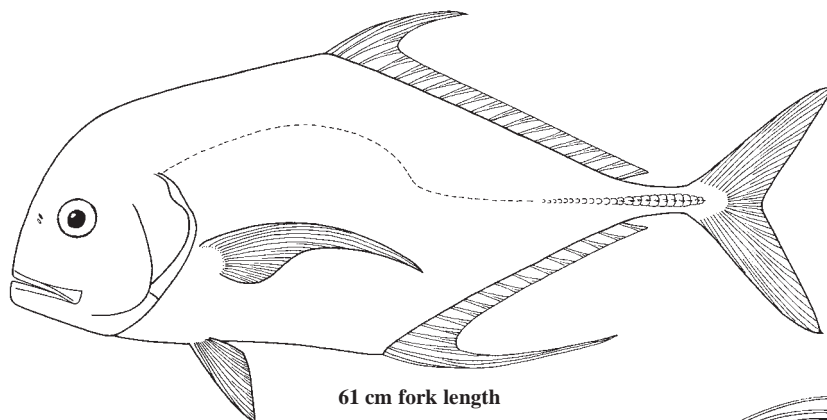


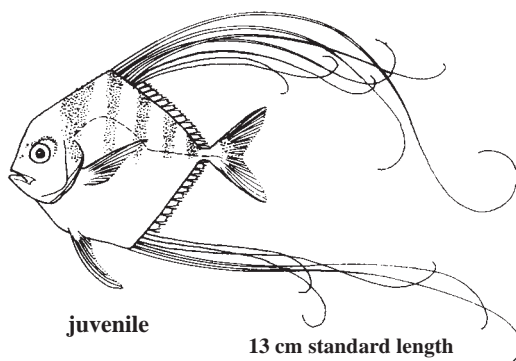
Alectis ciliaris (Bloch, 1788)

Frequent synonyms / misidentifications: Atlantic Ocean: *Alectis crinitus* (Mitchill, 1826); Hawaii: *Carangoides ajax* Snyder, 1904 / None.

FAO names: **En** - African pompano; **Fr** - Cordonnier fil; **Sp** - Pámpano de hebra.



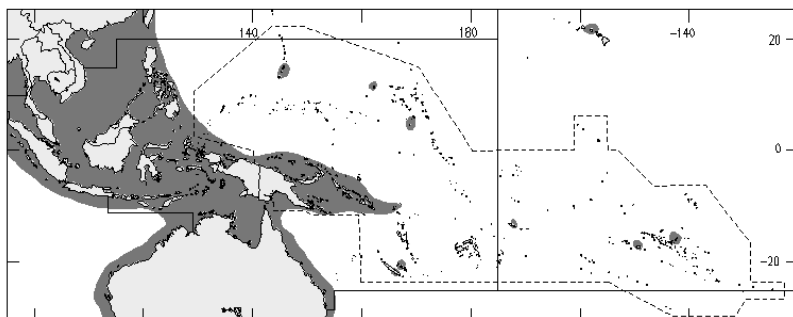
Diagnostic characters: Body deep, becoming more elongate with growth, and very compressed. **Profile of nape and head broadly rounded**; suborbital depth relatively narrow, contained 1.7 to 3 times in upper jaw length; upper jaw extends to below middle to posterior third of eye. Both on jaws with bands of villiform teeth, becoming obsolete with age. **Gill rakers (excluding rudiments) 4 to 6 on upper limb and 12 to 17 on lower limb of first gill arch (total 18 to 22)**. Dorsal fin with VII short spines (embedded and not apparent at about 17 cm fork length) followed by I spine and 18 to 20 soft rays; anal fin with II spines (embedded and not apparent with growth) followed by I spine and 15 to 17 soft rays; anterior soft rays of dorsal and anal fins extremely long and filamentous in young; pectoral fins falcate, longer than head; pelvic fins elongate in young. Lateral line anteriorly with a strong and moderately long arch, its posterior (straight) part with 12 to 30 scutes; **body superficially naked, scales minute and embedded where present**. Vertebrae 10+14; **no hyperostosis**. **Colour:** mostly silvery with a light metallic bluish tinge on upper third of body and head; juveniles with 5 chevron-shaped dark bars on body, and a black blotch at base of third to sixth soft dorsal-fin rays, filaments black distally.



Size: Maximum total length possibly 130 to 150 cm, but reliable data not available; commonly to 100 cm fork length, largest specimen examined 109 cm fork length and 16.5 kg. World angling record 18.8 kg.

Habitat, biology, and fisheries: Adults are usually solitary and frequent shallow coastal waters to a depth of about 100 m; young usually pelagic and drifting. Small pelagic juveniles with very filamentous dorsal and anal fins resemble medusae, and this "mimicry" may gain them some protection from predators. The diet consists of slow-swimming or sedentary crustaceans; small crabs and occasionally small fishes sometimes eaten. Adults are mainly taken on hook-and-line, especially on light tackle. Juveniles are often taken in beach seines.

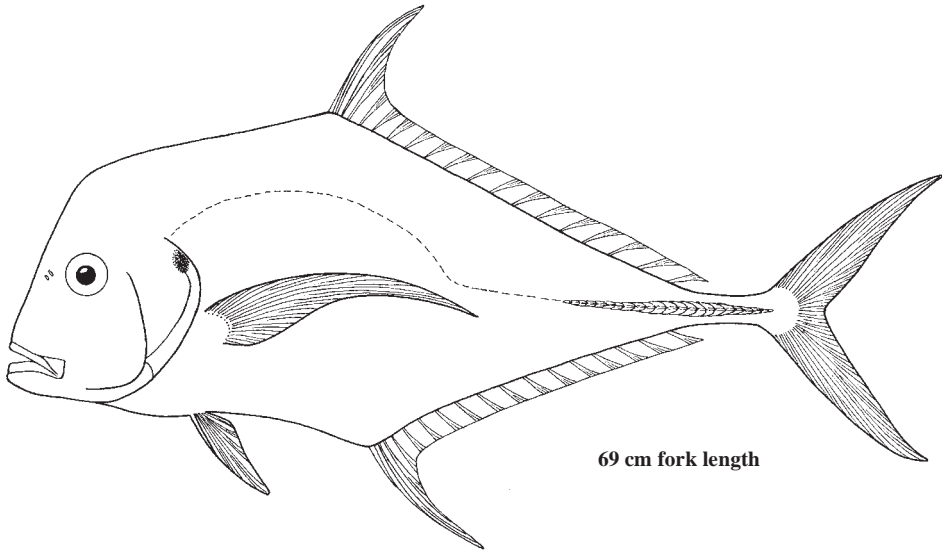
Distribution: Circumtropical in marine waters; widespread in the tropical Indo-West Pacific.



Alectis indica (Rüppell, 1830)

Frequent synonyms / misidentifications: None / None.

FAO names: **En** - Indian threadfish; **Fr** - Cordonnier plume; **Sp** - Pámpano indico.

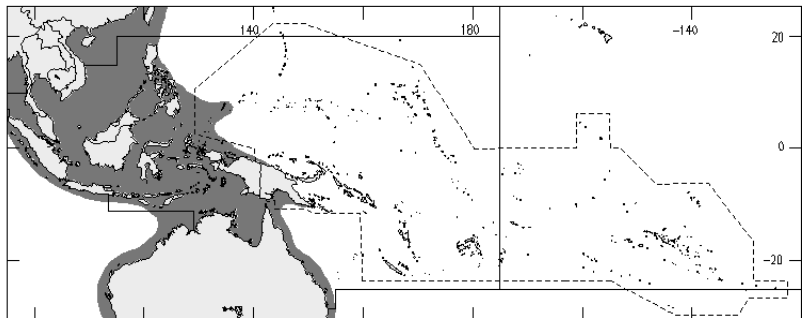


Diagnostic characters: Body deep, becoming more elongate with growth, and very compressed. **Profile of nape and head somewhat angular;** suborbital depth relatively broad, contained 0.8 to 1 times in upper jaw length; upper jaw extends to slightly before eye (to below anterior margin of eye in young). Both jaws with bands of villiform teeth, becoming obsolete with age. **Gill rakers (excluding rudiments) 8 to 11 on upper limb and 21 to 26 on lower limb of first gill arch (total 29 to 37).** Dorsal fin with VI short spines (embedded and not apparent at about 17 cm fork length) followed by I spine and 18 to 20 soft rays; anal fin with II spines (embedded and not apparent with growth) followed by I spine and 15 to 17 soft rays; anterior soft rays of dorsal and anal fins extremely long and filamentous in young; pectoral fins falcate, longer than head; pelvic fins elongate in young. Lateral line anteriorly with a strong and moderately long arch, its posterior (straight) part with 6 to 11 scutes; **body superficially naked, scales minute and embedded where present. Vertebrae 10+14; supraoccipital and distal ends of supraneural (predorsal) bones hyperossified and enlarged distally in specimens larger than 25 cm fork length. Colour:** mostly silvery with dusky green tinge dorsally; juveniles with dark bars on body; second dorsal fin pale with leading edges and tips of rays dusky; anal fin pale yellow and caudal fin dusky green.

