

A RAPID FIELD GUIDE  
TO THE IDENTIFICATION OF FLOUNDERS  
OF THE GENUS (Paralichthys)  
IN VIRGINIA'S WATERS

Prepared for the Virginia Marine Resources Commission  
by the  
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Three species of the flounder genus Paralichthys are, or could be, taken in Virginia's waters. These include the summer flounder or fluke, Paralichthys dentatus, the southern flounder, Paralichthys lethostigma, and possibly the Gulf flounder, Paralichthys albigutta. Of the three, the summer flounder is most common in Virginia's waters, with occasional reports of the southern flounder, which is most common south of Cape Hatteras. The Gulf flounder is the most common species in the Gulf of Mexico, with occasional reports up to Cape Hatteras. It may occur as a straggler north of the Cape, and so is included here. Their physical appearance is similar; and has caused some concern among Virginia Marine Resources Commission inspectors charged with enforcing Section 28.1-49.1 (Size of fish that may be caught in tidal waters; purchase or possession of undersized fish) of the Code of Virginia. Section 28.1-49.1 states that "...it is unlawful for any person to take or catch and retain possession of any...summer flounder (fluke) which is less than twelve inches in length." The law does not apply to the other two species. A means of rapidly differentiating the three species in the field was needed. This need, expressed to VIMS by an inspector, prompted the development of this pictorial guide.

The diagnostic characteristics for all three include dorsal color patterns and gill raker counts. Gill raker counts however, are time consuming and for these species the color patterns distinct. Consequently, the color patterns are the most appropriate diagnostic field characteristic.

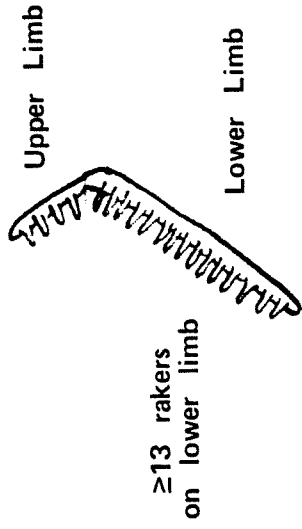
Summer Flounder: Ocellated spots present, and forming a unique "triangle" near the tail, the apex towards the head (Figure 1).

Southern flounder: No ocellated spots present, spot pattern blotchy (Figure 2).

Gulf flounder: Ocellated spots form distinct mid-body triangle, the apex toward the tail (Figure 3).

