

**INDUCEMENTS OFFERED FISHERMEN TO FURNISH SHAD EGGS
FOR THE UNITED STATES COMMISSION OF FISH AND FISHERIES.**

By SPENCER F. BAIRD, COMMISSIONER.

The co-operation of all fishermen is cordially invited in this effort to increase the supply of shad.

A liberal price will be paid to all gillers, pound net, and seine fishermen for eggs of the shad taken according to these instructions, and delivered on board the steamers of the Commission in their daily trips; by waving the hat or other signal the steamers will run down to the boats or land at the shores:

The necessary pans, trays, dippers, etc., will be furnished to responsible parties by application to the Armory Building, Washington, D. C., or on board the steamers. They must be returned or accounted for at the end of the season.

The accounts of each man will be kept separately, and the eggs measured at Washington by competent persons employed by the U. S. Fish Commission for that purpose.

HOW TO STRIP SHAD.

As soon as the shad are taken in the nets or seines, those which are ripe or soft should be selected, taking up the shad one by one. If ripe, the eggs will flow freely from the shad when a gentle pressure is applied to the belly of the fish; if unripe, the eggs will not flow at all; if the eggs are only nearly ready they will come forth with difficulty, in masses; such fish should not be taken.

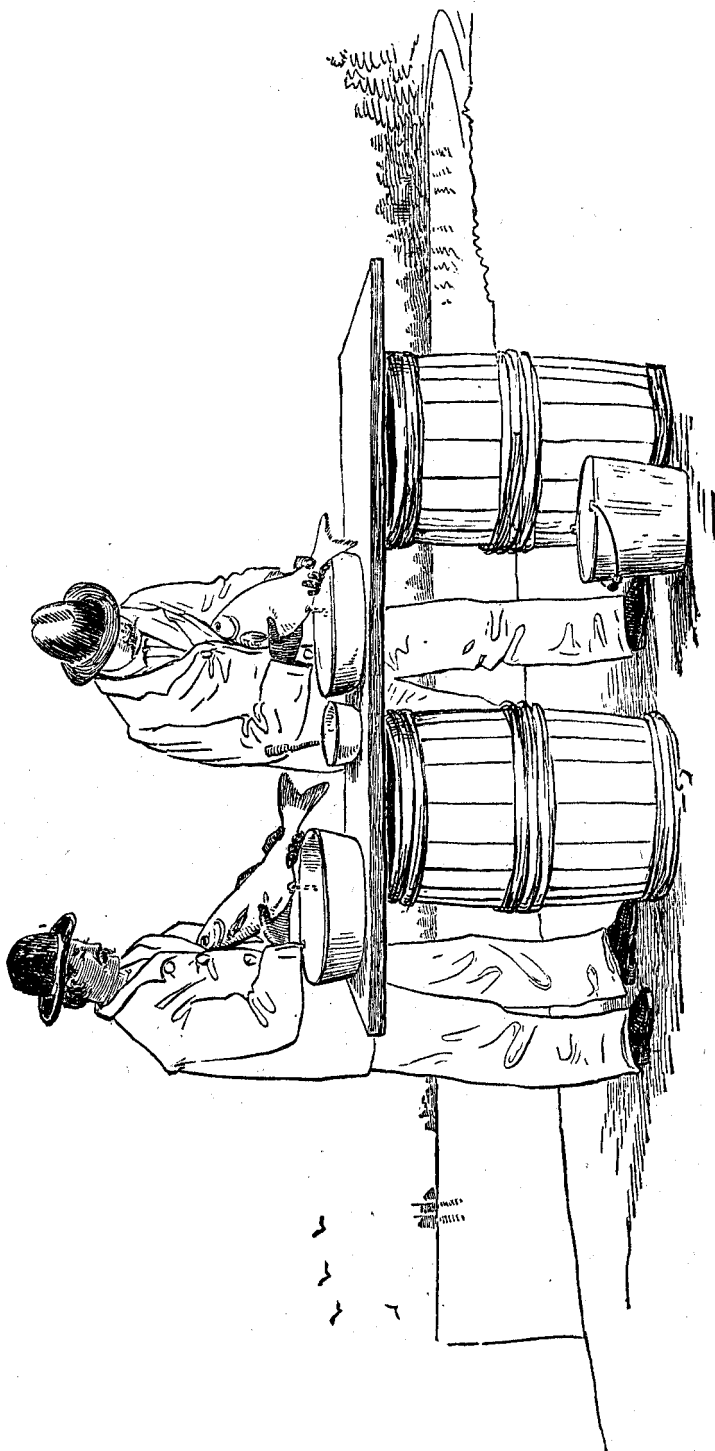
A short time before the shad spawns, clear eggs of large size will be found in the roe, while the rest is still hard; these become more and more numerous; after a time they separate and fall apart, a liquid stream of eggs flowing from the fish with the slightest pressure; unripe eggs will not flow at all.

Each person who takes the eggs should be provided with a tin pail, a pan, and a dipper.

The milter, or male shad, is rather smaller than the female; the sex will be known by the flow of milt from the fish. A very small quantity of milt will impregnate a large number of eggs; about one male in good condition to two or three females.

The *spawner*, or *female shad*, is easily known by its size and full appearance.

When a female is found from which the eggs flow freely when a gentle pressure is applied, *take the fish carefully in the hands, grasping it with the left hand close around the tail, the head of the fish being crowded closely against the body of the person, while with the thumb and forefinger of the right hand apply a slight pressure to the belly of the fish.* (See sketch.) A



stripping movement is executed, which causes the eggs to flow rapidly into the pan, which should be clean and without water. When all the spawn is taken it will be shown by the blood appearing among the eggs. Take two or three females in this manner, then pick out a male, handle him in the same way, forcing out two or three jets of milt upon the eggs, swaying the pan gently to and fro; a little water should be added from time to time until the eggs rise, which will be in the course of half an hour; the scales and blood must be rinsed off. After they are impregnated, the eggs will be seen to have increased in size; WHEN they have risen they can either be put on the trays or else kept in the pan. Eggs taken at different times must be kept in separate vessels.

To put the eggs on the trays.—Wet the cotton cloth, spread it out smoothly over the tray, and pour the eggs carefully upon it, not more than two layers deep; by keeping the cloth moistened from time to time, eggs can be kept in good condition for twenty-four hours.

When eggs are kept in the pans they should be filled with water, which ought to be changed at least once every hour; *the water should be poured in on the side of the pan in order not to injure the eggs.*

In stripping fish many scales will come off and fall into the pan unless great care is taken. The scales should be gathered and thrown away by a quick movement of the hand, otherwise the eggs will become attached to them.

All eggs should be as clean as possible, and free from dirt, blood, or scales; they should be kept free from exposure or violent shocks.

Bad eggs will float on top; they are white, being called water-blown; they should be gathered and thrown away.

Good eggs will be clear and like crystal in appearance; when they have risen they will feel like shot to the hand if they are gently stirred.

Sometimes eggs assume this appearance when they are not properly impregnated. In such cases they are worthless and will not hatch. It is, therefore, impracticable to determine with certainty that eggs are properly impregnated until development has advanced somewhat, and the formation of the fish is discernible in the egg.

The utmost pains must be taken to keep the fish from slipping out of the hands, or they will fall into the pan, throw a large number of the eggs out, and damage the rest.