Size: Maximum reported total length 150 cm; South African spear fishing record 21.4 kg.

Habitat, biology, and fisheries: Adults are reported to concentrate in large shoals and are wide ranging in tropical coastal waters including reef areas; juveniles are solitary and often enter estuaries. The diet consists of a wide range of fishes, small squids, and crustaceans. Adults are mainly taken on hook-and-line, especially on light tackle. Juveniles are often taken in beach seines.

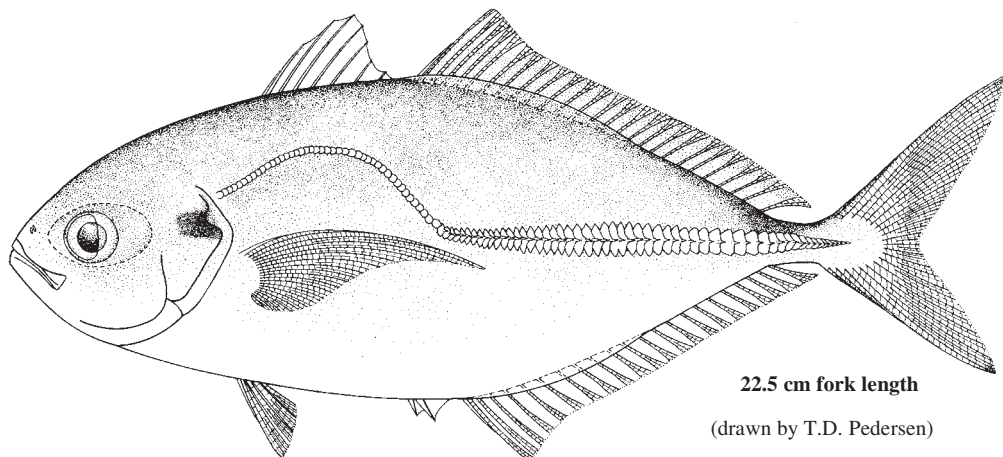
Distribution: Widespread in coastal waters of tropical Indo-West Pacific, from East Africa, including the Malagasy Republic, Red Sea, and Persian Gulf to Papua New Guinea; north to the Ryukyu Islands and south to Australia.



Alepes apercna Grant, 1987

Frequent synonyms / misidentifications: None / None.

FAO names: En - Smallmouth scad.



22.5 cm fork length

(drawn by T.D. Pedersen)

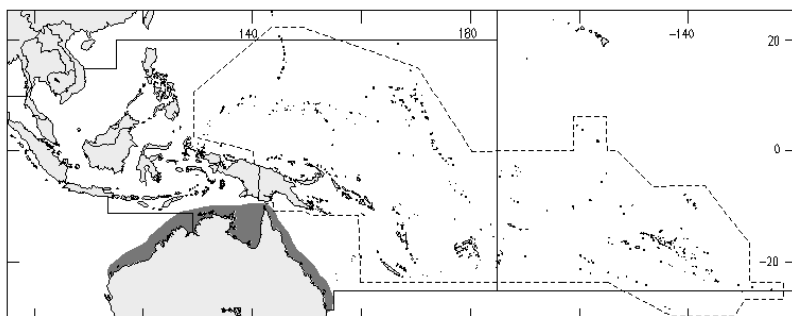
Diagnostic characters: Body oblong, compressed, with dorsal and ventral profiles almost evenly convex; snout bluntly rounded. Eye diameter about equal to snout length, with **adipose eyelid well developed on posterior half of eye only**. **Upper jaw narrowly rounded posteriorly, and supramaxilla relatively small without an anterior spine-like extension**; both jaws with a single row of numerous, comb-like teeth. **Gill rakers (including rudiments) 8 to 10 on upper limb and 18 to 21 on lower limb of first gill arch (total 27 to 30)**. Shoulder girdle (cleithrum) margin smooth, without papillae. Two separate dorsal fins, the first with VII spines, the second with I spine and 24 to 26 soft rays; anal fin with II detached spines followed by I spine and 20 to 22 soft rays; spinous dorsal fin moderately high, longest spine height about equal to length of soft dorsal-fin lobe; ultimate and penultimate rays of dorsal and anal fins of equal length. Lateral line strongly arched anteriorly, with junction of curved and straight parts below vertical from between second dorsal-fin origin and third soft ray; chord of curved part of lateral line contained 1.7 to 2.3 times in straight part (to caudal-fin base); scales in curved part of lateral line 35 to 48; 0 to 3 scutes in curved part; straight part with 0 to 2 scales and 50 to 64 scutes; total scales and scutes in lateral line (excluding scales on caudal fin) 90 to 113. Vertebrae 10+14. **Colour:** in life, green to bluish green above, silvery to white below; a diffuse dusky blotch on margin of opercle, not bordered above by a white spot; **interradial membranes of spinous dorsal fin hyaline to dusky**; spinous and second dorsal, anal, and caudal fins dusky yellow, with anterior rays of second dorsal and anal fins often with white tips; caudal-fin lobes often with dark tips; pelvic fins white and pectoral fins hyaline; juveniles with 7 dark bands on body.

Size: A small species, largest specimen examined 25 cm fork length and 29.5 cm total length.

Habitat, biology, and fisheries: An inshore species. Feeds primarily on small invertebrates, primarily microscopic crustaceans and molluscs. Caught mainly on hook-and-line.

Remarks: Grant (1987, Fishes of Australia) used the above scientific name (taken from manuscript paratypes deposited in the Queensland Museum) together with a very brief description and photograph, incorrectly crediting the species to Smith-Vaniz; according to the rules of the International Code of Zoological Nomenclature, this action qualifies as an original description and because the "description" was solely Grant's he becomes the author of the species.

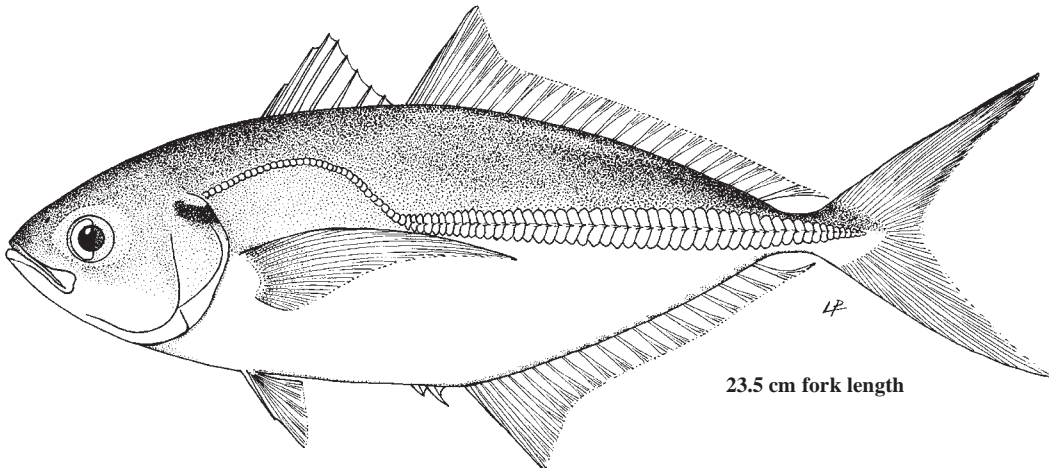
Distribution: Known only from Australia: Exmouth Gulf, western Australia (22°05'S) to Wide Bay, Queensland (25°52'S); may also occur in the Gulf of Papua from where not yet reported.



Alepes djedaba (Forsskål, 1775)

Frequent synonyms / misidentifications: *Atule djedaba* (Forsskål, 1775) [this name has frequently been misspelled "A. djeddaba"]; *Caranx djedaba* (Forsskål, 1775) / *Alepes vari* (Cuvier, 1833).

FAO names: En - Shrimp scad; Fr - Sélar subari; Sp - Jurel subari.

