down by the mantle, this organ must be protruded mainly at the end of the shell, at least during growth, in a foreshore habitat. It seems probable that on the usual muddy foreshore bed the mantle is normally extended upwards in this part for feeding and respiration. Such a habit would give the advantage of an intake of clearer or less muddy water than is available around the more anterior edges of the shell which lie more or less in the mud, while if muddy water is inhaled the particles of foreign matter can readily be got rid of from a restricted region. If the normal habit is to extrude the mantle from the broad end of the shell as stated above, then it would follow that shell would be laid down with the mantle extended in this way and an elongate form of shell results. The sensory equipment of the bivalve is doubtless adequate to determine the most suitable region for intake of water.

On the other hand, in deep water where broad shells were found, the beds tend to be less muddy and the direction of the currents of water more regular; it is therefore reasonable to suppose that there is less need for restriction of the mantle opening in this habitat, and that the mantle will normally be more uniformly extended. In that event, new growth will not be concentrated at the broad end of the shell and a broader shell will result.

It seems, therefore, that a difference in habit of controlling the extension of the mantle in the two habitats may account for the difference in the shape of the shell. At least two factors appear to be concerned, namely, the nature of the substratum, and the simplicity or complexity of the water-currents in the respective habitats. Further researches on shell-shape of this and *O. virginica*, the allied American species, living on different types of substratum below low water, would be interesting; for the American species resembles the Portuguese form to a considerable extent in habitat and shell-modifications[2].

The variable sinuous or irregularly twisted elongate form of the shell seen more commonly in the cultivated Portuguese oyster is clearly due to the habit of adding large new shell-shoots mainly from the upturned broader end.

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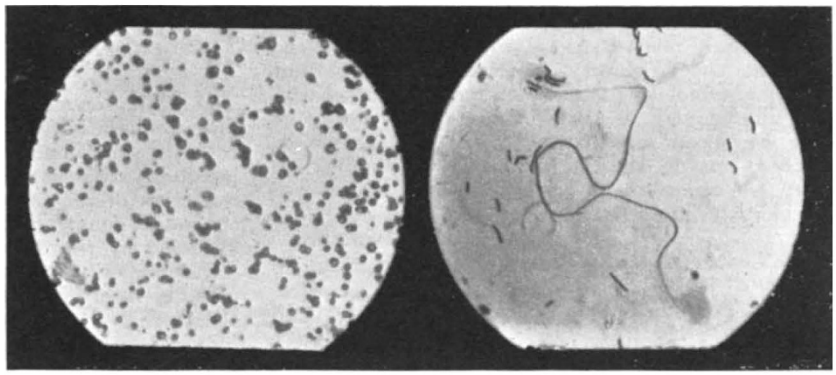
[1] J. H. Orton and P. R. Awati, *J. Mar. Biol. Assoc.*, **14**, 227 (1926).
[2] Dean Bashford, *Bull. U.S.F.C.* **10**, 367, 1890 (1892).

Life in the Dead Sea

THE remarkably high salt tolerance of unicellular organisms, which have been found in a saline lake of salt concentration so high as 19–26 per cent sodium chloride by Ruben Tschik, T. Hof, Baas-Becking and others, caused us to doubt the accuracy of the reputation of lifelessness, which tradition imputes to the Dead Sea. Accordingly, samples of Dead Sea water were taken under sterile conditions at a distance of 3–4 km. from the mouth of the Jordan at various sea depths up to 7 metres. The total salt concentration of the water samples was 28–29 per cent. Bacterial organisms could be grown in 1 per cent peptone sample water media at temperatures of 21°–23° C. and 30° C. from all the samples taken.



a *b*

FIG. 1. Dead Sea micro-organisms. × 550.

In addition, microscopic examination of a hanging drop of the water revealed the presence of a living phytoflagellate 13μ long, which we believe is either a *Chlamydomonas* or a *Dunaliella*. Three micro-organisms have so far been distinguished: a yeast-like, Gram negative orange pigment producer 1·6 × 1·6μ (Fig. 1*a*), a Gram negative small rod-like organism 1–4·8μ × 0·8μ, and a Gram positive long filamentous organism (Fig. 1*b*) 3·3–9·9μ to 170μ × 0·8μ. The investigations are being continued.

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A New Blowfly attacking Sheep in Western Scotland

IT is now generally accepted that *Lucilia sericata* is the only species of blowfly which causes primary 'strike' of sheep in Britain. Although MacDougall (1909)[1] recorded instances of sheep being struck by *Calliphora erythrocephala* alone, the more recent investigations of Davies (1934)[2] in Wales, and of Ratcliffe (1935)[3] in Aberdeenshire, failed to reveal any primary species other than *Lucilia sericata*. The following record is, therefore, of interest.

In the course of an investigation of the blowfly problem, I have obtained, from Mull and western Argyllshire, several collections of larvæ taken from field cases of strike. The larvæ were in each case transferred directly from the sheep into metal containers filled with a sand-sawdust mixture. On arrival they were placed in breeding jars, of a type which prevented the possibility of contamination of the cultures by ovipositing flies. Out of thirteen batches bred out to the adult stage, seven were found to be pure collections of *Phormia terræ-novæ R.-D.*