

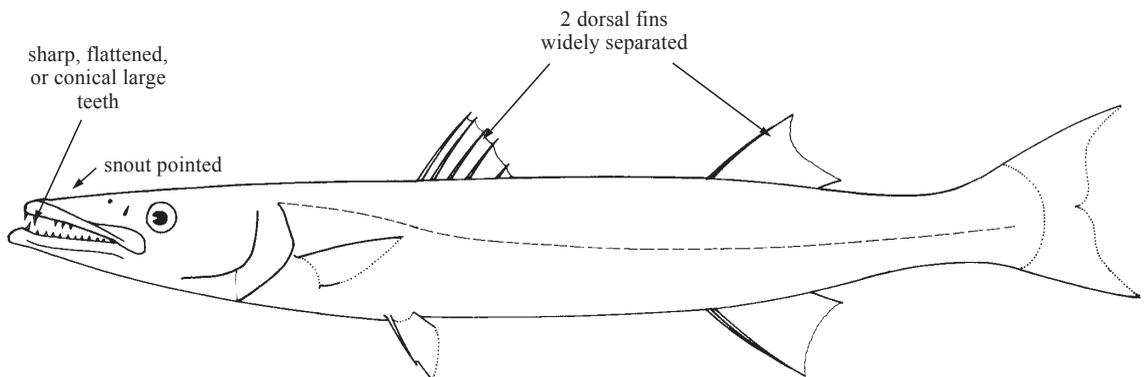
## Suborder SCOMBROIDEI

## SPHYRAENIDAE

## Barracudas

by B.C. Russell, Northern Territory Museum, Darwin, Australia

**Diagnostic characters:** Small to moderately large fishes, from 30 to 200 cm total length. **Body elongate, subcylindrical, or slightly compressed**, covered with small, cycloid scales. **Head long, with pointed snout**, scaly above and on sides. Mouth large, nearly horizontal; jaws elongate, the lower projecting beyond the upper; **large, sharp, flattened or conical teeth of unequal size on jaws and roof of mouth**; usually 1 or 2 strong sharp canines near tip of lower jaw. Branchiostegal rays 7; the membranes free from isthmus and each other. **Gill rakers, if present, as short spinules, 1 or 2 at angle of arch, in some species, as platelets with or without distinct spines. Two short dorsal fins, widely separated**; the first with 5 strong spines, inserted about opposite to or behind pelvic fins; the second with 1 spine and 9 soft rays, inserted about opposite to anal fin. Anal fin with 2 spines and 7 to 9 soft rays. Caudal fin forked; some large species with a pair of lobes in the posterior margin. Pectoral fins short, placed on or below midlateral line of body; pelvic fins with 1 spine and 5 soft rays. Lateral line well developed, straight. Vertebrae: 12 precaudal, 12 caudal (24 total). **Colour:** usually grey to green or blue above, with silvery reflections; lighter to white below. Body with darker bars, saddles, or chevron markings in some species. Longitudinal yellow stripes or dark blotches in other species.



**Habitat, biology, and fisheries:** Barracudas are voracious predators found in all tropical and warm-temperate seas. Pelagic or demersal, most of them inhabit shallow coastal waters such as bays, estuaries, or the vicinity of coral reefs; also at the surface of open oceans or to depths of 100 m or more. Juveniles of *Sphyraena barracuda* usually found in mangrove swamps or estuaries of rivers. They frequently occur in small to large schools, but the adult of *S. barracuda* is usually solitary. Some species primarily diurnal, while others are nocturnal and occur in inactive schools during the day. Edible fish caught by handlines, gill nets, set nets, or trawls, but large individuals of the larger species, especially *S. barracuda*, should be avoided because of the risk of ciguatera poisoning. They are a good target of anglers, and many are caught by trolling artificial lures. Attacks on humans have been documented but these are usually the result of mistaken identity or outright provocation such as being speared. Attractants such as metal objects flashing in the sun or speared fish, particularly in murky water, are frequently cited. Barracudas are marketed fresh, frozen, dried, salted, or smoked. Separate statistics are not reported for species of barracuda. The total reported catch of unclassified barracudas in Fishing Area 31 from 1995 to 1999 ranged from 1 596 to 2 130 t per year.

