

same effect upon the latter, and Mr. Sloane thinks that this discovery should be further investigated, and that it may serve to give a finer flavor to fish, and to prevent their too rapid increase in fish-ponds, where their number is too large as it is."

WEDDIGE.

OSNABRÜCK, *December 15, 1880.*

THE INTRODUCTION OF STRIPED BASS INTO CALIFORNIA.

By S. R. THROCKMORTON.

SAN FRANCISCO, *November 12, 1880.*

HON. SPENCER F. BAIRD,

U. S. Commissioner Fish and Fisheries

Smithsonian Institution, Washington, D. C.,

DEAR SIR: I have from unavoidable causes been compelled until now to defer addressing you upon the subject of the transporting to, and acclimatizing in, our waters the striped bass of your coast.

I have long had the impression, that the great bay of San Francisco, together with the bays of San Pablo and Suisun connecting with it, and the number of creeks running into them, affording a variety of qualities and conditions regarding temperature and saline properties, together with feeding material, would be well adapted to the propagation and growth of the striped bass.

Having this in view, I last year opened a correspondence with Mr. Livingston Stone upon the subject of attempting the transfer of some small fish at the time of the bringing on of the lobsters. Many difficulties presented themselves in the matter of obtaining the small fry of the striped bass, which resulted in my suggesting to Mr. Stone the probability of obtaining them in the extreme headwaters of the Navesink or Shrewsbury River, in New Jersey. Mr. Stone succeeded in obtaining a small number at the place designated by me, and, with his usual skill, brought them safely to this coast and deposited them at the head of the straits of Carquinez, the turning point of the fresh and salt water.

Some six or seven months after the time of placing in the water I heard that one of 8 inches in length had been taken in the bay of Monterey, which is about one hundred miles south of this, and is an open roadstead on the Pacific Ocean. All of the circumstances were of so doubtful a character that I gave the rumor but little attention, until about the 1st of July, eleven months after the planting of the young fry, at the time about 1½ inches in length, in the straits of Carquinez, there was brought to me a very handsome striped bass taken in this harbor, measuring 12½ inches in length and weighing one pound. The fish was in the highest condition, the milt full and ripe, and the flavor fully up to the best specimens of the fish at the East. The exceedingly

rapid growth, indicating the adaptability of the waters of this bay to this development, together with the immense amount of shrimps, which abound in this bay and furnish abundant food, have, I must acknowledge, infused me with almost an enthusiasm to have this valuable fish brought here in sufficient numbers to insure the breeding of them. I have heard of some experiments having been made in breeding them artificially. If that can be done, we might, of course, bring them out as easily and in as great numbers as we now do shad, and my object in now writing you is to ascertain the probability of such an effort being successful.

If it cannot be done our only course must be to enlarge upon and extend the experiment of last year. The small fry can be obtained in the fresh-water heads of the Navesink, the Raritan, the Passaic, the Hackensack, and, in fact, all of those small rivers which flow from the New Jersey coast into the Atlantic and the bays emptying into it. Will you be so kind as to give the matter some thought and let us have the benefit of it? The shad are a success, and we feel satisfied that so soon as they shall have reached such numbers as to insure contact we shall breed them in abundance.

With much respect, I remain, yours truly,

S. R. THROCKMORTON,
Chairman California Fish Commission.

THE SELF-PICKER.

By FRANK N. CLARK.

NORTHVILLE, MICH., *February 17, 1881.*

DEAR SIR: Responding to your request for my opinion concerning the operations of self-pickers, I submit the following:

The name "Self-picker," as applied to any ova hatching apparatus yet devised, claiming the ability within themselves to completely separate the dead eggs from the living, is a misnomer.

All self-pickers, so called, are employed in hatching eggs by what is known as the bulk method, and the principle on which they are operated is the same in each. This principle is based on the supposition that all ova of confervoid growth, which are, for the most part, lighter than the live eggs, can be driven or separated from the latter by a properly adjusted current of water. But, when we consider that a small percentage of the dead eggs possess no greater buoyancy than the live ones, and consequently a current of water, strong enough to drive off all of the former, must necessarily take with it some of the latter, the impossibility of devising any apparatus that will be a complete self-picker or separator will be readily seen. Nevertheless, I consider the method of bringing forward the eggs in bulk far superior to any of the hatching-box or tray systems now in use. It is practicable, however, to develop