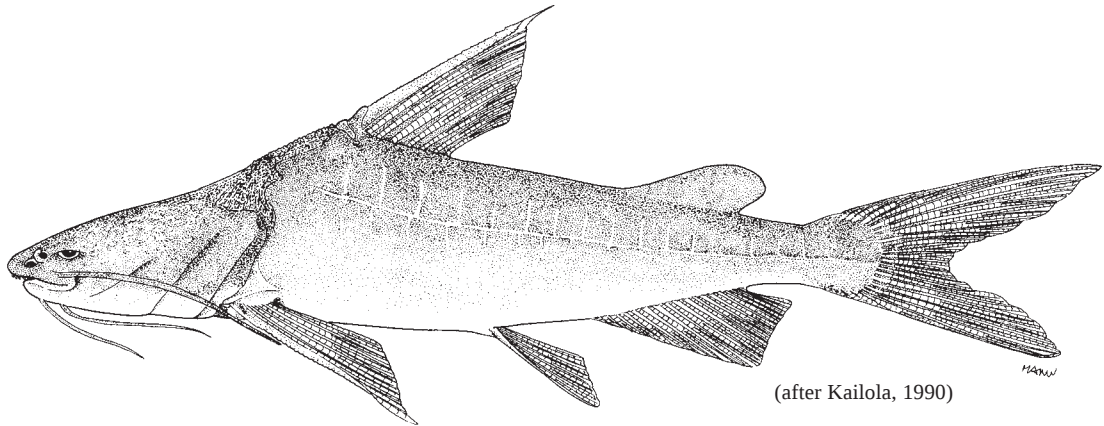


***Arius (Hemiarus) species 1* [Kailola, 1990]**

Frequent synonyms / misidentifications: None / None.

FAO names: En - Warrior catfish.



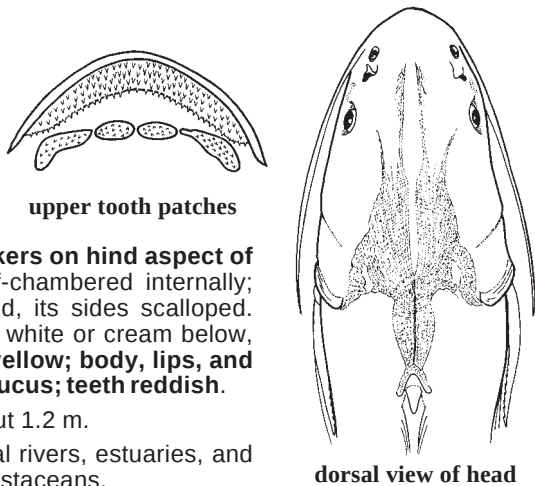
(after Kailola, 1990)

Diagnostic characters: Head shield venulose and almost smooth. **Eye small, free of head skin, 7 to 14% of head length.** **Snout shark-like, prominent, 32 to 41% of head length.** **Mouth wide, jaw teeth exposed. Jaw teeth very strong, non-depressible, caniniform; teeth in narrow bands in jaws and in 4 patches arranged across front of palate.** Maxillary barbels 15 to 25% of standard length. **Gill opening very wide.** **Total gill rakers on first gill arch 10 or 11; no rakers on hind aspect of first 2 gill arches.** **Fin spines robust and half-chambered internally; anal-fin rays 17 to 20.** Swimbladder heart-shaped, its sides scalloped. **Colour:** body greenish or pale bluish grey above, white or cream below, head may be blotched black; **fins bluish grey or yellow; body, lips, and inside of mouth covered with orange or yellow mucus; teeth reddish.**

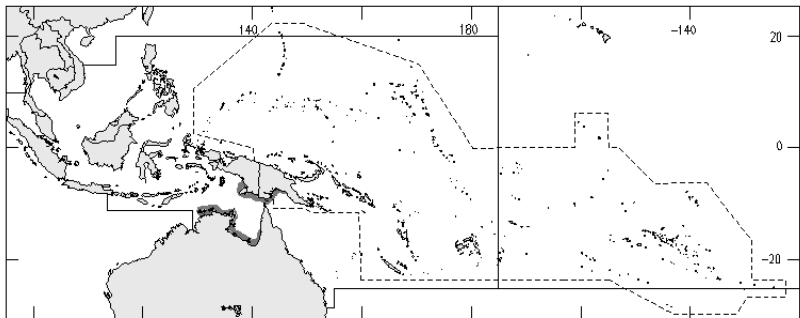
Size: Maximum total length 2 m, commonly to about 1.2 m.

Habitat, biology, and fisheries: Fresh water, tidal rivers, estuaries, and mangrove areas and coasts. Feeds on fish and crustaceans.

Distribution: Southern New Guinea and northern Australia.



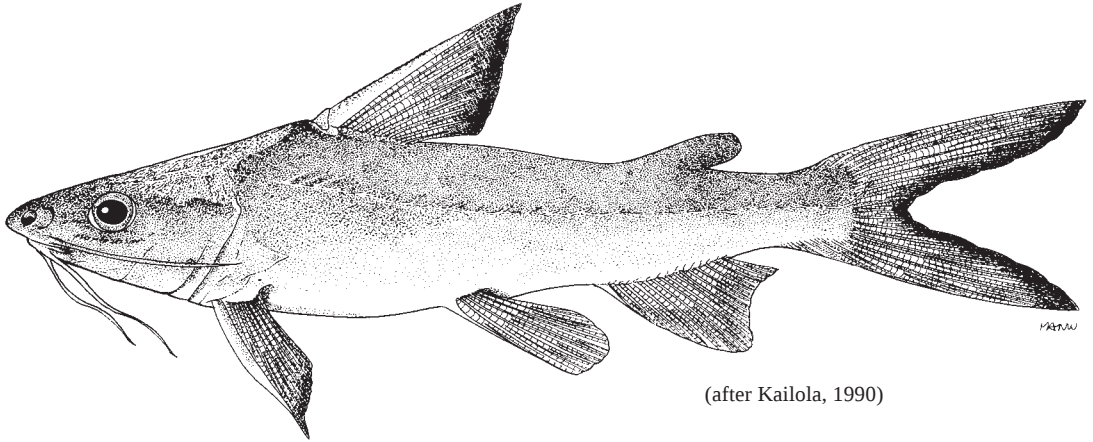
dorsal view of head



Arius species 3 [Kailola, 1990]

