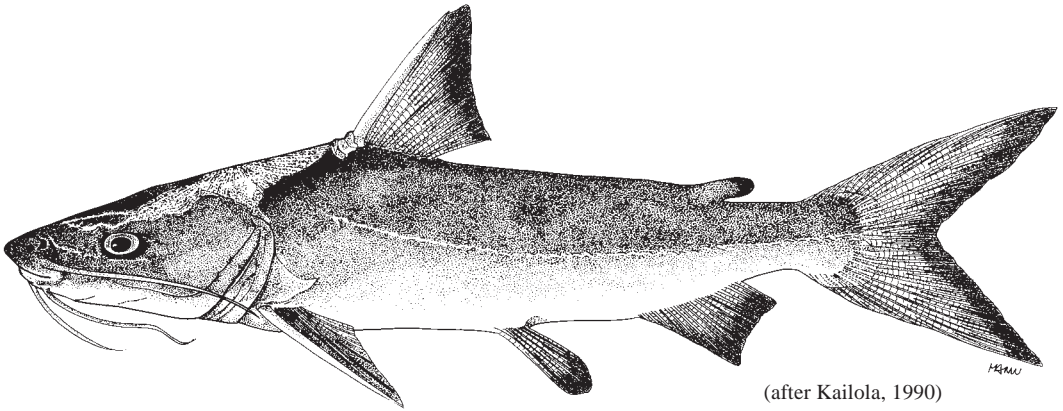


“*Arius*” *nella* (Valenciennes in Cuvier and Valenciennes, 1840)

Frequent synonyms / misidentifications: *Arius nella* Valenciennes in Cuvier and Valenciennes, 1840; *Nalla jellah* Russell, 1803; *Arius leiototocephalus* Bleeker, 1846; *Bagrus (Ariodes) meyenii* Müller and Troschel, 1849 / None.

FAO names: En - Shieldheaded catfish.



(after Kailola, 1990)

Diagnostic characters: Head length 29 to 33% (mean 31%) of standard length. Head shield rugose; dorsomedian head groove lanceolate; supraoccipital process triangular in young, expanding with age and becoming ovate with convex sides (shield-shaped); lateral ethmoid (before eye) rugose and prominent, especially in larger fish. Mouth terminal, its width 30 to 39% (mean 34%) of head length. Granular teeth in 2 patches on each side of palate, longitudinally arranged, anterior patch ovate and smaller; posterior patch elongate, long axes slightly diverging distally; palate teeth stout, peg-like or globular; always present in anterior patch, although individual teeth may be lost from all patches. **Posterior epithelial ridges on palate run obliquely.** Maxillary barbels reaching head margin and pectoral-fin base. **Total gill rakers on first gill arch 13 to 15**, of which 9 on lower limb; **no rakers on hind aspect of first 2 gill arches.** Dorsal-fin spines thick, compressed, with internal transverse partitions; anal-fin rays 14 to 17. Sides of swimbladder creased internally and smooth externally. **Colour:** body reddish brown to charcoal blue above, sides often scattered with small violet or olive-brown dots; body iridescent silvery grey; pectoral fin dark bluish brown above; remaining fins with dark brown margins.

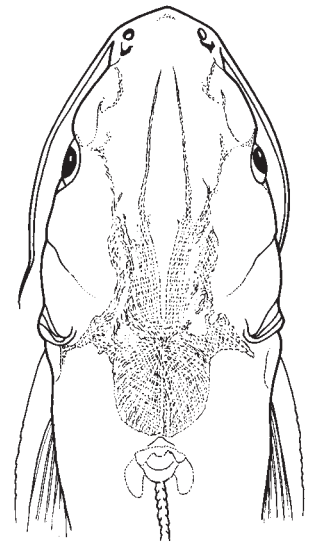
Size: Maximum standard length 75 cm.

Habitat, biology, and fisheries: Coastal sea and estuaries. Diet mainly consists of sea urchins.

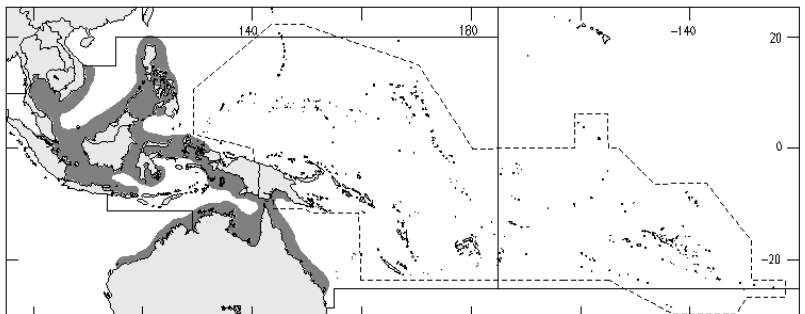
Distribution: From the east coast of India to Thailand, Singapore, Malaysia, Indonesia (Sumatra, Java, Kalimantan, Celebes), and the Philippines, to the southern coast of New Guinea and northern Australia from near Darwin to Queensland.



upper tooth patches



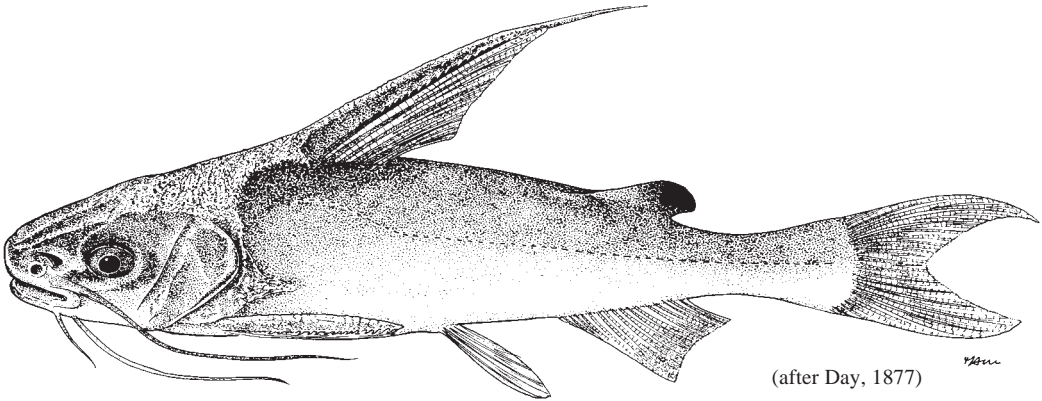
dorsal view of head



Arius nenga (Hamilton, 1822)

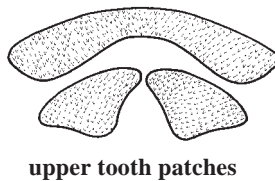
Frequent synonyms / misidentifications: *Arius caelatus* Valenciennes in Cuvier and Valenciennes, 1840 (probable). Synonyms recorded in literature: *A. aequibarbis* Valenciennes in Cuvier and Valenciennes, 1840; *A. granosus* Valenciennes in Cuvier and Valenciennes, 1840; *A. caelatoides* Bleeker, 1846; *A. microgastropterygius* Bleeker, 1846; *A. clypeaster* Bleeker, 1846; *A. clypeastroides* Bleeker, 1846; *A. chondropterygius* Bleeker, 1846; *A. melanopterygius* Bleeker, 1849 / None.

FAO names: En - Thickspined catfish.

