

"*D. sanaca* seems a good species. I have one female from Fagu, near Simla (about 7000 to 8000 ft.).

"As regards the males, there is every variety from specimens with the abdominal area and anal angles entirely black, to others with the white and yellow extending as far as the median and postmedian veins. Mr. Möller tells me that he has taken both these forms in Sikkim in one sweep of the net; but, as far as my experience goes, the entirely black form never occurs in the N.W. Himalayas. My own idea is that there are three good species of this group:—*D. belladonna*, West China to Kulu; *D. sanaca*, Western Himalaya; *D. belucha*, Beluchistan.

"As to species of this group being found at Penang or Barrackpore, I should as soon expect to find wild zebras in those localities as examples of *Delias* allied to *belladonna*."

The evidence I have brought forward, based as it is on the examination of specimens ten times more numerous than Mr. Butler's and with authentic localities, and the opinions of three naturalists in India who know the species in life, seem to me so strong against every one of Mr. Butler's conclusions, that it is to be hoped he will in future refrain from adding to his very numerous and scattered writings of this character until he has ample material and accurate observations on which to base his opinions.

PROCEEDINGS OF LEARNED SOCIETIES.

DUBLIN MICROSCOPICAL CLUB.

January 18, 1885.

Irish Bog-butter.—Dr. Frazer directed the notice of the Club to the microscopic appearance of a specimen of bog-butter obtained in the form of a large irregular-shaped mass from Mouncha Bog, near Belfast. When examined in a molten condition it showed the cow's hairs so invariably detected in all the examples of Irish bog-butter yet investigated; and in this case there were also observed well-preserved fragments of *Sphagnum* moss in all portions of the fatty matter taken from the outer part of the mass. It was clearly entitled to be considered a true butter, and its sojourn in bog was evidenced by the coating of *Sphagnum*, now noticed for the first time.

A seemingly undescribed Phycochromaceous Alga from Pump-water.—Mr. Archer drew attention to an Algal production taken from the well of a pump, forming to the naked eye an appearance like ground coffee distributed pretty thickly in the water, the little bodies composing the mass being of a brownish mahogany-like colour. These, viewed under a moderate amplification, proved to

form reddish, variously lobed, more or less irregularly ramifying "shapeless" little masses. These were of some toughness and rigidity on pressure, so that it was not a little difficult to compress a portion for a closer examination. This accomplished, however, it was seen that the plant owed its brownish colour to the toughish lobed matrix, as described, in which were sparsely imbedded lines of minute spherical phycochromaceous cells of a light colour. Whether this may be regarded as a mature plant or only a "state" would seem as yet not very readily to be decided. It had clearly, however, nothing to do with the so-called *Bacterium rubescens* (Lankester). Were a minute *Polycoccus* pulled out here and there into a branched or lobed configuration, and the contained cells, instead of being in a single cluster, become run into lines following the prolongations, and supposing the containing matrix to assume a reddish colour, something like our plant would be the result.

Torula sporendonema and *Cystopus candidus* exhibited.—Mr. G. Pim showed *Torula sporendonema* (= *Sporendonema casei*) from some old cheese at the Albert Farm, Glasnevin. It is not uncommon on very old cheese, and seems to be a somewhat aberrant member of the genus *Torula*.

He also showed the young oospores of *Cystopus candidus*, the white rust so very common on the cabbage tribe. They were obtained by allowing diseased leaves to rot in a damp place.

Dermocarpa prasina, Bornet, new to Ireland.—Dr. M'Nab exhibited specimens of *Dermocarpa prasina*, Born. et Thur., collected at Seapoint, co. Dublin, in July 1875, attached to *Polysiphonia fastigiata*. This species has not as yet been recorded from Ireland; but Mr. G. W. Traill (Proc. Roy. Dubl. Soc. n. s. vol. iii. p. 291, 1882) mentions that *Dermocarpa prasina* occurs on *Catenella opuntia*, in the Firth of Forth, in the month of January.

Structure of Leaf of Byblis liniflora.—Dr. M'Nab also exhibited part of a leaf of *Byblis liniflora*, Salisb., a portion of a dried specimen collected by Robert Brown (Iter Austral. 1802-5). The leaf is covered with small, long-stalked glands. The glandular top consists of from eight to sixteen cells, and closely resembles that of the hairs of *Pinguicula vulgaris*. Drude, in his paper on Insectivorous Plants in Schenk's 'Botanik,' p. 119, mentions that *Byblis gigantea*, Lindl., has the long filiform leaves closely covered with very short-stalked, small digestive glands; so that *B. liniflora* differs in having very long-stalked, small digestive glands sparingly scattered over the surface of similar linear leaves.

March 19, 1885.

Chlorocladus australiensis exhibited.—Dr. E. Perceval Wright exhibited mountings of *Chlorocladus australiensis*, Sonder. This interesting green algal form, discovered by Edward Dacmel at Cape York, Australia, had been described by Dr. W. Sonder. It appeared to be very rare, and Dr. Wright was indebted to Baron F. von Müller

for some specimens which had been gathered at Cape York in the autumn of 1884. It seemed to have affinities with *Dasycladus* and *Neomeris*, but differed from the former genus in its dichotomy, and from the latter in the want of a calcareous film and an investing membrane.