Frequent synonyms / misidentifications: None / *Arius graeffei* Kner and Steindachner, 1866; *A. berneyi* (Whitley, 1941).

FAO names: En - Sawspined catfish.



(after Kailola, 1990)

Diagnostic characters: Head shield finely granular; dorsomedian head groove lanceolate, narrow distally. Eye large, 19 to 28% of head length. Snout acute; lips fleshy and crenulate; mouth transverse. **Palatal teeth** conical and blunt, in 2 oval, oblique, and well-separated patches, 1 on each side of palate. Total gill rakers on first gill arch 15 to 20; **rakers present on hind aspect of all gill arches** (may be only a few on upper arm of first arch). Swimbladder with smooth, unnotched sides. Anal-fin rays 17 to 22; **caudal-fin lobes slender and acute; large, flattened, and strong serrae along inner margin of pectoral-fin spine.** **Colour:** body grey-brown to olive above, white below; **distinct charcoal or black margin to dorsal-, pectoral-, and inner caudal-fin lobes;** peritoneum occasionally dark stippled.

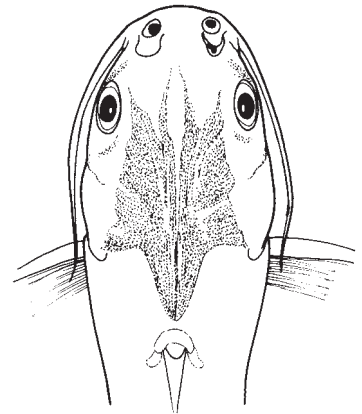
Size: Maximum standard length 31 cm.

Habitat, biology, and fisheries: Coastal waters, estuaries, and rivers within tidal influence. Diet probably omnivorous.

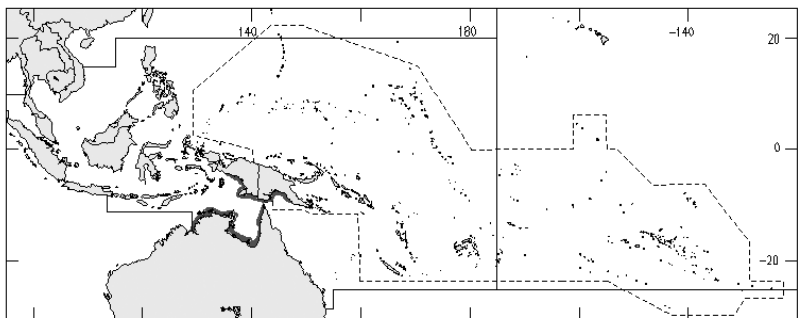
Distribution: Southern New Guinea and northern Australia (Darwin to Cape York).



upper tooth patches



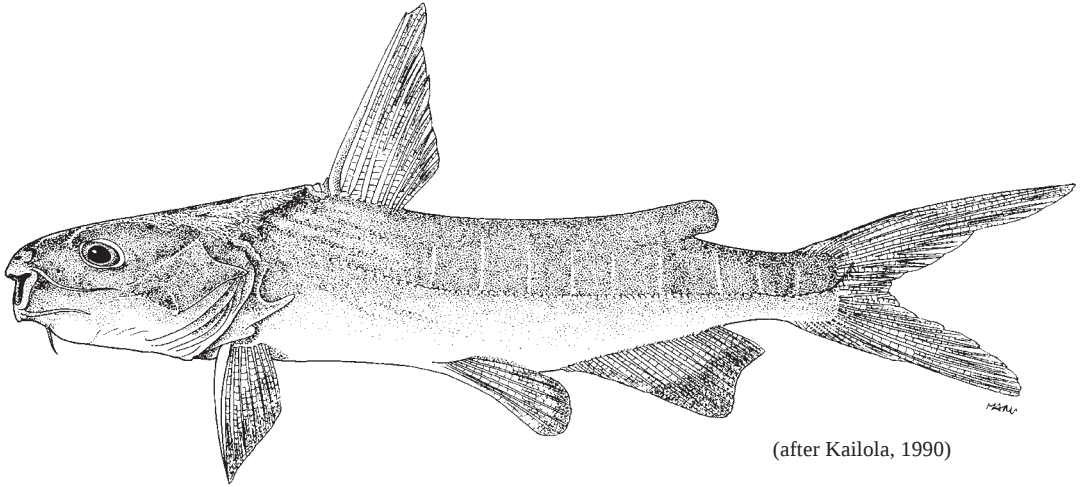
dorsal view of head



***Arius species 4* [Kailola, 1990]**

Frequent synonyms / misidentifications: None / *Nedystoma dayi* (Ramsay and Ogilby, 1886).

FAO names: En - Ridged catfish.



(after Kailola, 1990)

Diagnostic characters: Dorsomedian head groove elongate, deep posteriorly; longitudinal furrows in skin of "shoulder" in adults. Eye large and situated laterally, 14 to 24% of head length. **Mouth small; lips fleshy and thin.** Jaw teeth slender, in a short, oblong band; **no teeth on palate;** 2 large epithelial flaps on palate posteriorly.

