seem to indicate that the muttonfish is not a heavy fish in relation to its length, and the increase in weight per year is not great. The preceding table shows the relations of weight to age and length.

## **REPRODUCTIVE CAPACITY**

Counts of the number of eggs in the ovaries of female muttonfish show an average of 1,800 eggs per individual. This number is small in comparison with the egg production of spawning fish which give no eare to their eggs or young, for giving birth to living young eliminates the ordinary immense egg wastage. This is but another illustration of the biological principle—the better the nurture, the fewer young necessary to maintain the race. The enemies of the muttonfish are probably numerous, especially in its early years. Sculpins, sea-ravens, and skates are known to feed on the.n.

## FOOD

Examination of the digestive tracts of 70 specimens taken from May 31 to October 15, 1918, in Passamaquoddy bay region shows that the chief article of food is sea-urchins. One specimen 24 inches in length taken in the St. Croix river had eaten over 51 small seaurchins. Other forms found in abundance in the digestive tracts were barnaeles, snails and small clams. Some of the less abundant forms were hermit erabs, whelks, serpent stars and annulate worms. This shows that the muttonfish is a bottom feeder but is not a scavenger.

## CAPTURE

The muttonfish is regularly taken on set lines put out for haddoek, cod, etc. In the Passamaquoddy bay region in a eatch of from 80 to 100 haddock there may be from 6 to 12 muttoufish. The following are the available records of set line catches:—

1917-Off Cheticamp (Cape Breton,) 3 sets squid and mussel	bait, aver	. 61	ær	3000	hooks.
1917—Passamaquoddy bay, 1 set herring bait.	average	105	per	3000	64
1918 1918 1918 1919 1919 1919 1919 1919		- 6	**	3000	61
1918—St. Croix river, 10 sets "		12		3000	•
1918—" " i9 " clam bait				3000	4.6
1918-Wolve: islands (Bay of Fundy), 1 set herring bai				3000	6.
1918—Miramichi bay, 5 sets gaspereaux bait	(1	9	"	3000	**

In 1918 in Miramichi bay lobster traps usually contained one or two specimens. No records have been obtained for the trawling vessels off the Nova Scotia coast.

## MARKETING

The large head which might be considered objectionable by some purchasers would probably have to be removed before placing the fish on the markets. Removal of the head and internal organs