

Become Fluent in Flounder Identification

Anglers love to catch a flounder.

In fact, flounder consistently ranks as the top species targeted by recreational fishermen in North Carolina coastal waters.

Anglers typically catch three different species of flounder in North Carolina waters: southern, summer, and gulf. While they may look alike to the untrained eye, these species exhibit distinctive markings, and anglers need to know how to distinguish between them.

Why identify flounder?

The three species don't just vary in appearance, they move in different migration patterns and are managed by separate government fisheries agencies and fishery management plans. This means researchers need to study them independently.

One of the ways the N.C. Division of Marine Fisheries does research is by collecting information on recreational fishing catch and effort through in-person and mail surveys. Staff talks to more than 20,000 anglers each year on the beach, at the piers and at boat ramps to find out what they caught, what they threw back, where and how long they fished and other information. Anglers who can identify the species of flounder caught will help scientists better understand the status of these fish stocks and how to manage the recreational flounder fishery.

Southern Flounder

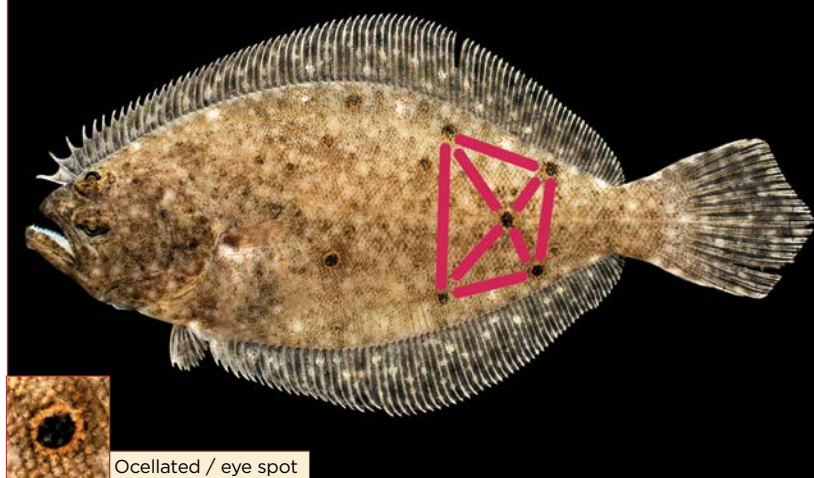


Non-ocellated spot



- This is the most common flounder caught in North Carolina, especially in estuarine waters.
- Non-ocellated spots cover the body
- Upper jaw extends to beyond rear margin of eye
- Eight to 11 gill rakers on lower limb of first gill arch
- Sixty-three to 74 anal fin rays

Summer Flounder

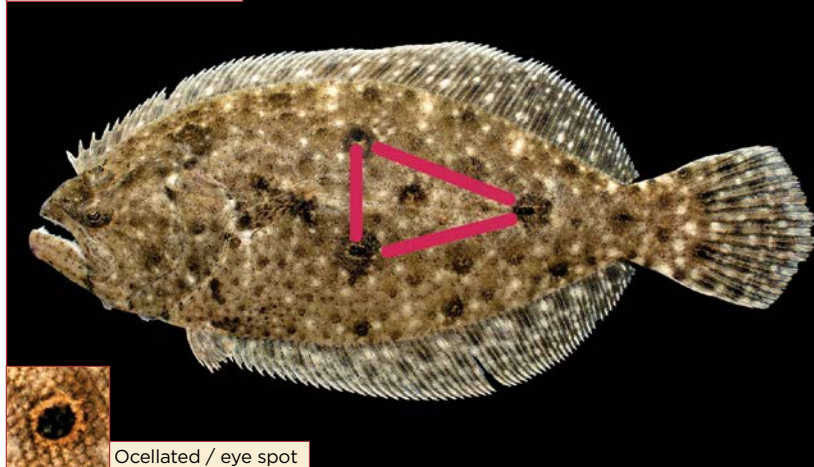


Ocellated / eye spot



- This species is commonly seen around inlets, in the ocean and in estuarine waters
- At least five ocellated spots on body — five prominent ocelli form the pattern from the five-side of a die
- Upper jaw extends to rear margin of eye
- Thirteen to 18 gill rakers on lower limb of first gill arch
- Sixty to 73 anal fin rays

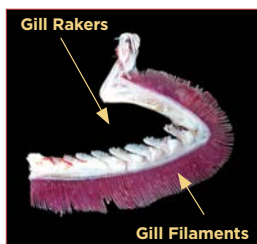
Gulf Flounder



Ocellated / eye spot



- This species is occasionally seen in North Carolina waters, usually in the ocean
- Three prominent ocellated spots form triangle on body, apex towards caudal fin (can have more than three over entire body, but three will be prominent)
- Upper jaw extends beyond rear margin of eye
- Nine to 12 gill rakers on lower limb of first gill arch
- Fifty-six to 63 anal fin rays



What are gill rakers?

Gill rakers are bony protrusions that extend outward from the gill arch. They appear in this image as white finger-like projections on the top of the gill arch. They are used differently in various fish species, depending on their feeding habits. In flounder, they work to guide baitfish into the esophagus and to protect the gill filaments from damage. Gill filaments are the thin, red projections on the bottom of the gill arch. Gill filaments are used in gas exchange and are red with blood.