Barbels thin and short, maxillary barbels reaching to just beyond eye; bases of chin barbels close together. Gill opening slightly restricted. **Total gill rakers on first gill arch 28 to 37; rakers present along hind aspect of all gill arches; double folds of epithelium on upper limb of first 2 gill arches.** Fin spines long and slender; **anal-fin rays 20 to 23;** pelvic-fin pad of mature females scalloped and tapered. Adipose fin short-based, situated over hind 2/3 of anal fin.

Colour: body dark grey to charcoal above and iridescent purple; lower sides white; fins pale; lining of branchial chamber may be purplish or dark grey.

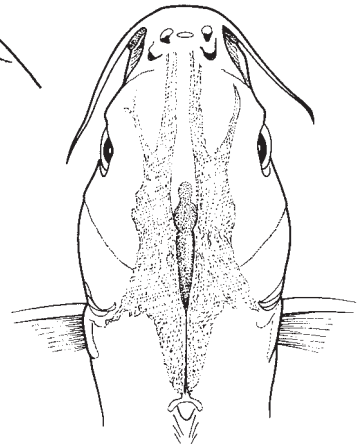
Size: Maximum standard length 32 cm.

Habitat, biology, and fisheries: Coasts, lower estuaries, and river mouths. Feeds mainly on fruits and detritus.

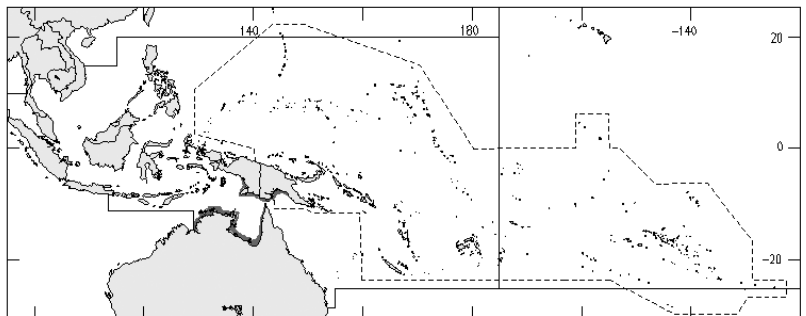
Distribution: Southern New Guinea and northern Australia.



upper tooth patches



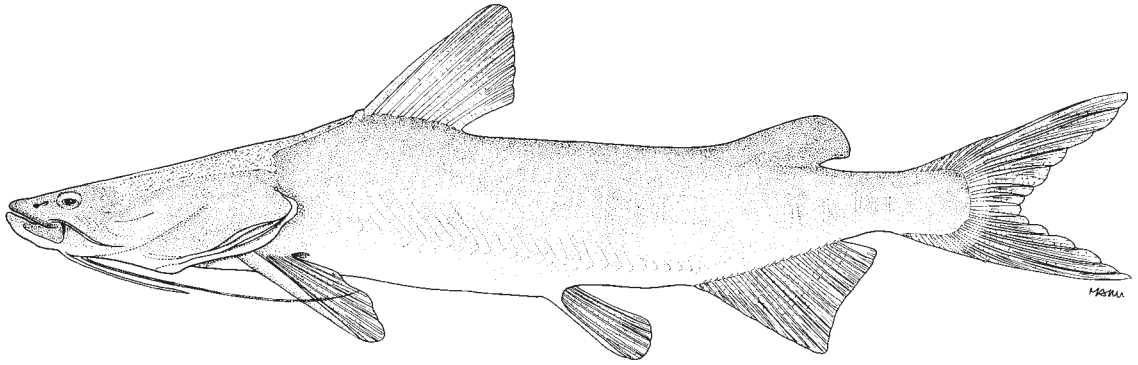
dorsal view of head



***Arius (Hemiarus) species 5* [Kailola, 1990]**

Frequent synonyms / misidentifications: None / None.

FAO names: En - Flat catfish.



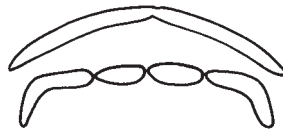
(after Kailola, 1990)

Diagnostic characters: Head and anterior part of body depressed; **ribs long and angular, impressed in abdominal body wall.** Head shield smooth. Eye small, covered with head skin. Snout shark-like, its length 28 to 32% of head length. **Mouth wide, terminal, jaws upturned at symphysis. Teeth strong, fixed; in 1 or 2 series on jaws and palate; palatal teeth arranged into 4 transverse, elongate patches.** Maxillary barbels short, reaching only to preopercular margin, 11 to 16% of standard length; mandibular barbel longest, reaching to opposite dorsal-fin base. Gill opening very wide. Total gill rakers on first gill arch 11 or 12; **no rakers on hind aspect of first 2 gill arches.** Fin spines slender and weak; anal-fin rays 20 or 21. Swimbladder very large, flat, and ovate. **Colour:** body pale grey or yellowish above, white below; dorsal, pectoral, pelvic, and anal fins bright yellow-orange; lips and inside mouth yellow or "honey"-coloured.

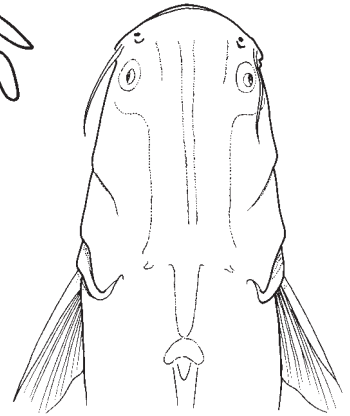
Size: Maximum standard length 35 cm.