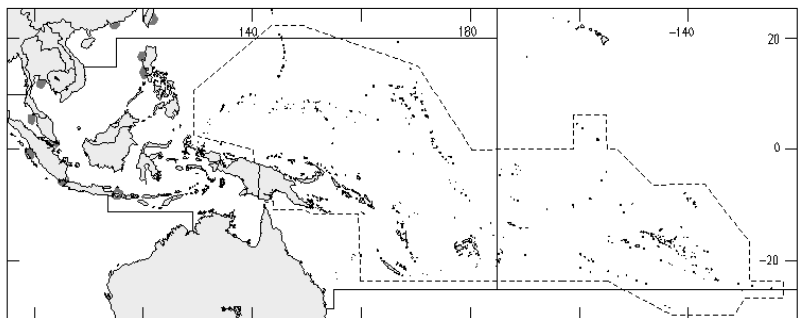


Diagnostic characters: Body oblong, compressed, with dorsal and ventral profiles almost evenly convex; snout pointed. Eye diameter about equal to snout length, with **adipose eyelid well developed on posterior half of eye only**. **Upper jaw slightly concave posteriorly, and supramaxilla relatively large with an anterior spine-like extension**; both jaws with a single row of numerous, comb-like teeth. **Gill rakers (including rudiments) 10 to 14 on upper limb and 27 to 33 on lower limb of first gill arch (total 38 to 47)**. Shoulder girdle (cleithrum) margin smooth, without papillae. Two separate dorsal fins, the first with VIII spines, the second with I spine and 23 to 25 soft rays; anal fin with II detached spines followed by I spine and 18 to 20 soft rays; spinous dorsal fin moderately high, longest spine height about equal to length of soft dorsal-fin lobe; ultimate ray of dorsal and anal fins about 1.3 to 1.5 times the length of penultimate ray. Lateral line strongly arched anteriorly, with junction of curved and straight parts below vertical from between origin of second dorsal fin and third soft ray; chord of curved part of lateral line contained 2 to 2.6 times in straight part (to caudal-fin base); **scales in curved part of lateral line 31 to 36**; 0 to 3 scutes in curved part; **straight part with 0 to 2 scales and 39 to 51 scutes**; **total scales and scutes in lateral line (excluding scales on caudal fin) 77 to 85**. Vertebrae 10+14. **Colour:** in life, greyish green above, silvery to white below; a distinct black blotch on margin of opercle, bordered above by a smaller white spot; **interradial membranes of spinous dorsal fin pale to dark dusky**; dorsal-fin lobe dusky, pale distally; caudal fin yellowish, except upper lobe often dusky to black distally; other fins pale.

Size: Largest specimen examined 29 cm fork length; seldom exceeds 25 cm fork length.

Habitat, biology, and fisheries: Rather common near inshore reefs, even in moderately turbid water, often forming large schools. Sexual maturity is attained by about 17 cm fork length. The diet consists primarily of invertebrates, shrimps, copepods, and larvae of decapod crustaceans; at larger sizes also feeds on small fishes. Caught mainly on hook-and-line.

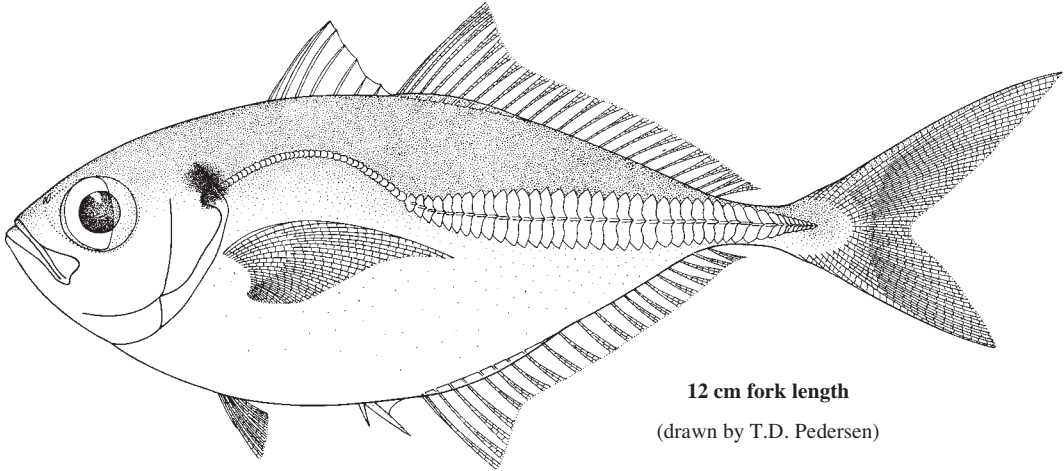
Distribution: Occurs throughout the western Indian Ocean, but appears to have a restricted distribution in the western Pacific Ocean where it is known only from Thailand, Taiwan Province of China, Sumatra, and the Philippines. Also occurs in the eastern part of the Mediterranean Sea (coasts of Israel, Lebanon, and Egypt); a recent immigrant from the Red Sea via the Suez Canal.



"*Alepes*" *kleinii* (Bloch, 1793)

Frequent synonyms / misidentifications: *Caranx para* Cuvier, 1833; *C. microchir* Cuvier, 1833; *C. miyakamii* Wakiya, 1924 / *Caranx kalla* Cuvier, 1833 (this name has generally been misapplied to "*Alepes*" *kleinii*); *Alepes kalla* (Cuvier, 1833).

FAO names: **En** - Banded scad; **Fr** - Comère rubari; **Sp** - Macarela bandoneada.



12 cm fork length

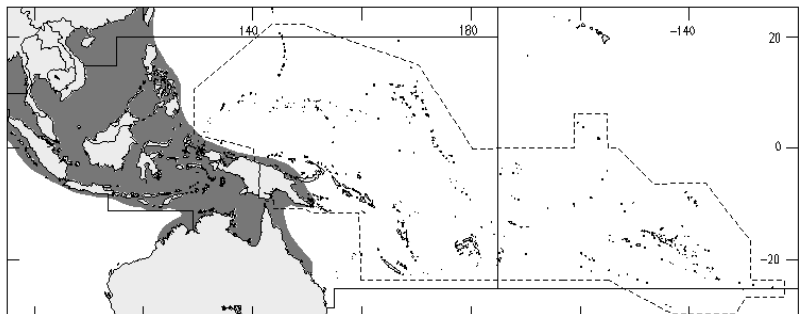
(drawn by T.D. Pedersen)

Diagnostic characters: Body oval, strongly compressed, with ventral profile distinctly more convex than dorsal profile; snout pointed. Eye diameter slightly larger than snout length, with **adipose eyelid well developed on posterior half of eye only**. Upper jaw broad and slightly concave posteriorly, extending to anterior margin of pupil; **upper jaw anteriorly with 2 irregular rows of short conical teeth, posteriorly inner surface of jaw paved with blunt teeth; lower jaw with a single row of short, conical teeth except 2 rows anteriorly**. Gill rakers (including rudiments) 10 to 12 on upper limb and 27 to 32 on lower limb of first gill arch (total 38 to 44). Shoulder girdle (cleithrum) margin smooth, without papillae. Two separate dorsal fins, the first with VIII spines, the second with I spine and 23 to 26 soft rays; anal fin with II detached spines followed by I spine and 19 to 22 soft rays; spinous dorsal fin moderately high, longest spine height about equal to length of soft dorsal-fin lobe; upper lobe of caudal fin longer than lower lobe in large adults. Lateral line strongly arched anteriorly, with junction of curved and straight parts below vertical from fourth to sixth soft ray of second dorsal fin; chord of curved part of lateral line contained 1.5 to 2.2 times in straight part (to caudal-fin base); **scales in curved part of lateral line 32 to 46**; 0 to 2 scutes in curved part; straight part with 0 to 2 scales and 35 to 45 scutes; total scales and scutes in lateral line (excluding scales on caudal fin) 72 to 86. Vertebrae 10+14. **Colour:** in life, bluish grey to green above, silvery below; **large black spot on upper margin of opercle and adjacent area of shoulder**; dark bands sometimes evident on sides above lateral line; caudal fin dusky to bright yellow, upper lobe with dark fringe; other fins mostly pale to hyaline.

Size: A relatively small species; largest specimen examined 16 cm fork length, commonly to about 14 cm fork length.

Habitat, biology, and fisheries: An inshore, coastal species. Feeds primarily on planktonic crustaceans and larval fishes. Caught on hook-and-line; also with gill nets and other artisanal gear.

