

Intime intermixta crescit *Puccinia polygoni*.

Sueciæ in foliis Polygoni amphibii in insulis lacus Glottern, par Quirlinge Östergötland, August, 1891.

488. DIDYMARIA AQUATICA Starback, n. sp.

Maculæ varia forma, sæpissime suborbiculares, confluentes, amphigenæ e fusco griseæ, fuscomarginatæ. Hyphæ non manifestæ. Sporulæ rectæ, fusoidæ, utrinque obtusiusculæ, 10-19x4-5 μ .

Sueciæ in foliis Alismatis plantaginis in lacu Glottern, Qvillinge, Östergötland, August, 1891.

500. HETEROSPORIUM PROTEUS Starback, n. sp.

Cæspitulæ hypophyllæ, laxæ gregariæ in maculis aridis foliorum insidentes, hyphis fasciculatis, interdum ad basin conglutinatæ stipitemque formantibus, compositæ. Hyphæ 95-100 μ long, 4.5 μ , 6.5 μ crassæ. Conidiæ e nodulis hypharum oriunda, et forman et magnitudine nem valde varia, cylindræa vel cylindræa-ellipsoidea, 3-septata 16-24x4.5-8 μ , 2-septata 14-15x6-7 μ , 1-septata 9-15x3-7.5 μ vel globosa, quæ rarissime adsunt, 5-6 diam., autem conspicue et densissime echinulata.

Heterosporio echinulato (Berk) Cooke affinis modis sporidiorum aliis notis exceptis, hæc species dignoscenda.

Sueciæ in foliis Querci sp. in Upsala, October, 1891.

JOSEPH F. JAMES.

THE BIBLIOGRAPHICA ZOOLOGICA AND ANATOMICA.

At the Baltimore meeting of the American Society of Naturalists (Dec. 1894) a committee was appointed to consider Dr. H. H. Field's plans for bibliographical reform, the committee to report in print. That committee would report as follows:

Dr. H. H. Field, in view of the well-known imperfections and shortcomings of all existing records of zoological literature, has formulated plans which will give the zoological world an approximately complete index of all current literature as promptly as possible. This record will be issued in the form of bulletins, each number of which will be distributed as soon as sufficient material has been accumulated to make a 'signature.' The same bulletin will also be issued printed only on one side of the page, to allow for cutting up for special bibliographies. Lastly, the separate titles

will be issued upon cards of the standard 'index' size. Each title will be followed by a few words giving the subject and scope of the article, when this is not sufficiently indicated by the title, while the cards will have, in addition, catch numbers, so that any library assistant can readily incorporate them in the card catalogue.

The plan contemplates a union of existing bibliographies with this one. In the case of the 'Naples Jahresbericht' this will be brought about by coöperation, the Naples series continuing practically as the yearly morphological analysis of the Bibliography. It is to be hoped that the 'Zoological Record' will consent to coöperate in a similar way, devoting itself to the systematic side, and by aid of the new facilities of coöperation increase its present usefulness to students. Arrangements have now progressed so far that it seems probable that the records of literature in the Zoologischer and Anatomischer Anzeigers will be merged in the new scheme, and it is hoped that the one in Archiv für Naturgeschichte will take the same course. If sufficient encouragement be given, it is proposed to include physiology in the scope of the new plan. The net gain will be fewer bibliographies, wider scope, nearer approximation to completeness, and more prompt publication.

The central office of the work will be established at Zürich, Switzerland, and it may be said that the cantonal government has already appropriated 2000 francs annually to its support, and will supply suitable quarters for its work. France has promised a similar sum, and aid is expected from Germany, from the International Congress of Zoologists and from the British Association for the Advancement of Science. Committees have been appointed in France, Germany and Russia to coöperate in making the record as complete as possible. Lastly, publishers stand ready to undertake the publication of the bulletins, cards, etc.,

without expense to the central office, since the sales are estimated to fully cover all cost of manufacture. The only matter unprovided for is that of preparing the Record for the printer, and this is already so far provided for that if America can contribute \$500.00, the beginning of the work with the year 1896 can be assured.

Your committee, having examined the matter in detail, would, therefore, report that they regard the plan as one worthy the fullest support of the American scientific world. They recommend it as worthy of financial support and would urge all publishers and publishing institutions to send all periodicals and other works (or in the case of books at least the correct title and a summary of contents prepared by the author) promptly to the central bureau. They would finally recommend the appointment of a permanent committee of ten to coöperate with similar committees in other countries in forwarding the movement.

(Signed) SAMUEL H. SCUDDER,
H. P. BOWDITCH,
HENRY F. OSBORN,
E. A. ANDREWS,
J. S. KINGSLEY,

Committee.

Since the above report was drawn up substantial progress has been made. The funds desired from America have been obtained: \$250 from the Elizabeth Thompson Fund, \$250 from the American Association for the Advancement of Science and \$50 from the American Society of Microscopists. Arrangements have been concluded for the publication of a '*Bibliographica Zoologica*,' as a continuation of the 'Litterateur' of the *Zoologischer Anzeiger*, and a '*Bibliographica Anatomica*,' to contain the morphological articles. The price of the *Bibliographica Zoologica* will be 15 Marks yearly. It will be published by Engelmann, of Leipzig. The price of the *Anatomica* has not been settled. Cards

containing the titles will be issued at from \$2.00 to \$3.00 a thousand, according to the number taken. Arrangements are now in progress for the inclusion of physiology in the plan, and steps have already been taken looking to the later incorporation of botanical literature.

CURRENT NOTES ON PHYSIOGRAPHY (XVIII.).

MACKINDER ON ENGLISH GEOGRAPHY.

THE address to the geographical section of the British Association last summer by Mackinder, reader in geography at Oxford, reviews the progress of the science in general, with especial reference to its advance in Germany. The still low position of geographical instruction in England is lamented, in contrast with its promotion on the Continent. There "some of the professors, as Richthofen, of Berlin, and Penck, of Vienna, have worked mainly at geomorphology; others, such as Krümmel, of Kiel, at oceanography; others, again, such as Ratzel, of Leipzig, at anthropography; while Wagner, of Göttingen, has been conspicuous in cartography, and Kirchhoff, of Halle, and Lehman, of Münster, in questions of method." In England, on the other hand, while an historical or classical student listens to a dozen different teachers at Oxford or Cambridge, a single lecturer at each university is charged with all geography. This wide subject has no appreciable position in degree examinations; there are no examinations at all for the post of secondary teacher, nor is there anywhere in the land anything really comparable to the German geographical institutes that form so important a part of the geographical equipment in certain universities.

The recognition of Mackinder's work in his election to preside over the geographical section of the Association is, however, an indication that even Englishmen are beginning to recognize that geographers, both explorers and teachers, need serious and