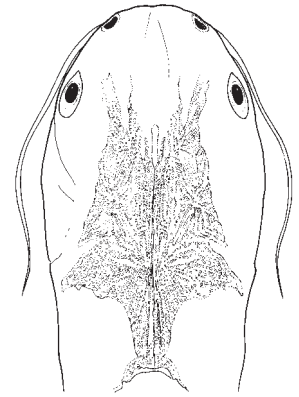


(after Day, 1877)

Diagnostic characters: Head shield granulated in series; dorsomedian head groove short and narrow, deep and teardrop-shaped anteriorly. Snout rounded to truncate, its length 36 to 40% of head length. Eye 5.5 to 7 times in head length. Mouth strongly curved, gape wide, 44 to 51% of head length; jaws strong. Maxillary barbels reaching middle of pectoral fins or further, 26 to 39% of standard length. Teeth in 1 patch on each side of palate, tooth patches roughly triangular, their base rounded and anterior, other margins straight or emarginate; apex of patches slightly diverging; palatal teeth conical, sharp, and strong. Dorsal-fin spine very strong, compressed, its basal half thick, rugose, and pitted; spine granulated along leading edge, serrated strongly along hind edge; spine equal or subequal to head length; tipped with a filament: moderately long in adults, very long in juveniles. Anal-fin rays 17 to 20. Pectoral-fin spine similar in form to dorsal-fin spine, 2/3 to 3/4 as long as head. Adipose-fin base 2/3 to 3/4 length of dorsal-fin base. Total gill rakers on first gill arch 12 to 17; rakers present on hind aspect of all gill arches. Caudal peduncle depth 1.7 to 2.2 in its length. Lateral line bifurcates at tail base. **Colour:** bluish charcoal or tan above, metallic golden sheen over back and sides; fins yellow, often with black margins and markings, adipose fin either entirely black or bearing a large black spot; barbels and fin filament black.



upper tooth patches

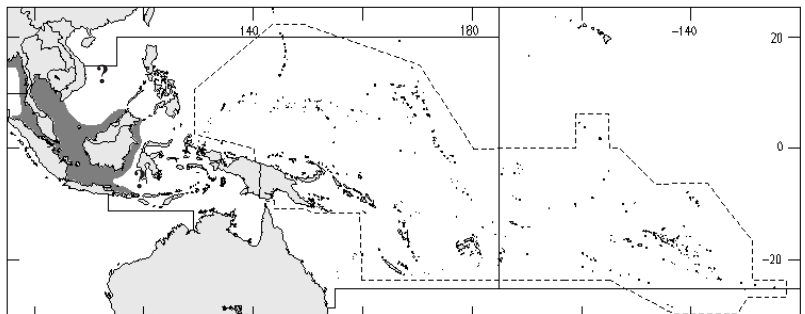


dorsal view of head

Size: Maximum standard length about 30 cm.

Habitat, biology, and fisheries: Inshore turbid waters, estuaries, and tidal reaches of river. Diet unknown.

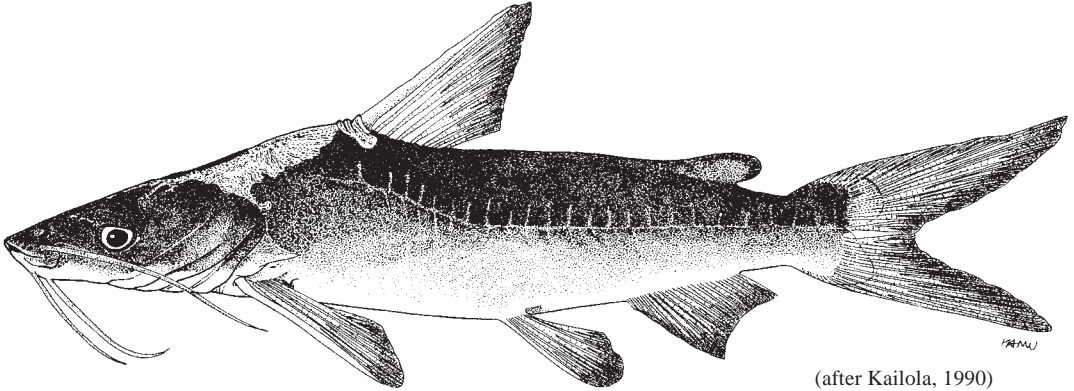
Distribution: From the west coast of India through Thailand to Malaysia and Indonesia (Sumatra, Java, Madura, Kalimantan); possibly Viet Nam.



“*Arius*” *polystaphylodon* Bleeker, 1846

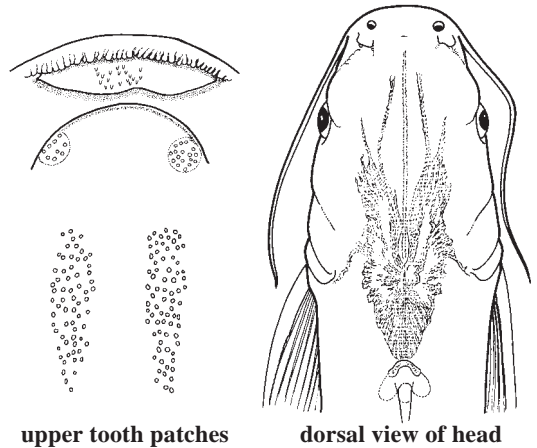
Frequent synonyms / misidentifications: *Arius polystaphylodon* Bleeker, 1846 / None.

FAO names: En - Sharpshielde sea catfish (formerly reported as “Mozambican sea catfish”).



(after Kailola, 1990)

Diagnostic characters: Head length 29 to 33% (mean 31%) of standard length. Dorsomedian head groove deep and straight, from just behind nostrils to supraoccipital process base; **process triangular, sides irregularly convex proximally;** median keel of process low; apex of process truncate or emarginate; lateral ethmoid (before eye) only slightly prominent, forming a “shelf” between eye and nostrils. **Mouth terminal, its width 26 to 39% (mean 34%) of head length.** Granular teeth in 2 patches on each side of palate, longitudinally arranged, anterior patch ovate and smaller; **posterior patch elongate, long axes parallel or slightly converging distally; palate teeth conical, stout or peg-like,** their tips blunt or sharp; always present in anterior patch, although individual teeth may be lost from all patches. **Posterior epithelial ridges on palate run obliquely. Total gill rakers on first gill arch 12 to 17,** of which 8 to 11 on lower limb; **no rakers on hind aspect of first 2 gill arches.** Anal-fin rays 15 to 20. Sides of swimbladder creased internally and smooth externally. **Colour:** body dark bluish charcoal above, white below, sometimes stippled dusky; back and upper sides metallic; all fins fawn, margined brown.



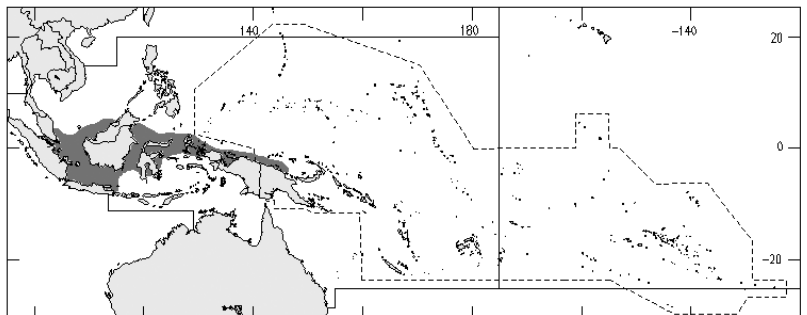
upper tooth patches

dorsal view of head

Size: Maximum standard length 34 cm.

