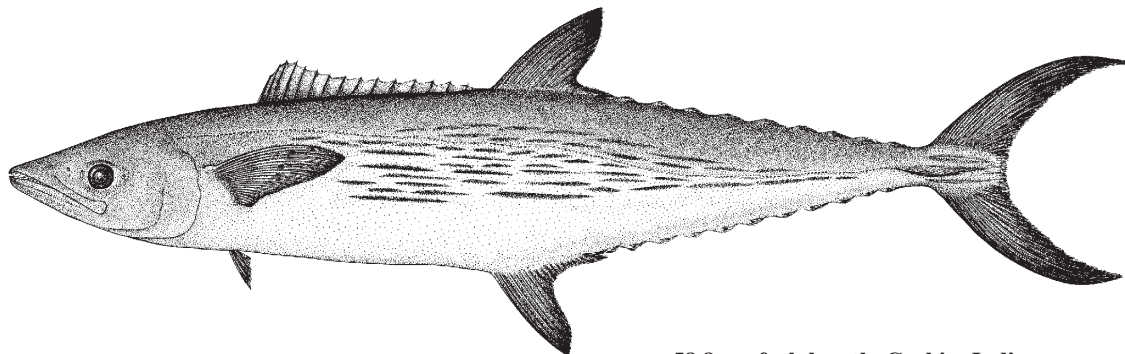


Scomberomorus lineolatus (Cuvier, 1831)

Frequent synonyms / misidentifications: *Cybium lineolatum* Cuvier, 1831; *Indocybium lineolatum* (Cuvier, 1831) / None.

FAO names: En - Streaked seerfish; Fr - Thazard cirrus; Sp - Carite rayado.



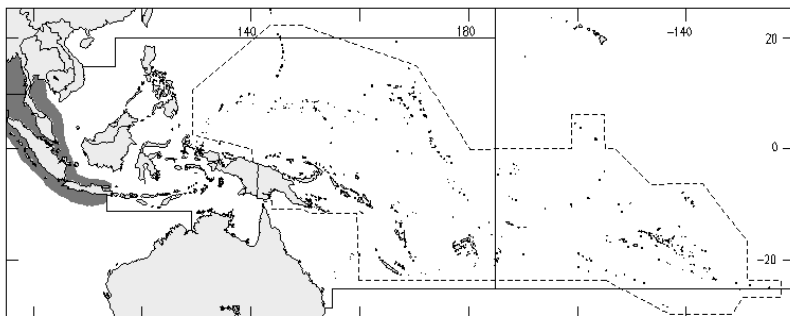
58.8 cm fork length, Cochin, India

Diagnostic characters: Body elongate, strongly compressed. Upper jaw reaching to below hind margin of pupil; teeth in jaws pointed and strongly compressed. **Gill rakers 1 or 2 on upper limb and 6 to 11 on lower limb of first gill arch (total 7 to 13)**. Two dorsal fins, the first with XV to XVIII spines and the second with 15 to 22 soft rays, followed by 7 to 10 finlets; anal fin with 17 to 22 soft rays, originating below anterior part of second dorsal fin, and followed by 7 to 10 finlets. **Lateral line running almost straight to below second dorsal finlet, then slightly bent downward toward keel of caudal peduncle (which is very wide)**. Pectoral fins covered with scales. No swimbladder. **Colour:** back blue-grey; sides silvery white, **upper part of body marked with a series of irregular, horizontal, narrow black lines sometimes breaking up into spots ventrally**.

Size: Maximum fork length 80 cm, commonly to 70 cm.

Habitat, biology, and fisheries: Little is known about the biology of this species. Caught with drift gill nets, midwater trawls, purse seines, and by trolling. Marketed mainly fresh; also dried-salted.

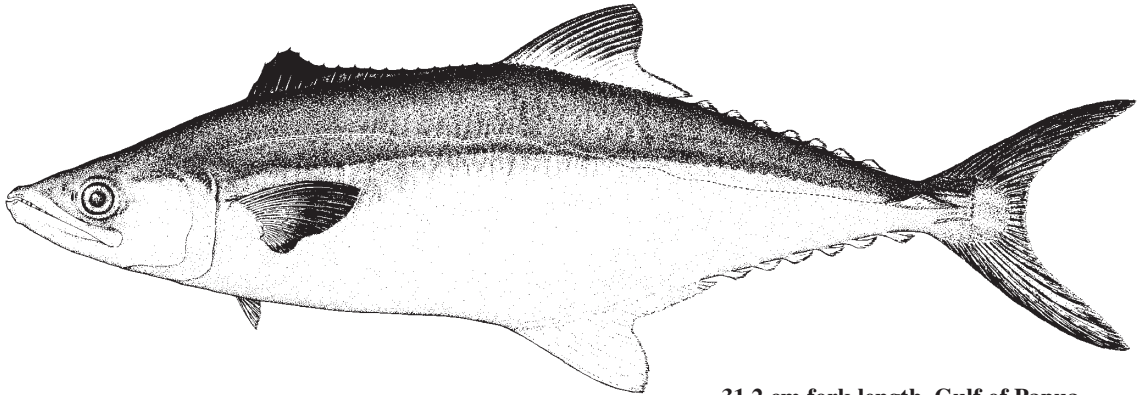
Distribution: A coastal species found from the west coast of India and Sri Lanka westward to Thailand, Malaysia, and Java.



Scomberomorus multiradiatus Munro, 1964

Frequent synonyms / misidentifications: None / None.

FAO names: En - Papuan seerfish; Fr - Thazard papou; Sp - Carite papuense.