Habitat, biology, and fisheries: Turbid coastal waters, mudflats, and river mouths. Probably piscivorous.

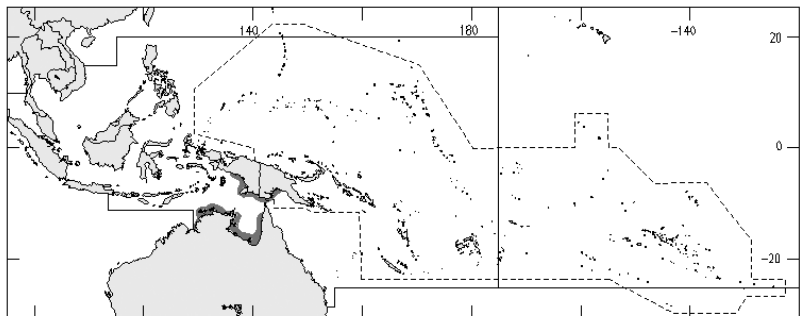
Distribution: Southern New Guinea and northern Australia.



upper tooth patches



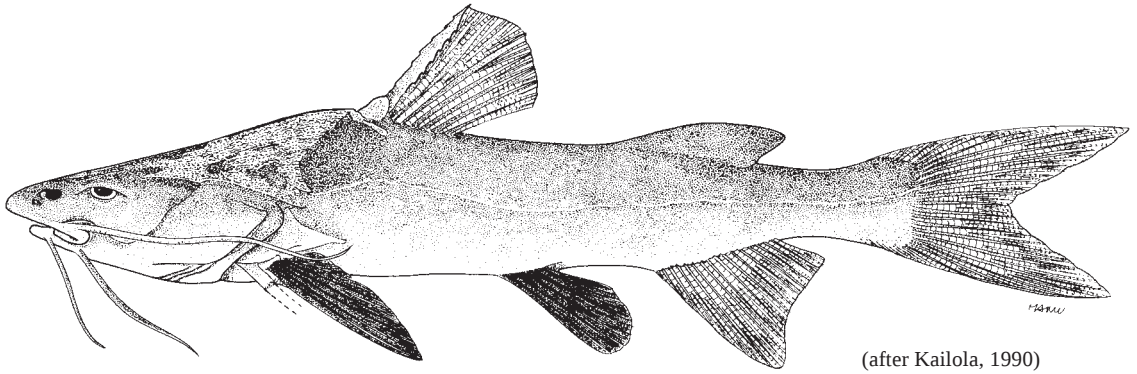
dorsal view of head



***Arius* species 6 [Kailola, 1990]**

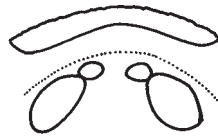
Frequent synonyms / misidentifications: None / *Arius* (*Netuma*) *proximus* Ogilby, 1898.

FAO names: En - Thickwhiskered catfish.

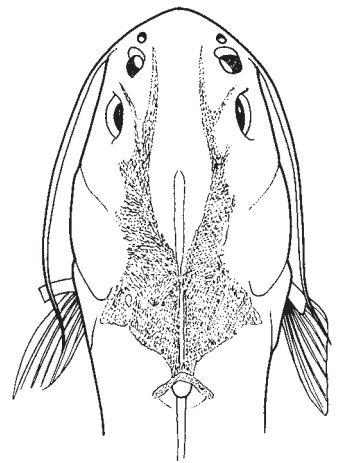


(after Kailola, 1990)

Diagnostic characters: Head shield very granular and extensive posteriorly; triangular supraoccipital process short and very broad. Eye small, dorsolateral, 8 to 11% of standard length. **Snout fleshy, overhanging mouth.** Teeth conical and generally sharp; **teeth on palate arranged into 4 patches, 2 on each side:** outer autogenous ("palatine") patches oval or crescentic, 2 to 3 times larger than rounded inner (vomerine) patches, which are well separated. **Barbels thick proximally, thin distally;** chin-barbel bases not well separated, slightly staggered. Low papillae present on palate and hind aspect of all gill arches. **Total gill rakers on first gill arch 10 to 14; rakers rarely present on hind aspect of first 2 gill arches.** Anal-fin rays 16 to 18. **Adipose fin large, base longer than anal-fin base** and 12 to 19% of standard length. Swimbladder with smooth, unnotched sides. **Colour:** body dark grey, brown or mauve, pale below, iridescent gold on back and sides; **upper aspect of paired fins charcoal blue.**



upper tooth patches

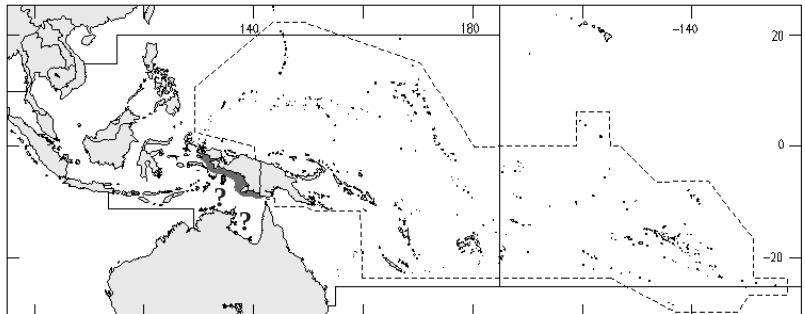


dorsal view of head

Size: Maximum standard length 26 cm.

Habitat, biology, and fisheries: Turbid coastal waters, mudflats, and estuaries. Diet unknown.

