

- B. multispinis* Shcherbachev, 1980. Indian Ocean. Benthopelagic at 1 500 to 1 880 m. Rare.
- B. nasus* Garman, 1899. East Pacific. Benthopelagic at 3 060 to 3 570 m. Common.
- B. normalis* Gill, 1884. Northwest Atlantic. Benthopelagic at 2 850 m. Uncommon.
- B. oncercephalus* (Vaillant, 1888). East Atlantic. Benthopelagic 3 200 m. Rare.
- B. robustus* Smith and Radcliffe in Radcliffe, 1913. In all oceans. Benthopelagic at 1 035 to 2 750 m. Common.
- B. taenia* (Günther, 1887). North Atlantic. Benthopelagic at 4 375 m. Rare.
- B. zenkevitchi* Rass, 1955. North Pacific. Deep pelagic. Rare.
- B. n. sp. 1.* Indian Ocean and West Pacific. Benthopelagic at 1 280 to 3 960 m. Uncommon.
- B. n. sp. 2.* Off Vanuatu. Benthopelagic at 1 850 m. Rare.

Bathyonus Goode and Bean, 1886

Type species: Replacement name for *Bathynectes* Günther, 1877; takes same type species, *Bathynectes laticeps* Günther.

Synonyms: *Bathynectes* Günther, 1878, type species *Bathynectes laticeps* Günther; preoccupied by *Bathynectes* Stimpson, 1870 in Crustacea. *Mixonus* Günther, 1887, type species *Bathynectes laticeps* Günther. *Nematonus* Günther, 1887, type species *Bathyonus pectoralis* Goode and Bean.

Number of recognized species: 3.

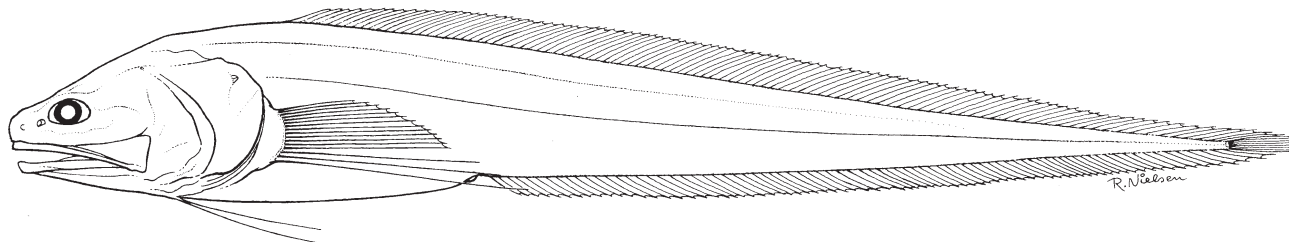


Fig. 55 *Bathyonus caudalis* (from Nielsen, 1997)

Diagnosis and description: Body depth 9.5 or less in standard length; head length about 1/2 preanal length; branchiostegal rays 8 or 9; no prominent spines on top or side of head; median basibranchial tooth patches 2; developed rakers on first arch 10 or more; pectoral-fin rays 16 to 19, lower rays free and stronger than upper ones, pelvic fin with 2 rays in each; caudal-fin rays 6; precaudal vertebrae 17 to 19.

Revisions: None.

Geographical distribution: Probably circumtropical.

Habitat and biology: Benthopelagic at bathyal and abyssal depths.

Interest to fisheries: None.

Size: Reaches at least 780 mm.

Remarks: Taxonomic revision is needed in order to verify species distributions.

Key to species: Not possible at present.

List of nominal species

Bathyonus caudalis (Garman, 1899). Eastern tropical Pacific at 1 524 to 2 417 m; also recorded from the Indian Ocean at 1 840 to 4 040 m. Uncommon.

B. guentheri (Vaillant, 1888) (junior synonym of *B. laticeps*).

B. laticeps (Günther, 1878). Bathyal to abyssal in the Atlantic; juvenile caught in midwater off Bermuda at 1 280 m. Locally abundant.

B. pectoralis Goode and Bean, 1886. Tropical western Atlantic at 604 to 2 615 m and eastern Indian ocean at 4 600 m. Uncommon.

<i>Benthocometes</i> Goode and Bean, 1896

Type species: *Neobythites robustus* Goode and Bean, 1886 by subsequent selection.

Synonyms: None.

Number of recognized species: 1.

