

cone was of such a size (No. 0 silk = 38 strands per inch) that the diatoms could pass freely through it, but copepods, etc., were stopped and swept off to one side.

Using one net (1 m diameter, 4 m long, No. 10 silk = 109 strands per inch) provided with a cone of this type, large quantities of diatoms were obtained on two occasions during September in Vineyard Sound. The net was towed at very slow speed, and at intervals of three minutes was hauled in and emptied. Each catch, which amounted to about six quarts of a thick suspension, was allowed to stand for two half-hour periods. At the end of each period the supernatant liquid, in which the diatoms remained suspended, was poured into a strainer, leaving in the bottom of each jar the heavier sand, detritus, and whatever zooplankton had accidentally entered. In the strainer (a bag of No. 20 silk) the material drained in the course of about half an hour to a sludge. For the first day's work, this sludge was spread out on towels to dry, and later transferred to a chemical hood heated to 40° C. On the second occasion the sludge was not dried but was shaken immediately with an equal volume of ether. As a result of a day's work we obtained on the first occasion about 200 grams of dry, flaky material, and on the second occasion about two quarts of sludge in ether.

A complete analysis of the plankton in a sample of sea water taken during the first operation, kindly carried out for me by Miss Lois Lillick, showed that the concentration of diatoms in this area was almost 200,000 cells per liter. This approaches the maximum richness observed for diatom flowerings. One species of diatom (*Rhizosolenia alata*) composed 85 per cent. of the count, another species (*Corethron hystrix*) formed 8 per cent., and seventeen other forms together amounted to less than 7 per cent. Examination of a sample of the sludge indicated that the detritus and the animal contaminants were as low as ever found in phytoplankton hauls, in this case being certainly less than 1 per cent. of the total volume. All the material has been turned over to Professor Hans T. Clarke, of the Department of Biological Chemistry at Columbia University, for chemical analysis.

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A COLOR TEST FOR THIAMIN (VITAMIN B₁)

A FEW milligrams of thiamin (crystalline, synthetic, Merck) and about five milligrams of p-dimethylaminobenzaldehyde are placed in a small crucible. 0.1 cc of glacial acetic acid is added and the mixture heated until all the acid is evaporated. After cooling, one drop of glacial acetic acid is added. An intense brick red color develops immediately.

The red compound is probably a Schiff's base, as most primary amines readily form colored condensation products with aldehydes.¹ Proteins and amino acids interfere.

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A METHOD FOR OBTAINING NEWLY HATCHED TADPOLES IN A CLEAN STATE

IN removing newly hatched tadpoles from their egg mass, especially when this has been procured outside the laboratory, some difficulty in obtaining them perfectly free from their "jelly" is often encountered. To overcome this the following procedure is suggested.

Place the material—the egg mass, if the larvae haven't hatched as yet, or the mixture of animals and debris—in as small a dish as convenient. Set this in a second container of sufficient size to enable water in it to more than cover the first vessel. Slowly fill the larger with clean water, being careful not to disturb the material in the smaller dish as the water overflows into it. Enough water to cover the dish by about three eighths of an inch should be added, and allowed to stand undisturbed. As soon as they are able, the tadpoles will rise and leave the smaller dish, entering the clean water surrounding it, from which they may be easily removed by means of a pipette.

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¹ O. Frehden and L. Goldschmidt, *Mikrochim. Acta*, 1: 338, 1937.

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