, becoming silvery white or yellowish white on lower sides; dorsal, pectoral, and caudal fins dark with black borders.

Geographical Distribution: Currently known from Thailand (Gulf of Thailand and Phuket Island, Andaman Sea), Malaysia (Malay Peninsula and Sarawak, Kalimantan) and Indonesia (Sumatra, Java, Kalimantan and Moluccas) (Fig. 40).

Habitat and Biology: No data are available.

Size: Maximum standard length at least 25 cm (Motomura *et al.*, 2002a).

Interest to Fisheries: Of little commercial importance because the population of the species appears to be too small. The species has been taken with *E. tetradactylum*.

Local Names: INDONESIA: Suro.

Literature: Feltes in Carpenter and Niem (2001); Motomura *et al.* (2002a).

Remarks: Initially, Bleeker (1845) gave only the name "*Polynemus tridactylus*," there being no distinguishing features included. However, the species was later described in detail by Bleeker (1849) on the basis of a single specimen, about 350 mm total length which represents the largest confirmed record of the species.

Eleutheronema tridactylum is easily distinguished from both *E. rhadinum* and *E. tetradactylum* by having vomer without tooth plates (versus vomer with 2 deciduous tooth plates in *E. rhadinum* and *E. tetradactylum*) and lower counts of second dorsal-fin soft rays [13 (rarely 14) versus 14 (rarely 13 or 15 in *E. rhadinum* and *E. tetradactylum*)], pectoral filaments (3 versus 4 in *E. rhadinum* and *E. tetradactylum*) and gillrakers [4 to 10 (mode 8) versus 10 to 17 (mode 12) and 6 to 18 (mode 13) in *E. rhadinum* and *E. tetradactylum*, respectively].

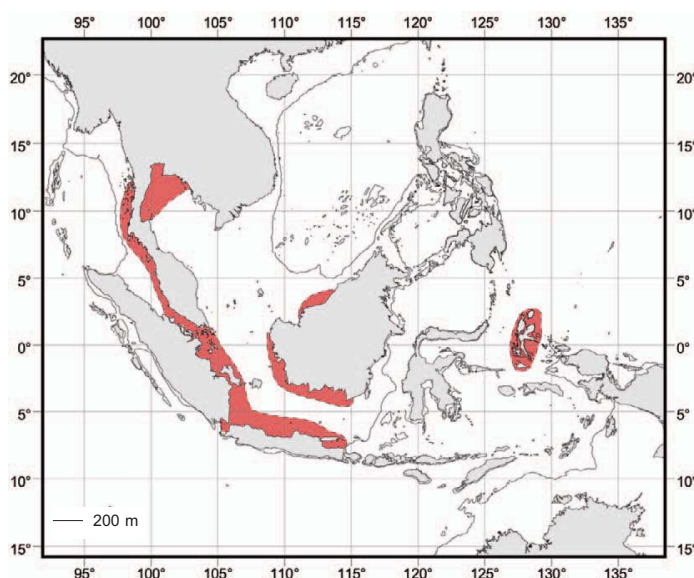


Fig. 40 *Eleutheronema tridactylum*

■ Known distribution

Filimanus Myers, 1936

Filimanus Myers, 1936: 379 [type species: *Polynemus melanochir* (not of Valenciennes): Myers, 1936 (later described as *Filimanus perplexa* Feltes, 1991)].

Synonyms: None.

Diagnostic Features: Body oblong to moderately deep, compressed. Adipose eyelid well developed; eye diameter greater than snout length. Lip on lower jaw well developed and dentary teeth restricted to dorsal surface; width of tooth band on upper and lower jaws less than space (on symphysis) separating tooth bands on opposing premaxillae; teeth villiform in narrow bands on jaws, palatines and ectopterygoids, tooth plates on palatines shorter than those on ectopterygoids; vomer with inconspicuous tooth plate. Posterior margin of maxilla extending beyond level of posterior margin of adipose eyelid. Posterior margin of preopercle serrated. Basisphenoid not in contact with prootic; sphenotics not visible dorsally between anterior margins of parietal and pterotic. First dorsal fin with VIII spines; second dorsal fin with I spine and 11 to 13 soft rays; anal fin with III spines and 10 to 15 soft rays; anal-fin base less than head length; pectoral fin with 13 to 16 rays, all unbranched; pectoral-fin insertion well below midline of body; pectoral-fin base (including base of pectoral filaments) less than upper-jaw length; pectoral filaments 5 to 8, not extending beyond level of posterior tip of caudal fin; caudal fin deeply forked, but upper and lower caudal-fin lobes not filamentous. Pored lateral-line scales 43 to 52; scale rows above lateral line 5 to 8, below 9 to 12. Gillrakers 35 to 49. Vertebrae 10 precaudal and 14 caudal; supraneural bones 2 or 3.

