SCOPHTHALMIDAE

Windowpanes

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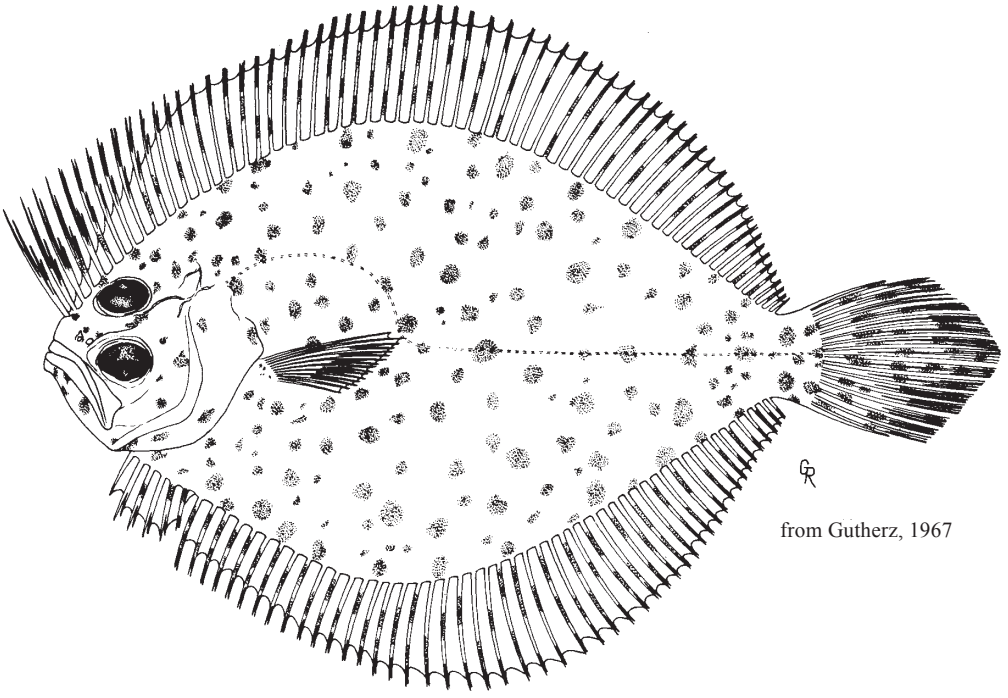
A single species occurring in the area.

Scophthalmus aquosus (Mitchill, 1815) FLD

Frequent synonyms / misidentifications: None / None.

FAO names: En - Windowpane; **Fr** - Turbot de sable.



from Gutherz, 1967

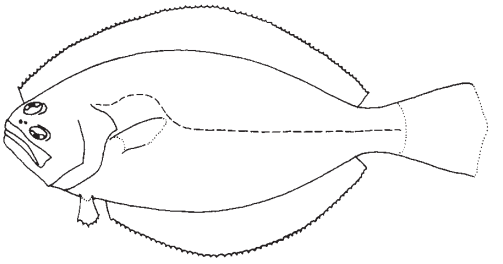
Diagnostic characters: Body rhomboid-shaped and deep; body depth 60 to 70% standard length, body strongly compressed, nearly translucent in life. Anterior profile concave with slight notch anterior to upper eye. Head length 25 to 30% standard length. Snout length greater than eye diameter. **Eyes on left side, large and prominent, eye diameter 17 to 25% head length, eye diameter greater than interorbital width**. Eyes separated by flat space of moderate width, interorbital region similar in both sexes. No rostral or interorbital spines. **Mouth large**, upper jaw length about 45% head length. Upper jaw extending posteriorly to vertical through middle of eye or beyond. A bony tubercle at anterior end of ocular-side maxilla. Teeth about equally developed on both sides, small, curved, pointed, in narrow bands in both jaws, no canines, with patch of teeth on vomer. Gill rakers long and slender, about 8 on upper limb and 22 to 26 on lower limb of first gill arch. Branchial septum without foramen between lower pharyngeals and urohyal. **Dorsal fin commencing in front of anterior nostril of blind side and well in advance of eye; most fin rays branched. Anterior dorsal-fin rays long and branched, slightly longer than succeeding rays, and mostly free from membrane for the greater part of their lengths. Dorsal-fin rays 64 to 71**. Dorsal and anal fins not continued onto blind side of caudal peduncle. **Tip of first interhaemal spine not projecting in front of anal fin. Anal-fin rays 48 to 55**. Pectoral fins unequal, that of ocular side slightly larger, middle rays branched. Ocular-side pectoral fin triangular, with 11 fin rays. **Bases of both pelvic fins extending forward onto urohyal**. First ray of right pelvic fin opposite third ray of left pelvic fin. Caudal fin moderately long, rounded, or obtusely pointed. **Scales small, cycloid. Lateral line equally developed on both sides of body, with prominent arch above pectoral fin; lateral-line scales 85 to 95**. Vertebrae 11 + 23 to 25. Anus on blind side, above first ray of anal fin. **Colour:** ocular side light to medium brown with many small dark spots and numerous larger spots that continue onto dorsal, anal and caudal fins (spots somewhat larger on median fins compared with those on body). Pectoral fins also spotted. Blind side uniformly whitish.