Habitat, biology, and fisheries: Shallow, turbid coastal waters, and river mouths. Diet unknown.

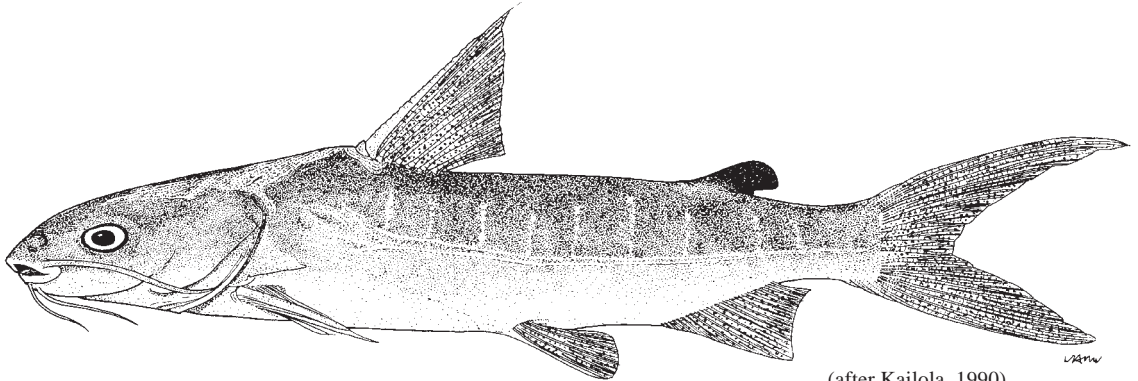
Distribution: From Singapore and Indonesia (Sumatra, Java, Celebes) to the northern coast of New Guinea.



Arius (Netuma) proximus Ogilby, 1898

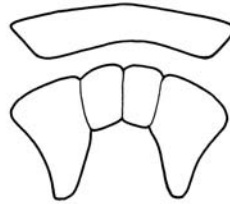
Frequent synonyms / misidentifications: *Arius arafurensis* Hardenberg, 1948 / *Arius graeffei* Kner and Steindachner, 1866.

FAO names: En - Arafura sea catfish.

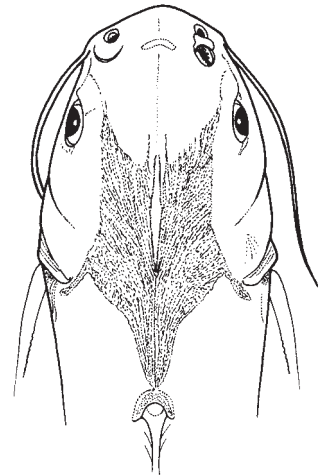


(after Kailola, 1990)

Diagnostic characters: Head shield moderately to very granular; dorsomedian head groove deep and distinct posteriorly. Snout curved or acute, always with crescent-shaped depression between nostrils. Four patches of fine and conical sharp teeth across front of palate, **outer autogenous ("palatine") patches subtriangular, much larger than inner (vomarine) patch.** Total gill rakers on first gill arch 10 to 13; no rakers on hind aspect of first 2 gill arches. Anal-fin rays 16 to 19; **caudal-fin lobes slender. Adipose fin small-based** and situated over posterior 2/3 of anal fin. Swimbladder heart-shaped with scalloped sides. **Colour:** body dark blue-grey to violet, creamy white below, iridescent sheen over back and sides; fins finely speckled black, **adipose fin mostly black.**



upper tooth patches

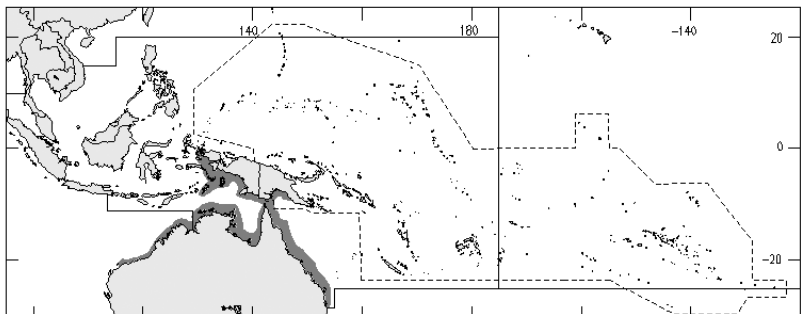


dorsal view of head

Size: Maximum standard length 41 cm.

Habitat, biology, and fisheries: Nearshore coastal waters and estuaries. Diet generally omnivorous, including crustaceans, fish, gastropods, and fish scales.

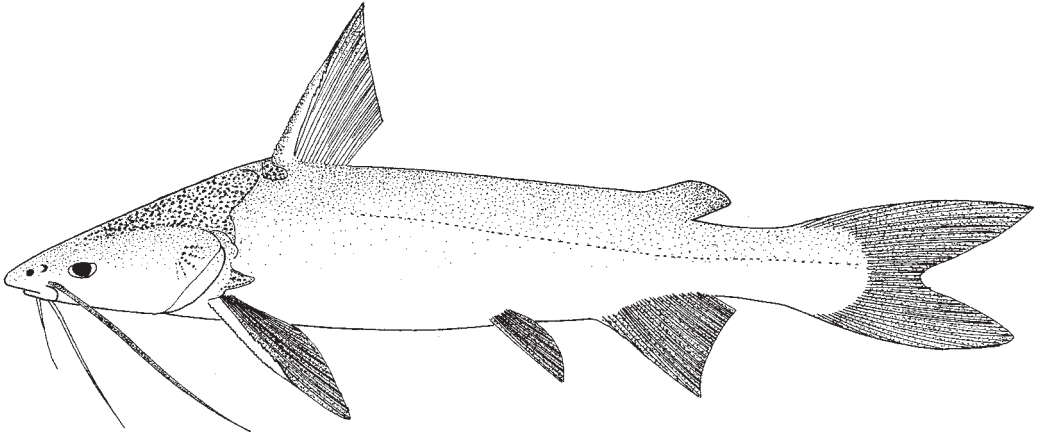
Distribution: Aru Islands, southern New Guinea, and northern Australia (Dampier to Newcastle).



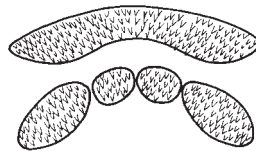
Arius (Hexanemichthys) sagor (Hamilton, 1822)

Frequent synonyms / misidentifications: Synonyms recorded in literature: *Bagrus sondaicus* Valenciennes in Cuvier and Valenciennes, 1839; *Bagrus javensis* Valenciennes in Cuvier and Valenciennes, 1839; *Hexanemichthys sondaicus* Bleeker, 1858 / None.

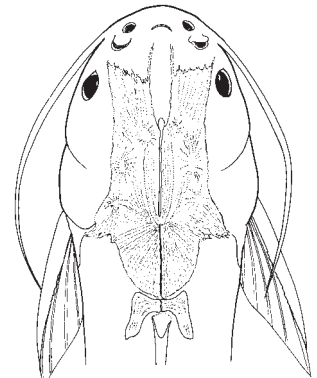
FAO names: En - Sagor sea catfish; Fr - Mâchoiron sagor; Sp - Bagre sagor.



