

## A LONG ISLAND TROUT FARM.

We are interested to learn from Eastern papers of the success of a fish-farming enterprise on Long Island, which has been developed by Geo. W. Thompson, who is an old Californian, and during the latter part of his stay in this State was a resident of Brooklyn township in Alameda county. What Mr. Thompson has done at the East may serve as a hint for similar enterprise to some of his old friends who still remain here, for California has many sites well adapted for such work. We shall take from the accounts at hand some interesting paragraphs:

Long Island is noted for its trout farms, and many of them have attained a just celebrity. Most of these trout preserves are situated near the center of the island or at its western end, the only one on the east end being the Noyac trout farm. This farm is owned by Mr. Geo. W. Thompson, who came to Noyac from San Francisco about six years ago. Before Mr. Thompson's purchase of the tract of land now comprising the trout farm it was a perfect wilderness of underbrush and trees. There are now 40 springs upon the place from which the various ponds are supplied, but when the present proprietor entered upon the land a small brook, leading into a pond that supplied the motive power to an old grist mill, was the only water course.

## PREPARING THE PONDS.

The first thing the new proprietor set about doing was to clear the land of underbrush, thin out the trees and convert the brook into a series of ponds suitable for trout propagation. The ponds were dug by hand in such a manner as to give a pleasing variety of outlines, and graded in such a way as to allow the stream an easy fall from one reservoir to the other. There are 30 of these ponds altogether, ranging in size from 15 to 20 ft. in length to an extent of three or four acres. They are separated by wide screens in order to keep the different growths of trout apart. The water takes its course through the most sequestered nooks upon the place, over rocks and pebbly bottoms, and in the shadow of trees and bushes; thus making the preserve as much like the natural haunts of the fish as possible.

In the autumn when the leaves are falling they would soon cover up and sully the water were it not for an ingenious contrivance which Mr. Thompson invented to remedy such a state of affairs. From one pond to the other there is a slight fall of, perhaps, a foot or more, and the flow of the water causes the leaves to cluster about the dividing screens. Where the leaves gather thickest a large wire fly-wheel is placed, turned by the stream itself, which sucks in all the light debris and throws it up on the bank on each side. In this way a perfectly clear water course is always insured. To obtain a larger supply of water for hatching, nursery and other purposes, the 40 springs, previously mentioned, were dug, and thus in the driest times of summer there is no fear of dearth of water.

After clearing his land and making the necessary reservoirs for his fish, Mr. Thompson commenced raising trout for market. It requires great familiarity with the habits of trout to be able to tell exactly at what time the female trout is ready to spawn, and it requires equal skill and judgment to treat the fish in such a way that they will experience no ill effects after the spawn is taken from them.

## GATHERING THE SPAWN.

When the spawning season arrives the experienced eye can easily detect when the eggs of the female trout have reached maturity. The fish are caught in a light net and put into tubs of clear water. Pans purposely made for the reception of eggs are then placed in readiness, and the female trout are relieved of the spawn in the following manner: The fish is held near

the head with the left hand, and the right is clasped around the body just above the abdomen. Then with a gentle downward movement of the right hand the eggs are forced from the trout into the pan. The male trout is then treated in the same manner, contributing a milky fluid, which is dropped into the same pan with the spawn and causes fecundation. The fish, both male and female, are much exhausted after this operation and unless placed where they cannot be molested they are apt to become sickly and die. They are usually put in a separate pond until fully recovered, when they are allowed to mingle with other fish of their own size.

## HATCHING THE EGGS.

The hatching trough is a long narrow box divided into compartments, into which the eggs are placed according to their different stages of maturity. The sides of the trough are charred to prevent the growth of fungi, as any impurity is deadly to the life germ of the eggs. Water from a large reservoir is kept continually running through the hatching trough, and so great is the need of keeping it clear of all impurity or any kind of sediment that before entering the hatching boxes it is forced through seven filters of finest flannel. The time of incubation varies from a few days to much longer terms, according to the character of the season and the various stages of maturity of the eggs.

When the fish are hatched they are minute creatures with a curious little transparent sac attached to the stomach. The sac disappears as the fish increases in size, some theorists attributing their disappearance to the fact that they furnish sustenance to the young fish, and are gradually absorbed until they are capable of feeding themselves. When the young trout reach this stage they are taken from the hatching trough and placed in what are called nurseries, which are simply a series of large wooden compartments with latticed covers to protect the young trout from their enemies of the air and field. These compartments are separated by wire screens, and through them all flows a shallow stream from the reservoir up the brook. The nurseries are constantly filled with young trout, the various sizes being kept in different compartments. This is a very necessary precaution, for trout are cannibals, and unless great care is taken to keep the larger fish from the smaller the latter would soon be destroyed.

