REPRINT FROM

CALIFORNIA FISH and GAME

"CONSERVATION OF WILDLIFE THROUGH EDUCATION"

VOLUME 48 JANUARY, 1962 NUMBER 1

# OBSERVATIONS ON THE FOOD HABITS OF JUVENILE WHITE STURGEON [1]

The stomachs and esophagi of 30 young-of-the-year white sturgeon (*Acipenser transmontanus*) were obtained at the United States Bureau of Reclamation's Tracy Fish Collecting Facility on Old River, eight miles northwest of Tracy, San Joaquin County, during August, September, and October of 1956 and 1958. All fish were preserved in 10 percent formalin. Their ages were determined by using cross sections of pectoral rays (Pycha, 1955).

The organisms in the stomach and esophagus of each sturgeon were identified and counted, and the volume of the contents was measured. The volume of each species of food material found in the stomach was determined by displacement in alcohol after the excess water had been removed with blotting paper.

All of the fish examined were in their first year of life (age 0), and their mean fork length was 8.0 inches.

Nine of the 30 stomachs examined were empty. The food in the remaining 21 stomachs is summarized in Table 1.

TABLE 1
Food Items Found in Juvenile Sturgeon

| Food | Frequency of occurence (percent) | Stomach contents: Number: Range | Number: Mean | Number: Total | Volume: Range |
|---|---|---|---|---|---|
| *Corophium spinicorne* | 90 | 1–45 | 6 | 108 | Trace—0.1 ml. |
| *Neomysis mercedis* | 10 | 1 | 1 | 2 | Trace |
| Tendipedidae | | | | | |
| Larvae | 19 | 1–6 | 2 | 9 | Trace—0.05 ml. |
| Adult | 5 | 1 | 1 | 1 | Trace |

The stomachs contained only small amounts of food—the greatest volume in any one being 0.1 ml. This stomach contained 45 *Corophium spinicorne,* along with a trace amount of body and appendage parts. All others contained 14 organisms or less.

This sample is so small that no general conclusions may be made about the food habits of juvenile sturgeon. However, it would appear that their primary food in the southern portion of the Sacramento-San Joaquin Delta during the late summer and fall is the amphipod *Corophium spinicorne.* The shrimp *Neomysis mercedis,* and midge or

[1] This work was performed as part of Dingell-Johnson Project California F-9-R, "A Study of Sturgeon and Striped Bass," supported by Federal Aid to Fish Restoration funds.

tendipedid adults and larvae appear to be of lesser importance in the diet.

## REFERENCES

Pycha, R. L.
1955. A quick method of preparing permanent fin-ray and spine sections. Prog. Fish-Cult., vol. 17, no. 4, p. 192.

*—Max R. Schreiber, Inland Fisheries Branch, California Department of Fish and Game, December 1960.*

o

*printed in* CALIFORNIA STATE PRINTING OFFICE
55059 12-61 225