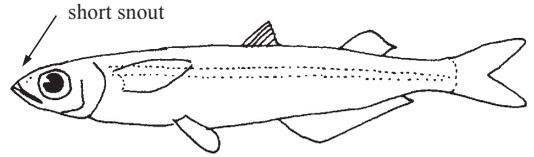
**Similar families occurring in the area**

Atherinidae, Mugilidae, and Polynemidae: have 2 widely spaced dorsal fins: but in all of these families the snout is short, the mouth is small, and there are no canine teeth. Additionally, in the Polynemidae the lower pectoral fin rays are long and filamentous.

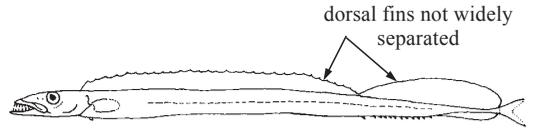
Trichiuridae and Gempylidae: elongate snout, large mouth and canine teeth, but never two short and well spaced dorsal fins; also ribbon-like body in Trichiuridae.

Scombridae: relatively large mouth and 2 dorsal fins, but with distinct finlets behind the second dorsal and anal fins.

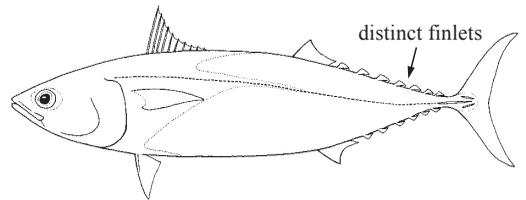
Poeciliidae (*Belonesox belizianus*): upper and lower jaws modified to form elongate beak, with strong teeth, superficially resembling juvenile *Sphyraena*, but only a single dorsal fin, and males with anal fin modified to form gonopodium.



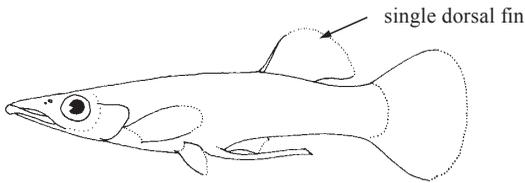
**Atherinidae**



**Gempylidae**



**Scombridae**



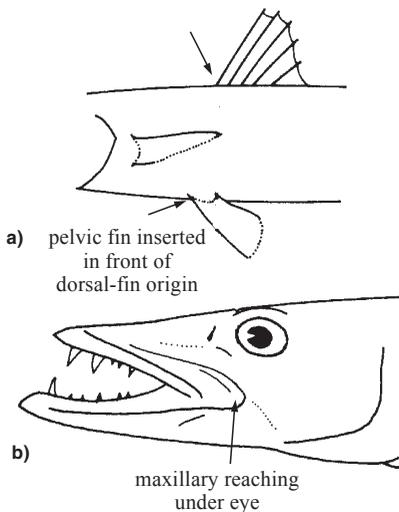
**Poeciliidae**

**Key to the species of Sphyraenidae occurring in the area**

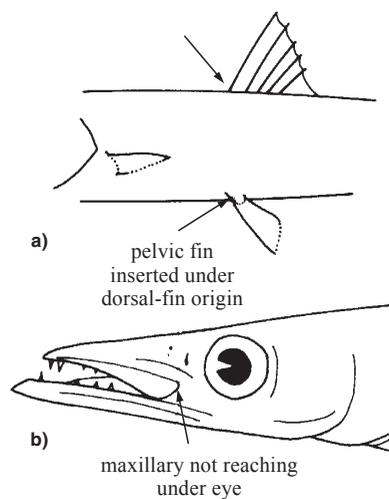
1a. Pelvic fins inserted in front of origin of first dorsal fin, about midway between anterior tip of lower jaw and base of last anal-fin ray (Fig. 1a); pectoral fins reaching beyond base of pelvic fins, and to about origin of first dorsal fin; maxillary reaching to or slightly beyond anterior margin of orbit in adults (Fig. 1b) . . . . . → 2

1b. Pelvic fins inserted directly under origin of first dorsal fin, much nearer base of last anal-fin ray than anterior tip of lower jaw (Fig. 2a); pectoral fins not reaching base of pelvic fins and well short of origin of first dorsal fin; maxillary not reaching anterior margin of orbit (Fig. 2b)