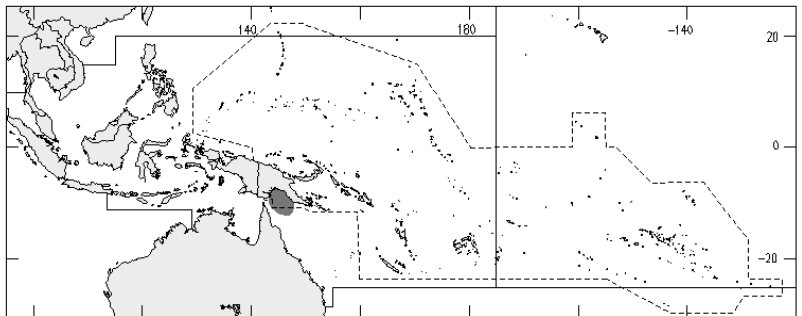
31.2 cm fork length, Gulf of Papua

Diagnostic characters: Gill rakers on first gill arch few, none on upper limb and 1 to 4 on lower limb (total 1 to 4). First dorsal fin with XVI to XIX spines (usually XVII or XVIII); second dorsal fin with 21 to 25 soft rays, followed by 7 to 9 finlets; anal fin with 25 to 29 soft rays (the highest number in the genus), followed by 6 to 8 finlets (usually 6); pectoral-fin rays 20 to 23. Lateral line gradually curving down toward caudal peduncle. Highest number of vertebrae in the genus (20-21 + 34-36 = 54-56). Intestine with 2 folds and 3 limbs. **Colour:** sides silvery without spots, blotches, or bars; first dorsal fin black anteriorly and along distal edge posteriorly with some white at posterior base of fin.

Size: Maximum fork length 35 cm, maximum weight 0.5 kg; the smallest species in the genus, attains sexual maturity at much less than 30 cm fork length.

Habitat, biology, and fisheries: An epipelagic, neritic species found in turbid waters. Nothing is known about its biology. Trawled in the Gulf of Papua but lacks commercial significance.

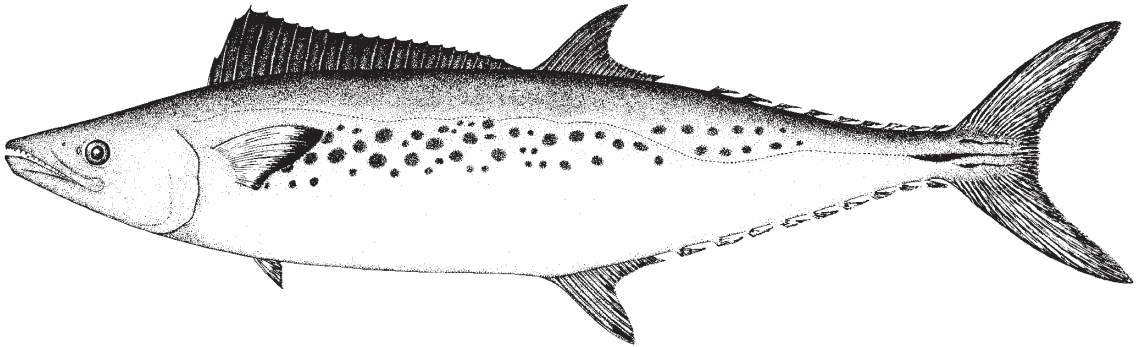
Distribution: Restricted to the Gulf of Papua off the mouth of the Fly River.



Scomberomorus munroi Collette and Russo, 1980

Frequent synonyms / misidentifications: None / None.

FAO names: **En** - Australian spotted mackerel; **Fr** - Thazard australien; **Sp** - Carite australiano.



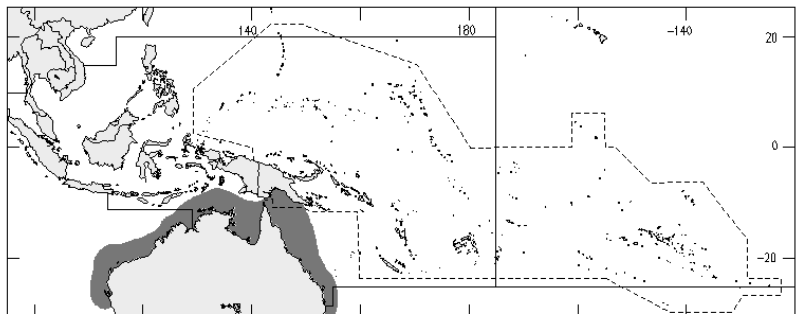
74 cm fork length, Queensland

Diagnostic characters: Gill rakers on first gill arch moderate, 2 on upper limb and 8 to 10 on lower limb (total 10 to 12). **First dorsal fin with XX to XXII spines;** second dorsal fin with 17 to 20 soft rays, followed by 9 or 10 finlets; anal fin with 17 to 19 soft rays, followed by 8 to 10 finlets; pectoral-fin rays 21 to 23. Lateral line gradually curving down toward caudal peduncle. Vertebrae 21-22 + 28-30 = 50-52. Intestine with 2 folds and 3 limbs. **Colour:** sides with several poorly defined rows of round spots, larger than pupil but smaller than diameter of eye (*Scomberomorus niphonius* has more numerous smaller spots, usually about size of pupil); inner surface of pectoral fins dark blue, cheeks, and belly silvery white, anal fin light silvery grey, and anal finlets silvery grey; first dorsal fin black (bright steely blue in fresh specimens) with blotches of white toward bases of more posterior membranes in some specimens; membranes entirely black in some specimens; most other species of *Scomberomorus* have more extensive white areas on posterior half or middle third of dorsal fin.

Size: Maximum fork length 100 cm (at a maximum weight of about 8 kg), more commonly between 50 and 80 cm (and 4.5 kg weight). Fork length at first maturity ranges between 50 and 55 cm.

Habitat, biology, and fisheries: An epipelagic, neritic species that forms large schools, which move close inshore along the coast of Queensland, commonly taken between December and April or May.

