

ON THE IDENTITY OF *CURVULARIA SUBULATA*

C. S. TAN and G. S. de HOOG

*Centraalbureau voor Schimmelcultures, Baarn*

Occasionally fungal strains have been received by the 'Centraalbureau voor Schimmelcultures' under the name *Curvularia subulata* (Nees) Boedijn. This name also turns up in the literature (Corbetta, 1965; Jalal & al., 1984). A culture, carrying this name and deposited recently at the CBS, was indistinguishable from *Curvularia lunata*. Since the epithet 'subulata' is older than 'lunata', a study was made to establish the identity of *Curvularia subulata*.

The binomial *Curvularia subulata* was mentioned by Gilman (1945), with the cited author's names '(Nees) Boedijn' and making reference to Boedijn's (1983) paper on *Curvularia*. However, neither in this article, nor in any other article Boedijn's personal notes, maintained at the Rijksherbarium at Leiden, no reference to *Curvularia subulata*, nor its basionym, *Helminthosporium subulatum* Nees, could be found. The name was also not included in most of the recent treatments of *Curvularia* (see for example Ellis, 1966); neither was *Helminthosporium subulatum* mentioned in Hughes' (1985) list of excluded *Helminthosporium* species. We consequently assume that Gilman (1945) first made the combination *Curvularia subulata*. The same conclusion was drawn in the 'Index of Fungi' (1950: 278). Gilman's material had originally been isolated by Takahashi (1919) from soil and is now probably lost.

Nees & Nees (1818) described *Helminthosporium subulatum* Nees & T. Nees as having straight, mostly unbranched conidiophores bearing oblong-clavate conidia with rounded apices. On their accompanying tab. V, fig. 13 the conidia were depicted as being 3–4-septate. This concept of *H. subulatum* was adopted by Fries (1832), Saccardo (1886), and Lindau (1910). The last mentioned author gave the conidial measurements as 22–26 × 9–11 µm. His description was copied by Gilman (1945). Apparently Lindau's (1910) and Gilman's (1945) descriptions do not refer to the type specimen, as in a collection preserved at the Brussels herbarium (No. 17749, without data; scr. Nees ?), which is probably authentic for *H. subulatum*, and a collection preserved at the Leningrad herbarium (no. 72, ex 'Sredinsky Crypt. Mosquensis'), the conidia are found to be obclavate, measuring 53–76 × 12–18 µm. Both specimens are indistinguishable from *Helminthosporium velutinum* Link: Fr. A similarity of *H. subulatum* to *H. velutinum* was already suggested by Ellis (1961) when he reidentified a secondary specimen of *H. subulatum* at the Kew herbarium.

Judging from Nees & Nees' (1818) description and illustration, they and many later authors interpreted the conidial attachment incorrectly, and depicted the conidia upside-down. This explains its erroneous interpretation by later authors as a possible *Curvularia* species.

Consequently *Helminthosporium subulatum* Nees & T. Nees: Fr. should be regarded as a synonym of *H. velutinum*, and the combination *Curvularia subulata* does not jeo-

pardize *Curvularia lunata*. Strains that are maintained (CBS 231.39) in, or received by the CBS collection as *C. subulata*, have all been reidentified as *C. lunata* (Wakker) Boedijn.

## REFERENCES

- BOEDIJN, K. B. (1933). Ueber einige phragmosporen Dematiaceen. In Bull. Jard. bot. Buitenzorg, Sér. III, 13: 120–134.
- CORBETTA, G. (1965). Rassegna delle specie del genere *Curvularia*. In Il Riso 14: 3–23.
- DONK, M. A. (1965). The mycological publications of K. B. Boedijn. In Persoonia 3 (3): 325–330.
- ELLIS, M. B. (1961). Dematiaceous Hyphomycetes III. In Mycol. Pap. 82: 1–55.
- (1966). Dematiaceous Hyphomycetes VII. In Mycol. Pap. 106: 1–43.
- FRIES, E. M. (1832). Systema mycologicum. Vol. 3(2), Greifswald.
- GILMAN, J. C. (1945). A manual of soil fungi pp. 303–304. Ames, Iowa.
- HUGHES, S. J. (1958). Revisions hyphomycetum aliquot cum appendice de nominibus rejiciendis. In Can. J. Bot. 36: 727–836.
- JALAI, M. A. F., MOCHARLA, R. & HELM, D. van der (1984). Separation of ferrichromes and other hydroxamate siderophores of fungal origin by reversedphase chromatography. In J. Chromat. 301: 247–252.
- LINDAU, G. (1910). Fungi imperfecti: Hyphomycetes (zweite Hälfte). In Rabenh. Kryptog.-Fl. 1(9).
- NEES von ESENBECK, C. G. D. & NEES von ESENBECK, T. F. L. (1818). De plantis nonnullis e mycetoidearum regno tum nuper detectis, tum minus cognitis commentatio prior doctoris Nees ab Esenbeck et Fridericinees fratrum. In Nova Acta Acad. Caesar. Leop. Carol. 9: 242.
- SACCARDO, P. A. (1836). Sylloge fungorum. Vol. 4. Patavii.
- TAKAHASHI, R. (1919). On the fungeous flora of the soil. In Ann. Phytopath. Soc. Japan 1: 17–22.