. . . . . *Sphyraena borealis*



**Fig. 1**



**Fig. 2 *Sphyraena borealis***

- 2a. Lateral-line scales 75 to 87; body greyish brown above, silvery below, with oblique dark bars on upper half, not across lateral line except in juveniles (less than 15 cm standard length); many conspicuous, irregular, small black blotches on lower sides in adults (greater than 15 cm standard length); caudal fin black with white tips in fresh specimens, a pair of large lobes on the posterior margin in adults; last rays of soft dorsal and anal fins not notably longer than penultimate rays (Fig. 3) . . . . . *Sphyraena barracuda*
- 2b. Lateral-line scales 108 to 122; body greyish or olive brown above, sides silvery with a yellow to golden stripe; no dark bars on body (except small juveniles with broad black bars encircling body); edges of pelvic fins, anal fin, and middle rays of caudal fin blackish; no lobes on posterior margin of caudal fin; last rays of soft dorsal and anal fins elongate, 1.4 to 2.0 times longer than penultimate rays (Fig. 4) . . . . . *Sphyraena guachancho*

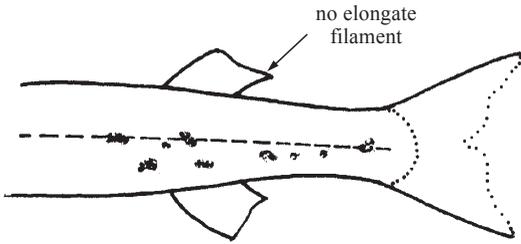


Fig. 3 dorsal and anal fins of *Sphyraena barracuda*

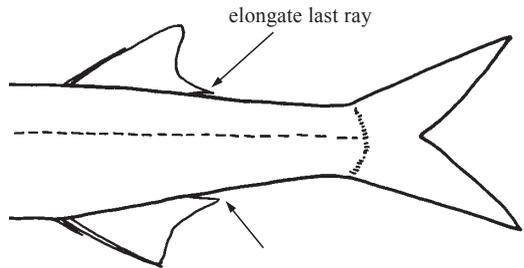


Fig. 4 dorsal and anal fins of *Sphyraena guachancho*

**List of species occurring in the area**

Note: Records of an additional species, the eastern Atlantic - Mediterranean *Sphyraena sphyraena* (Linnaeus) from Bermuda and Brazil are doubtful, and this species is not included here.

The symbol  is given when species accounts are included.

-  *Sphyraena barracuda* (Edwards, 1771).
-  *Sphyraena borealis* DeKay, 1842.
-  *Sphyraena guachancho* Cuvier, 1829.

**References**

De Sylva, D.P. 1984. Sphyraenoidei; development and relationships. *Amer. Soc. Ichth. Herpet. Special Publication* 1:534-540.

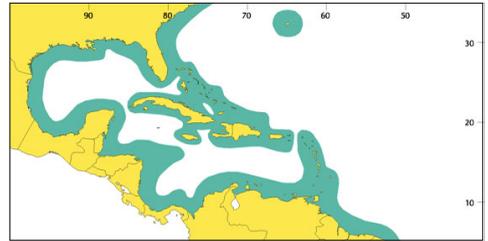
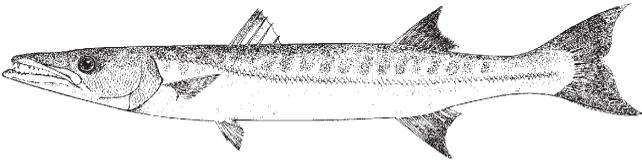
Smith-Vaniz W.F., B.B. Collette, and B.E Luckhurst. 1999. Fishes of Bermuda, history, zoogeography, annotated checklist and identification keys. *Amer. Soc. Ichth. Herpet. Special Publication* 4:424 p.