Habitat and Biology: *Filimanus* species are usually found in 1 to 80 m on open sandflats and muddy substrates. They frequently enter estuaries and are mostly taken in trawls.

Geographic Distribution: The genus is distributed in the Indo-West Pacific where it ranges from Pakistan to the Philippines, Papua New Guinea and the Solomon Islands.

Interest to Fisheries: Because of their small size, *Filimanus* species are generally of little commercial importance.

Species: The genus comprises 6 species:

Filimanus heptadactyla: Western Pacific, Thailand to Papua New Guinea.

Filimanus hexanema: Java, Indonesia.

Filimanus perplexa: Andaman Sea to western Indonesia.

Filimanus sealei: Western Pacific, Philippines to Solomon Islands.

Filimanus similis: Indian Ocean, Pakistan to Andaman Sea.

Filimanus xanthonema: East coast of India to western Indonesia.

Remarks: Myers (1936) described *Filimanus* as a new genus on the basis of a single specimen (USNM 72742, 114 mm standard length), but had misidentified the latter as *Polynemus melanochir* Valenciennes *in* Cuvier and Valenciennes, 1831. *Polynemus melanochir* is, in fact, a valid species belonging to *Polynemus*, the specimen used by Myers (1936) in his description of *Filimanus* representing an undescribed species, subsequently described by Feltes (1991) as *F. perplexa* [based on 26 specimens (68 to 157 mm standard length), including the specimen used in the original description of *Filimanus*]. In Opinion 1761 (ICZN) established *F. perplexa* as the type species of *Filimanus*. Feltes (1991) included 5 species in *Filimanus* in addition to the type species.

Key to the Species of *Filimanus*

- 1a. Pectoral filaments extending well beyond level of midpoint of anal-fin base; anal-fin soft rays 13 to 15 (mode 14) → 2
- 1b. Pectoral filaments not extending beyond level of midpoint of anal-fin base; anal-fin soft rays 10 to 12 (mode 11). → 3
- 2a. Pectoral filaments 6; body depth at first dorsal-fin origin 29 to 32% (mean 30%) of standard length (Fig. 41, Plate 1e) *Filimanus hexanema*
(Java, Indonesia)
- 2b. Pectoral filaments 7; body depth at first dorsal-fin origin 32 to 37% (mean 36%) of standard length (Fig. 42, Plate 1f) *Filimanus perplexa*
(Andaman Sea to western Indonesia)

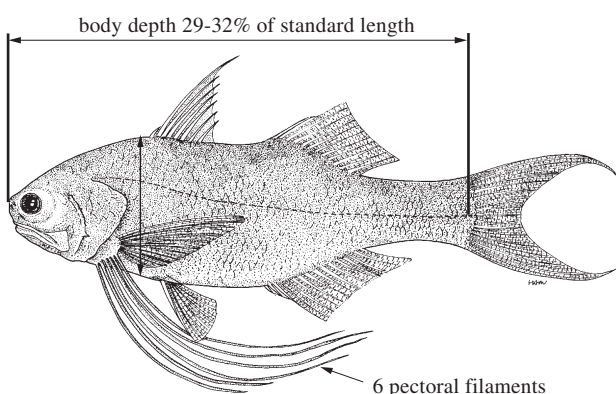


Fig. 41 *Filimanus hexanema*

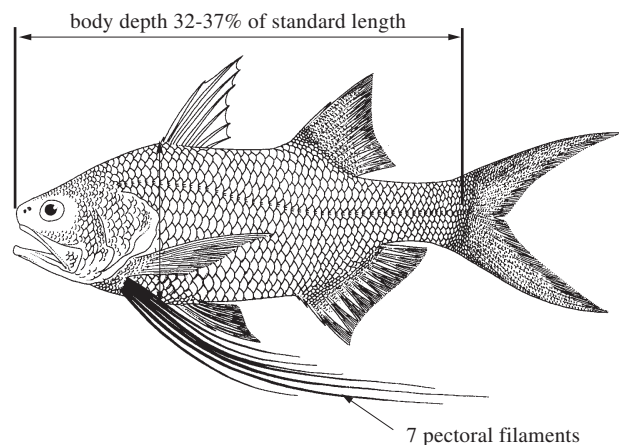


Fig. 42 *Filimanus perplexa*

- 3a. Pectoral filaments 8 (rarely 7); gillrakers 40 to 48 (mode 46) (Fig. 43, Plate Ig) ***Filimanus sealei***
(Philippines to Solomon Islands)
- 3b. Pectoral filaments 6 or 7 (rarely 5); gillrakers 35 to 49. → 4