Peculiar adventitious or abnormal (?) Growth of Hair-like Filaments on Stems of Moss.—Mr. Archer drew attention to a remarkable fringe of reddish arborescent filaments growing on a moss (*Aulacamnion palustre*), given him by Mr. Pim, imparting to the plant a very curious and striking appearance. These filaments grew from the stem only, not from the leaves, and presented, at first sight, much the appearance of an algal parasite of some kind, densely coating the moss, and from the colour very conspicuous. A closer examination showed that this was an actual outgrowth from the moss itself, the primary joint of these, so to speak, adventitious hairs being simply cut off from one of the joints of the stem of the moss. This then grew up into a comparatively stout main stem, which gave off (somewhat *Cladophora*-fashion) multitudes of branches, continually growing more and more slender, so as to form a densely dendroid structure, the whole confusedly interlaced, the leaves of the moss more or less involved and covered by the thicket so produced. The reddish colour, like that of protonematous growths, was due to the cell-wall, the contents being chlorophyllaceous green; here, however, unlike a *Protonema*, the joints were not separated by oblique, but directly transverse, septa. The whole might lead to the assumption that the moss was giving rise to a kind of retrogressive growth, a kind of secondary "*Protonema*," which, if detached, and on a damp substratum, might give rise to a new moss.

Claviceps Wilsoni from Aberdeen exhibited.—Mr. Pim showed *Claviceps Wilsoni* sent to him by Mr. A. Stephen Wilson, of Aberdeen. This is an extremely distinct form of ergot, occurring on *Glyceria fluitans* near Aberdeen. The club, instead of being nearly globose, is long and clavate and has the perithecia external to it as pear-shaped sacs, instead of being sunk in the substance of the club. The asci and spores did not differ materially from those of the common form, which was shown for comparison.

Section of Macrocystis pyrifera.—Prof. M'Nab exhibited a transverse section of part of the thallus of *Macrocystis pyrifera* taken close to the base of the air-bladder, showing the peripheral series of gum-canals.

Nectria sinopica exhibited.—Mr. Pim showed *Nectria sinopica* on ivy, received from Rev. H. W. Lett, Lurgan. The circular cluster of somewhat flattened deep red perithecia, surrounded by the ruptured epidermis, formed an exceedingly pretty object by reflected light, reminding one of a basket of strawberries.

June 18, 1885.

Embryo Plantlets of Fucus.—Dr. M'Nab exhibited seedlings or, more correctly, young embryo plants of *Fucus vesiculosus*, Linn.

These were found in considerable numbers adhering to the outside of the conceptacular portion of the thallus. The embryos measured about $\frac{1}{250}$ inch, but some were as long as $\frac{1}{100}$ inch, and notched at the apex, where a few hairs also originated. The specimens were collected on the shore at Clontarf on the morning of the 18th June. It seems therefore that the young embryos adhere for a short time to the surface of the mature thallus after their escape from the conceptacle.

Olivine Dolerite.—Prof. Hull, F.R.S., exhibited a thin section of Olivine Dolerite from Ballentory, co. Antrim. This rock is very massive and is quarried by the Eglinton Mineral Company for paving sets. Under the 2-inch objective it is seen to consist of plagioclase, augite, olivine, and titaniferous magnetite, the last not abundant. The effect with the polariscope is very fine, the olivine being fresh and polarizing vividly.

Young Parasitic State of Halcampa.—Prof. A. C. Haddon exhibited a living immature sea-anemone which was parasitic on Hydro-medusæ. It was a still younger example than that described by Reid as *Halcampa Fultoni*, which Prof. Haddon believed was the young form of *Halcampa chrysanthellum*, Peach. Recently Mark has described the young of an *Edwardsia* as parasitic on the ctenophore *Mnemiopsis leidyi*, so there is nothing unique in the parasitic habits of a larval sea-anemone.

Continuity of Protoplasm in Fucus.—Mr. Greenwood Pim exhibited sections of *Fucus vesiculosus* in which the continuity of the protoplasm from one cell to another was clearly shown. The sections were prepared in accordance with Dr. Hicks's directions in the April number of the 'Journal of Botany'—soaked in sulphuric acid and water (1:3), stained with saffranin, and mounted either in pure glycerine or glycerine and ammonia.

Zygospore of Cosmarium corbula, Bréb.—Mr. Archer showed the zygospore of *Cosmarium corbula*, Bréb., orbicular, and beset with rather numerous, elongate, slender spines, trifid at apex; this is rather a rare species, and still more rarely found conjugated.

October 15, 1885.

Rhizopodal Parasite (?) in a Sponge.—Prof. Sollas exhibited a section of a sponge having imbedded therein, seemingly occupying a cavity, an orbicular body, presenting many features giving it a strong resemblance to some rhizopodal form, showing what appeared to be a median nucleus and seemingly elongate pseudopodia. It did not seem to offer a resemblance to any state of an ovum.