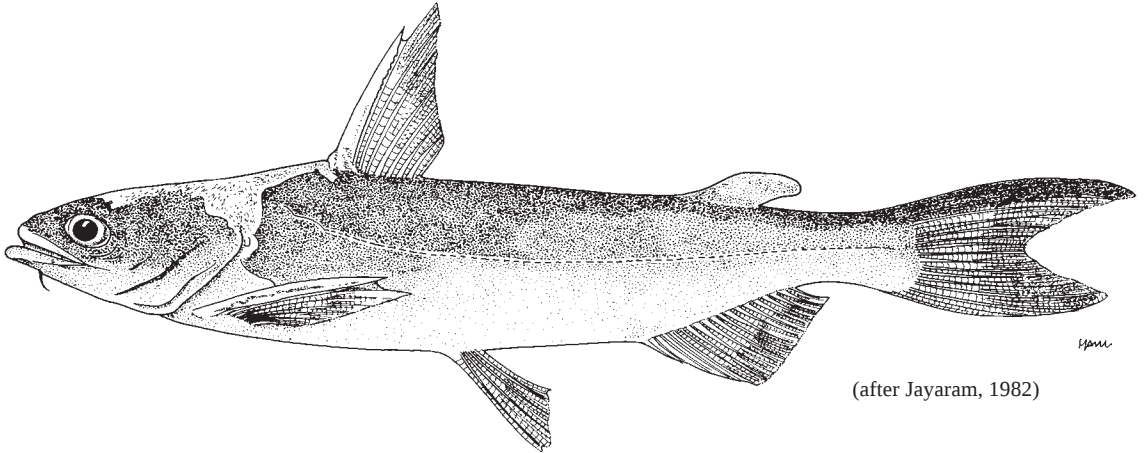
Distribution: Southern New Guinea, possibly extending to northern Australia.



Batrachocephalus mino (Hamilton, 1822)

Frequent synonyms / misidentifications: Synonyms recorded in literature: *Batrachocephalus ageneiosus* Bleeker, 1846; *Bagrus micropogon* Bleeker, 1852 / None.

FAO names: **En** - Beardless sea catfish; **Fr** - Mâchoiron imberbe; **Sp** - Bagre lamiño.



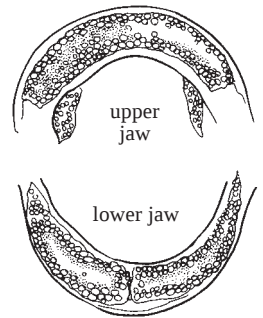
(after Jayaram, 1982)

Diagnostic characters: Head shield exposed, rugose. Eyes 5 to 6.5 times in head length, placed well forward. Snout blunt. Mouth gape wide, 40 to 45% of head length, jaws very strong, lower jaw prominent. Wide band of conical, blunt teeth in both jaws; palatal teeth conical and blunt tipped, in a broad, short longitudinal band on each side of palate, close to jaw teeth. Only mandibular barbels present; barbels very small. Gill opening restricted. Total gill rakers on first gill arch 15. Dorsal- and pectoral-fin spines strong and flattened, denticulated on both anterior and posterior borders; dorsal-fin spine 2/3 to 3/4 of head length, pectoral-fin spine slightly longer than dorsal-fin spine; anal-fin rays 19 to 22; pectoral-fin rays 8 or 9. Adipose-fin base 2/3 of dorsal-fin base. **Colour:** body dark brown above, white below; fins dusky yellow, upper lobe of caudal fin dark.

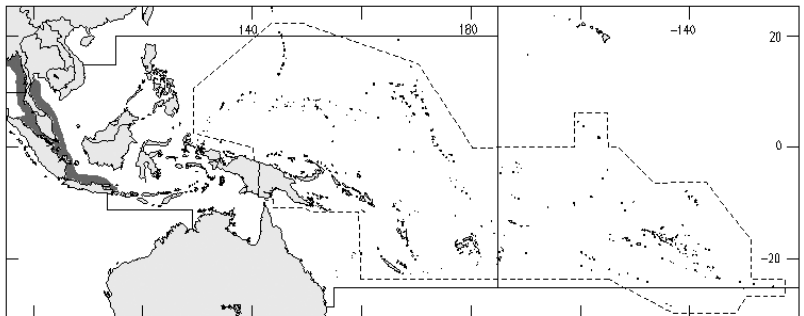
Size: Maximum standard length 25 cm.

Habitat, biology, and fisheries: Coastal waters, estuaries, and tidal reaches of rivers. Diet unknown.

Distribution: From India and Myanmar through Thailand to Indonesia (Sumatra, Java, Kalimantan); also Malaysia.