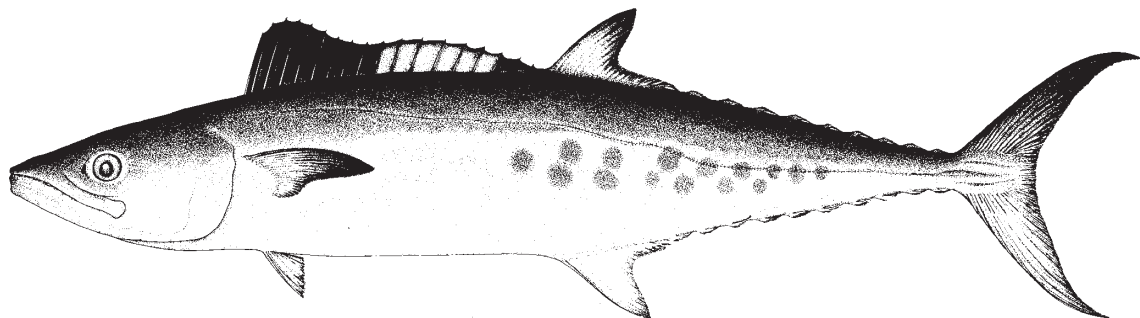
Distribution: Restricted to the northern coast of Australia from the Abrolhos Islands region of Western Australia to Coffs Harbour and Kempsey in central New South Wales and the southern coast of Papua New Guinea from Kerema to Port Moresby.



***Scomberomorus queenslandicus* Munro, 1943**

Frequent synonyms / misidentifications: None / None.

FAO names: **En** - Queensland school mackerel; **Fr** - Thazard du Queensland; **Sp** - Carite de Queensland.



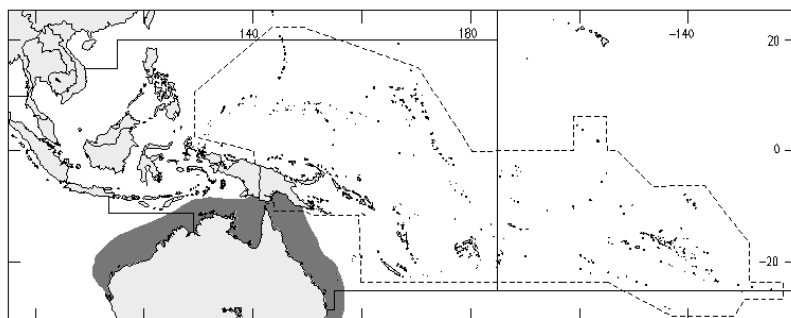
63.5 cm fork length, Exmouth Gulf, Western Australia

Diagnostic characters: Gill rakers on first gill arch few, 0 to 2 on upper limb and 3 to 8 on lower limb (total 3 to 9, usually 7 or fewer). First dorsal fin with XVI to XVIII spines (usually XVII); second dorsal fin with 17 to 19 soft rays, followed by 9 to 11 finlets; anal fin with 16 to 20 soft rays, followed by 9 to 11 finlets; pectoral-fin rays 21 to 23. Lateral line gradually curving down toward caudal peduncle. Vertebrae 19-20 + 28-29 = 48-49 (usually 20 + 28 = 48). Intestine with 2 folds and 3 limbs. **Colour:** sides of adults marked with about 3 indefinite rows of indistinct bronze grey blotches, each a little larger than orbit (blotches absent in a juvenile of 9.5 cm length); membrane of first dorsal fin jet black with large contrasting areas of intense white between sixth and last spine; second dorsal fin, finlets, and caudal fin pearly grey with darker margins; pelvic fins, anal fin, and anal finlets white; pectoral fins greyish, darkest on inner surface.

Size: Maximum fork length 100 cm (at a maximum weight of 8 kg), commonly between 50 and 80 cm.

Habitat, biology, and fisheries: An epipelagic, neritic schooling species moving into inshore waters, bays, and estuaries of Queensland during the southern midwinter and early spring. It is seasonally migratory in the Gulf of Carpentaria and forms mixed schools with *Scomberomorus commerson* over shallow reefs offshore of Queensland. Four species of *Scomberomorus*, including *S. queenslandicus* and *Grammatorcynus* form Queensland's second most important fin-fishery with an annual production of about 1 000 t of whole and filleted fish. The Queensland school mackerel is caught by recreational and commercial line-fishermen trolling with lures including metal spoons and cut bait. The species is also trawled in the Gulf of Papua.

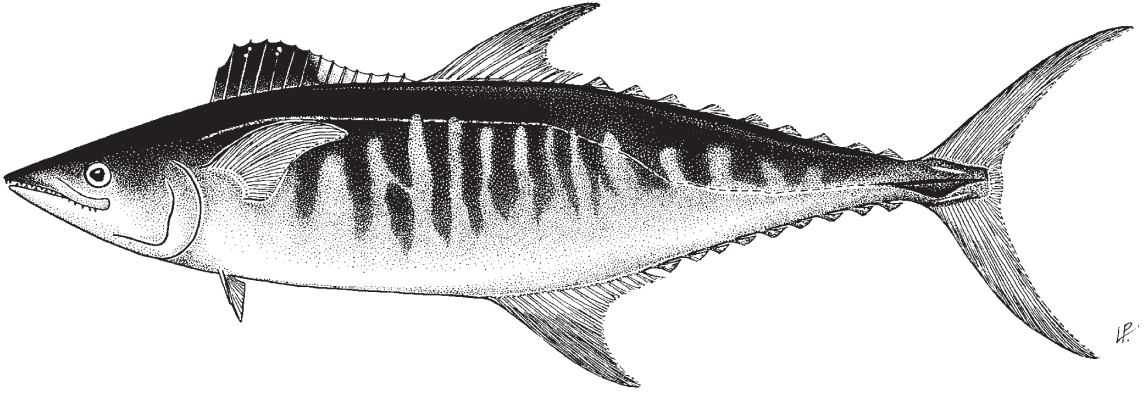
Distribution: Largely confined to inshore coastal waters of southern Papua New Guinea and northern and eastern Australia, from Shark Bay and Onslow, Western Australia to Sydney, New South Wales.



Scomberomorus semifasciatus (Macleay, 1884)

Frequent synonyms / misidentifications: *Indocybium semifasciatum* (Macleay, 1884) / None.

FAO names: En - Broadbarred king mackerel; Fr - Thazard tigre; Sp - Carite tigre.