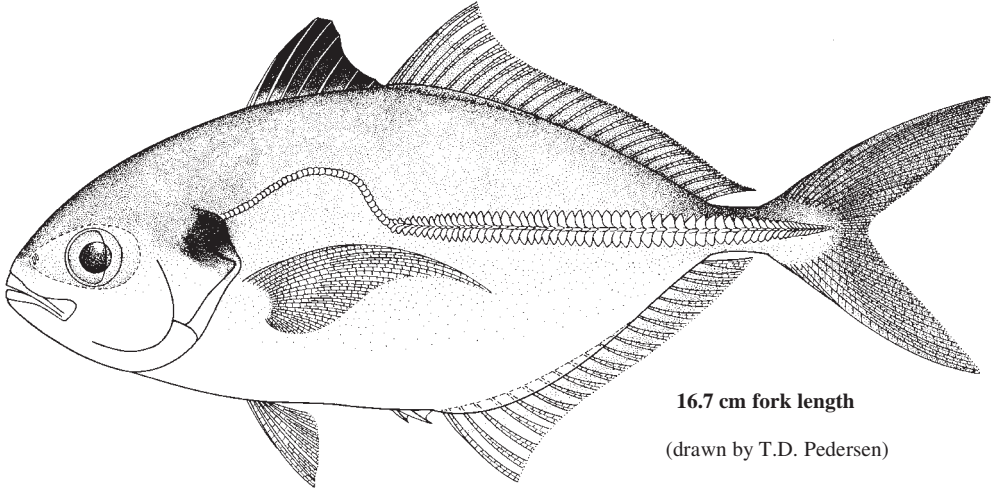
Distribution: In the western Indian Ocean, this locally abundant species is apparently restricted to coastal waters from Pakistan to Sri Lanka. Elsewhere in the Indo-West Pacific, known from the east coast of India, Taiwan Province of China, Okinawa, Japan, the Philippines, Papua New Guinea, and Australia.



Alepes melanoptera Swainson, 1839

Frequent synonyms / misidentifications: *Caranx malam* (Bleeker, 1851); *Alepes malam* (Bleeker, 1851); *Caranx nigripinnis* Day, 1876; *C. pectoralis* Chan, 1968 / None.

FAO names: **En** - Blackfin scad; **Fr** - Sélar aile noire; **Sp** - Jurel alinegro.



16.7 cm fork length

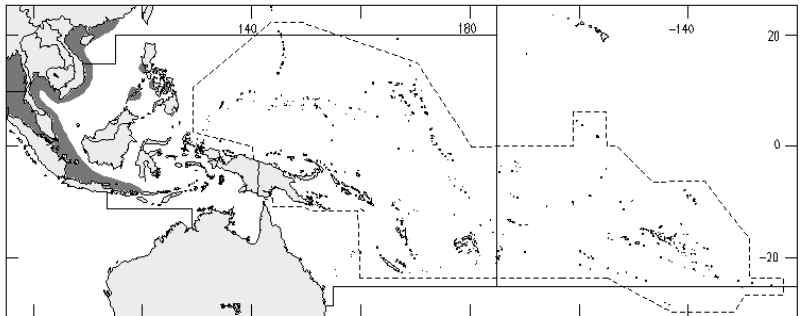
(drawn by T.D. Pedersen)

Diagnostic characters: Body oblong, compressed, with dorsal and ventral profiles almost evenly convex; snout bluntly rounded. Eye diameter about equal to snout length, with **adipose eyelid well developed on posterior half of eye only**. **Upper jaw narrowly rounded posteriorly, and supramaxilla relatively small without an anterior spine-like extension**; both jaws with a single row of numerous, comb-like teeth. **Gill rakers (including rudiments) 7 to 9 on upper limb and 17 to 24 on lower limb of first gill arch (total 24 to 30)**. Shoulder girdle (cleithrum) margin smooth, without papillae. Two separate dorsal fins, the first with VII spines, the second with I spine and 23 to 26 soft rays; anal fin with II detached spines followed by I spine and 18 to 21 soft rays; spinous dorsal fin moderately high, longest spine height about equal to length of soft dorsal-fin lobe; ultimate and penultimate rays of dorsal and anal fins of equal length. Lateral line strongly arched anteriorly, with junction of curved and straight parts below vertical from between second dorsal-fin origin and third soft ray; chord of curved part of lateral line contained 2.3 to 2.7 times in straight part (to caudal-fin base); scales in curved part of lateral line 31 to 50; 0 to 2 scutes in curved part; straight part with 0 to 4 scales and 49 to 69 scutes; total scales and scutes in lateral line (excluding scales on caudal fin) 95 to 114. Vertebrae 10+14. **Colour:** in life, grey-blue above, silvery to white below; a diffuse dusky blotch on margin of opercle, not bordered above by a white spot; **interradial membranes of spinous dorsal fin black**; second dorsal fin greyish, lobe pale distally; caudal fin dusky yellow, with darker trailing edges, other fins pale.

Size: A small species, largest specimen examined 21 cm fork length.

Habitat, biology, and fisheries: An inshore species. Feeds primarily on small invertebrates, shrimps, and copepods. Caught mainly on hook-and-line.

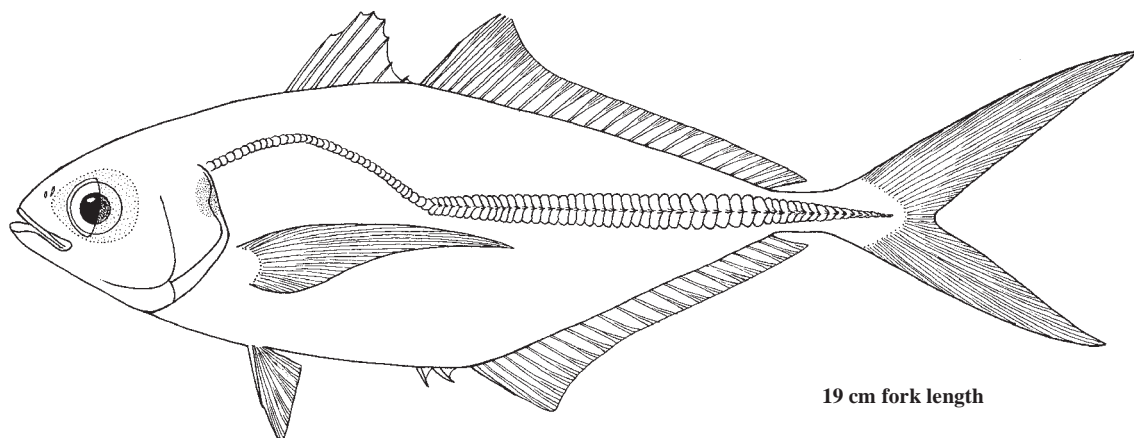
Distribution: In the western Indian Ocean, known only from the Persian Gulf eastward to Sri Lanka; elsewhere in the Indo-West Pacific known from the Gulf of Thailand southern China, Indonesia, and the Philippines.



Alepes vari (Cuvier, 1833)

Frequent synonyms / misidentifications: *Caranx macrurus* (Bleeker, 1852); *Alepes macrurus* (Bleeker, 1852); *A. glabra* (Fowler, 1904) / None.

FAO names: En - Herring scad; Fr - Sélar harengule; Sp - Jurel arenque.

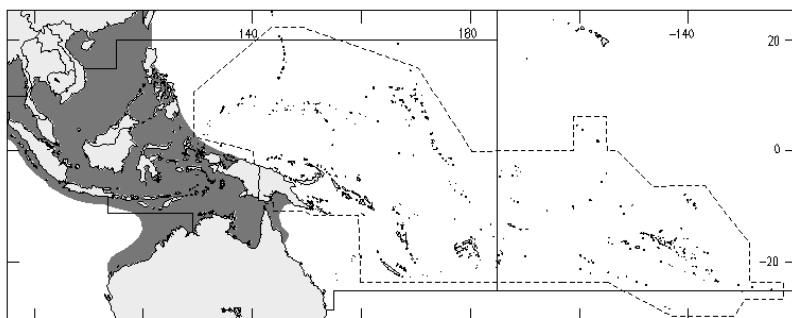


Diagnostic characters: Body oblong, compressed, with dorsal and ventral profiles almost evenly convex; snout pointed. Eye diameter about equal to snout length, with adipose eyelid well developed on posterior half of eye only. Upper jaw nearly straight posteriorly, and supramaxilla relatively large with an anterior spine-like extension; both jaws with a single row of numerous, comb-like teeth. Gill rakers (including rudiments) 9 to 12 on upper limb and 23 to 26 on lower limb of first gill arch (total 32 to 38). Shoulder girdle (cleithrum) margin smooth, without papillae. Two separate dorsal fins, the first with VIII spines, the second with I spine and 24 to 27 soft rays; anal fin with II detached spines followed by I spine and 20 to 23 soft rays; spinous dorsal fin moderately high, longest spine height about equal to length of soft dorsal-fin lobe; ultimate and penultimate rays of dorsal and anal fins of about equal length. Lateral line strongly arched anteriorly, with junction of curved and straight parts below vertical from between origin of second dorsal fin and third soft ray; chord of curved part of lateral line contained 1.9 to 2.5 times in straight part (to caudal-fin base); **scales in curved part of lateral line 42 to 50**; 0 to 2 scutes in curved part; **straight part with 0 to 7 scales and 48 to 69 scutes**; **total scales and scutes in lateral line (excluding scales on caudal fin) 86 to 119**. Vertebrae 10+14. **Colour:** in life, ash blue above, silvery to white below; a diffuse dusky blotch on margin of opercle, not bordered above by a white spot; **interradial membranes of spinous dorsal fin pale to dark dusky**; second dorsal fin, anal, and caudal fins dusky; mature males develop black pigmentation in spinous dorsal fin, lobes of soft dorsal and anal fins, and in pelvic fins that is lacking in females.