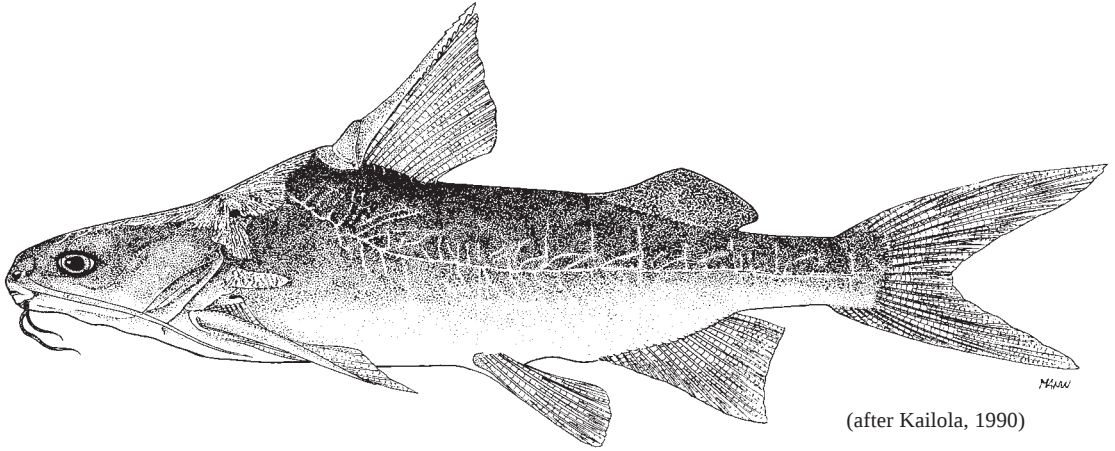
tooth patches



***Cinetodus (Cinetodus) froggatti* (Ramsay and Ogilby, 1886)**

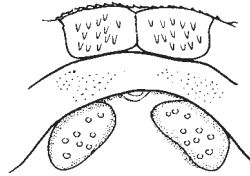
Frequent synonyms / misidentifications: *Septobranchus johannae* Hardenberg, 1941 / None.

FAO names: En - Froggatt's catfish.

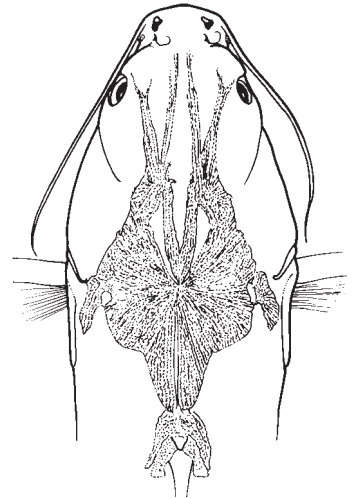


(after Kailola, 1990)

Diagnostic characters: Body elevated at level of dorsal fin; predorsal profile steep. Head shield finely striated; supraoccipital process very broad, triangular. Snout blunt. Mouth small, 27 to 31% of head length. Premaxillary teeth in oblong patches; **no inner (vomerine) tooth patches**; outer autogenous ("palatine") tooth patches oblong and well separated. Barbel bases on chin close together. **Gill opening restricted, closing just below level of pectoral-fin base**, membranes continuous across isthmus. **Total gill rakers on first gill arch 11 to 16; club-shaped rakers present on hind aspect of all gill arches.** **Fin spines robust**; anal-fin rays 17 to 19. **Adipose fin large and oblong**, its base equal to or more than anal-fin base. **Posterior cleithral process ("humeral process") well developed, oblong, and horizontal.** Mature females lack pelvic-fin pads. Gonad bilobate. **Colour:** body dark blue or reddish above; **upper aspect of pectoral fins dark bluish brown.**



upper tooth patches

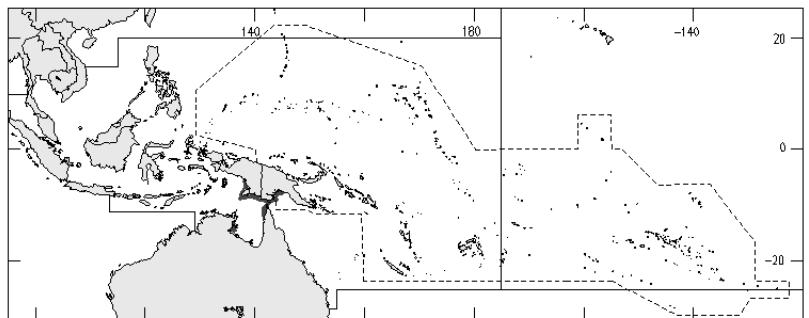


dorsal view of head

Size: Maximum standard length 42 cm.

Habitat, biology, and fisheries: Coasts, estuaries, and rivers into fresh water. Diet consists solely of molluscs (both bivalves and gastropods).

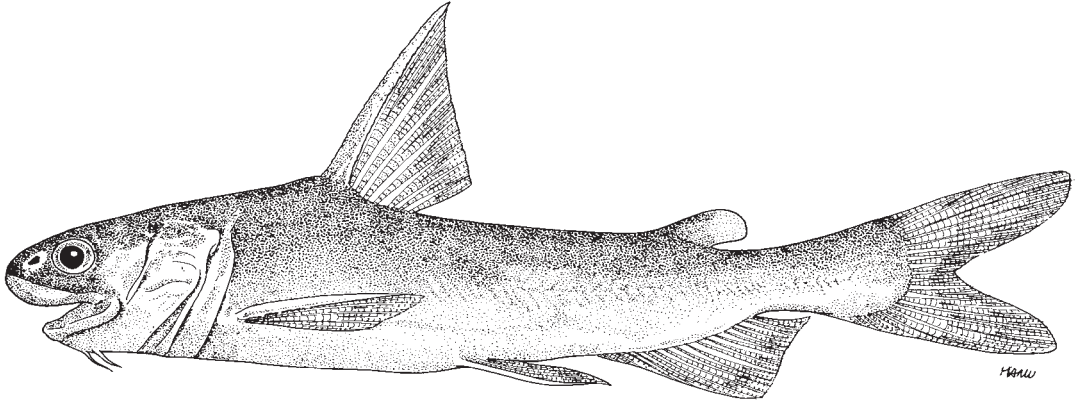
Distribution: Southern New Guinea and northern Australia.



***Ketengus typus* Bleeker, 1847**

Frequent synonyms / misidentifications: *Pimelodus pectinidens* Cantor, 1849 / None.

FAO names: En - Largemouthed catfish.