Diagnostic characters: Head broad. Head shield extensive, striae rugose; dorsomedian head groove short, tapered posteriorly; **supraoccipital process a hemispherical plate** (triangular in young fish), **much broader than long, its apex convex**; nuchal bone ("predorsal plate") **very broad and butterfly-shaped** (narrow and crescentic in young fish). Eye 5.5 to 8 times in head length. Snout rounded. Mouth subterminal, **gape 42 to 50% of head length**; broad crescent on snout. **Four oval patches of teeth on front of palate, 2 on each side, inner (vomarine) patches smaller than outer, autogenous ("palatine") patches**; tooth patches may be contiguous in larger fish; palatal teeth sharp and conical; jaw teeth strong, sharp, and depressible. **Barbels flattened and strap-like**, maxillary barbels 30 to 52% of standard length. Total gill rakers on first gill arch 12 to 18; **no rakers on hind aspect of first 2 gill arches. Pectoral-fin spine longer and stronger than dorsal-fin spine, 1.2 to 1.4 times in head length**; **all spines with short filament**; anal-fin rays 16 to 19. Adipose-fin base 2/3 to 3/4 length of dorsal-fin base. Total number of vertebrae 53 to 55. **Colour:** body bluish brown above, white below; fins dusky, **paired fins with white margin**; **peritoneum fawn or dark grey.**



upper tooth patches



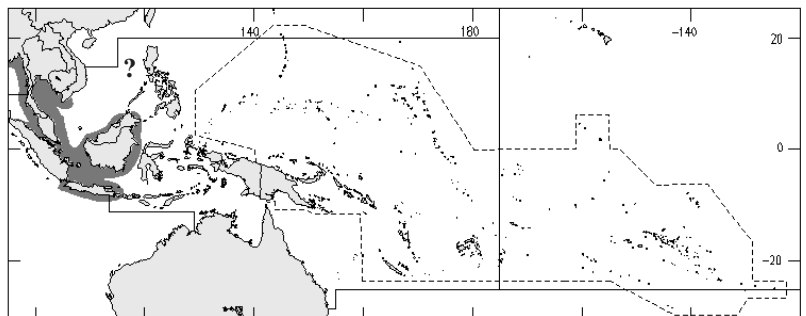
dorsal view of head

Size: Maximum standard length 45 cm.

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

Distribution: From the east coast of India to Singapore, Thailand and Malaya, Indonesia (Sumatra, Java, Kalimantan), possibly the Philippines.

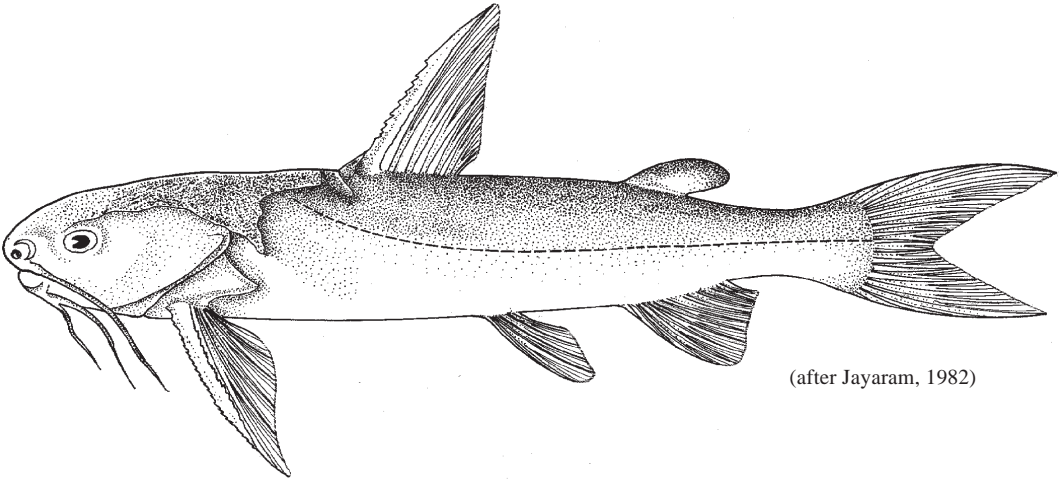
Remarks: *Bagrus doroides* Valenciennes, 1839, has been placed in synonymy of this species by earlier authors. However, as *B. doroides* "has a few ossified plates along the first portion of its lateral line" (Day, 1877: 462) or "granulated small plates" (Günther, 1864: 142) it cannot be an *ariid*.



Arius sona (Hamilton, 1822)

Frequent synonyms / misidentifications: *Arius gagorides* (Valenciennes, 1840) (probable); *Bagrus trachipomus* Valenciennes in Cuvier and Valenciennes, 1840 (synonym recorded in literature) / None.

FAO names: En - Sona sea catfish; Fr - Mâchoiron goujon; Sp - Bagre sona.

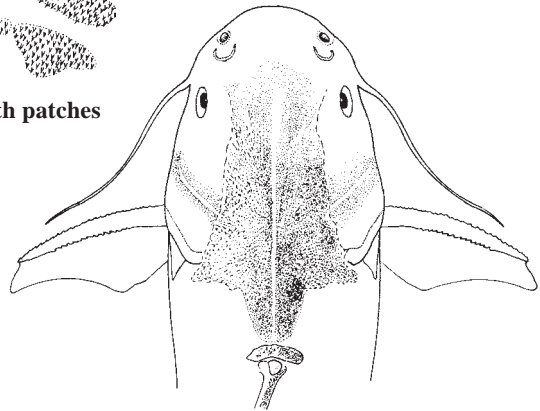


(after Jayaram, 1982)

Diagnostic characters: Head depressed, 1/3 broader than high. Head shield with strong, radiating granules; supraoccipital process as wide as long, keel low, sides and apex convex. Eye oval, dorsolateral, 6.8 to 9 times in head length. Snout prominent. Mouth gape 50 to 55% of head length; jaws strong, elevated at symphysis; premaxillary teeth partly exposed. Jaw teeth sharp and fixed (i.e. not depressible); 2 patches of teeth on each side of palate, outer autogenous ("palatine") patch very much larger than rounded inner (vomerine) patch, triangular and emarginate posteriorly, contiguous with inner patch; palatal teeth sharp and conical. Maxillary barbels reaching head margin. Total gill rakers on first gill arch 15 or 16; rakers present on hind aspect of all gill arches. Dorsal-fin spine strong and granulated along leading edge, pectoral-fin spine more so and longer than dorsal-fin spine; anal-fin rays 15 to 18. Adipose-fin base as long as or nearly as long as dorsal-fin base. **Colour:** body brownish blue, white below, iridescent gold on back and sides; fins mostly bluish black.