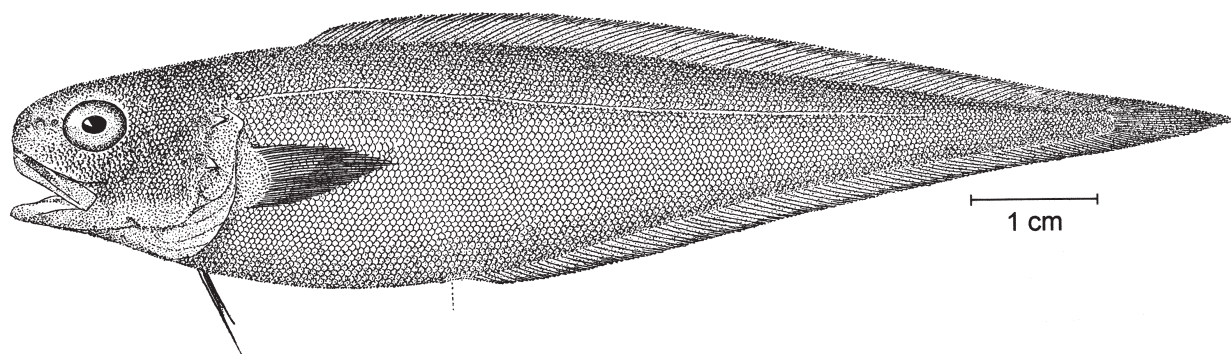


Fig. 56 *Benthocometes robustus* (from Goode and Bean, 1896)

Diagnosis and description: Head short and stubby, mouth terminal; eyes equal to or greater than length of snout; opercle with 2 posteriorly directed spines, 1 basibranchial tooth patch; vomerine tooth patch without arms; developed rakers on anterior gill arch 7 to 10; pseudobranchial filaments 5 to 7; pectoral-fin rays 27 to 33; pelvic fins with 2 rays in each.

Revisions: Bougis and Ruivo (1954).

Geographical distribution: Tropical West Atlantic, off Northwest Africa and the Mediterranean.

Habitat and biology: Benthopelagic at 500 to 1 000 m. Larvae epipelagic (see Fig. 4).

Interest to fisheries: None.

Size: At least 122 mm.

List of nominal species

Benthocometes robustus (Goode and Bean, 1886). Information see above. Uncommon.

Pteridium armatum Doederlein, 1886 (junior synonym of *B. robustus*).

Sirembo muraenolepis Vaillant, 1888 (junior synonym of *B. robustus*).

Dannevigia Whitley, 1941

Type species: *Dannevigia tusca* Whitley, 1941 by original designation.

Synonyms: None.

Number of recognized species: 1.

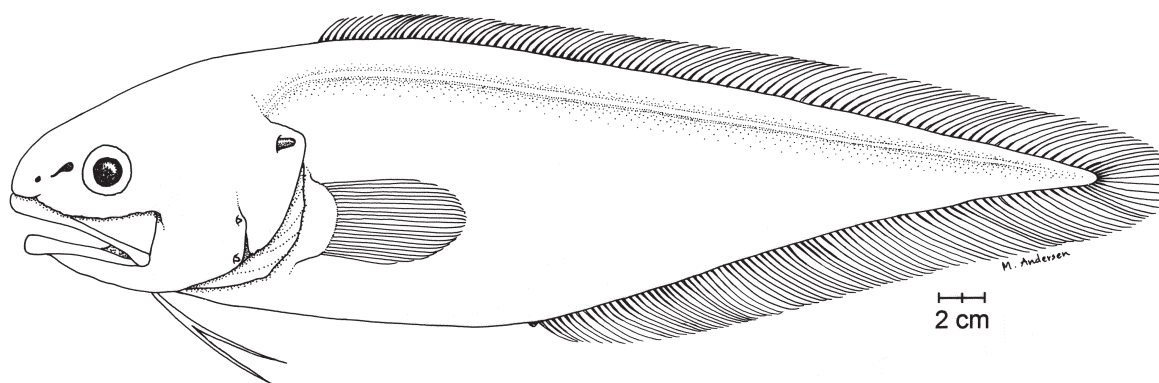


Fig. 57 *Dannevigia tusca*

Diagnosis and description: Body robust, deepest over pectoral fins; **several short, weak, concealed spines at lower angle of preopercle**; spine on opercle barely if at all reaching beyond rear margin of head; eyes well developed; **median basibranchial tooth patches 2**; developed gill rakers on first arch 4; **no dark spots on body or fins of adults**; **pelvic fins with 2 rays in each, fin bases close together, inserting under rear margin of eye**. Small specimens with 4 rather diffuse broad vertical brown bands on body, adults uniformly brown.

Revisions: None.

Geographical distribution: Great Australian Bight, straying to Bass Straits.

Habitat and biology: Benthopelagic along the outer shelf at 115 to 365 m.

Interest to fisheries: Occasionally landed but not taken in abundance.

Size: Reaching at least 56 cm.

List of species

Dannevigia tusca Whitley, 1941. Information see above. Common.