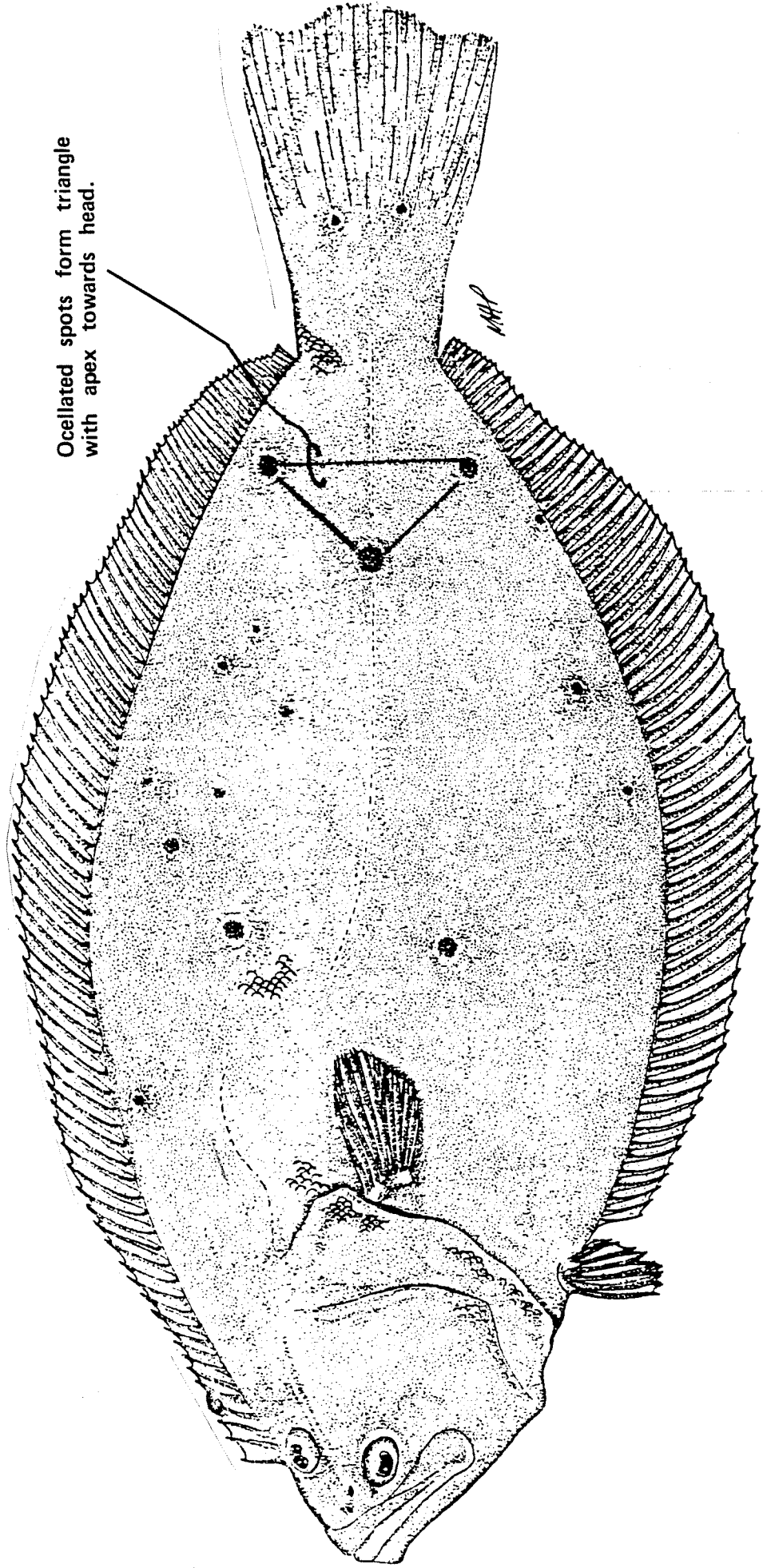
**DIAGNOSTIC CHARACTERISTICS**

1. Ocellated spots present, and form unique triangle as shown.
2. Gill rakers on lower arch number 13 or greater ( 13 - 18 ).



**FIRST GILL ARCH**

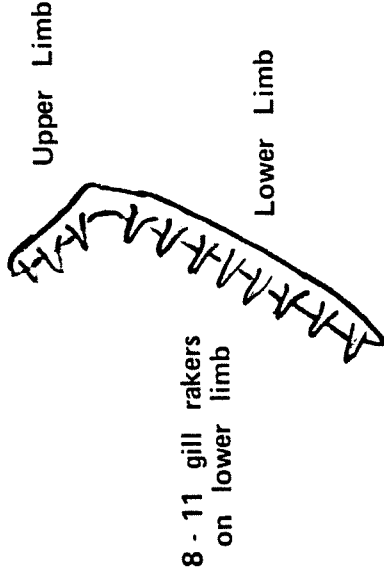
Ocellated spots form triangle with apex towards head.