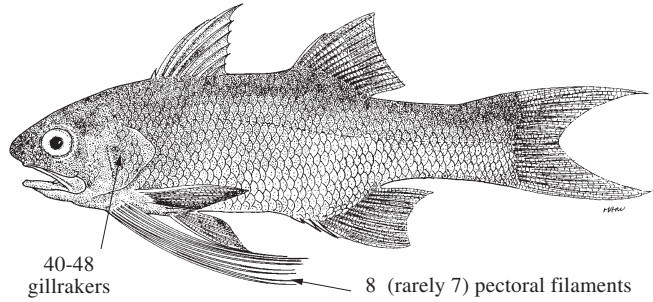


Fig. 43 *Filimanus sealei*

- 4a. Pectoral filaments 6 (occasionally 5), or asymmetrically 5 and 6, or 6 and 7; gillrakers 36 to 46 (mode 41) (Fig. 44, Plate IIa) ***Filimanus xanthonema***
(east coast of India to western Indonesia)
- 4b. Pectoral filaments 7 → 5

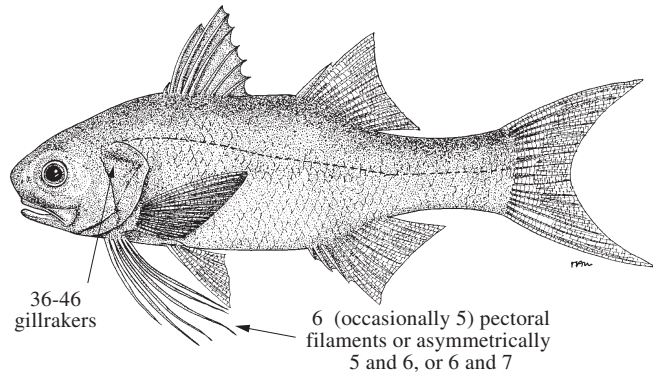


Fig. 44 *Filimanus xanthonema*

- 5a. Gillrakers 35 to 41 (mode 39) (Fig. 45, Plate Id) ***Filimanus heptadactyla***
(Thailand to Papua New Guinea)
- 5b. Gillrakers 40 to 49 (mode 43) (Fig. 46, Plate Ih) ***Filimanus similis***
(Pakistan to Andaman Sea)

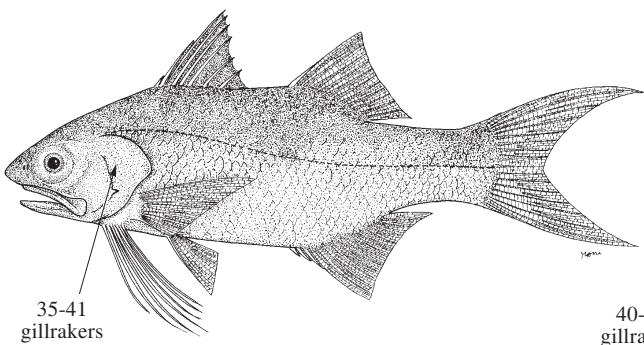


Fig. 45 *Filimanus heptadactyla*

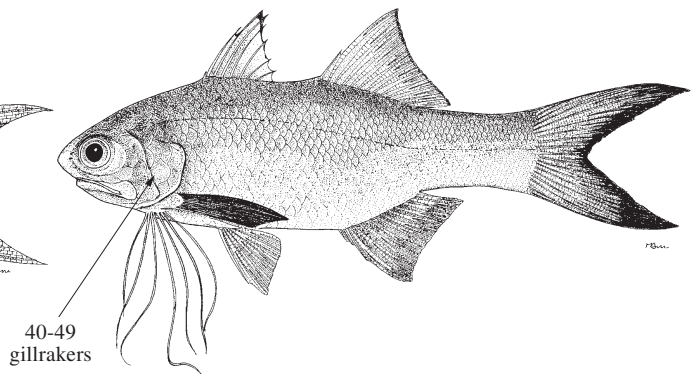


Fig. 46 *Filimanus similis*