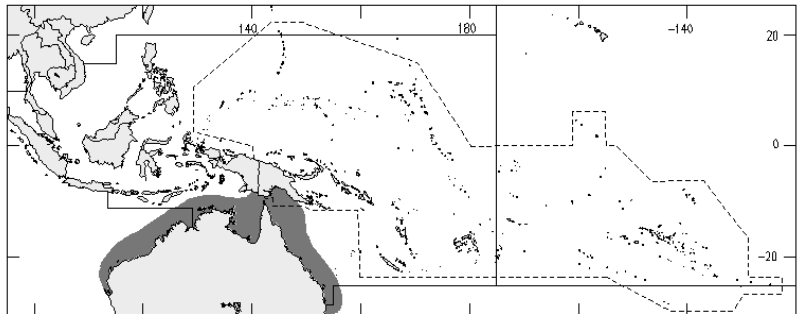
45.1 cm fork length, Queensland

Diagnostic characters: Gill rakers on first gill arch moderate, 1 or 2 on upper limb and 5 to 11 (usually 7 to 9) on lower limb (total 6 to 13, usually 9 to 11). First dorsal fin with XIII to XV spines; second dorsal fin with 19 to 22 soft rays (usually 20 or more), followed by 8 to 10 finlets (usually 9); anal fin with 19 to 22 rays (usually 21 or 22), followed by 7 to 10 finlets; pectoral-fin rays numerous, 22 to 25 (usually 23 or 24). Lateral line gradually curving down toward caudal peduncle. Vertebrae 18-19 + 25-27 = 44-46 (usually 45). Intestine with 2 folds and 3 limbs. **Colour:** juveniles (less than 10 cm) marked with 12 to 20 broad vertical dark grey bands, number increasing with age; cheeks and belly silver white; snout dark slate grey, patch of green above orbit; first dorsal fin jet black with contrasting areas of white in central region; second dorsal fin cream with yellow anteriorly; anal fin and finlets transparent white; caudal-fin lobes creamy white at margins and dusky or blackish near hypural; pectoral fins dusky. With increase in size the bronze green coloration of the back turns greenish blue. The vertical bands on the back are most marked in specimens less than 50 cm and in larger fishes there is tendency for these markings to become less distinct, break into spots, or fade out more or less completely. **Above 70 cm, dead fishes assume a drab greyish yellow blotchy appearance with little or no evidence of markings.**

Size: Maximum fork length 120 cm; maximum weight 10 kg, usually 1.3 to 2.7 kg.

Habitat, biology, and fisheries: The biology of this epipelagic, neritic species is virtually unknown. Juveniles ranging between 4.5 and 10 cm in length are commonly encountered during November along beaches in the vicinity of Townsville, Queensland, and grow to twice this size by January. Four species of *Scomberomorus*, including *S. semifasciatus*, and *Grammatorcynus* form Queensland's second most important fin-fishery with an annual production of about 1 000 t of whole and filleted fish. Fish of 60 to 90 cm fork length are caught on fishing grounds north of Yeppoon (Queensland) in November, while smaller size groups are taken in estuaries north of Moreton Bay. Fishing gear includes set nets and lines. Popularly, anglers operating from small outboard powered boats troll with small lures or cut bait. Broadbarred king mackerels are also taken by trawlers in the Gulf of Papua.

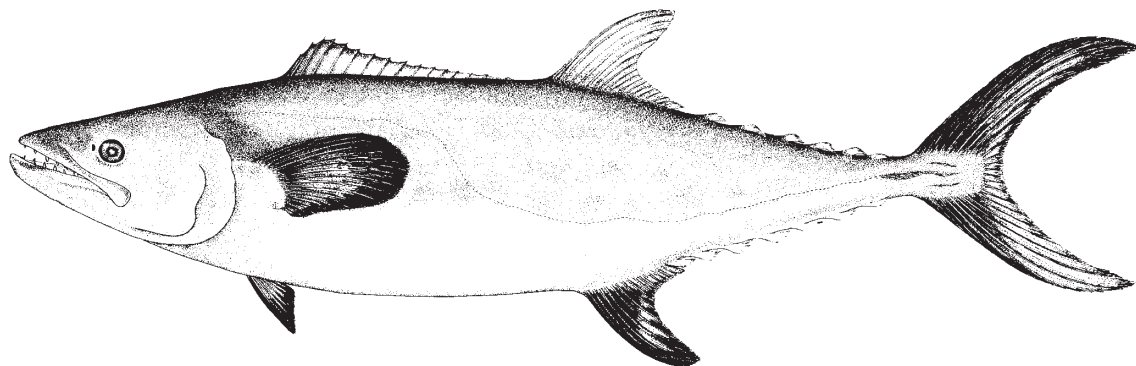
Distribution: Confined to southern Papua New Guinea and to northern Australia, from Shark Bay, Western Australia to northern New South Wales.



Scomberomorus sinensis (Lacepède, 1800)

Frequent synonyms / misidentifications: *Scomberomorus cambodgiense* Durand, 1940 / None.

FAO names: **En** - Chinese seerfish; **Fr** - Thazard nébuleux; **Sp** - Carite indochino.



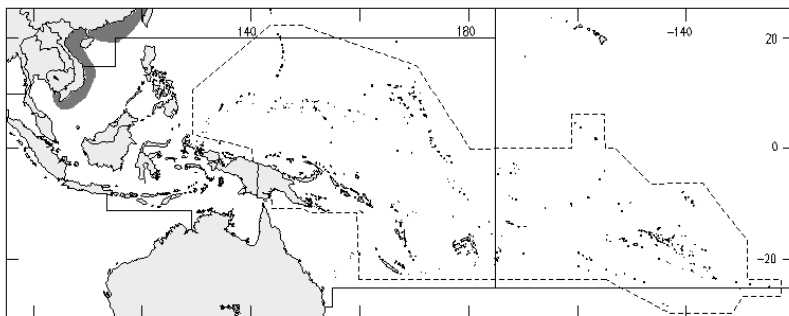
71.4 cm fork length, Shanghai

Diagnostic characters: Gill rakers on first gill arch moderate, 1 to 3 (usually 2) on upper limb and 10 to 12 on lower limb (total 11 to 15). First dorsal fin with XV to XVII spines; second dorsal fin with 15 to 17 soft rays, followed by only 6 or 7 finlets; anal fin with 16 to 19 soft rays, followed by only 5 to 7 finlets; pectoral-fin rays 21 to 23. **Lateral line abruptly curving down below first dorsal fin.** Vertebrae few (19-20 + 21-22 = 41-42). Intestine with 2 folds and 3 limbs. **Colour: sides silvery with large (larger than eye diameter), round, indistinct spots in 2 poorly defined rows in adults;** juveniles with saddle-like blotches extending down to about middle of body; fins mostly blackish; pelvic and anal fins with blackish margins, anal finlets colourless.

