Conchocelis-phases of various species of *Porphyra* are very similar. As might be expected, the *Conchocelis*-phase of *Bangia*[4], a description of which is being prepared for publication, shows slight differences.

Fertile cell-rows develop on the *Conchocelis*-phase in abundance and the next step in the elucidation of the life-history consists in showing how these spores are liberated and into what type of thallus they develop. Kurogi[1] shows they are liberated into the culture solution in great profusion[5], thus confirming my view and not that held by earlier investigators[6,7] who supposed they were liberated laterally from each cell into the shell. Kurogi observed and figures the very early stages in the germination of these spores in all four species, *P. tenera* Kjellm., *P. suborbiculata* Kjellm., *P. umbilicalis* (L.) J.Ag. *prox.* and *P. pseudolinearis* Ueda. The method of germination of these spores is quite different from those which give rise to the *Conchocelis*-phase and consists (excepting those of *P. umbilicalis, prox.*) of a very short row of quadrate cells. The cell contents are not indicated. Those of *P. umbilicalis prox.* show longitudinal division in the apical cell at a very early stage and they soon become obovate. None of the germlings figured has more than fifteen cells, the majority fewer. Korugi concludes that the spores liberated from the *Conchocelis*-phase "germinated into such a bud of the leafy thallus of *Porphyra* as is found in the sea and they did not penetrate again into the shells".

If, in fact, these germlings had been grown on and had developed into the leafy *Porphyra* thallus, it would appear that either the life-histories of different species of *Porphyra* may be variations of a basic type, or that the life-history of a given species may not always follow the same course. For one thing, the occurrence of 'plantlets' of considerable size and vigour, with every character of an independent phase, has been demonstrated already in the life-history of *P. umbilicalis* v. *laciniata*[3,8]. Moreover, a further experiment I have carried out has demonstrated that sterile shells introduced into a culture vessel containing shells 'infected' with the *Conchocelis*-phase of this species themselves become 'infected' with the *Conchocelis*. The first sterile shells to be introduced were in contact with the 'infected' ones; but subsequent sterile shells were suspended, by means of nylon thread, in such a way that they touched neither the vessel nor the 'infected' shells. Still they became 'infected' with *Conchocelis*. In some cases the points of 'infection' were very numerous, as in the shell figured (Fig. 1). This shell was introduced into the culture vessel on February 27, 1953, and photographed on April 20, 1953. The culture used had been started in mid-November 1952. Similar experiments with the same results have been carried out with the *Conchocelis*-phase of *Bangia fuscopurpurea* from Naples. It is clearly necessary to establish the method by which the spread of the *Conchocelis*-phase from one shell to another has taken place, whether by vegetative filaments or spores, and, if spores, whether there are two types of spores formed, as appears possible on the basis of Kurogi's observations and those now reported.

It is certain that there is still much to be learnt about the life-history of *Porphyra*.

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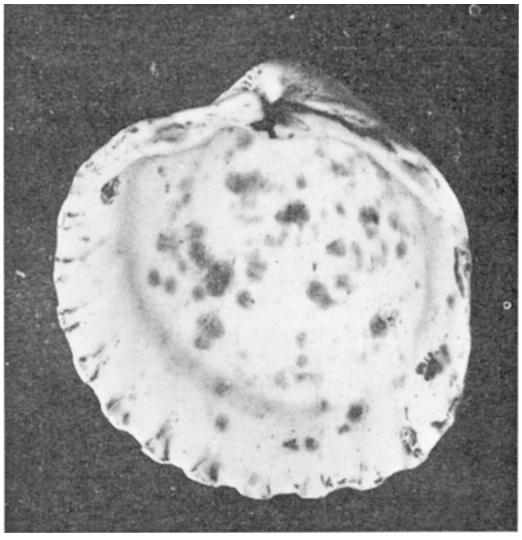

Fig. 1. Sterile shell suspended in culture vessel containing shells 'infected' with the *Conchocelis*-phase of *Porphyra umbilicalis* v. *laciniata* on February 27, 1953, and photographed April 20, 1953. Note the numerous areas of 'infection' by *Conchocelis* now clearly visible. The dark linear areas in the fluting at the edge of the shell are mostly due to diatoms. Nat. size

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A Rare Fungus in Surrey

On October 24, 1953, I was fortunate in collecting an example of the rare fungus *Battarraea phalloides* (Dicks) Pers. The locality was Druid's Grove, Boxhill, and it was growing at the base of one of the large old yew trees which are a feature of that particular area. The specimen was rather small (9 cm. tall), as most records mention about one foot in height. Very few specimens have been recorded since it was first described by Thomas Woodward in 1784.

Dr. J. Ramsbottom, who deals extensively with this species in his recent book "Mushrooms and Toadstools", remarks that it is surprising that it is known with certainty elsewhere only from one locality in France and one, or perhaps two, in Italy. Incidentally, he also states that the last British record was from Temple Guiting, Gloucestershire, in 1915; but it now transpires that an example was found at the base of an elm trunk (in a hedgerow) at Callow Hill, near Virginia Water, Surrey, by Miss Notley on November 1, 1944, and is now at the Royal Holloway College.

My Boxhill specimen has been handed over to Mr. J. T. Palmer, who has kindly undertaken a revision of the British Gasteromycetes on behalf of the British Mycological Society.

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