

## No. 50. The Myxomycetes in the Rijks-Herbarium at Leyden

BY

Dr. T. BROEKSMIT.

The kindness of Dr. GOETHART has enabled me to investigate all the Myxomycetes (Myxogasteres, Mycetozoa) which are kept in the Rijks-Herbarium at Leyden.

Among the older collections I found those of PERSOON, v. HALL, HANKARL, BUSE, JUNGHUHN, WAGNER. Only a little part of these collections remains, owing to the way, in which the above-mentioned collectors used to conserve their materials.

The collections of LISTER, of ELLIS and EVERHART, of OTTO JAAP are placed in small boxes, which have kept them in good condition and facilitate their examination. In BUSE's collection, which have been gathered in the Netherlands, I found some species, which Prof. OUDEMANS in his „catalogue raisonné” of 1905 has not mentioned. They are *Diderma hemisphericum* HORNEM and *Hemitrichia clavata* ROST., both found at „de Boekhorst”.

The oldest collections are put together:

- 1<sup>o</sup>. in 4 portfolios, in which the Myxomycetes are classed alphabetically and which contain principally the collection PERSOON and the collection LISTER.
- 2<sup>o</sup>. in a portfolia, containing the collections v. HALL, HANKARL, BUSE, JUNGHUHN and WAGNER.

I intend to give a description of each collection, following LISTER's nomenclature 1911.

When beginning with the oldest collection, the one due to PERSOON, I ought to mention the great merit of this botanist. He was the first to give a scientific classification of the *Fungi*, among which he placed the *Myxomycetes*. He put them together in one class: the

*Trichiaceae*. As a proof of PERSON'S exactness in describing this group, I cite his own words<sup>1)</sup>: les *Trichiacées* sont très voisines des *Lycoperdacées*, mais elles s'en distinguent par leur premier état de croissance, qui se présente comme une gelée quelquefois fluide et d'une couleur jaune ou rouge, mais ordinairement blanchâtre. Cette masse visqueuse se cristallise ensuite, pour ainsi dire, en plusieurs périodes, assis dans la plupart sur une membrane (subiculum). Les champignons de cette division croissent à l'ombre; et groupés sur les bois pourris, sur de petites branches sèches, et sur des feuilles, tombées à terre, sur les mouches etc., ils sont en général petits et fragiles, fort agréables à la vue. Leurs filamens, excepté quelques genres, qui en sont dépourvus, sont plus apparens et souvent hors du périidium; ils offrent un corps particulier, appelé capillitium (chevelure), quelquefois en forme de réseau, libre ou attaché à la paroi interne du peridium, rarement au pédicelle; on remarque en outre dans quelques-uns, au fond de leur enveloppe, un prolongement globuleux ou ovale, que l'on a désigné sous le nom de columelle. Les genres suivans se réunissent dans cette division: *Fuligo* ou *Ethalium* LINK, *Spumaria*, *Lycogala*, *Tubulina*, *Licea*, *Leangium*, *Diderma*, *Physarum*, *Craterium*, *Trichia*, *Arcyria*, *Cribraria* et *Stemonitis*. Les trois premiers, quoiqu'ils soient aussi gélatineux avant la maturité, ne changent presque pas de forme, et ne se convertissent pas ensuite en plusieurs individus".

He distinguished already 13 genera with 52 species.

1. *The 4 alphabetically classed portfolios.*

They also contain some Fungi-genera, which at present are no longer classed under the Myxomycetes for instance *Onygena*. As for the rest I found about 140 species, collected by PERSON. Many of these were completely lost for examination, some others could be examined by microscope and about twenty were in good condition. Amongst them were some rare species, for instance: *Diderma ochraceum* HOFFM.; *Dictydiaethalium plumbeum* ROST. (*Clathroptychium rugulosum* Rost)<sup>2)</sup>; *Cienkowskia reticulata* ROST. (*Physarum reticulatum*); *Hemitrichia Serpula* ROST. (*Hemiarcyria Serpula* ROST.).

About fifty specimens of the collection LISTER are kept in the same portfolios. Remarkable are the following: *Badhamia nitens* BERK. (*B. inaurata*); *Badhamia lilacina* ROST. *Physarum compressum* ALB. and

1) C. H. PERSON. *Traité sur les Champignons* etc. 1818.

2) The names between parentheses have been used by the collectors.

SCHW.; *Physarella oblonga* MORG.; *Craterium aureum* ROST.; *Didymium dubium* ROST.; *Liceopsis lobata* TORREND; *Lachnobolus congestus* LISTER; *Dianema depressum* LISTER; *Margarita metallica* LISTER; *Prototrichia metallica* LISTER.

2. *The portfolio*, which contains the collections v. HALL, HANKARL, BUSE, JUNGHUHN and WAGNER:

*Collection* v. HALL: I found here only common species. Under the name of *Licea strobulina* I found an Uredinea, *Aecidium strobulinum*, on scales of fircones. HANKARL called it *Perichaena strobulina*. In external appearance it looks very much a *Perichaena*-species.

*Collection* BUSE contains among others: *Diderma hemisphericum* HORNEM.; *Lycogala conicum* PERS.; *Hemitrichia clavata* ROST.