Size: A relatively large species, commonly attaining 30 cm fork length; largest specimen examined 46 cm fork length and 56 cm total length.

Habitat, biology, and fisheries: Common in shallow coastal waters where it often swims near the surface. Feeds primarily on shrimps, copepods, decapod crustaceans, and small fishes. Caught mainly on hook-and-line.

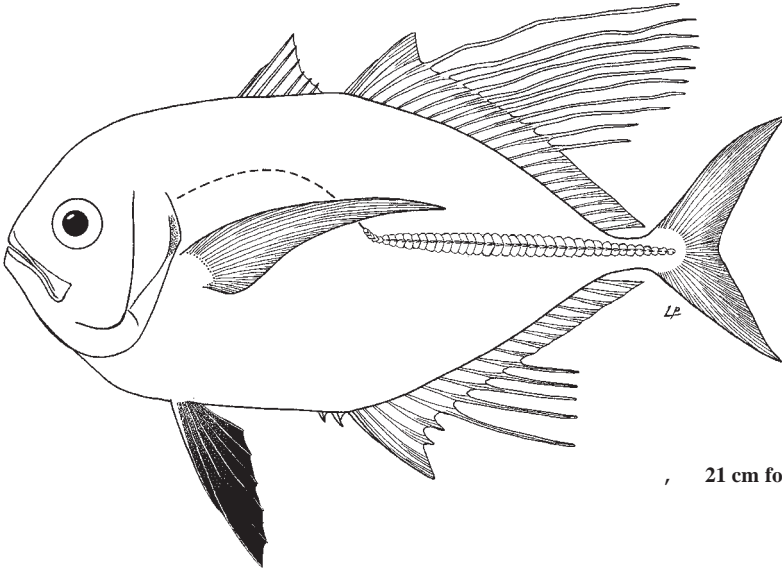
Distribution: In the western Indian Ocean apparently confined to coastal waters from the Red Sea to Sri Lanka; elsewhere in the Indo-West Pacific known from the east coast of India, Bay of Bengal, Gulf of Thailand, Taiwan Province of China, Okinawa, Indonesia, northern Australia, and New Guinea.



Atropus atropus (Schneider, 1801)

Frequent synonyms / misidentifications: *Atropus atropus* (misspelling) / *Carangoides armatus* (Rüppell, 1830); *C. hedlandensis* (Whitley, 1933).

FAO names: En - Clef belly trevally; Fr - Pompano à quille noire; Sp - Pámpano de quilla.



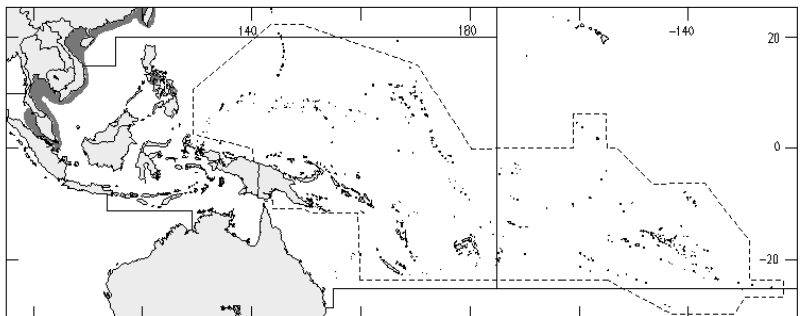
, 21 cm fork length

Diagnostic characters: Body strongly compressed, almost ovate; nape strongly convex; **belly with a deep median groove, accommodating pelvic fins, anus, and anal-fin spines.** Eye diameter slightly larger than snout length. Upper jaw with a narrow band of small teeth, the band widest anteriorly; lower jaw with a single series of small teeth, except 2 or 3 irregular rows anteriorly. Gill rakers (including rudiments) 8 to 11 on upper limb and 19 to 22 on lower limb of first gill arch (total 29 to 34). Two separate dorsal fins, the first with VIII spines, the second with I spine and 19 to 22 soft rays; anal fin with II detached spines followed by I spine and 17 or 18 soft rays; lobe of second dorsal fin shorter than head length; **dorsal fin sexually dimorphic, in mature males (only) 6 to 12 of the central rays produced into filaments of greatly varying lengths; pelvic fins conspicuously long, tip of appressed fin extending almost to anal-fin origin.** Lateral line anteriorly with a moderate regular arch, with junction of curved and straight parts below vertical from sixth or seventh soft rays of second dorsal fin; chord of curved part of lateral line contained 1.5 to 2 times in straight part; straight part of lateral line with 31 to 37 scutes. Breast naked ventrally to behind pelvic fins; laterally, naked area of breast extends diagonally to naked base of pectoral fins. Vertebrae 10+14. **Colour:** in life, head and body bluish green above, silvery below; **membranes of pelvic fins black, with the rays white basally;** other fins pale; young with indistinct dark bands and opercular spot, the latter prominent in adults.

Size: Largest specimen examined 23 cm fork length and 26.5 cm total length; probably does not exceed 30 cm total length.

Habitat, biology, and fisheries: Common, in shallow coastal waters where it often swims near the surface. Feeds primarily on shrimps, copepods, decapod crustaceans, and small fishes. Caught mainly with bottom trawls, traps, and on hook-and-line.

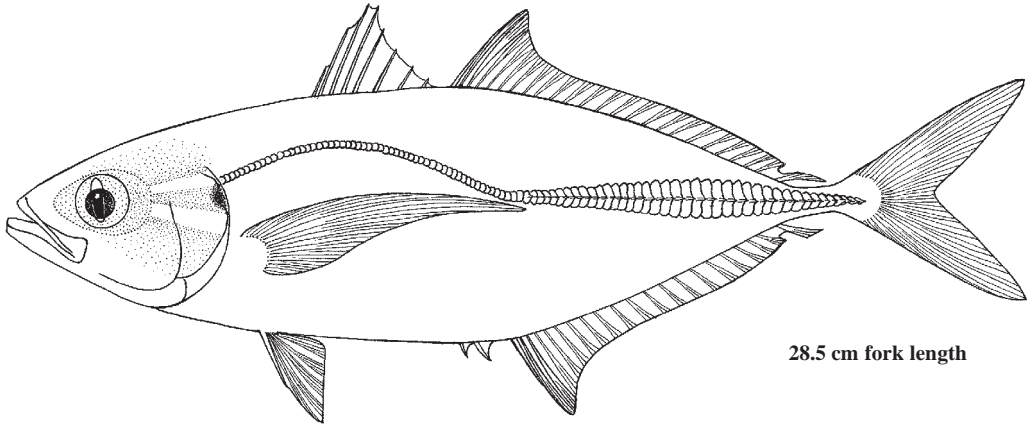
Distribution: Tropical Indo-West Pacific in coastal waters of the Arabian Gulf to Sri Lanka, east coast of India, Malaysia, Gulf of Thailand, Taiwan Province of China, Okinawa, and the Philippines.



Atule mate (Cuvier, 1833)

Frequent synonyms / misidentifications: *Caranx mate* Cuvier, 1833; *C. affinis* Rüppell, 1836; *Decapterus politus* (Jenkins, 1904); *D. lundini* Jordan and Seale, 1906; *D. normani* Bertin and Dollfus, 1948 / None.

FAO names: **En** - Yellowtail scad; **Fr** - S lar queue jaune; **Sp** - Jurel rabo amarillo.