As the trout grow they are removed to larger nurseries, where they are kept until they attain a size of two and a half or three inches, when they are again sorted and placed in the larger ponds.

## SORTING AND FEEDING THE TROUT.

The process of sorting the trout is, it may be said, of almost continual duration. As soon as a trout outgrows his companions he is caught in a net and placed in more suitable company; for if left among the smaller and weaker fish, he would soon display his cannibalistic propensities. This, of course, applies only to the younger fish, for a three-pound trout would probably find it discouraging work to try and dispatch a two-pound brother. Brook trout rarely attain a weight over three pounds, though Mr. Thompson has some beautiful specimens which will weigh nearly four pounds; but they are exceptional cases.

The trout are fed at stated times every day, the food in summer consisting of minnows and other small fish caught in the neighboring coves and bays, and in winter, of beef chopped fine in a machine made for the especial purpose of preparing trout food. The price the trout fetch in the New York markets varies from \$1 to \$1.50 per pound according to the season.

A WRITER in the London *Lancet* remarks that at the Middlesex hospital, female patients who have suffered many years from sick headache, evidently of a hereditary character, have been greatly benefited, if not cured, by the administration of ten minim doses of tincture of Indian hemp, three times a day, between the

## THE WHEAT CROP OF 1880.

For the purpose of informing our readers of the current estimates of the wheat crop in this country and Europe we quote from a circular issued September 1st by Henry Clews & Co., of New York, who are bankers and interested in wheat only in its possible effects upon the securities in which they deal. We have no means of knowing whether the estimates are correct or not, except in the warranty of the firm publishing them. We quote:

A fair balancing of estimates warrants the conclusion that the wheat crop of the whole country will afford an increase of 35 to 40 million bushels over that of 1879. What the crop of other countries may be best indicated by the estimates presented at the great Vienna International fair, whose annual reports are accepted as authority the world over, and which have just come into our hands. The following are the estimates of that body of the wheat crop of the several countries; 100 being regarded as representing an average crop, and the approximations to that standard being expressed by the percentages specified.

	Per Cent.		Per Cent.
Germany	100	Holland	100
Prussia	100	Great Britain & Ireland	90
Saxony	90	Russia	75
Bavaria	125	Estonia	75
Franconia and Swabia	120	Courland	80
Southern Bavaria	115	Poland	105
Palatinate	100	Podolia	120
Baden	100	Central Government	60
Württemberg	110	Southern "	100
Mecklenburg	95	Bessarabia	110
Denmark	100	Roumania	115
Sweden and Norway	100	Servia	100
Italy, Upper	130	Hungary	90
" Central	100	Czechia	97
" Southern	115	Austro-Hungary	97
France	100	Egypt	100
Belgium	105		

The estimates for Russia are very low, and indicate a complete failure of both the wheat and rye crops. But the fair's estimates for last year's crop were even lower than these; and yet Russia has made a considerable export of wheat within the last 12 months. These returns, taken as a whole, must be regarded as implying an average crop for the whole of Europe; and an average crop in Europe must cause the consumptive demand upon the United States to fall very materially below that of the past year. What England and France may take from us to fill up their depleted stocks and what on speculation, to be carried over to next year's supply, are matters of very uncertain calculation. The quantity to be exported for that purpose, however, is likely to depend very much upon the price of wheat being temptingly low; and the question is a very pertinent one, whether, in the event of low prices for wheat, the railroads would not have to make liberal concessions on freight charges in order to draw it out of farmers' hands.

**SALICYLIC ACID AS A PRESERVATIVE.**—A correspondent of the *Journal of Microscopy* says salicylic acid has been strongly recommended in this journal as a preservative, and I have had very good success with it in mounting vegetable preparations of all kinds. One difficulty, however, is that it dissolves very sparingly in water, and alcohol produces changes which are frequently undesirable. It is well known that salicylic acid dissolves freely in a solution of borax, and it is also familiar to most persons that borax itself is quite efficient as a preservative. It, therefore, occurred to me to combine these two, and I have found that two parts of salicylic acid and one part of borax dissolved completely in half an ounce of glycerine, and that this solution when mixed with three parts of water, forms a most excellent preservative fluid for coarse organisms. More delicate preparations should be mounted in the above solution diluted with five parts of water. Preparations mounted with this solution are very durable.