upper tooth patches

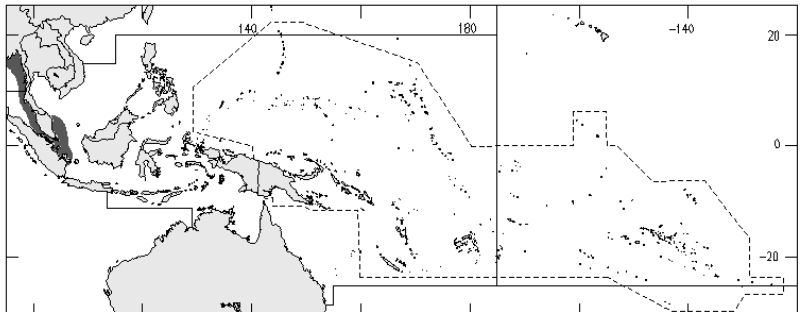


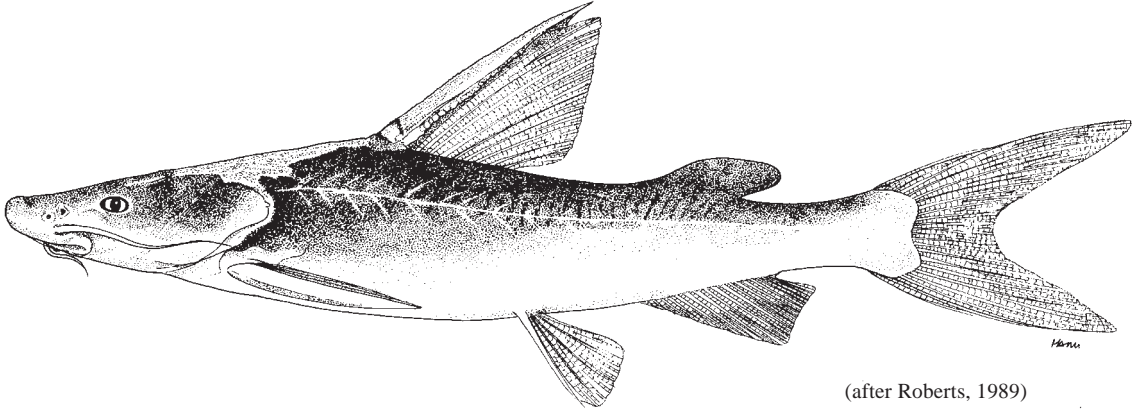
dorsal view of head

Size: Maximum total length about 90 cm.

Habitat, biology, and fisheries: Seas, estuaries, and tidal reaches of rivers.

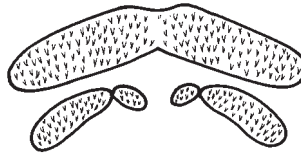
Distribution: India, Myanmar, Singapore, Penang, Malaysia, and northern Sumatra.



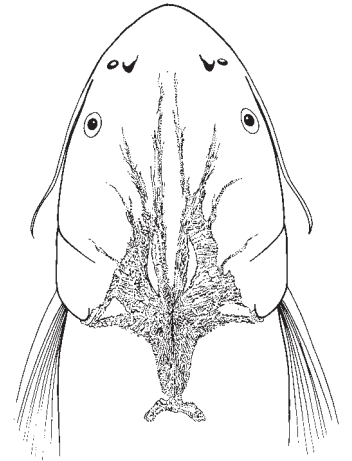
Arius (Hemiaris) stormii (Bleeker, 1858)**Frequent synonyms / misidentifications:** None / None.**FAO names:** En - Armoured sea catfish.

(after Roberts, 1989)

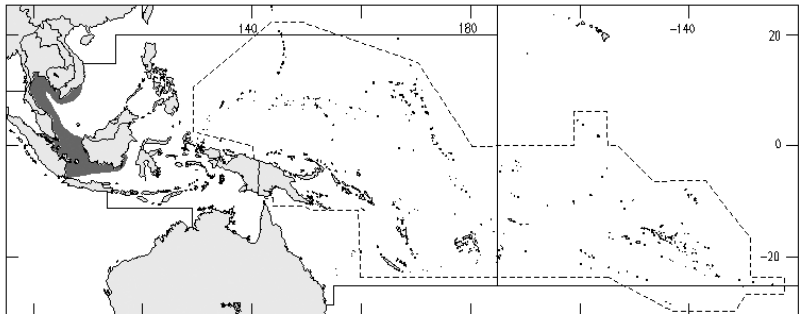
Diagnostic characters: Head shield finely granular, venulose laterally; supraoccipital process triangular and narrow. **Eye 6 to 10.5 times in head length** (smaller in larger fish). **Snout prominent, shark-like; upper jaw teeth mostly exposed;** mouth gape 46 to 51% of head length; anterior nostrils lateral to posterior nostrils. **Four oval patches of teeth on front of palate, 2 on each side, inner (vomerine) patches 1/4 to 1/3 the size of outer, autogenous ("palatine") patches;** tooth patches each side contiguous in larger fish, vomerine patches always separated by a wide gap at palate symphysis; **teeth on palate and jaws fixed** (i.e. not depressible), strong, sharp, and conical. Total gill rakers on first gill arch 16 to 18; **no rakers on hind aspect of first 2 gill arches.** **Dorsal-fin spine** broad and flat, coarsely striated, front margin rugose and granular basally, **upward directed serrae towards tip, hind margin with 25 to 35 strong serrae;** spine as long as head in larger fish, 3/4 head length in smaller fish; pectoral-fin spine similar in form but shorter (3/4) than dorsal-fin spine; anal-fin rays 16 or 17. Adipose-fin base about as long as dorsal-fin base, its origin before anal-fin origin. **Caudal peduncle very slender, its depth 2.4 to 3 in its length.** **Colour:** body olive grey to tan above, white below; **fins yellow and upper aspect of pectoral fins bluish or violet.**



upper tooth patches



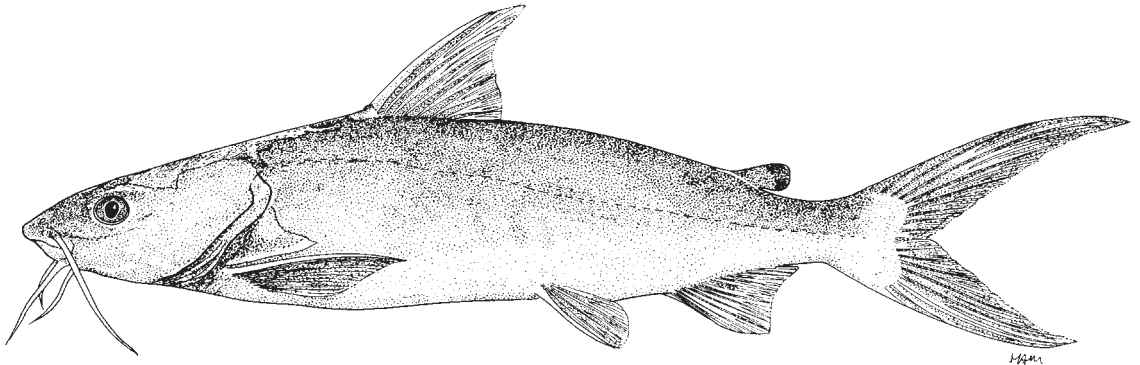
dorsal view of head

Size: Maximum standard length more than 50 cm.**Habitat, biology, and fisheries:** Inshore coastal waters, estuaries, and tidal reaches of rivers. Diet unknown but probably piscivorous.**Distribution:** Thailand and Viet Nam through Indonesia (Sumatra and Kalimantan).

Arius (Netuma) thalassinus (Rüppell, 1837)

Frequent synonyms / misidentifications: *Bagrus netuma* Valenciennes *in* Cuvier and Valenciennes, 1840; *B. laevigatus* Valenciennes *in* Cuvier and Valenciennes, 1840; *Arius nasutus* Valenciennes *in* Cuvier and Valenciennes, 1840; *Bagrus carchariorhynchus* Bleeker, 1846; *Arius andamanensis* Day, 1871 (in part); *A. serratus* Day, 1877 (in part); *Ariodes aeneus* Sauvage, 1883; *Netuma thalassina jacksonensis* Whitley, 1941 / *Arius bilineatus*: non Valenciennes.

FAO names: En - Giant sea catfish; Fr - Mâchoiron titan; Sp - Bagre titan.