***Sphyraena barracuda*** (Edwards, 1771)

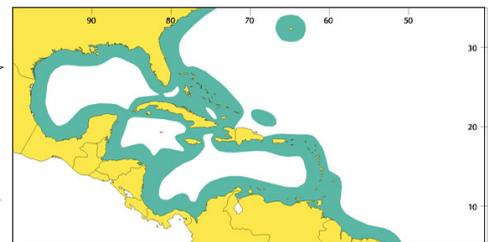
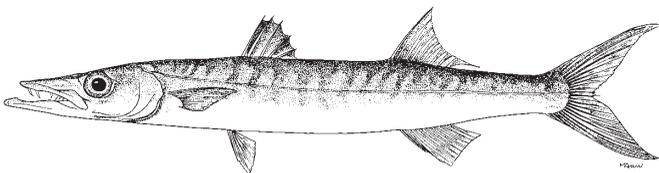
GBA

**En** - Great barracuda; **Fr** - Barracuda; **Sp** - Picuda barracuda.

Maximum size to 230 cm, commonly to 200 cm standard length; world game record 38.5 kg. Small individuals are mostly found in shallow waters over sandy and weedy bottoms, often forming schools while larger individuals (above 65 cm standard length) generally are solitary dwellers of reef areas and offshore waters. However, large schools of adult barracuda have been observed occasionally and are probably connected with spawning behaviour. Feed mainly on various kinds of fishes; also on cephalopods and occasionally shrimps. Main fishing grounds are inshore waters (smaller fish) and coastal and offshore waters (larger fish). Generally not subject to a specific fishery; caught mainly with handlines, trolling gear, bottom trawls, gill nets and trammel nets. Of minor commercial importance; marketed fresh and salted, but its flesh is sometimes considered of second-rate quality. Human consumption of large specimens of barracuda may cause ciguatera poisoning. The toxicity of the flesh seems to be related to the food habits of large fish (their diet includes poisonous reef fishes). Fishing and marketing of *S. barracuda* is prohibited by law in Cuba and in parts of Florida. Common throughout the area, including Bermuda. On the American Atlantic coast it extends from Massachusetts (rare) to southern Brazil; also found in the eastern Atlantic and the Indo-western Pacific. Most previous authors have attributed the name *Esox* (= *Sphyraena*) *barracuda* to Walbaum 1792, but the name correctly dates to the authorship of Edwards in Catesby, 1771 (Eschmeyer, 1998).

***Sphyraena borealis*** DeKay, 1842**En** - Sennet; **Fr** - Bécune chandelle; **Sp** - Picuda china.

Maximum size to 50 cm, commonly 35 cm; world game record 0.93 kg (as *Sphyraena picudilla*). Inhabits coastal waters at depths between 10 and 65 m, often forming large schools; found over all kinds of substrate, but more abundant over muddy bottoms. Juveniles occur in seagrass beds. Feeds mainly on small fishes, squids, and shrimps. Main fishing grounds are coastal areas of continental and island shelves, especially around Cuba and off the Guianas. Caught mainly with trammel nets; also with bottom trawls (especially beam trawls). Of minor commercial importance in the American tropics; marketed fresh and frozen. Although reported to be excellent eating, it is often not regarded as a foodfish. It has never been reported as ciguatoxic. Very common from Nova Scotia and Massachusetts to southern Florida, and throughout the Gulf of Mexico and the Caribbean coast of Central America; also recorded (as *S. picudilla*) from the Bahamas, throughout the Antilles to the Guianas, and extending southwards to latitude 36°S. *Sphyraena picudilla* (Poey 1860), considered by some authors to be a different species, is here regarded as a junior synonym of *S. borealis* (for discussion see Smith-Vaniz et al., 1999).



***Sphyraena guachancho*** Cuvier, 1829

YRU

**En** - Guachanche barracuda (AFS: Guachanche); **Fr** - Bécune guachanche; **Sp** - Picuda guaguanche.  
Maximum size to 50 cm. A schooling species occurring in shallow and generally turbid coastal waters over muddy bottoms, often around river estuaries. Feeds mainly on small fishes and shrimps. Main fishing grounds are coastal waters of the continental and island shelves, particularly the shrimp grounds off the southern coast of Cuba, Campeche, Guianas, and the northern part of the Gulf of Mexico. It is a significant commercial species in the Greater Antilles. Caught mainly with trammel nets and bottom trawls; also with handlines. Marketed fresh and salted. Probably the best eating of Atlantic barracudas, its flesh is considered a delicacy in the West Indies but is not so highly esteemed elsewhere. It has never been reported as ciguatoxic. On the American Atlantic coast it extends from Massachusetts (rare) to Brazil; also common in the eastern Atlantic and throughout the Caribbean Sea and the Gulf of Mexico; records from Bermuda are unsubstantiated.

