

**NOTES ON FISHES OBSERVED AT THE HEAD OF CHESAPEAKE BAY
IN THE SPRING OF 1882; AND UPON OTHER SPECIES OF THE SAME
REGION.**

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Early in June, 1882, the writer made a short visit to the station of the United States Fish Commission near Havre de Grace, Maryland, while the work of hatching eggs of the shad and other economic fishes was in progress. An immense seine was in use here by the Commission, and in it were captured most of the species which are the subjects of the present brief sketch. Information concerning species not seen by me, but perfectly well known to persons employed at the station, and taken in the seine previous to the time of my visit, or by some other means of capture, was furnished by one of the most experienced of the fishermen, and is here reproduced. The species marked by an asterisk were taken June 9 and 10 and examined after they reached the Museum, where they are now preserved. The common names given are in use at Havre de Grace.

1. *Achirus lineatus* (L.) Cuv. *Hogchoke.*

2. *Liostomus xanthurus* Lac. *Spot.*

The "spot" is said to occur only in very dry seasons.

3. *Lepomis auritus* (L.) Raf. *Sun-fish.*

Said to be present throughout the year.

4. * *Lepomis gibbosus* (L.) McKay. *Moccasin.*

Said to be present all the year.

5. *Micropterus dolomiei* Lac. *Black Bass.*

6. * *Perca americana* Schranck. *Yellow Perch; Ring Perch; Yellow Ned.*

In February yellow perch come into the creeks to spawn; the spawning season ends in March, when the fish go out to the flats. They remain in the vicinity all the year. The maximum weight here is about 2 pounds.

7. *Stizostedium vitreum* (Mitch.) Jor. & Copel'd. *Salmon Trout; Salmon.*

This species is highly esteemed in the Susquehanna. In the year 1862 or 1863 an individual weighing 8 pounds was sold at Bainbridge, Pennsylvania, for \$2.

8. *Roccus saxatilis* (Bl. Schn.) Jor. & Gilb. *Rock.*

Rock-fish are said to be present from April to October, and to be most abundant in August and September on the flats in the celery grass. They are always plentiful, occurring in hundreds of thousands. They will live in "live cars," and a great many are so kept now. The species reaches a length of 4 feet and sometimes weighs 60 pounds.

9. **Roccus americanus* (Gmel.) Jor. & Gilb. *White Perch.*

This fish is found from April to October, and is gravid in May and June. It is most plentiful in August and September.

10. *Pomatomus saltatrix* (L.) Gill. *Tailor.*

In very dry seasons small examples of this species are found here.

11. **Tylosurus marinus* (Bl. Schn.) Jor. & Gilb. *Silver Gar.*

The silver gar makes its appearance in April. A gravid female was seen June 9.

12. **Esox reticulatus* Le Sueur. *Pickrel.*

The species is said to remain throughout the year.

13. *Fundulus diaphanus* (Le S.) Agassiz.14. *Brevoortia tyrannus* (Latrobe) Goode. *Bug-fish; Alewife.*

The species occurs here only in very dry seasons.

15. **Clupea sapidissima* Wilson. *Shad.*

Shad measuring $4\frac{1}{2}$ inches in length were seined June 10. It is said that quantities of the young about 4 inches long were seen in 1882 with the adults. The species appears in April and spawns on the flats. Shad have been caught plentifully in July; on the 3d of the month, one year, a man caught 44 in a gill-net in the swash just below the light-house. The shad has until recently been considered one of the weakest of fishes, and it was astonishing to see the treatment which it survived at Battery station; examples were taken from the seine, carried several steps to the pool in dip-nets, afterward seined out of the pool and pressed to see if the eggs were mature, and then returned to the pool, where they seemed to suffer no injury from the handling they had received. Sometimes, in taking shad from the gill-nets, lampreys, presumably the young of *Petromyzon marinus*, are hauled in fastened to the side of the fish.

16. *Clupea vernalis* Mitchill. *Branch Herring.*

The branch alewife first appears in February. It comes along shore and runs up all the small streams; it spawns in the creek, and departs in May. Plenty of young alewives $2\frac{1}{2}$ to 3 inches long are seen in the creek in May. On the 10th of June a young branch alewife $4\frac{1}{5}$ inches long was caught in the pool with a dip-net. Many of the young were seen in this inclosure.

17. **Clupea æstivalis* Mitchill. *Glut Herring.*

These appear late in April, coming up through the deepest water. They spawn on the flats and go up the river, departing in June. A small number were caught in the large seine June 9.

18. **Clupea mediocris* Mitchill. *Hickory Shad; Hickory Jack.*

This species comes early in March; it spawns in the creek, with the branch alewife, on gravel and rocks, well out of the tide. It leaves in May.

19. *Dorosoma cepedianum* (Le S.) Gill. *Mud Shad*.

The mud shad is a permanent resident, but it is said to be rare.

20. * *Carpiodes cyprinus* (Le S.) Agassiz. *Carp Sucker*.

This handsome sucker is considered a pretty good food-fish, and is often supposed to be the German carp (*Cyprinus carpio*.) It is comparatively abundant.

21. * *Catostomus teres* (Mitch.) Le S. *Black Mullet*.

This species arrives in February, spawns in creeks on gravel and rock bottom until March, and departs in May or June. It reaches 18 inches in length and 3 pounds in weight.

22. *Catostomus nigricans* Le Sueur. *Horn Mullet; Stone-roller*.

23. * *Moxostoma macrolepidotum* (Le S.) Jor. *Bay Mullet*.

24. * *Semotilus bullaris* (Raf.) Jor. *Fall-fish; Chub*.

25. *Notemigonus chrysoleucus* (Mitch.) Jor. *Roach*.

This is said to be present all the year.

26. * *Amiurus catus* (L.) Gill. *Cat*.

27. * *Amiurus albidus* (Le S.) Jor. *White Cat*.

28. * *Anguilla rostrata* (Le S.) De Kay. *Eel*.

The eel is a permanent resident. It is very destructive to spawning shad when these are caught in gill-nets, often completely disemboweling the fish before they can be taken from the nets.

A very effective trap for the capture of eels is in use at Havre de Grace. It consists of a keg or barrel with gunny sack at one or both ends. In one end there is a funnel made of a stocking leg, or anything of a similar form that may be at hand, and this is fastened to the opposite end by four cords. Auger-holes are bored in the staves. Bricks or stones are placed inside to sink the trap. A line is attached for the purpose of lowering the contrivance, and to this a buoy is fastened to mark the place of setting. A small trap-door is made in the top of the keg to put in bait and remove the eels. Fish entrails and heads or stale fish are used for bait.

29. *Lepidosteus osseus* (L.) Agassiz. *Green Gar*.

This gar comes in May and is not plentiful.

30. *Acipenser oxyrhynchus* Mitchill.

A sturgeon which I suppose to be this species is common at Havre de Grace, coming in June or July, running into creeks, and leaving in September.

31. *Petromyzon marinus* L. *Sea Lamprey; Shad Lamprey*.

The sea lamprey comes up into the river to spawn about the time shad appear. The young of this species is apparently the "shad lamprey" of the fishermen.

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