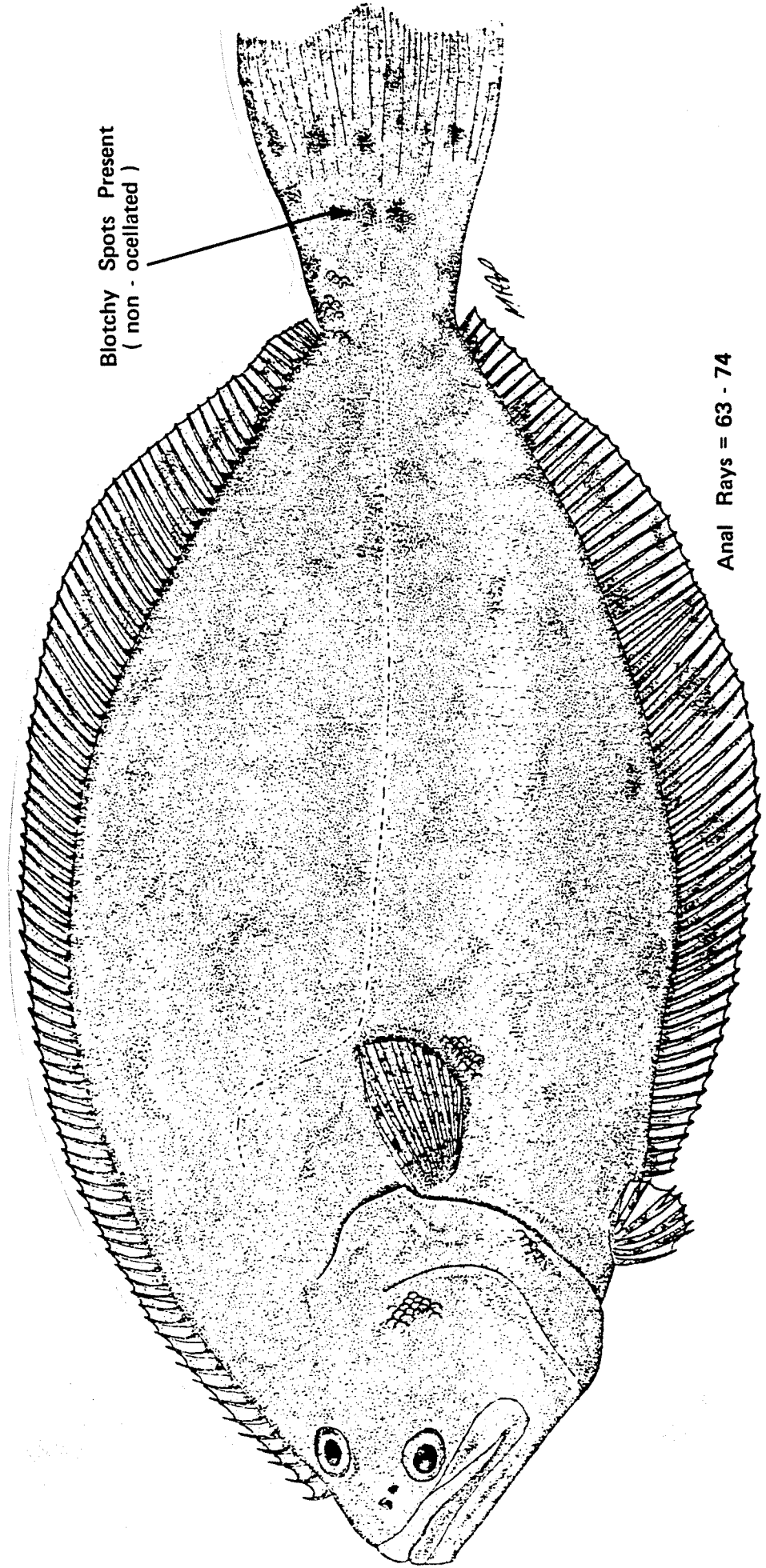
**Paralichthys dentatus (Summer Flounder or Fluke)**

**DIAGNOSTIC CHARACTERISTICS**

1. No ocellated spots present - spots blotchy.
2. 8 - 11 gill rakers on lower limb of gill arch, and 63 - 74 anal rays.



FIRST GILL ARCH



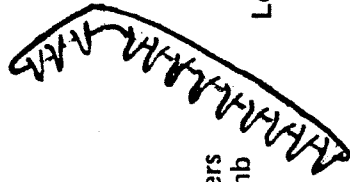
Blotchy Spots Present  
( non - ocellated )

Anal Rays = 63 - 74

Paralichthys lethostigma (Southern Flounder)

**DIAGNOSTIC CHARACTERISTICS**

1. Ocellated spots form distinct triangle as shown.
2. 9 - 12 gill rakers on lower limb of first gill arch plus 53 - 63 anal rays.