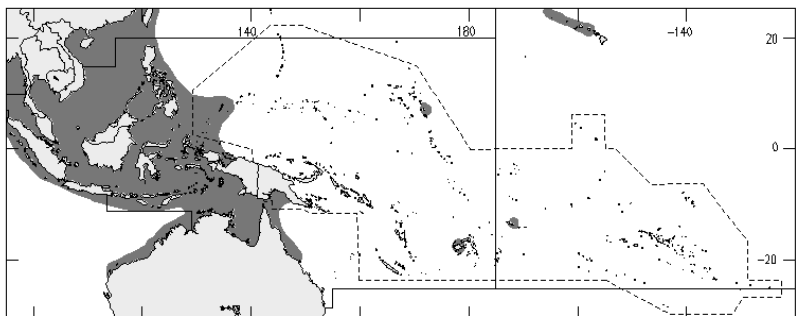
28.5 cm fork length

Diagnostic characters: Body elongate oval, moderately compressed, with dorsal and ventral profiles almost evenly convex; snout pointed. Eye moderate, diameter shorter than snout in adults, with **adipose eyelid well developed and completely covering eye except for a vertical slit centred on pupil**. Upper jaw extending to below anterior third of eye; both jaws with a single series of small conspicuous teeth, except in large specimens upper jaw with 2 or 3 rows of small canines anteriorly. Gill rakers (including rudiments) 10 to 13 on upper limb and 26 to 31 on lower limb of first gill arch (total 37 to 44). **Shoulder girdle (cleithrum) margin smooth, without papillae**. Two separate dorsal fins, the first with VIII spines, the second with I spine and 22 to 25 soft rays; anal fin with II detached spines followed by I spine and 18 to 21 soft rays; spinous dorsal fin moderately high, longest spine height about equal to length of soft dorsal-fin lobe; **terminal dorsal and anal rays finlet-like in adults, about twice length of adjacent rays and a little more separated but joined by interradiial membrane**; pectoral fins long and falcate, tip of appressed fin extending to junction of curved and straight parts of lateral line. **Lateral line gently arched anteriorly, with junction of curved and straight parts below vertical from sixth to eighth soft rays of second dorsal fin**; chord of curved part of lateral line contained 1 to 1.4 times in straight part (to caudal-fin base), **scales in curved part of lateral line 39 to 57; straight part with 0 to 10 scales and 36 to 49 scutes**; total scales and scutes in lateral line (excluding scales on caudal fin) 92 to 103. Vertebrae 10+14. **Colour:** in life, bright olive-green dorsally, yellowish green laterally and whitish ventrally; dorso-laterally 9 or 10 faint, grey bars, wider than pale interspaces; **a black spot, slightly smaller than eye, on upper margin of opercle and adjacent area of shoulder; dorsal and caudal fins dusky greenish yellow; anal fin pale yellow**; pectoral and pelvic fins hyaline to whitish.

Size: Largest specimen examined 20 cm fork length and 30 cm total length; commonly to about 26 cm fork length.

Habitat, biology, and fisheries: Occurs in schools at depths to about 50 m in inshore waters throughout its range; feeds primarily on crustaceans and planktonic invertebrates. Caught mainly on hook-and-line, and with various types of artisanal gear.

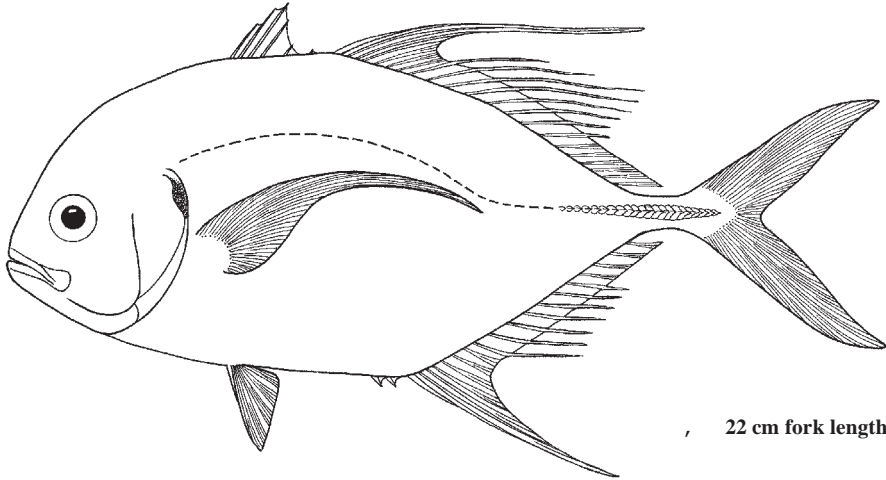
Distribution: Broadly distributed throughout the Indian Ocean; elsewhere in the Indo-West Pacific from southern Japan and Australia eastward to Hawaii.



***Carangoides armatus* (Rüppell, 1830)**

Frequent synonyms / misidentifications: *Caranx armatus* (Rüppell, 1830); *Carangoides ciliaris* of authors; *Caranx schlegeli* Wakiya, 1924 / *Carangoides hedlandensis* (Whitley, 1933).

FAO names: **En** - Longfin trevally; **Fr** - Carangue sap-sap; **Sp** - Jurel sap-sap.

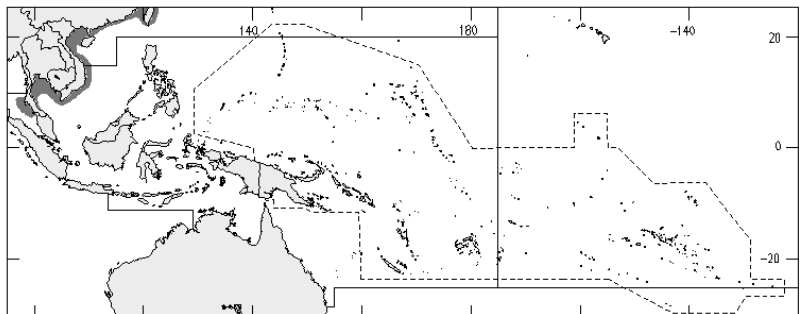


Diagnostic characters: Body strongly compressed and deep. **Head profile very steep in adults but relatively straight from snout to nape.** Eye diameter about equal to, or smaller than, snout length. Both jaws with bands of villiform teeth, the bands widest anteriorly; vomerine tooth patch wedge-shaped without a posteromedian, extension. **Gill rakers (including rudiments)** 10 to 15 on upper limb and 20 to 24 on lower limb of first gill arch (**total 31 to 37**). Two separate dorsal fins, the first with VIII spines, the second with I spine and 19 to 22 soft rays; anal fin, with II detached spines followed by I spine and 16 to 18 soft rays; lobe of second dorsal fin elongate and filamentous, longer than head length; **dorsal fin sexually dimorphic, in mature males (only) larger than 21 cm fork length, 3 to 12 of the central rays produced into filaments of greatly varying lengths.** Lateral line anteriorly with a moderate regular arch, with junction of curved and straight parts below vertical from tenth to twelfth soft rays of second dorsal fin; chord of curved part of lateral line longer than straight part of lateral line, contained 0.7 to 0.9 times in straight part; straight part of lateral line with 11 to 24 weak scutes and 25 to 43 total elements (including anterior scales). **Breast naked ventrally to behind origin of pelvic fins; laterally, naked area of breast extends diagonally to naked base of pectoral fins.** Vertebrae 10+14. **Colour:** bluish grey above, silvery below; blackish blotch on upper margin of opercle; spinous dorsal fin blackish; second dorsal and anal fins pale to dusky, leading edge of lobes dusky to blackish; caudal fin grey with leading and trailing edges black; pelvic fins generally black in specimens smaller than 10 cm fork length, but becoming paler with increasing size until at 20 cm pale or only slightly dusky.

Size: Largest specimen examined 50 cm fork length.

Habitat, biology, and fisheries: Inhabits rocky and coral coastlines as well as shallow bays; small groups of adults often swim along the edges of reefs. Juveniles may occur in estuarine areas. Sexual maturity is attained at 21 or 22 cm fork length. Caught mainly on hook-and-line; also by spears.

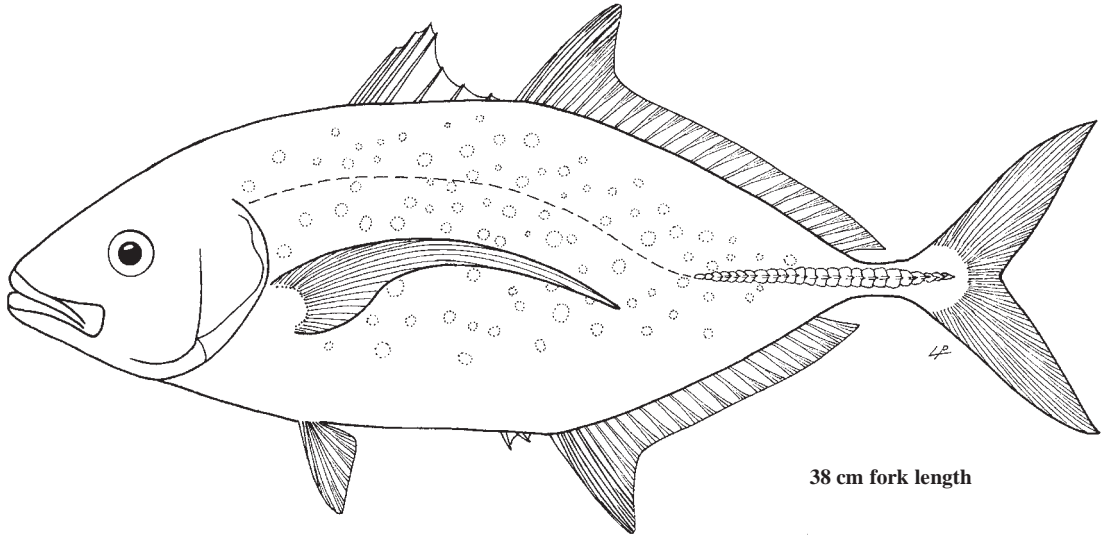
Distribution: Western Indian Ocean from South Africa northward to southern India and Sri Lanka, including the Red Sea, Gulf of Oman, and west coast of Malagasy Republic; in the western Pacific known from the Gulf of Thailand, Hong Kong, Thailand, Okinawa, and Japan.