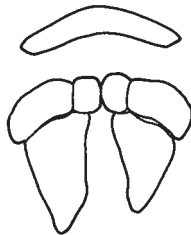
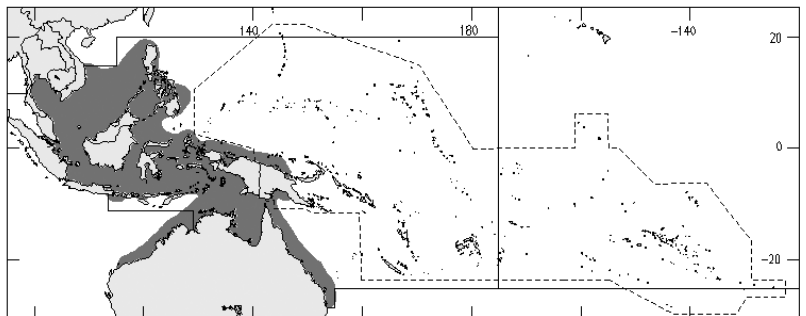


Diagnostic characters: Head shield finely granular; termination of dorsomedian head groove margined by a "V" formed by the frontals; supraoccipital process a broad-based triangle with straight or convex sides. Snout angular in young, prominent and acute with age. Mouth inferior. Fine teeth arranged into 3 patches on each side of palate; patches generally forming a large triangle, 1 vomerine (inner) and 2 autogenous (outer) patches; patches may coalesce in larger fish, yet vomerine patches always separated at palate midline. Total gill rakers on first gill arch 12 to 15; usually no rakers on hind aspect of first 2 gill arches. Anal-fin rays 14 to 17; caudal-fin lobes slender and tapered. Adipose fin short-based and situated posteriorly. Total number of vertebrae 46 to 48 (38 to 44, or 45 free). Heart-shaped swimbladder with scalloped sides. **Colour:** body greyish blue to fawn, back and sides iridescent coppery or golden; outer half of adipose fin blackish.

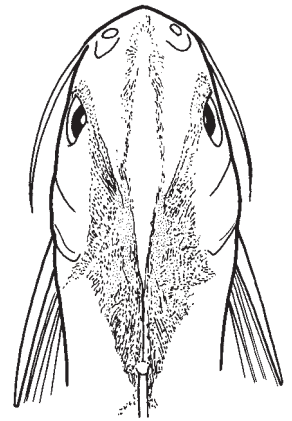
Size: Maximum standard length 1.3 m.

Habitat, biology, and fisheries: Coastal waters from nearshore to the continental shelf margin. Diet mainly opportunistic and carnivorous, from crustaceans, squid, and fish to detritus, echinoderms, amphipods, sand, and mud.

Distribution: East Africa through the Red Sea, India and neighbouring coastal states, Thailand and Viet Nam, Indonesia, Malaysia, the Philippines, South China Sea, northern and southern coasts of New Guinea, and northern Australia from Exmouth Gulf to Sydney.



upper tooth patches

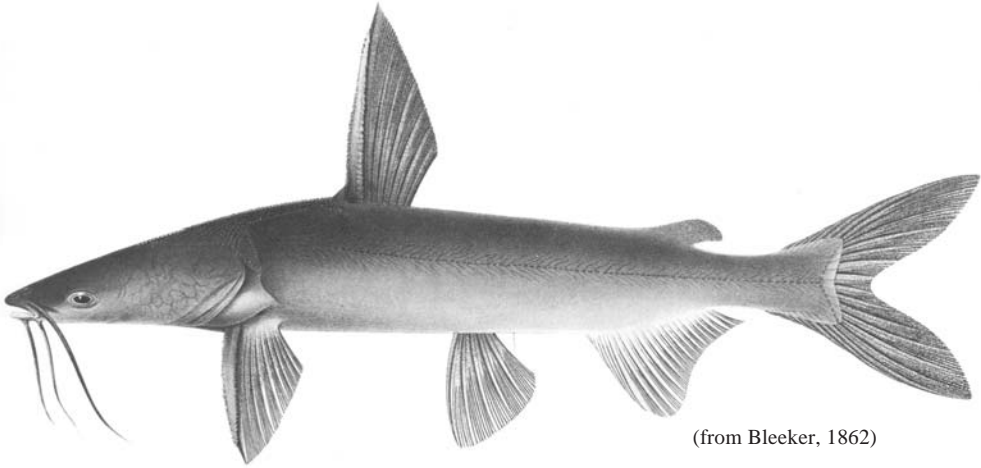


dorsal view of head

Arius truncatus Valenciennes in Cuvier and Valenciennes, 1840

Frequent synonyms / misidentifications: *Hemipimelodus cochlearis* Fowler, 1935 / None.

FAO names: En - Spoonsnouted catfish.



(from Bleeker, 1862)

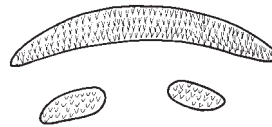
Diagnostic characters: Head somewhat depressed. Head shield smooth anteriorly and rugose to granular posteriorly, also supraoccipital process; head venulose laterally. Eye small, 7 to 11 times in head length. Snout truncate or obtuse, 3 to 3.3 times in head length; snout and chin papillose, lips thin and crenulate. Mouth curved, gape 30% of head length, jaws slightly elevated at symphysis. Palatal teeth in small oval, widely-separated patches, 1 on each side of palate; patches small, their long axis oblique; teeth short and conical, tips blunt or sharp. Chin-barbel bases roughly aligned. Dorsal-fin spine long and slender, leading edge granular, longer than pectoral-fin spine and 2/3 of head length; anal-fin rays 20 to 25. Adipose-fin base 4/5 to as long as dorsal-fin base. Gill opening restricted, closed across isthmus from just below pectoral-fin base, although margin of gill cover free. Total gill rakers on first gill arch 8 or 9; no rakers on hind aspect of first 2 gill arches. Margin of swimbladder scalloped. Lateral line bifurcate at tail base. Colour: body greenish yellow or bluish above, rich creamy yellow below; dorsal and caudal fins with dark margins, adipose fin pale.

Size: Maximum total length 42 cm.

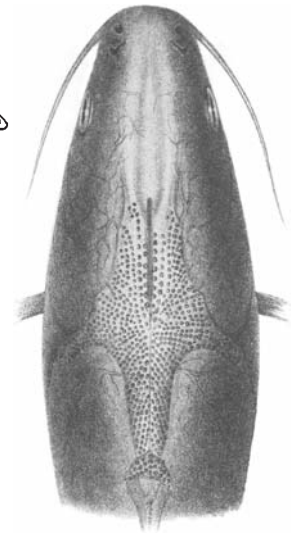
Habitat, biology, and fisheries: Tidal reaches of rivers and estuaries. Diet unknown.

Distribution: Thailand, Indonesia (Sumatra, Java, Kalimantan), and Malaysia.