Upper Limb

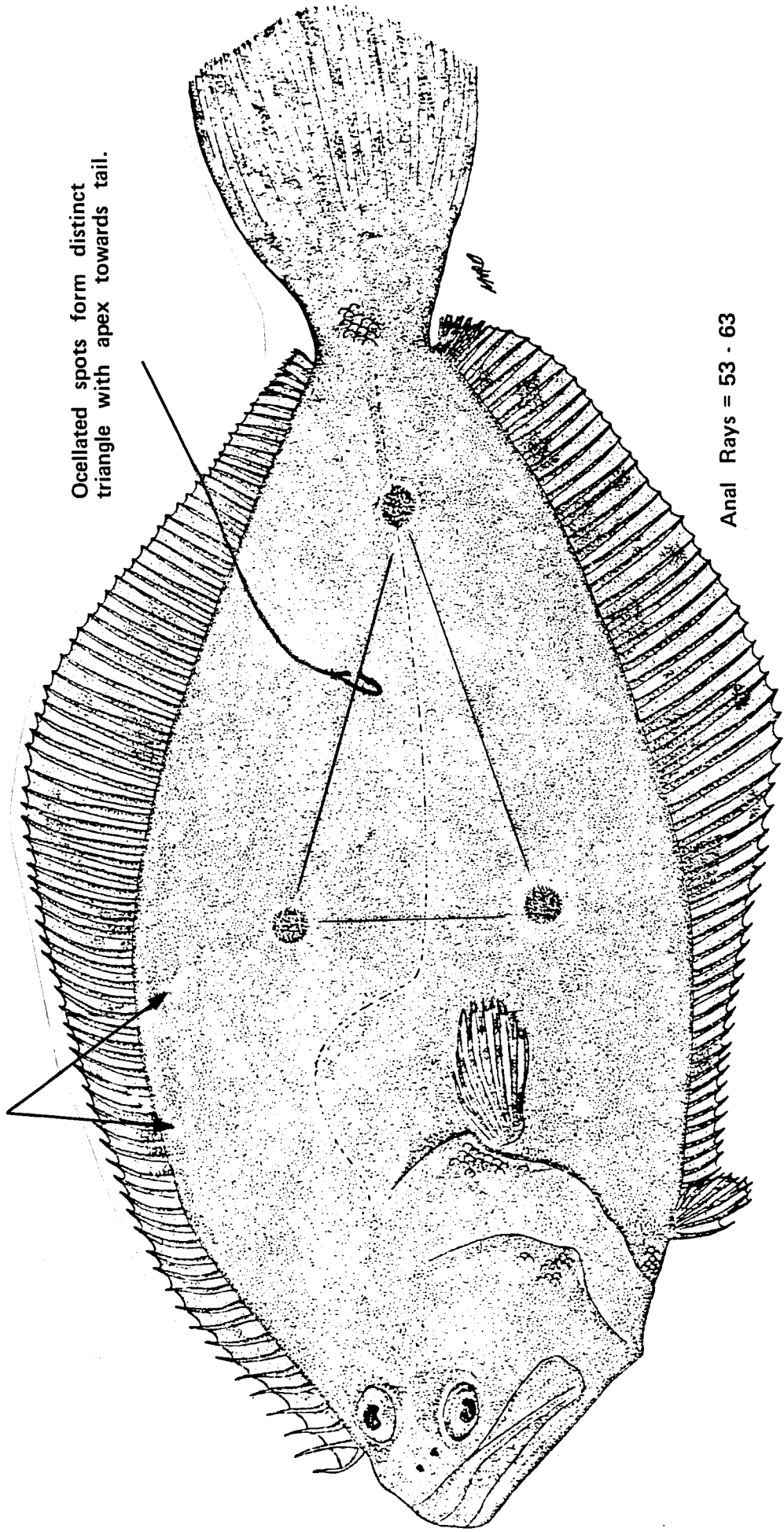
Lower Limb

9 - 12 gill rakers  
on lower limb

FIRST GILL ARCH

Body usually peppered  
with white spots.

Ocellated spots form distinct  
triangle with apex towards tail.



Anal Rays = 53 - 63

*Paralichthys albigutta* (Gulf Flounder)