Dicrolene Goode and Bean, 1883

Type species: *Dicrolene intronigra* Goode and Bean, 1883 by monotypy.

Synonyms: *Pteroidonus* Günther, 1887, type species *Pteroidonus quinquarius* Günther; *Paradicrolene* Alcock, 1889, type species *Paradicrolene multifilis* Alcock; *Brachydicrolene* Norman, 1939, type species *Dicrolene nigricaudis* Alcock.

Number of recognized species: 15.

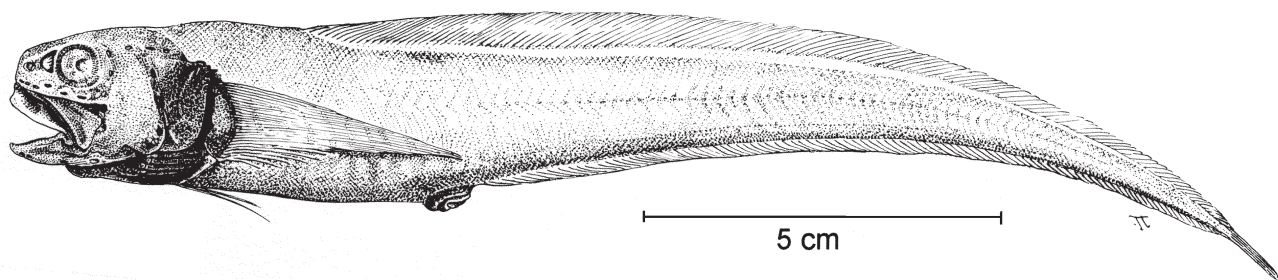


Fig. 58 *Dicrolene pallidus* (from Hureau and Nielsen, 1981)

Diagnosis and description: Snout rather blunt; eye diameter almost as long as snout; opercular spine strong and straight (except curved in *D. kanazawai*); hind margin of preopercle usually with 3 sharp spines; 1 or 2 median basibranchial tooth patches and a pair (except *D. kanazawai* with 0); pseudobranchial filaments 2 or 3; 7 to 15 developed rakers on anterior arch; pectoral-fin rays 22 to 33 of which lower 5 to 11 are free and longer than upper ones; pelvic-fin rays 2; precaudal vertebrae 13 to 16.

Revisions: None.

Geographical distribution: Below tropical and subtropical areas of all oceans.

Habitat and biology: Benthopelagic at bathyal and abyssal depths (350 to 3 200 m).

Interest to fisheries: None.

Size: At least 580 mm.

Remarks: A much needed revision may show that more than 1 genus should be recognized. Various collections hold much untreated material.

Key to species

Note: Shcherbachev (1980) published a tentative key to *Dicrolene* spp. mainly based on meristic characters, but due to insufficient knowledge of the intraspecific variation his key is difficult to use. A key to species and species groups from Hureau and Nielsen (1981) is provided below.

- 1a. No paired and 1 median basibranchial tooth patch; opercular spine curved . . . *D. kanazawai*
- 1b. One or 2 median and 1 pair of basibranchial tooth patches; opercular spine straight . . . → 2
- 2a. Two median basibranchial tooth patches (Fig. 59a) *D. longimana, D. nigricaudis, D. tristis, D. vaillanti*
- 2b. One median basibranchial tooth patch → 3
- 3a. Median basibranchial tooth patch long and narrow (Fig. 59b) *D. filamentosa, D. gregoryi, D. nigra, D. pullata*
- 3b. Median basibranchial tooth patch broad → 4

- 4a. Caudal fin and posterior part of dorsal and anal fins black
 *D. hubrechtii*, *D. mesogramma*, *D. quinquarius*
- 4b. No black fin rays → 5
- 5a. One supraorbital and 3 preopercular spines all strong *D. intronigra*
- 5b. Spines in supraorbital absent and on preopercle absent or weak → 6
- 6a. Paired basibranchial tooth patches larger and overlapping the median one
 (Fig. 59c) *D. pallidus*
- 6b. Paired basibranchial tooth patches small and placed behind median one (Fig. 59d) *D. multifilis*

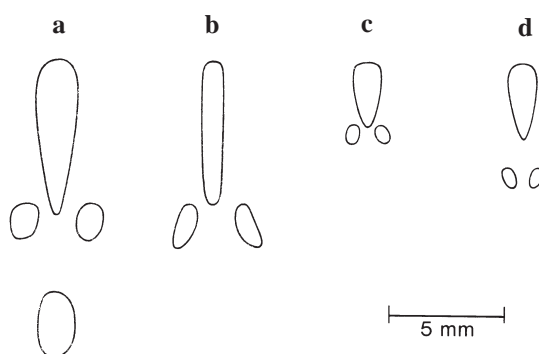


Fig. 59 Basibranchial tooth patches

List of species

Dicrolene filamentosa Garman, 1899. East Pacific. Benthopelagic at 935 to 1 855 m. Rare.