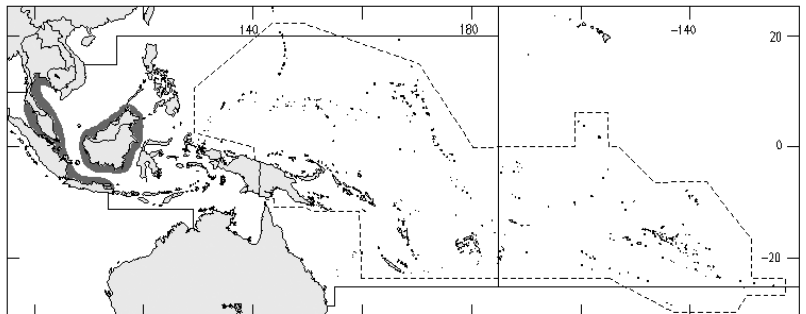
Remarks: This species may have an affinity with the fresh-water species, *Arius daugueti* (Chevey, 1932).



upper tooth patches



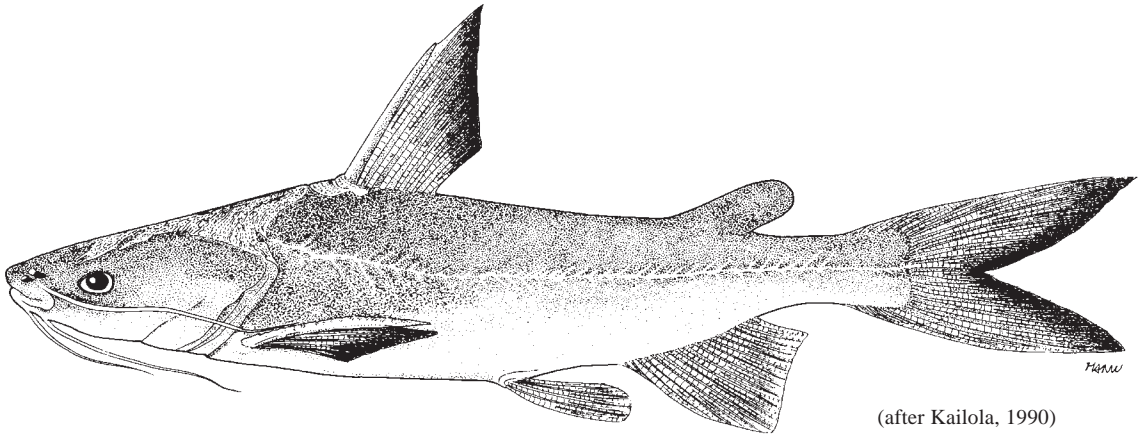
dorsal view of head



***Arius utarus* Kailola, 1990**

Frequent synonyms / misidentifications: *Arius leptaspis* (Bleeker, 1862); *A. velutinus* (Weber, 1907) / None.

FAO names: En - Northcoast catfish.

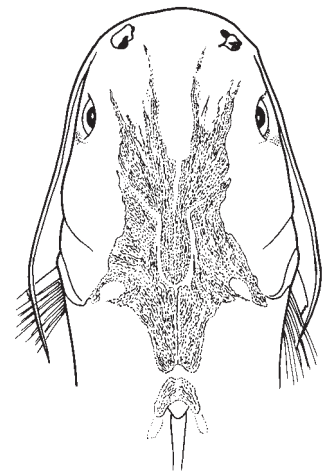


(after Kailola, 1990)

Diagnostic characters: Body compressed and noticeably tapered distally, caudal peduncle shallow, its depth 6 to 8% of standard length. Head depressed, its height 1 to 1.5 (mean 1.2) in its width. Head skin thin; supraoccipital process oblong or broadly triangular; head shield rough, coarse granules extending forward along midline. Eye situated slightly before midhead length and visible from above. **Snout rounded; mouth broad, gape 46 to 56% of head length;** jaws strong. Jaw and palate teeth fine, slender and curved, sharp, depressible; **4 oval, isolated patches of teeth across front of palate, outer autogenous ("palatine") patches equal to or only slightly larger than inner (vomerine) patches.** Maxillary barbels 28 to 50% of standard length; chin-barbel bases not well separated. **Total gill rakers on first gill arch 13 to 22; rakers usually absent from hind aspect of first 2 gill arches.** Anal-fin rays 18 to 22. Swimbladder sides smooth. **Colour:** body dark blue to olive, **upper sides with vertical series of golden spots** and lateral line often highlighted golden, white-cream below.



upper tooth patches

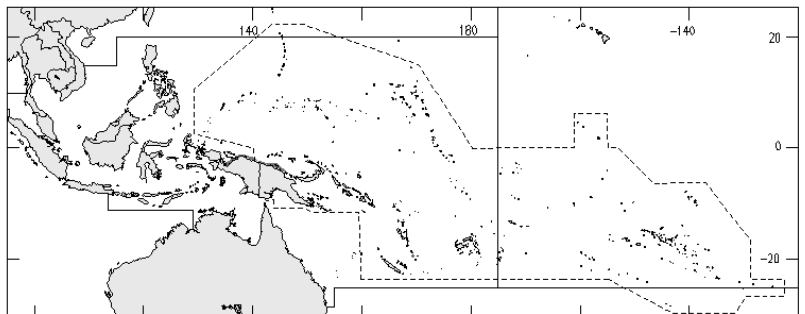


dorsal view of head

Size: Maximum standard length 45 cm.

Habitat, biology, and fisheries: Fresh water, tidal reaches of rivers and estuaries. Diet omnivorous yet prefers larger food items such as fish, crustaceans, insect larvae, fish scales, and plant material.

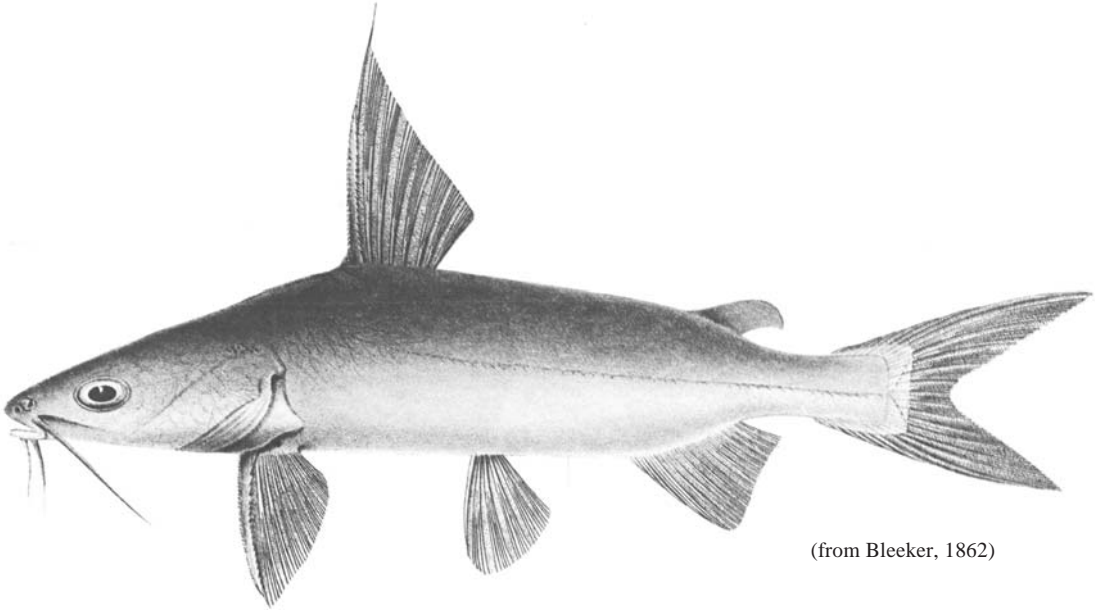
Distribution: Northern New Guinea.



Arius utik Bleeker, 1846

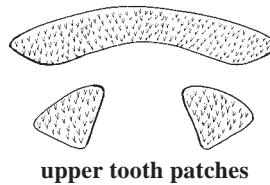
Frequent synonyms / misidentifications: *Arius pidada* Bleeker, 1846 (in part) / None.

FAO names: En - Lowly catfish.