Carangoides bajad (Forsskål, 1775)

Frequent synonyms / misidentifications: *Caranx auroguttatus* Cuvier, 1833; *Carangoides auroguttatus* (Cuvier, 1833) / *Carangoides gymnostethus* (Cuvier, 1833).

FAO names: **En** - Orangspotted trevally; **Fr** - Carangue lentigine; **Sp** - Jurel lentejuela.



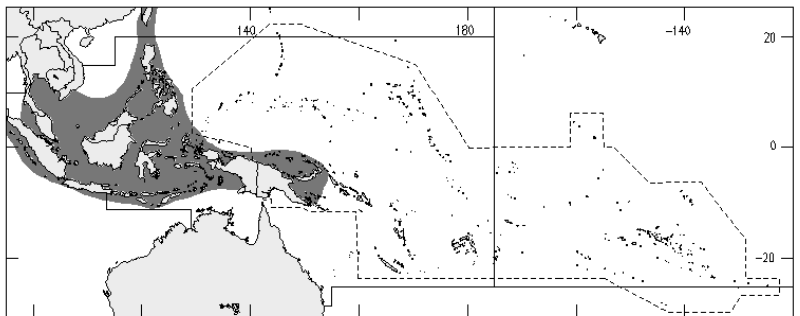
38 cm fork length

Diagnostic characters: Body oblong and compressed; dorsal profile more convex than ventral profile; dorsal profile of head slightly elevated to nape, almost straight. Eye diameter smaller than snout length. Both jaws with narrow bands of villiform teeth, the bands widest anteriorly; vomerine tooth patch triangular, without a posteromedian extension. Gill rakers (including rudiments) 7 to 9 on upper limb and 18 to 21 on lower limb of first gill arch (total 25 to 33). Two separate dorsal fins, the first with VIII spines, the second with I spine and 24 to 26 soft rays; **anal fin with II detached spines followed by I spine and 21 to 24 soft rays, lobe of second dorsal fin shorter than head length.** Lateral line anteriorly with a relatively low arch, with junction of curved and straight parts below vertical from eleventh to fifteenth soft rays of second dorsal fin; chord of curved part of lateral line longer than straight part of lateral line, contained 0.7 to 0.9 times in straight part; straight part of lateral line with 14 to 26 scales followed by 20 to 30 scutes. **Breast completely scaly or with a narrow naked area anteroventrally, scarcely if at all visible in lateral view.** Vertebrae 10+14. **Colour:** brassy dorsally, shading to silvery white on sides, with **numerous conspicuous orange-yellow spots**; no dark opercular spot; capable of rapidly changing colour to almost entirely orange.

Size: Largest specimen examined 49 cm fork length and 55 cm total length.

Habitat, biology, and fisheries: Caught on hook-and-line, with gill nets, and other artisanal gear.

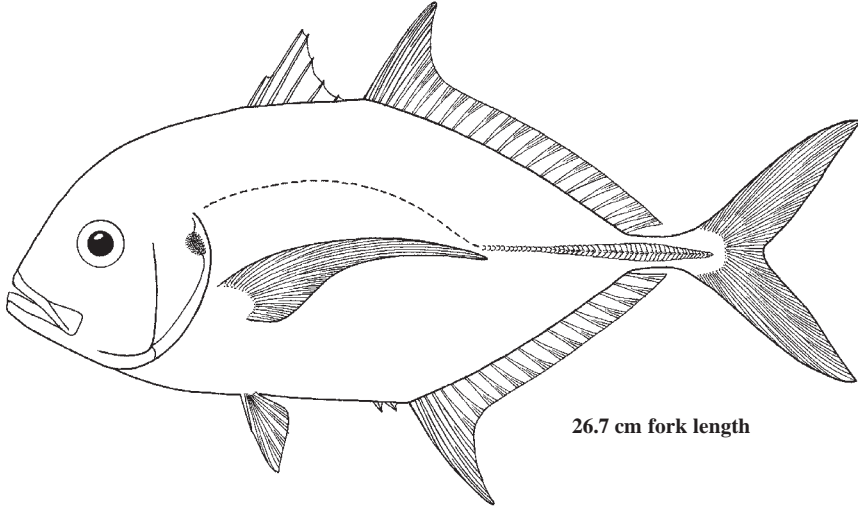
Distribution: In the Indian Ocean known from the Red Sea, Gulf of Aden, Persian Gulf, and the Gulf of Oman; elsewhere in the Indo-West Pacific known from the Gulf of Thailand, Okinawa, Indonesia, Philippines, and New Britain.



***Carangoides caeruleopinnatus* (Rüppell, 1830)**

Frequent synonyms / misidentifications: *Caranx caeruleopinnatus* Rüppell, 1830; *Carangoides altissimus* Jordan and Seale, 1907; *C. formosanus* Jordan and Snyder, 1910; *C. uii* Wakiya, 1924; *Citula diversa* Whitley, 1940 / None.

FAO names: **En** - Coastal trevally; **Fr** - Carangue c ti re; **Sp** - Jurel costero.

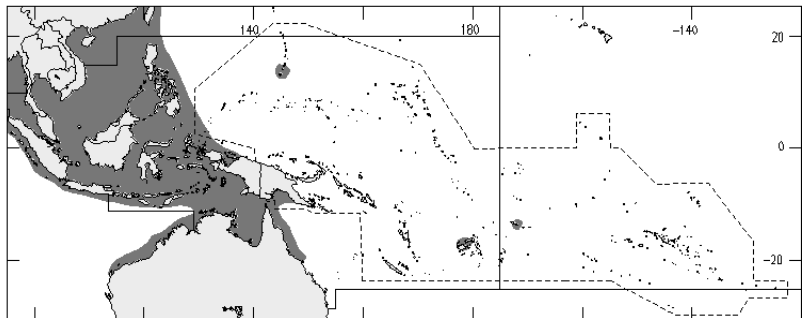


Diagnostic characters: Body strongly compressed, almost ovate; dorsal profile of body more strongly convex than ventral profile, nape moderately curved. Eye diameter slightly smaller than snout length. Both jaws with bands of villiform teeth, the bands widest anteriorly; vomerine tooth patch ovate, without a posteromedian extension. **Gill rakers (including rudiments)** 5 to 8 on upper limb and **15 to 19 on lower limb of first gill arch (total 21 to 27)**. **Two separate dorsal fins**, the first with VII spines, **the second with I spine and 20 to 23 (usually 22 or 23) soft rays**; anal fin with II detached spines followed by I spine and 16 to 20 soft rays; **lobe of second dorsal fin filamentous in young, becoming shorter with age, in mature adults distinctly shorter than head length** (in specimens larger than 25 cm fork length, height of second dorsal-fin lobe usually shorter than head length, and slightly to distinctly shorter than anal-fin lobe). Lateral line anteriorly with a moderately regular arch, with junction of curved and straight parts below vertical from between twelfth to fourteenth soft rays of second dorsal fin; chord of curved part of lateral line longer than straight part of lateral line, contained 0.55 to 0.8 times in straight part; straight part of lateral line with 16 to 20 scutes, and 31 to 50 total elements (including anterior scales). **Breast naked ventrally to distinctly behind origin of pelvic fins; laterally, naked area of breast typically extends diagonally to naked base of pectoral fins (rarely, naked areas of breast and pectoral-fin base interrupted laterally by a narrow band of scales)**. **Colour:** in life, bluish green above, silvery grey below; sides with numerous, small yellow spots; small black blotch on upper margin of opercle; second dorsal, anal, and caudal fins dusky, the latter sometimes yellowish; pectoral fins pale yellow; pelvic fins hyaline to pale grey.

Size: Largest specimen examined 36 cm fork length; commonly to 25 cm fork length.

Habitat, biology, and fisheries: Adults are commonly found over deeper coastal reefs, but are rarely close to the shore. A rather sluggish fish, as compared to other *Carangoides* species. Taken incidental to artisanal fisheries throughout its range. Caught on hook-and-line, gill nets, and traps.

