

ON NEOTTIOSPORA COPROPHILA SPEG.

BY C. V. SUBRAMANIAN, F.A.Sc. AND K. RAMAKRISHNAN

(University Botany Laboratory, Madras-5)

Received January 13, 1956

Neottiospora coprophila was described by Spegazzini in 1879 from a collection made in northern Italy on dung of sheep. A description of this fungus, from Saccardo (1884, p. 217) is given below: "Peritheciis minutissimis, 80-70, globosis, astomis (?), irregulariter dehiscentibus, contextu densiusculo, parenchymatico-indistincto; sporulis oblongo-fusoideis, 25×3 , utrinque acutiusculis, nubiloso-granuloso-farctis, hyalinis, sessilibus, apice tribus rostellis exilissimis, 20×1 , ornatis. *Hab.* in fimo ovino vetusto in pratis circa Conegliano Italiae bor., socia *Delitschia Winteri*."

Through the kindness of Dr. J. C. Lindquist of the Instituto de Botanica "Spegazzini", University of La Plata, Argentina, we have been able to examine what is presumably the type specimen of this fungus. The cover containing the material received from Dr. Lindquist is labelled simply "Neottiospora Sporormium status conidicus socia *Delitschia Winteri* 10-7-1878" in Spegazzini's handwriting and also contains a rough sketch of the pycnidium with the words "contextu parench. indist." and sketches of three conidia with the words "hyal. $20 \times \frac{1}{2}$, 25×2 ". $20 \times \frac{1}{2}$ refers obviously to the measurement of the spore appendage and 25×2 to that of the spore itself, both in microns. The writing and the drawings are all in pencil. In sending us the specimen Dr. Lindquist stated: "...I enclose herewith the specimen that I suppose is the type, because as you will see in the original envelope Spegazzini had marked neither the species nor the type, but this occurs in some Italian Spegazzini's collections. The only sign that permits infer this is given by the date of collection and that like the original publication says: socia *Delitschia Winteri*". A further reason to suppose that the material represents the type is the fact that the spore and appendage measurements given in the envelope match fairly well with Spegazzini's description and the words "parench. indist." given in the envelope appears in the description also. We, therefore, presume that the material received from Dr. Lindquist is the type. We may add that, so far as we are aware, type material of this fungus is not available elsewhere.

The material consists of small fragments of dung which have become powdery and no fungus could be discerned in the powdery material. However, just one pellet of dung, about 0.5 cm. in diameter, wrapped in a small

bit of paper separately, showed a number of minute, black pycnidia on the surface of the pellet. Detailed study of the structure of the pycnidia has not been possible because of the meagre material available, but examination of scrapings of one pycnidium indicated that the pycnidial wall is membranous and is made up of brownish pseudo-parenchymatous cells. The scrapings of the material showed an abundance of pycnidiospores. These spores are hyaline, sub-cylindrical, broader towards the apex and narrowed towards the base which is blunt and rounded, and $18-21 \times 1.6 \mu$. Each spore has 3 or 4 filiform, hyaline, divergent appendages arising from all round the

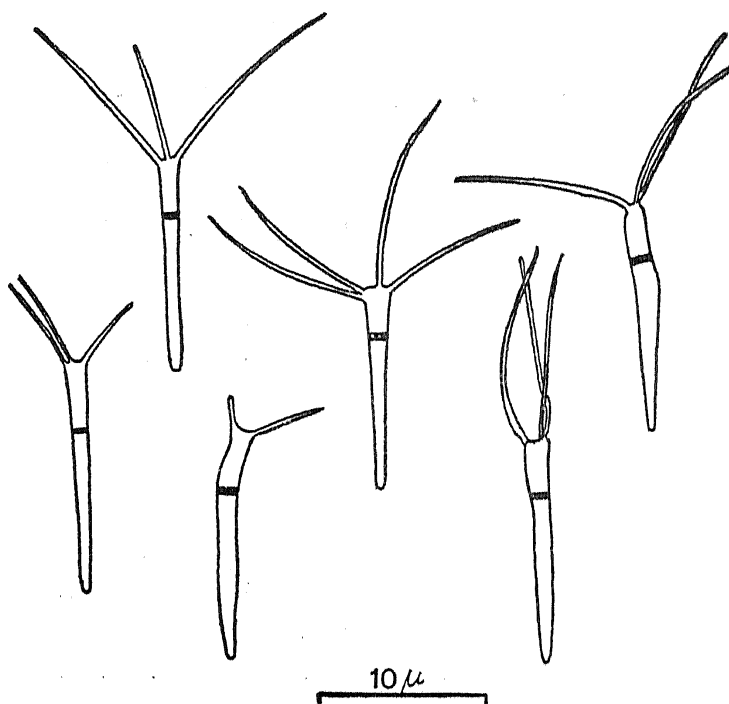


FIG. 1. Pycnidiospores of *Robillarda coprophila* from type specimen, Herb. M.U.B.L. No. 1504.

flattened apex of the conidium. The appendages are $14-16 \mu$ long. However, the spores are not one-celled as stated by Spegazzini, but each spore has a clear septum dividing it into two unequal cells of which the lower one is almost twice as long as the upper one. Thus, the fungus belongs to the hyalodidymæ of the Sphærospidales-Sphærioideae and not to the hyalosporae of this group, as described by Spegazzini and figured by him in the packet containing the type specimen. Further, the appendages are persistent and not mucoid and are, therefore, unlike those of *Neottiospora caricina* (Desm.) Hoehnel, the type species of *Neottiospora* (Subramanian and Ramakrishnan, 1953). Indeed, Diedicke and Hoehnel have already suggested that

N. coprophila is not a *Neottiospora* (Hoehnel, 1924), although they did not assign the fungus to any other genus.

Since *Neottiospora coprophila* has hyaline didymospores with apical appendages which are persistent and non-mucoid, it cannot be retained in the genus *Neottiospora* Desm. It agrees essentially with *Robillarda* Sacc. (Saccardo, 1884, p. 407) and since it differs sufficiently both in habitat and in spore characteristics from species of this genus so far known, we propose to transfer it to this genus as a separate species:

***Robillarda coprophila* (SPEG.) SUBRAMANIAN AND RAMAKRISHNAN
COMB. NOV.**

Basionym: *Neottiospora coprophila* Speg., 1879, *Michelia*, 1, 481; Saccardo, P. A., 1884, *Sylloge Fungorum*, 3, 217.

Type (?) : Herb. M.U.B.L. No. 1504, in fimo ovino, Italia, 10-7-1878, leg. C. Spegazzini. Socia: *Delitschia Winteri*, ex Colecciones Micologicas Universidad Nacional de la ciudad Eva Peron Museo-Instituto Spegazzini No. 11564.

We are grateful to Dr. J. C. Lindquist and Dr. A. E. Jenkins for making available the type material of *Neottiospora coprophila*. We are also indebted to Professor T. S. Sadasivan for much encouragement.

REFERENCES

- Hoehnel, von F. .. "Ueber die Gattung *Neottiospora* Desm.," *Mitt. bot. Lab. tech. Hochsch. Wien*, 1924, 1, 78-85.
- Saccardo, P. A. .. *Sylloge Fungorum*, 1884, 3, 860 (Litho-printed by Edwards Brothers, Ann Arbor, Michigan, 1944).
- Subramanian, C. V. and Ramakrishnan, K. "On the nature of the spore appendage in *Neottiospora* Desm.," *Proc. Indian Acad. Sci.*, 1953, 37 B, 228-31.