Size: Maximum fork length 200 cm; maximum weight 80 kg.

Habitat, biology, and fisheries: An epipelagic, neritic and estuarine species known to move 300 km up the Mekong River above Phnom Penh, but believed to reproduce only in marine waters. No information on biology available. No catches of *Scomberomorus sinensis* were reported to FAO for the period between 1978 and 1981. However, it is a prized food fish in Japan and probably in China as well. It is caught in the Mekong River of Cambodia and commanded a high price in the Phnom Penh market in 1964.

Distribution: Western Pacific from Akita, Honshu, Sea of Japan, Yellow Sea, and China south to Viet Nam and Cambodia where it enters the Mekong River.

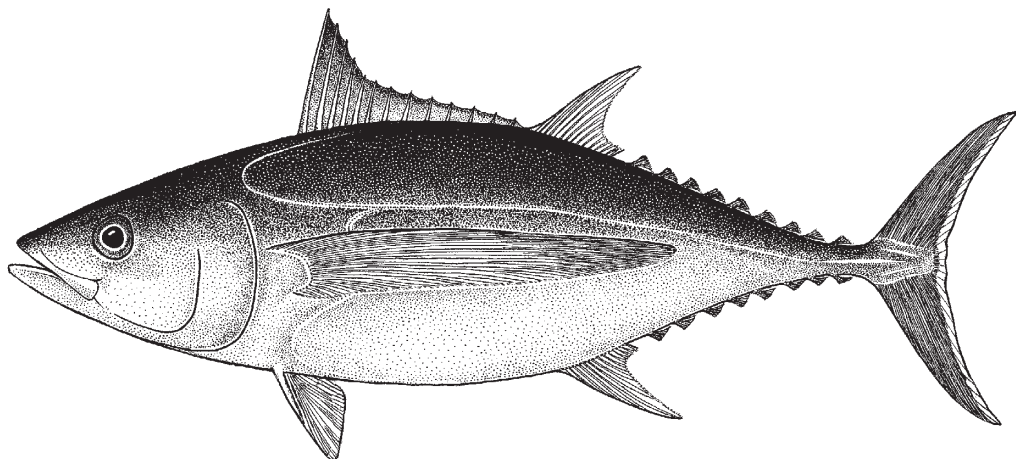


Thunnus alalunga (Bonnaterre, 1788)

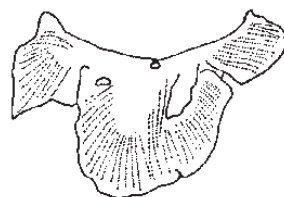
ALB

Frequent synonyms / misidentifications: *Germo alalunga* (Bonnaterre, 1788); *Thunnus germo* (Lacepède, 1801) / None.

FAO names: En - Albacore; Fr - Germon; Sp - Atún blanco (= Albacora).



Diagnostic characters: A large species with an elongate, fusiform body, its greatest depth at a more posterior point than in other tunas (at, or only slightly anterior to, second dorsal fin rather than near middle of first dorsal-fin base). Eyes moderately large. Total gill rakers 25 to 31 on first gill arch. Two dorsal fins separated only by a narrow interspace, the second clearly lower than the first and followed by 7 to 9 finlets; anal fin followed by 7 or 8 finlets; pectoral fins remarkably long, usually 30% of fork length or longer, reaching well beyond origin of second dorsal fin (usually to second dorsal finlet); 2 flaps (interpelvic process) between pelvic fins. Small scales on body; corselet of larger scales developed but not very distinct. Caudal peduncle very slender, bearing on each side a strong lateral keel between 2 smaller keels. **Liver striated on ventral surface.** Swimbladder present. **Colour:** back metallic dark blue, lower sides and belly whitish; a faint lateral iridescent blue band runs along sides in live fish; first dorsal fin deep yellow, second dorsal and anal fins light yellow, anal finlets dark; posterior margin of caudal fin white.

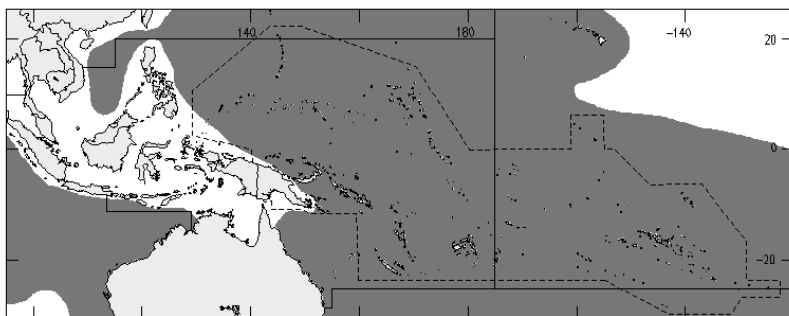


liver

Size: Maximum fork length 120 cm, commonly to 100 cm.

Habitat, biology, and fisheries: Oceanic, the young often in large schools; found below the thermocline, particularly larger individuals, or at temperatures of 17° to 21°C. Feeds on many kinds of organisms, particularly fishes, squids, and crustaceans. Caught with purse seines, longlines; also by trolling. Marketed mainly canned or frozen. From 1990 to 1995, the FAO Yearbook of Fishery Statistics reports a range of yearly catch of 10 837 to 36 312 t of *Thunnus alalunga* from the Western Central Pacific.