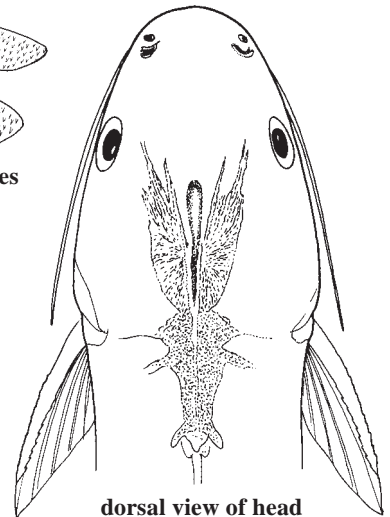


(from Bleeker, 1862)

Diagnostic characters: Head 3 to 3.8 in standard length. Head shield smooth anteriorly, rugose or granulated posteriorly and over supraoccipital process; **dorsomedian head groove narrow and deep, tapering posteriorly; supraoccipital process strongly keeled and tending rectangular.** Eye dorsolateral, 4.6 to 5.3 times in head length. Snout blunt and rounded, slightly prominent. **Palatal teeth in 2 patches, 1 on each side of palate;** patches triangular, long axes of patches converging at palate midline, at about 25° to curve of mouth, **margins of tooth patches straight or inner margin barely emarginate;** palatal teeth conical, low, tips mostly blunt, some sharp. Total gill rakers on first gill arch 14 to 16; **rakers present on hind aspect of all gill arches.** Dorsal- and pectoral-fin spines slender, leading margin of dorsal-fin spine corrugated, hind margin of both spines serrated, **pectoral-fin spine especially so with numerous, even-sized, curved serrae;** pectoral-fin spine slightly longer than dorsal-fin spine, each 2/3 to 3/4 of head length; short filament on dorsal-fin spine tip; **anal-fin rays 18 to 20. Lateral line bifurcates at tail base.** **Colour:** body tan above, white below; fins yellowish, margins brown.



upper tooth patches

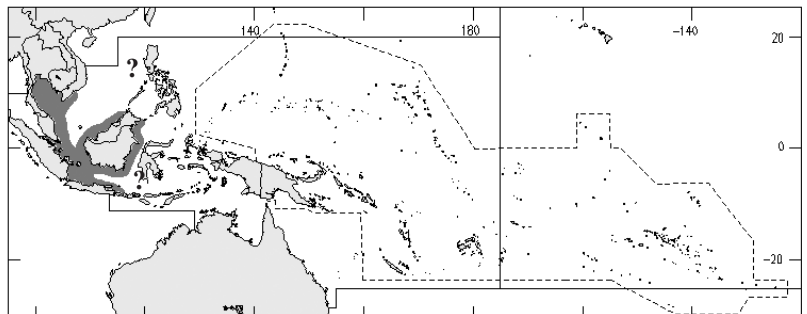


dorsal view of head

Size: Maximum standard length 23 cm.

Habitat, biology, and fisheries: Coastal waters and estuaries. Diet unknown.

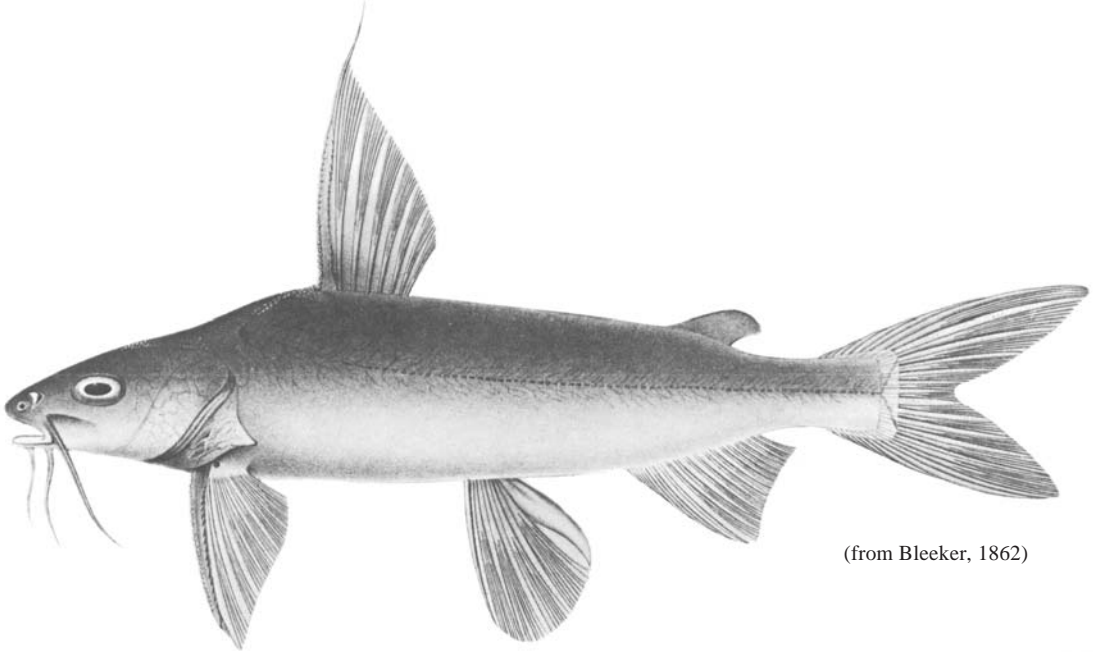
Distribution: From the Gulf of Thailand through Malaysia and Indonesia (Sumatra, Java, Kalimantan); possibly the Philippines.



Arius venosus Valenciennes in Cuvier and Valenciennes, 1840

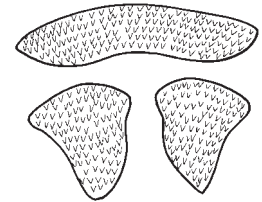
Frequent synonyms / misidentifications: *Arius sumatranus* (Anonymus [Bennett] 1830) (probable synonym; "insufficient description" stated, but type said to be in BMNH collection); *Bagrus schlegelii* Bleeker, 1846 (in part). Synonyms recorded in literature: *Arius micronotacanthus* Bleeker, 1846; *A. manjong* Bleeker, 1846; *A. macruropterygius* Bleeker, 1846; *A. micruropterygius* Bleeker, 1846; *A. laeviceps* Bleeker, 1846 / None.

FAO names: **En** - Veined catfish; **Fr** - Mâchoiron veiné; **Sp** - Bagre veteadó.



(from Bleeker, 1862)

Diagnostic characters: Head 4 to 5 in standard length. **Head shield smooth and venulose to slightly granular**; dorsomedian head groove narrow and short. Eye 4.2 to 5 times in head length. Snout rounded. **Teeth in 1 patch on each side of palate, tooth patches triangular, their base anterior, apex posterior; long axes of patches almost parallel longitudinally on palate, at about 80° to curve of the mouth**; palatal teeth conical, slender, and sharp. Total gill rakers on first gill arch 15; **rakers present along hind aspect of all gill arches**. Dorsal-fin spine moderately thickened and granulated, serrated on leading edge towards tip and along hind border; dorsal-fin spine 3/4 to 4/5 of head length; **pectoral-fin spine flattened and as long as dorsal-fin spine, its hind border with numerous very strong serrae**; anal-fin rays 18 to 23. **Lateral line bifurcates at tail base**. **Colour:** body reddish brown to bluish green above, white below; fins with grey or brown margins and pectoral and pelvic fins dark above.



upper tooth patches

Size: Maximum total length about 32 cm.

Habitat, biology, and fisheries: Coastal waters and estuaries. Diet unknown.

Distribution: From the Andaman Islands through the east coast of India to Myanmar, Thailand, Singapore, Malaya, Indonesia (Sumatra), and the Philippines.