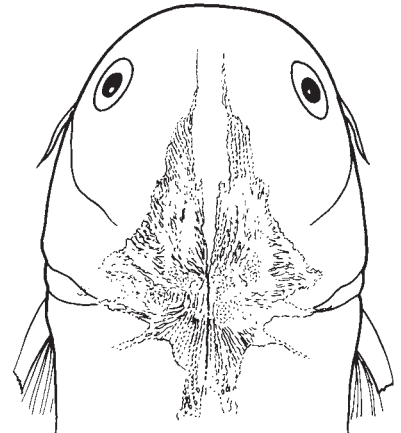
(after Weber and de Beaufort, 1913)

Diagnostic characters: Head shield striate and moderately granular, exposed. **Eye** 3 to 5.3 times in head length, **situated well forward**. **Mouth inferior**, its opening wide, extending behind eye, gape 3/4 to 4/5 of head length. **Single series of incisor-like, compressed teeth in each jaw**, teeth blunt or with a central tip; **no teeth on smooth palate**. **Three pairs of barbels**, all of them very short, equal to or shorter than eye diameter. **Gill opening restricted**, closed across isthmus from level of lower pectoral-fin base. Total gill rakers on first gill arch 15; **rakers present on hind aspect of all gill arches**. Dorsal-fin spine equals head length, serrated on both margins; **pectoral-fin spine** 2/3 to 1 length of dorsal-fin spine and strongly **serrated along both margins**; anal-fin rays 19 to 21; pectoral-fin rays 7 or 8. Adipose-fin base equal to dorsal fin 2/3 to 1 of dorsal-fin base. **Colour:** body dark blue above, white below, iridescent grey on back and sides.

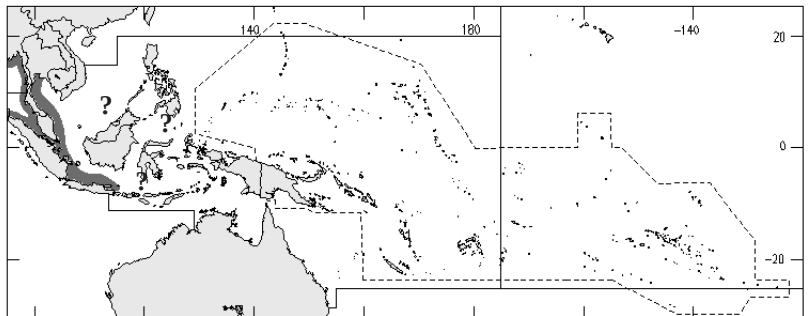
Size: Maximum standard length 24 cm.

Habitat, biology, and fisheries: Nearshore coastal and brackish waters to tidal reaches of rivers. No information on diet.

Distribution: Andaman Islands, Malay Peninsula, Thailand, and Indonesia (Sumatra, Java, Madura, and Kalimantan).



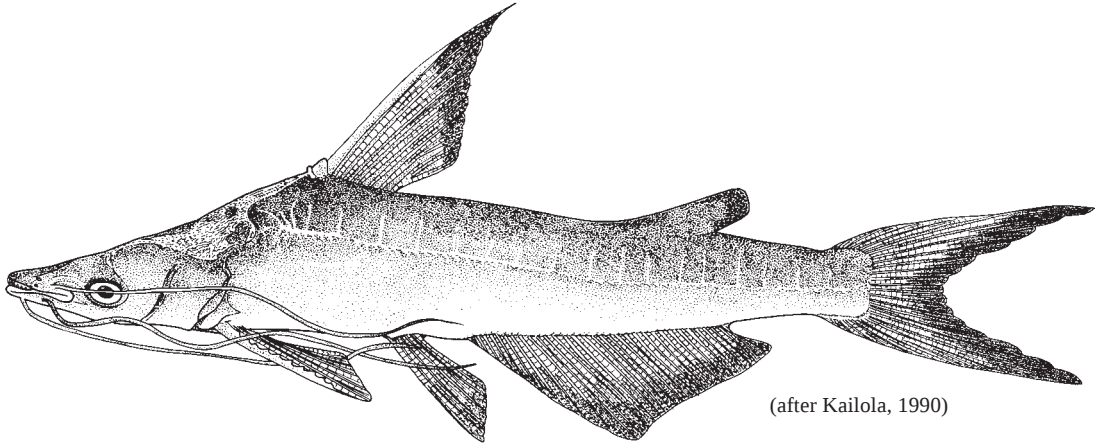
dorsal view of head



***Nedystoma novaeguineae* (Weber, 1913)**

Frequent synonyms / misidentifications: None / None.

FAO names: En - Broadmouthed catfish.



(after Kailola, 1990)

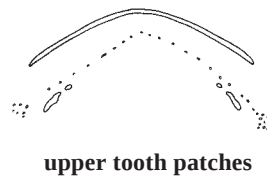
Diagnostic characters: Head broad and depressed; dorsomedian head groove rounded posteriorly; posterior cleithral process ("humeral process") reduced. Eye low-set, covered by head skin. Mouth wide, 50 to 62% of head length; snout spatulate. Teeth very small, in 1 row in both jaws; few teeth in 4 small patches at extremity of palate.

Barbels very long, maxillary barbels 51 to 57% of standard length; barbel bases on chin well separated. Gill opening very wide. Total gill rakers on first gill arch 45 to 51; rakers present on hind aspect of all gill arches. Anal-fin rays 29 to 33; fin spines strong; very large serrae along inner margin of pectoral-fin spine. Mature females lack pelvic fin pads. Gonad appearing as 1 (not bilobate). **Colour:** body dusky above, silvery yellow on sides; dorsal- and caudal-fin margins brown.