Distribution: Cosmopolitan in tropical and temperate waters of all oceans. Offshore, often extending into cool waters. In the western Pacific Ocean, its range extends in a broad band between 40°N and 40°S.

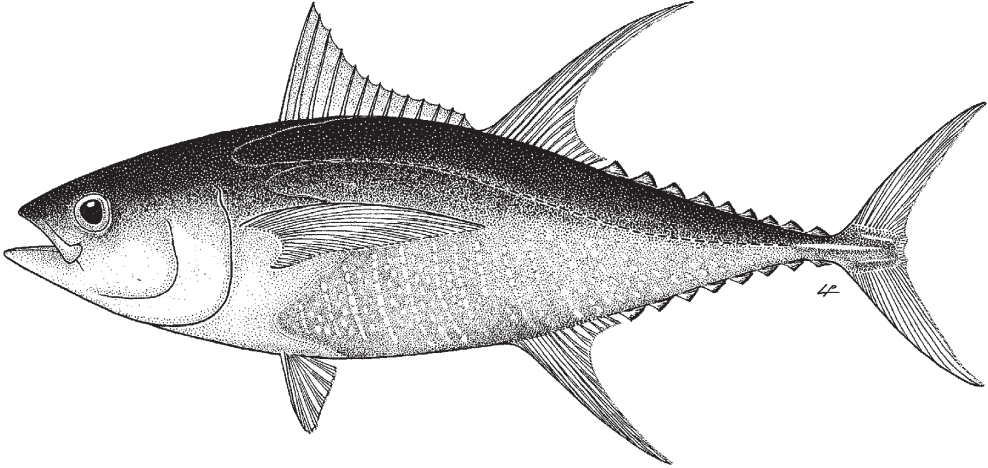


Thunnus albacares (Bonnaterre, 1788)

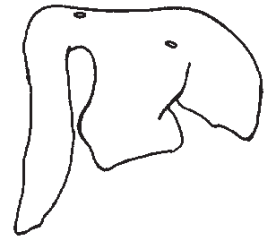
YFT

Frequent synonyms / misidentifications: *Neothunnus macropterus* (Temminck and Schlegel, 1844); *N. albacora* (Lowe, 1839); *Thynnus argentinatus* (Cuvier, 1822) / None.

FAO names: En - Yellowfin tuna; Fr - Albacore (= Thon albacore, Area 31); Sp - Rabil.



Diagnostic characters: A large species with an elongate, fusiform body, slightly compressed laterally. **Total gill rakers 26 to 34 on first gill arch.** Two dorsal fins, separated only by a narrow interspace, the second followed by 8 to 10 finlets; anal fin followed by 7 to 10 finlets; **large specimens may have very long second dorsal and anal fins, becoming well over 20% of fork length; pectoral fins moderately long, usually reaching beyond second dorsal-fin origin but not beyond end of its base, usually 22 to 31% of fork length;** 2 flaps (interpelvic process) between pelvic fins. Body with very small scales; corselet of larger scales developed but not very distinct. Caudal peduncle very slender, bearing on each side a strong lateral keel between 2 smaller keels. **No striations on ventral surface of liver.** Swimbladder present. **Colour:** back metallic dark blue changing through yellow to silver on belly; **belly frequently crossed by about 20 broken, nearly vertical lines;** dorsal and anal fins, and dorsal and anal finlets bright yellow, the finlets with a narrow black border.

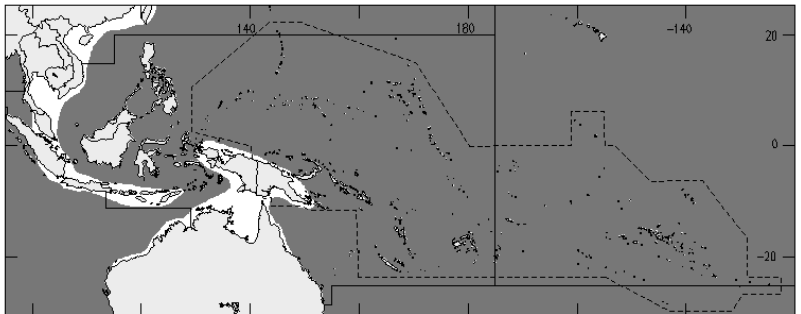


liver

Size: Maximum fork length 195 cm, commonly to 150 cm.

Habitat, biology, and fisheries: Oceanic, above and below the thermocline. Schools by size, also with other species. Peak spawning occurs during summer, in batches. Feeds on a wide variety of fishes, crustaceans, and cephalopods. Caught mainly with longlines and purse seines. Marketed mainly fresh, frozen, or canned. From 1990 to 1995, the FAO Yearbook of Fishery Statistics reports a range of yearly catch of 323 537 to 346 942 t of *Thunnus albacares* from the Western Central Pacific.

Distribution: A pantropical species. Known from the entire area from 40°N to 40°S.

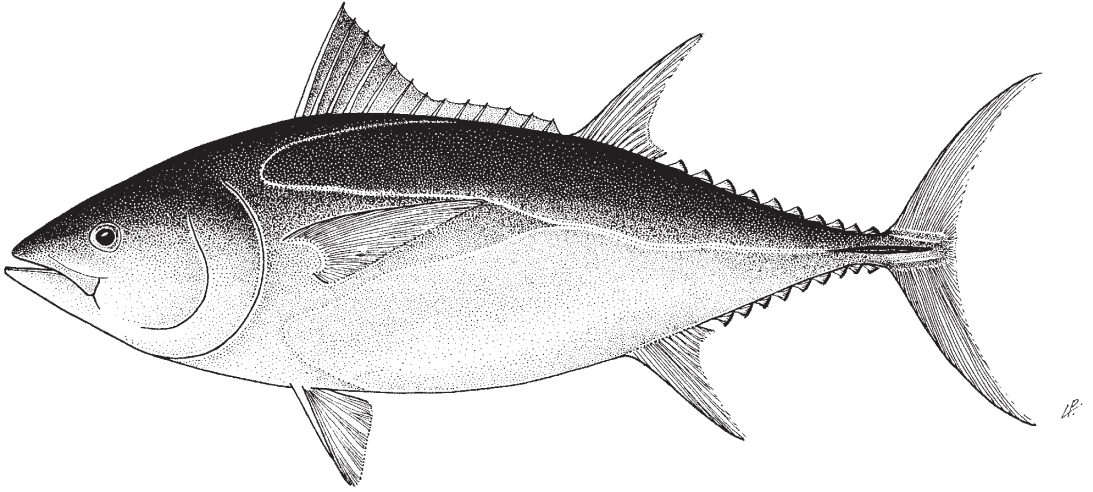


Thunnus maccoyii (Castelnau, 1872)