Similar families occurring in the area

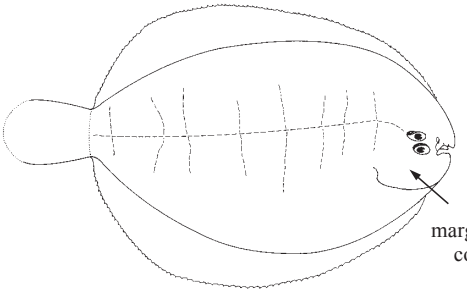
Bothidae, Paralichthyidae, and Cynoglossidae: flatfishes with eyes on left side; also, dorsal and anal fins confluent with caudal fin and preopercular margin hidden in Cynoglossidae.

Achiridae: flatfishes with eyes on right side; margin of preoperculum not free and covered by skin and scales.

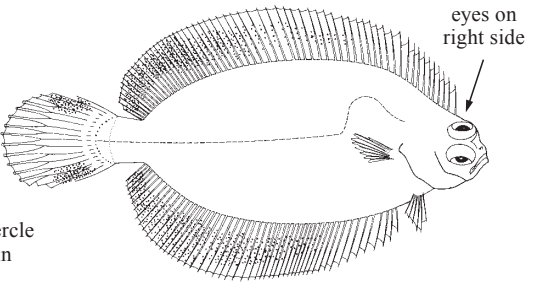
Poecilopsettidae: flatfishes with eyes on right side.



Bothidae



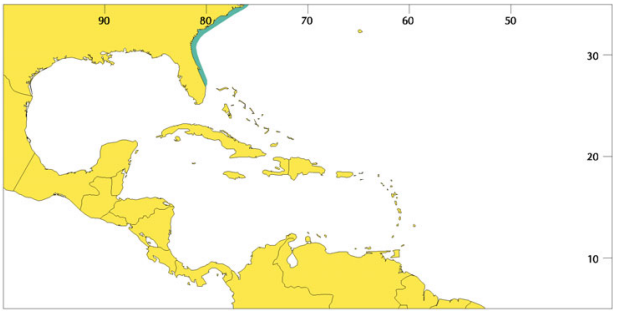
Achiridae



Poecilopsettidae

Size: Maximum size 46 cm total length.

Habitat, biology, and fisheries: Generally inhabits sand to sand/silt or mud sediments in relatively shallow waters (less than 110 m); most abundant from 1 to 2 m to usually less than 56 m. Occurs in most bays and estuaries along USA coast south of Cape Cod; north of Cape Cod usually inhabits nearshore waters. Adults are euryhaline, occurring at salinities of 5.5 to 36.0 ‰. Sensitive to hypoxic conditions; few individuals collected where DO concentrations were less than 3 mg/l. Juveniles migrate from shallow inshore waters to deeper offshore waters as they grow. Juveniles on Georges Bank (less than 60 m) undergo seasonal movements to deeper waters along southern flank of the Bank during late autumn as bottom temperatures drop, and overwinter in deeper waters until late spring. Spawning occurs throughout most of year, beginning in February or March in inner shelf waters, peaking in Middle Atlantic Bight in May, extending onto Georges Bank during summer, and continuing into autumn in southern portions of the range. Species apparently has a split spawning season in the Middle Atlantic Bight with peaks in spring and autumn. Some spawning may occur in high salinity portions of estuaries in Middle Atlantic Bight and in coastal habitats of North and South Carolina. Spawning occurs in the evening or at night on or near the bottom at temperatures ranging from 6 to 21 °C. Eggs are buoyant and spherical, 0.9 to 1.4 mm in diameter, with a single oil globule (0.2 to 0.3 mm in diameter). Females are sexually mature at 3 to 4 yr (about 22 cm total length). Juveniles and adults feed on small crustaceans, especially mysids and decapod shrimps, various fish larvae, and small fishes. Major predators, particularly of juveniles, include spiny dogfish, thorny skate, goosefish, Atlantic cod, black sea bass, weakfish, and summer flounder. Seldom exceeds weights of 350 to 400 g. Not targeted by commercial fisheries, but caught as bycatch in bottom trawl fisheries and made into fishmeal. Increased landings during the mid-1980s in the northern portions of the range probably reflect an expansion of the fisheries offshore and increased targeting of alternative species as stocks of other, more marketable, flatfish decreased. Total landings in the Gulf of Maine-Georges Bank region peaked in 1991 (about 2 800 t), then decreased significantly and have remained at less than 1 000 t; stock is considered to be overexploited.



Distribution: Atlantic coast of North America from Gulf of St. Lawrence and Nova Scotia to Florida.