Gloiotrichia natans exhibited.—Prof. M'Nab exhibited examples of *Gloiotrichia natans* which had developed in quantity in one of the tanks in the College of Science amongst plants which had been brought in June from the pond in the Botanic Gardens, Glasnevin.

Type of a new Alcyonarian Genus: Primnoides.—Dr. E. P. Wright exhibited mounted specimens of a small portion of the colony of a Primnoid Alcyonarian, for which a new genus, *Primnoides*, had to be made. The spicules of the cœnenchyma were small, orbicular, scale-like, gradually merging into those of the body of the polyp. There were no true opercular scales, but the tentacles were retractile. The species, one of the 'Challenger' collection, and called from its outline *P. sertulariæ*, W. & S., was dredged from a depth of 310 fathoms off Prince Edward Island.

Continuity of Protoplasm in Strychnos.—Mr. Greenwood Pim showed sections of *Strychnos ignatia* which had been treated with alcohol and iodine, as recommended by Mr. S. Le M. Moore, and which showed very distinctly the continuity of the protoplasm between one end of the endosperm and another. A section of *S. nux vomica*, in which the continuity was originally described by Dr. Tangl, was shown for comparison. The protoplasm-threads are much less easily seen in this species than in *S. ignatia*.

New Gregarious Monad.—Mr. Archer showed examples, unfortunately much deteriorated, which he put up on a slide in acetate of potash, of an organism sent him in very minute quantity by Prof. Lankester. This turned out (though somewhat algal-like at first glance) to be a form of gregarious monad, the individual monads nestling in a muco-granular coloured matrix. This matrix formed very minute subglobose masses, the basic substance of great rigidity and elasticity withal. So great was its retrogressive power on being pressed out with some considerable force, that, on its relaxation, it could forthwith pull itself together and restore its figure as if nothing had happened. However, on patiently causing the ejection of a few of the monads, they were seen to be elongate, minute, somewhat greenish in colour, with a narrow pale space at the anterior extremity, and occasionally, after a little wriggling action, they would swim away. But Mr. Archer had found it impossible actually to detect flagella, still less whether two or one only. Flagellate certainly these little organisms were, nevertheless, and the place of the form would therefore be close to such genera as *Spongomonas* or *Phalansterium*. Prof. Lankester was about to subject this organism to a closer study, and hoped to give an account of it ere long.

November 18, 1885.

Seeds of Lolium perenne and Festuca pratensis exhibited.—Dr. M'Nab exhibited under a low power with a binocular microscope seeds of *Lolium perenne* and *Festuca pratensis* for the purpose of directing attention to their special diagnostic characters and also for the purpose of demonstrating the use of Van Heurck's Helot photophore and the electric light in microscopical research.

Spumaria alba accompanied by a remarkable Network of Crystals

of *Carbonate of Lime*.—Mr. G. Pim exhibited specimens of *Spumaria alba*, which appears to be unusually abundant this year, as he has received it from Dr. E. P. Wright and Mr. R. M. Barrington, Fassaroe, and had heard of it from near Gorey, &c. The chief point to which attention was directed was the remarkable incrustation of carbonate of lime, consisting of exceedingly minute needle-shaped crystals which, lying very frequently more or less at right angles to each other, gave a somewhat cruciform appearance, and were collected into dense matted tufts. Some doubt existing as to the substance being carbonate of lime, Mr. Pim subsequently carefully tested it with acetic acid and oxalate of ammonia, with which it gave the characteristic reaction. The needles seldom exceed $\cdot 0005$ in length by $\cdot 0001$ in width, and are often much less.

Transverse Sections of Halcampa chrysanthellum were exhibited by Prof. Haddon illustrating the arrangement of the muscular bands of the twelve mesenteries, and demonstrating the existence of a pair of very small secondary mesenteries in the alternate mesenterial chambers. The œsophagus is ciliated, there are a pair of deep sagittal œsophageal grooves, which are provided with long cilia, and five obscure lateral furrows.

New Alcyonaria.—Dr. E. Perceval Wright exhibited a series of sections through the polyp (decalcified) of *Callozostron mirabile*, showing the absence of any marked siphonoglyph, the peculiar unfolding of the tentacles, and, at the base of the polyp, the ramifying network of vascular canals.—He further exhibited mounted sections of a new genus and species of the group of the *Isidæ*, in which the external spicules were like those of a *Primnoa*. The colony formed a reticulated network. The branches started from the hard joints, and these in the younger twigs were very beautifully ornamented with rows of irregular spine-like processes. The soft joints were very small. The species stands as *Acanthoisis flabellum*, Wright et Studer.

Micrococcus form (?) on Piper-leaves.—Mr. Archer exhibited some *Piper*-leaves (given him by Mr. Pim) showing on their lower surface what appeared to be a form of *Micrococcus*, forming here and there a thin scurfy stratum. If this were referable to that genus it would be a somewhat singular *nidus*. The leaves did not appear to be injured.

MISCELLANEOUS.

Notes on the Stomatopoda. By W. K. BROOKS.

Two species of *Stomatopoda* are common at Beaufort—*Squilla empusa* and a *Lysiosquilla* which, so far as I am aware, has never been described. The swimming-larvæ of both species are very



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