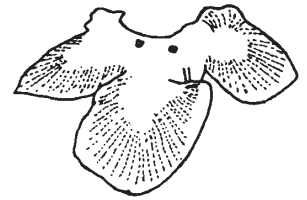
SBF

Frequent synonyms / misidentifications: *Thunnus thynnus maccoyii* (Castelnau, 1872) / None.

FAO names: En - Southern bluefin tuna; Fr - Thon rouge du Sud; Sp - Atún del Sur.



Diagnostic characters: A very large species with a fusiform and rounded body (nearly circular in cross-section), very robust in front. **Gill rakers 31 to 34 on first gill arch.** Two dorsal fins separated only by a narrow interspace, the second higher than the first; 8 to 10 finlets present behind second dorsal fin and 7 to 9 behind anal fin; **pectoral fins very short, less than 80% of head length, never reaching interspace between dorsal fins;** 2 separate flaps (interpelvic process) between pelvic fins. A well-developed, although not particularly conspicuous corselet; very small scales on rest of body. Caudal peduncle slender, with a strong lateral keel between 2 small keels located at the bases of the caudal-fin lobes. **Ventral surface of liver striated.** Swimbladder present. **Colour:** back dark blue or black, lower sides and belly silvery white with colourless transverse lines alternated with rows of colourless dots (the latter dominate in older fish), visible only in fresh specimens; first dorsal fin yellow or bluish; anal fin and finlets dusky yellow edged with black; **lateral caudal-peduncle keel yellow in adults.**

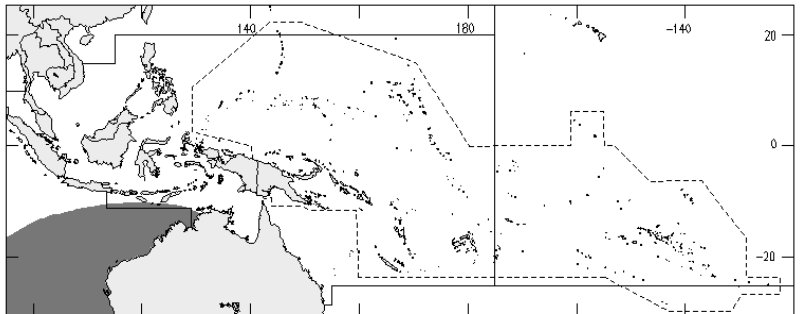


liver

Size: Maximum fork length 225 cm, commonly to 160 cm.

Habitat, biology, and fisheries: A pelagic schooling species, oceanic in cold-temperate waters between 5° and 20°C for much of its life span. Returns to warm waters between northwestern Australia and Indonesia to spawn. Preys on fishes, crustaceans, and salps. Primarily taken on longlines. Canning is the most important form of local utilization of this highly esteemed fish. Separate statistics from the area are not available for this species.

Distribution: Found throughout the Southern Ocean mainly between 30°S and 20°S. May extend into the area between northwestern Australia and Indonesia during the spawning season.

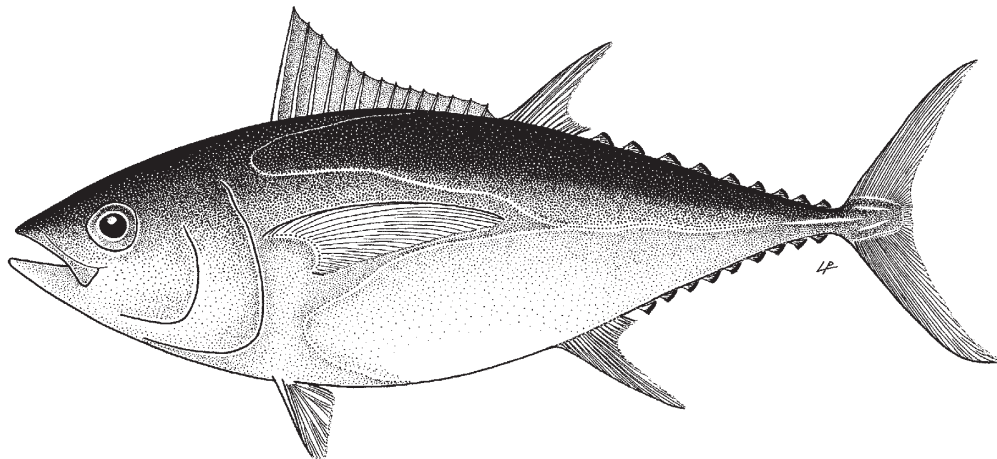


Thunnus obesus (Lowe, 1839)

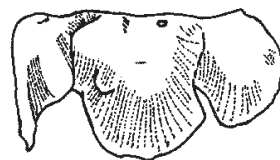
BET

Frequent synonyms / misidentifications: *Parathunnus mebachi* (Kishinouye, 1915); *P. sibi* (Temminck and Schlegel, 1844) / None.

FAO names: En - Bigeye tuna; Fr - Thon obèse (= Patudo, Area 31); Sp - Patudo.



