Species Fact Sheets

*Scomberomorus maculatus* (Mitchill, 1815)

Synonyms

- *Cybium maculatum* Cuvier, 1829
- *Scomberomorus maculatus* Jordan & Gilbert, 1882

FAO Names

En - Atlantic Spanish mackerel, Fr - Thazard atlantique, Sp - Carite atlántico.

3Alpha Code: SSM    Taxonomic Code: 1750101507

Scientific Name with Original Description


Diagnostic Features

Gillrakers on first arch moderate: 1 to 4 on upper limb; 8 to 13 on lower limb, usually 10 or 11; 10 to 16 total. First dorsal fin with 17 to 19 spines; second dorsal with 17 to 20 rays, usually 18 or more, followed by 7 to 9 finlets; anal fin with 17 to 20 rays, followed by 7 to 10 finlets; pectoral fin rays 20 to 23, modally 21. Lateral line gradually curving down toward caudal peduncle; pelvic fins relatively long, 4.6 to 5.8% of fork length, compared to *S. brasiliensis* (3.6 to 5.9%). Vertebræ 21 or 22 precaudal plus 30 or 31 caudal, total 51 to 53. Intestine with 2 folds and 3 limbs. Colour: sides silvery marked with about three rows of round to elliptical dark spots (orange in life); first dorsal fin black anteriorly and at distal margin posteriorly, basal part of posterior membranes white.

Geographical Distribution
Seasonal along Atlantic coast of the United States from Cape Cod to Miami and Gulf of Mexico coast from Florida to Yucatan.

Habitat and Biology
An epipelagic, neritic species known to migrate in large schools over great distances along the shore. With increasing water temperatures, Atlantic Spanish mackerel move northward, from Florida along the Atlantic coast of the USA to Narraganset Bay, Rhode Island, between late February and July, and back in fall. It overwinters off Florida. There are also schools migrating westwards in early spring, reaching Texas in late March. North-south movements along the Mexican coast occur between August and November and back in March and April.

*S. maculatus* spawn in batches from May to September in waters of less than 50 m depth over the inner continental shelf of Texas, from July to September (or as early as April in some years) off Florida, starting in April off the Carolinas, and from late August to late September in the northernmost part of its range. Larvae have been encountered in surface waters with temperature ranging between 19.6 and 29.8° C and salinities of 28.3 to 37.4° S (McEachran, Finucane & Hall, 1980). As with other members of the genus, food consists mainly of small fishes with lesser quantities of penaeoid shrimps and cephalopods. Clupeoids such as **menhaden**, alevives, thread herring (**Opisthonema**), and anchovies (**Anchoa**) are particularly important forage in North Carolina, Florida, Texas, and Veracruz. The percentage of anchovies consumed is higher for juveniles than for adults.

Size
Maximum size is about 77 cm fork length and 4.8 kg weight (Beardsley & Richards, 1970). Females grow
larger than males. The all-tackle angling record is a 4.02 kg fish with a fork length of 83 cm taken at Kitty Hawk, North Carolina in June 1982. In Florida, females attain sexual maturity between 25 and 37 cm fork length, males between 28 and 34 cm (Klima, 1959).

**Interest to Fisheries**
The Atlantic Spanish mackerel is a valued fish to recreational or commercial fisheries throughout its range. The fisheries along the Atlantic US coast north of southern Florida, and in the Gulf of Mexico are seasonal between spring and late summer or fall, depending on species migrations, while in southern Florida operations are concentrated in the winter months, from October to February or March (Klima, 1959). Since 1950, over 92% of the total US catch has been landed in Florida (Trent & Anthony, 1979). The species is second in volume among Mexico’s Gulf of Mexico fisheries with an average annual production of 4 900 metric tons in the period from 1968 to 1976 (Doi & Mendizabal, 1979), most of which is landed in the state of Veracruz (80%). Catches from Campeche amounted to 15%, and those from Yucatan to 5% of the Mexican total. After substracting the catches reported as *S. maculatus* that should be attributed to *S. brasiliensis*, *S. cavalla*, and *S. regalis* (in the case of catches reported by Cuba and the Dominican Republic), the world catch of Atlantic Spanish mackerel ranged between about 15 000 t in 1975 and 14 000 t in 1981 (FAO, 1983). The early fishery in the USA utilized *trolling lines*, *gillnets*, and *pound nets* (Earll, 1883). Fish taken by the commercial gillnet fishery in Florida range between 30 and 65 cm fork length, larger than *hooks and lines* caughtfish (21 to 69 cm fork length). The minimum acceptable fork length in those days was 30 cm. Gillnet catches comprised predominantly 3 year old fish from 36 to 41 cm fork length (Klima, 1959). Larger vessels now entering the fishery have power-rollars to mechanically retrieve the nets which are mostly made of nylon; airplane spotter pilots locate the fish (Trent & Anthony, 1979). Recreational anglers catch Spanish mackerel from boats while *trolling* or *drifting* and from boats, piers, jetties, and beaches by casting, livebait fishing, jigging, and drift fishing (Trent & Anthony, 1979). Fishermen in Veracruz employ *beach seines* (chinchorros playeras), gillnets (redes agalleras), trolling lures (curricanes), and trap nets (almadrabas). Nearly all the catch is consumed fresh, frozen, or smoked (Lyles, 1969). A few attempts have been made at canning Atlantic Spanish mackerel but the product has not been widely accepted (Lyles, 1969). Frozen fish begin to show signs of rancidity after as little as three months time in frozen storage. Therefore, they are now being treated with antioxidants and EDTA (Farragut, 1972; Hale, 1979). The total catch reported for this species to FAO for 1999 was 10 046 t. The countries with the largest catches were Mexico (8 382 t) and USA (1 362 t).
COLOMBIA : Sierra.
CUBA : Sierra.
GERMANY : Gefleckte Königsmakrele.
MEXICO : Carite, Pintada.
POLAND : Makrela hiszpanska.
SOUTH AFRICA : Spaanse makriel, Spanish mackerel.
USA : Spanish mackerel.
former USSR : Ispanskaya makrel, Korolevskaya pyatnistaya makrel, Pyatnistaya makrel.
VENEZUELA : Carite, Sierra pintada.

Remarks
Three other species have been confused with *S. maculatus* by some workers, *S. tritor* in the eastern Atlantic, *S. sierra* in the eastern Pacific, and *S. brasiliensis* along the Caribbean and Atlánatic coasts of Middle and South America.

Source of Information

Bibliography
Alcantara, (1972)
Berrien & Finan, (1977a)
Collette, (1978, Species Identification Sheets, Western Central Atlantic)
Earll, (1883)
Friusche, (1978, on larvae and juveniles)
Klima, (1959, Florida)
MArquez, (1973, Mexico)
Mendoza, (1968, Mexico)
Powell, (1975, Florida)