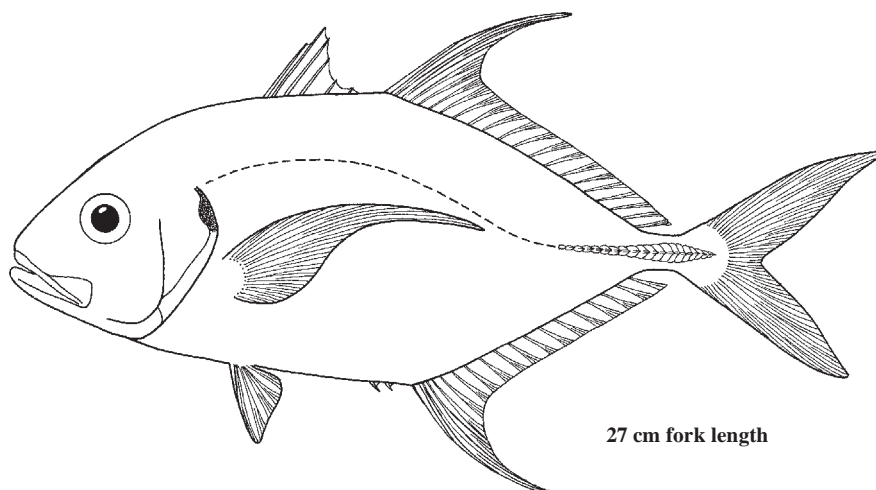
Distribution: Common in coastal waters throughout the western Indian Ocean; elsewhere in the Indo-West Pacific broadly distributed throughout the eastern Indian and western Pacific oceans from Japan to Australia.



***Carangoides chrysophrys* (Cuvier, 1833)**

Frequent synonyms / misidentifications: *Caranx chrysophrys* Cuvier, 1833; *Carangoides chrysophryoides* Bleeker, 1851; *Caranx typus* Gilchrist and Thompson, 1917 / None.

FAO names: En - Longnose trevally; Fr - Carangue tapir; Sp - Jurel tapir.

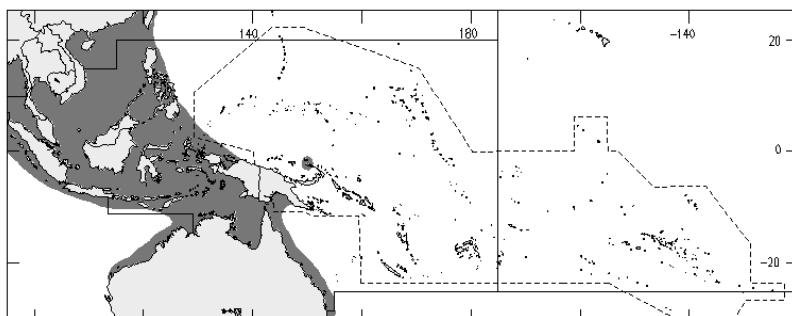


Diagnostic characters: Body subovate in juveniles, oblong in adults and compressed; nape only slightly elevated, **dorsal profile of snout gently sloped, then abruptly vertical just above mouth cleft.** Eye diameter smaller than snout length. Both jaws with bands of small villiform teeth, the bands widest anteriorly and in large specimens some outer teeth conical; vomerine tooth patch ovate, without a posteromedian extension. **Gill rakers (including rudiments)** 5 to 9 on upper limb and **15 to 18 on lower limb of first gill arch (total 21 to 26).** Two separate dorsal fins, the first with VIII spines, the second with I spine and 18 to 20 soft rays; anal fin with II detached spines followed by I spine and 15 to 17 soft rays; lobe of second dorsal fin falcate but usually shorter than head length, height of fin lobe becoming shorter with age. Lateral line anteriorly with a moderate regular arch, with junction of curved and straight parts below vertical from between twelfth to fourteenth soft rays of second dorsal fin; chord of curved part of lateral line longer than straight part of lateral line, contained 0.5 to 0.6 times in straight part; straight part of lateral line with 20 to 37 weak scutes and 32 to 42 total elements (including anterior scales). **Breast naked posteroventrally to distinctly behind pelvic fins; laterally, naked area of breast extends diagonally to naked base of pectoral fins.** Vertebrae 10+14. **Colour:** in life, generally silvery with head and body greenish above and silvery with yellow-green reflections below; opercle with a small black spot on upper margin; dorsal and anal fins ranging in colour from whitish to pale yellow to dusky; interradial membranes of soft anal-fin rays often with a white spot basally; caudal and pectoral fins pale to dusky yellow; large adults sometimes very dark, head and fins blackish; these fish perhaps exhibiting nuptial or spawning coloration.

Size: Largest specimen examined 38.5 cm fork length and 44 cm total length; reported to attain 60 cm total length.

Habitat, biology, and fisheries: Inhabits coastal waters in depths to 90 m, but most abundant at 30 to 60 m. Feeds on small demersal fishes and epibenthic crustaceans. Caught on hook-and-line, bottom trawls, gill nets, and traps.

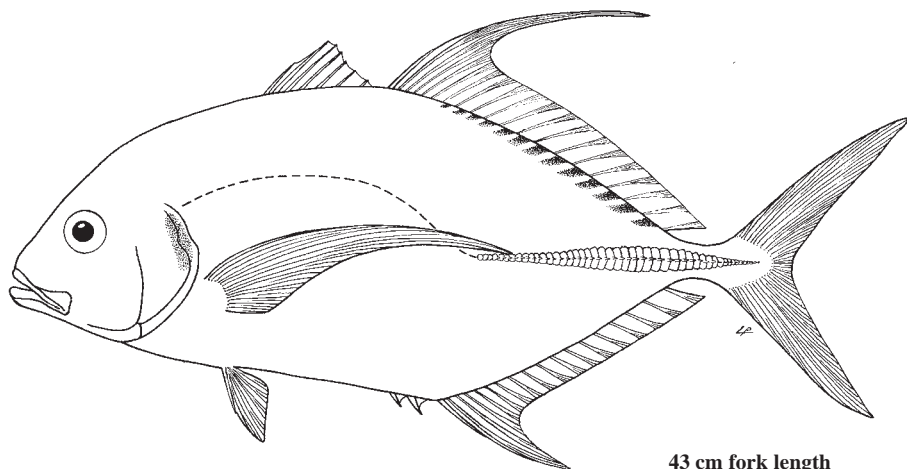
Distribution: Widespread in coastal waters of the Indian Ocean, including the Red Sea and Persian Gulf; elsewhere in the Indo-West Pacific from Okinawa to Australia and eastward to New Britain.



***Carangoides dinema* Bleeker, 1851**

Frequent synonyms / misidentifications: *Caranx dinema* (Bleeker, 1851); *Carangichthys dinema* (Bleeker, 1851); *Caranx deani* Jordan and Snyder, 1907 / None.

FAO names: En - Shadow trevally; Fr - Carangue crépuscule; Sp - Jurel crepúsculo.



Diagnostic characters: Body strongly compressed, almost ovate; nape slightly elevated, almost straight in profile. Eye diameter slightly smaller than snout length. Both jaws with bands of small teeth, the bands widest anteriorly; upper jaw also with an irregular outer series of moderately large teeth (in large specimens outer row teeth may be enlarged in both jaws); vomerine tooth patch ovate, without a posteromedian extension. Gill rakers (including rudiments) 7 to 9 on upper limb and 16 to 19 on lower limb of first gill arch (total 24 to 28). **Two separate dorsal fins**, the first with VIII spines, **the second with I spine and 17 to 19 soft rays**; anal fin with II detached spines followed by I spine and 15 to 17 soft rays; lobe of second dorsal fin elongate, longer than head length, in adults about equal or exceeding the length of second dorsal-fin base. Lateral line anteriorly with a moderate regular arch, with junction of curved and straight parts below vertical from between tenth or twelfth soft rays of second dorsal fin; **chord of curved part of lateral line slightly longer than straight part of lateral line, contained 0.7 to 0.95 times in straight part; straight part of lateral line with 0 to 6 scales followed by 23 to 30 scutes. Breast naked ventrally only to origin of pelvic fins; laterally, naked area of breast usually separated from naked base of pectoral fins by a moderate to narrow band of scales** (rarely, naked areas of breast and pectoral-fin base united laterally by a narrow naked strip). Vertebrae 10+14. **Colour:** in life, bluish green above, silvery white below; **small brown blotches (becoming larger posteriorly) on back between bases of second dorsal-fin rays**; opercular blotch brownish and diffuse; spinous dorsal fin pale to dusky; second dorsal-fin lobe dusky and ray tips yellowish; anal fin with distal margin whitish blue; caudal fin with upper lobe yellowish, and with trailing edges and tip of lower lobe pale; pectoral fins hyaline and pelvic fins whitish to dusky.

Size: Largest specimen examined 53 cm fork length, 58.5 cm total length, and 2.6 kg.

Habitat, biology, and fisheries: Inhabits coastal waters. Caught on hook-and-line, with bottom trawls and various kinds of artisanal gear.

Distribution: In the Indian Ocean known only from South Africa to Tanzania; elsewhere in the Indo-West Pacific known from southern Japan, Okinawa, Indonesia, Philippines, Papua New Guinea, Tonga Islands, and Samoa.