*Collection* HANKARL: among the generally known species I found here worth mentioning: *Physarum sulfureum* ALB., and SCHW. (*Physarum flavum* FR.); *Badhamia macrocarpa* ROST. (*Physarum macrocarpum*); *Trichia affinis* DE BARY; *Hemitrichia clavata* ROST.

*Collection* JUNGHUHN is entirely lost, except *Trichamphora pezizoidea* JUNGH.

*Collection* WAGNER contains some common Austria-Hungarian specimens.

### 3. *Collection* ELLIS and EVERHART:

Of course this collection contains many species, which have either not or very rarely been found in Europe, for instance: *Physarum pulchripes* PECK (*P. Petersii* B and C); *Physarum pulcherrimum* BERK and RAV.; *Physarum tenerum* REX; *Physarum compactum* LISTER (*Tilmadoche compacta* WING); *Physarum citrinellum* PECK; *Physarum Serpula* MORG. (it was distributed by ELLIS as *P. gyrosum*. ROST<sup>1</sup>); *Comatricha pulchella* ROST var. *gracilis* WING.; *Tubifera Casparyi* MACBR. (*Siphoptychium Casparyi* ROST.). Besides these, many remarkable species are gathered in this collection: *Physarum galbum* WING; *Physarella oblonga* MORG. (*Tilmadoche oblonga* ROST.); *Stemonitis pallida* WING; *Stemonitis splendens* ROST. (*S. Morgani* PECK); *Lamproderma arcyricnema* ROST.; *Orcadella operculata* WING; *Lindbladia effusa* ROST.; *Cribraria intracata* SCHRAD.; *Cribraria macrocarpa* SCHRAD.; *Cribraria tenella* SCHRAD.; *Trichia erecta* REX; *Hemitrichia serpula* ROST.; *arcyria globosa* SEHWEIN (*Lachnobolus globosus* ROST.).

<sup>1</sup>) LISTER, sec. ed. pg 81.

## 4. Collection OTTO JAAP:

It contains 200 numbers with many duplicates, remain 125 species, among which a great number of valuable ones, for instance: *Badhamia ovispora* RACIB.; *Physarum auriscalpium* COOKE; *Physarum leucopus* LINK; *Physarum luteo-album* LISTER; *Physarum sulphureum* ALB. and SCHW.; *Fuligo muscorum* ALB. and SCHW.; *Fuligo cinerea* MORG.; *Craterium aureum* ROST.; *Diachaea subsessilis* PECK; *Didymium Trochus* LISTER; *Enteridium olivaceum* EHRENB. var. *liceoides* LISTER; *Perichaena chrysosperma* LISTER; JAAP collected most of them himself at Triglitz, Sleswick and Hamburg. On the Furka (Swiss) he found *Lepidoderma carestianum* ROST. together with *Didymium Wilczeckii*. MEYL. In this collection are also specimens from the Swiss botanist CHR. MEYLAN, gathered in the Jura-mountains about 1200 M. high: the alpine forms of *Diderma globosum* PERS. and of *Trichia contorta* ROST.; *Diderma Trevelyani* FR. var. *nivale* MEYLAN; *Lamproderma atrosporum* MEYL.; *Diderma Lyallii* MACBR.; *Physarum alpinum* LISTER; *Physarum vernum*. SOMMERF.; *Cribraria splendens* PERS. Also specimens from STURGIS (America): *Badhamia orbiculata* REX; *Comatricha laxa* ROST.; *Physarum connatum* LISTER; *Diderma Trevelyani* FR.; *Stemonitis herbatica* PECK.

From LISTER this collection contains most rare and beautiful species: *Badhamia rubiginosa* ROST. var. *globosa* LISTER; *Physarum bitectum* LISTER; *Physarum didermoides* ROST. var. *lividum* LISTER; *Fuligo cinerea* MORG.; *Didymium dubium* ROST.; *Didymium anellus* MORG.; *Didymium difforme* DUBY. var. *comatum* LISTER; *Diderma asteroides* LISTER; *Diderma lucidum* BERK.

Under no. 99 and no. 100 I found the very small *Listerella paradoxa* JAHN on *Cladonia rangiferina*. This species has been found at first in the neighbourhood of Berlin and has been described by JAHN (1909). JAAP found it the same year at Triglitz. In a note<sup>1)</sup> LISTER mentions: „In size and external appearance *Listerella paradoxa* resembles *Licea minima*, but as Dr. JAHN points out, the presence of the capillitium completely separates the genus from the *Liceaceae*; he suggest, that it should be the type of a new family, the *Listerellaceae*. It is placed here provisionally among the *Margaritaceae*, but its true position is at present uncertain. It may perhaps be allied to *Dianema*, but is distinguished by the regular moniliform markings of the capillitium, and by the dusky colour of the spores”.

<sup>1)</sup> LISTER sec. ed. pg 262.

5. There remains to mention the small collections of SACCARDO, SCHINZ, RABENHORST, KLOTZSCH: with *Cribaria purpurea* SCHRAD., *Enteridium Rozeanum* WING., *Oligonema nitens* ROST., (*Trichia bavarica de THUEMEN*). These species are not found in the other collections.

The Rijks-Herbarium at Leyden possesses in these collections 169 different species, all in good condition for study and investigation.

Having seen and studied this material, which has given me a great satisfaction, I am much obliged to Dr. Goethart for entrusting me with these collections. I drew up a list of the species in order to facilitate the work of those, who want to study the Myxomycetes at Leyden.

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