D. gregoryi Trotter, 1926. East Pacific. Benthopelagic at 1 545 m. Rare.

D. hubrechtii Weber, 1913. Eastern Indian Ocean, Timor Sea and off Hawaii (Iwai 1976) at 920 to 1 700 m. Rare.

D. intronigra Goode and Bean, 1883. From both sides of the Atlantic at 700 to 1 785 m. Common.

D. kanazawai Grey, 1958. Western Atlantic at 1 375 to 2 342 m. Common.

D. longimana Smith and Radcliffe in Radcliffe, 1913. From off East Africa to New Caledonia at 410 to 1 410 m. Uncommon. A report from the Peru-Chile Trench (Nalbant and Mayer, 1971) is based on an incorrectly identified specimen.

D. mesogramma Shcherbachev, 1980. Eastern Indian Ocean at 1 340 to 1 640 m. Rare.

D. multifilis (Alcock, 1889). Indian Ocean at 350 to 1 700 m. Uncommon. *D. nigra* Garman, 1899. Eastern Pacific at 770 to 1 865 m. Uncommon.

D. nigricaudis (Alcock in Wood-Mason and Alcock, 1891). Indian Ocean at 345 to 730 m. Uncommon.

D. pallidus Hureau and Nielsen, 1981. Off Southwest Africa at 2 772 to 2 992 m. Rare.

D. pullata Garman, 1899. Eastern Pacific at 1 335 m. Rare.

D. quinquarius (Günther, 1887). From off Mozambique to Japan at 1 030 to 1 300 m. Rare.

D. tristis Smith and Radcliffe in Radcliffe, 1913. Off the Philippines at 880 m. Uncommon.

D. vaillanti (Alcock, 1890b). Indian Ocean at 1 355 m. Rare.

Enchelybrotula Smith and Radcliffe in Radcliffe, 1913

Type species: *Enchelybrotula paucidens* Smith and Radcliffe in Radcliffe, 1913 by original designation.

Synonyms: None.

Number of recognized species: 2.

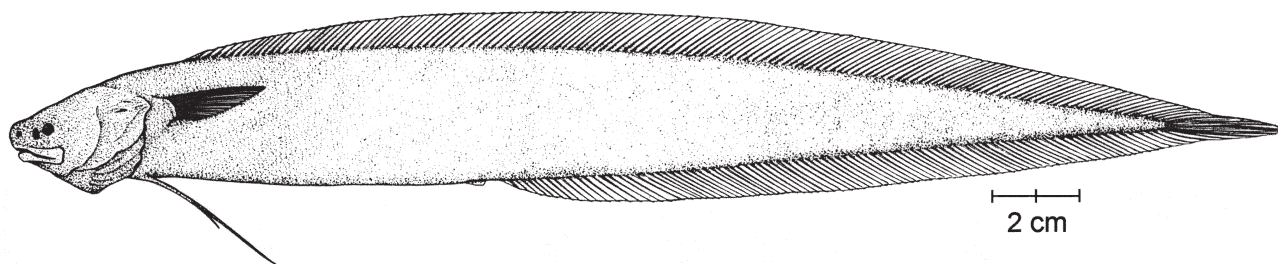


Fig. 60 *Enchelybrotula gomoni* (from Cohen, 1982)

Diagnosis and description: Body long and compressed; head short, 3 or more times in preanal; eyes small; branchiostegal rays 7; jaw teeth sharp-pointed, compressed, in a single row; median basibranchial tooth patches 2; gill rakers short, spiny tubercles or pads; pelvic fins with 2 rays in each; caudal-fin rays 8; precaudal vertebrae 22 or 23.

Revisions: Cohen (1982).

Geographical distribution: Gulf of Panama, Celebes and Bay of Bengal.

Habitat and biology: Benthopelagic at 2 000 to 3 200 m. Massive lower jaw skeleton, unique dentition, and the high oblique placement of pectoral fins suggest that *Enchelybrotula* may hover and nip at prey items.

Interest to fisheries: None.

Size: At least 491 mm.

Key to species

- 1a. Body depth at anus greater than head length; dorsal-fin rays 130 *E. paucidens*
 1b. Body depth at anus less than head length; dorsal-fin rays 135 to 136 *E. gomoni*

List of species

Enchelybrotula gomoni Cohen, 1982. Gulf of Panama. Benthopelagic at 2 000 to 3 208 m. Rare.
E. paucidens Smith and Radcliffe in Radcliffe, 1913. Gulf of Tomini, Celebes and Bay of Bengal. Benthopelagic at 2 000 to 2 820 m. Rare.