Diagnostic characters: A large species with robust, fusiform body, slightly compressed from side to side. **Total gill rakers 23 to 31 on first gill arch.** Two dorsal fins, separated only by a narrow interspace, the second followed by 8 to 10 finlets; **pectoral fins moderately long (22 to 31% of fork length) in large specimens (over 110 cm fork length), but very long (as long as in *Thunnus alalunga*) in smaller specimens;** 2 flaps (interpelvic process) between pelvic fins; anal fin followed by 7 to 10 finlets. Very small scales on body; corselet of larger and thicker scales developed, but not very distinct. Caudal peduncle very slender, with a strong lateral keel between 2 smaller keels. **Ventral surface of liver striated.** Swimbladder present. **Colour:** back metallic dark blue, lower sides and belly whitish; a lateral iridescent blue band runs along sides in live specimens; first dorsal fin deep yellow, second dorsal and anal fins light yellow, **finlets bright yellow edged with black.**

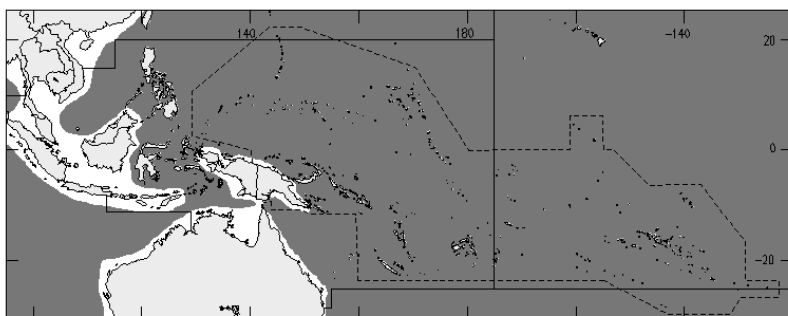


liver

Size: Maximum fork length over 200 cm, commonly to 180 cm.

Habitat, biology, and fisheries: A pelagic oceanic species, taken from the surface to depths of 250 m. Juveniles school with yellowfin and/or skipjack tuna. Feeds on a wide variety of fishes, cephalopods, and crustaceans. Caught mainly with longlines; occasionally purse seines are also used. Marketed mainly canned or frozen. From 1990 to 1995, the FAO Yearbook of Fishery Statistics reports a range of yearly catch of 23 779 to 38 438 t of *Thunnus obesus* from the Western Central Pacific.

Distribution: Worldwide in tropical and subtropical waters. Pantropical, known from the entire area between 40°N and 30°S.

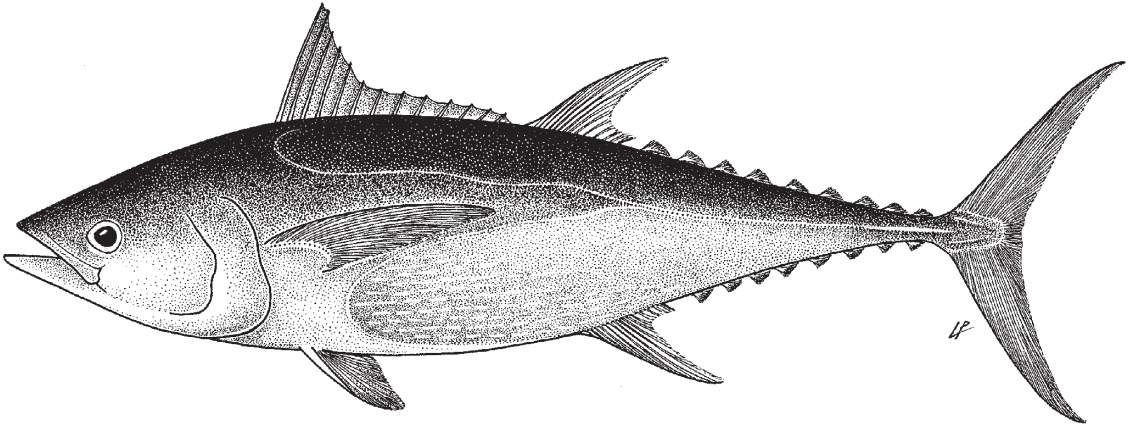


Thunnus tonggol (Bleeker, 1851)

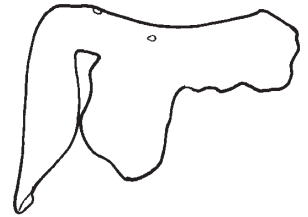
LOT

Frequent synonyms / misidentifications: *Kishinoella tonggol* (Bleeker, 1851) / *Thunnus albacares* (Bonnaterre, 1788).

FAO names: En - Longtail tuna; Fr - Thon mignon; Sp - Atún tongol.



Diagnostic characters: A small species with a fusiform and rounded body. **Gill rakers few, 19 to 27 on first gill arch.** Two dorsal fins, separated only by a narrow interspace, the second higher than the first and followed by 9 finlets; anal fin followed by 8 finlets; **pectoral fins** with 30 to 35 soft rays, **short to moderately long**, 22 to 31% of fork length in smaller specimens (under 60 cm fork length and 16 to 22% in larger individuals); 2 flaps (interpelvic process) between pelvic fins. Very small scales on body; corselet of larger scales well developed, but not particularly conspicuous. **Caudal peduncle long**, with a strong lateral keel between 2 smaller keels. **Ventral surface of liver not striated; no swimbladder.** **Colour:** back dark blue or black, lower sides and belly silvery white with colourless elongate-oval spots arranged in horizontally oriented rows; dorsal, pectoral, and pelvic fins blackish, tip of second dorsal and anal fins washed with yellow; anal fin silvery; dorsal and anal finlets yellow with greyish margins; caudal fin blackish, with streaks of yellowish green.



liver

Size: Maximum fork length 130 cm, commonly to 70 cm.

Habitat, biology, and fisheries: A largely coastal species but avoids low salinity areas near mouths of large rivers. Reported to occur in large schools off the west coast of Australia. Feeds on a wide variety of fishes, cephalopods, and crustaceans, particularly stomatopod larvae and prawns. Caught mainly with longlines. Marketed mainly fresh and dried-salted. From 1990 to 1995, the FAO Yearbook of Fishery Statistics reports a range of yearly catch of 33 857 to 105 072 t from the Western Central Pacific.

Distribution: Indo-West Pacific Ocean from Japan south through the Philippines to New Guinea and the northern three-quarters of Australia west to India and the Red Sea.