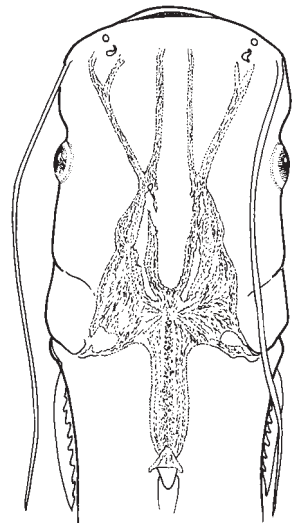
Size: Maximum standard length 15 cm.

Habitat, biology, and fisheries: Estuaries and tidal reaches of rivers, rarely in fresh water. Diet mainly prawns, opportunistic on other items (polychaete worms, plants).

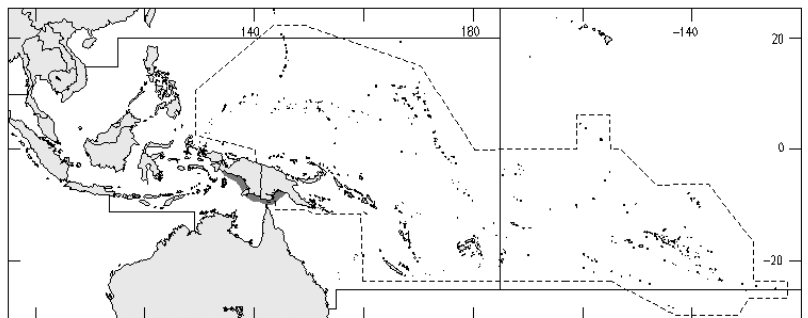
Distribution: Southern New Guinea.



upper tooth patches



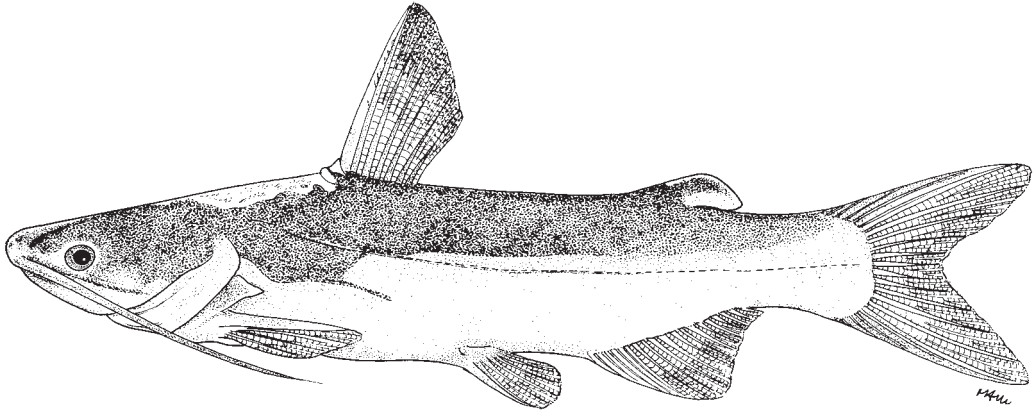
dorsal view of head



***Osteogeneiosus militaris* (Linnaeus, 1758)**

Frequent synonyms / misidentifications: Synonyms recorded in literature: *Osteogeneiosus cantoris* Bleeker, 1846; *O. valenciennesi* Bleeker, 1846; *O. gracilis* Bleeker, 1846; *O. blochii* Bleeker, 1846; *Arius macrocephalus* Bleeker, 1846; *Osteogeneiosus longiceps* Bleeker, 1846; *O. ingluvies* Bleeker, 1846; *O. stenocephalus* Day, 1877 / None.

FAO names: En - Soldier catfish; Fr - Mâchoiron soldat; Sp - Bagre soldado.

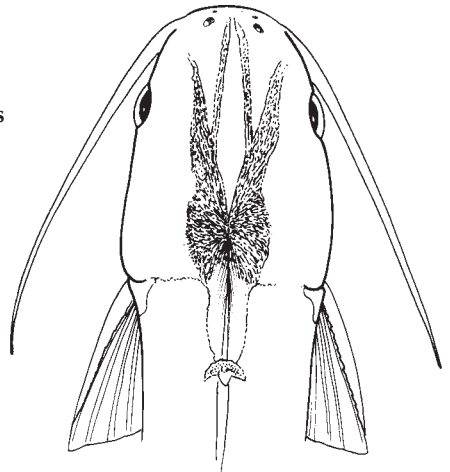


(after Jayaram, 1982)

Diagnostic characters: Head strongly depressed. Head shield covered with smooth skin. Eye small, 5.5 to 8 times in head length. Snout truncate. Mouth inferior, lips thin. Single band of fine teeth in jaws; **palatal teeth conical with blunt tips, grouped into 2 large longitudinal, semi-oval or elliptical patches, 1 each side nearer palate margins, inner margin of patches concave.** Only maxillary barbels present; barbels long and stiff, extending to or beyond pectoral-fin base. Total gill rakers on first gill arch 10 or 11; rakers present on hind margin of all gill arches. **Fin spines thin, dorsal-fin spine 2/3 to 3/4 of head length, pectoral-fin spine 4/5 to 9/10 of dorsal-fin spine, its front and hind margins denticulated; anal-fin rays 19 to 22; pectoral-fin rays 9 or 10. Adipose fin 2/3 to 9/10 of dorsal-fin base.** **Colour:** bluish above, white or cream below; **margins of dorsal fin and adipose fin dark blue.**



upper tooth patches



dorsal view of head

Size: Maximum standard length 31 cm.

Habitat, biology, and fisheries: Lower courses of rivers, coastal-lake systems, and inshore waters.

Distribution: From India and neighbouring coastal states to Singapore, Thailand, Indonesia (Sumatra, Java, Kalimantan), and Malaysia.

