

## New Species of the Genus *Pseudobotrytis*

M. I. TIMONIN (1)

A fungus belonging to the genus *Pseudobotrytis* was isolated from a sample of soil obtained near La Lima, Honduras. The fungus appeared on four plates of 1:1000 dilution poured with acidified soil extract agar.

This fungus differs from the type species of the genus *Pseudobotrytis* *P. terrestris* by the character of the spores. For this reason, the fungus is described as a new species.

### *PSEUDOBOTRYTIS BISBYI* sp. nov.

Colonies on potato dextrose agar (Difco) slow spreading, floccose, dark coffee brown to fuscus, reverse orange. Sometimes in older cultures the orange tint diffuses into entire medium (test tube), producing amber-colour of the medium. Mycelium branched, sparsely septate, with numerous clamydospores. Conidiophores arise from submerged (Fig. 1-1) or aerial (Fig. 2) mycelium. At the point of origin from submerged mycelium it produces one or two rhizoidlike hyphae. From aerial mycelium, usually two or three conidiophores originate at the same point and the hypha at this site is swollen but without rhizoidlike hyphae (Fig. 1-4, Fig. 2). Conidiophores (Fig. 1-1) erect, slightly tapering toward apex, unbranched, septate, dark brown to the upper septum, smooth, 250-650 $\mu$ (2) long. The apex, which is slightly inflated, bears a whorl of 6-12 club-shaped sporogenous cells. Sometimes the centrally located sporogenous cell continues to grow and develop another whorl of sporogenous cells (Fig. 1-1). Sporogenous cells are unbranched, non-septate, irregularly swollen at the apex, which is covered with papillae. Sporogenous cells are 12-20 $\mu$  long and 3-5 $\mu$  wide at the base (Fig. 1-3). The swollen part at maturity is up to 8 $\mu$  thick. Conidia produced singly on each papilla, cylindrical-oval,

(1) Formerly Dept. of Animal Husbandry, Escuela Agrícola Panamericana, Zamorano Honduras.

(2) Because of technical problems  $\mu$ =millimicron.

smooth, pale brown to fuliginous, one celled, 5-7.2(9) x 2.5-3.6 $\mu$   
Conidia on germination produced only one germ tube (Fig. 1-5)

The culture and the dry specimen of *P. bisbyi* were deposited in the Plant Research Institute, Canada Department of Agriculture, Ottawa, Ontario under the number DAOM - 59494.

#### PSEUDOBOTRYTIS BISBYI n. sp.

Conidiophoris erectis, apicem versus leviter tenuescens, simplicibus, septatis fusco-brunneis, usque ad septum superum, levibus, usque ad 250-650 $\mu$  longis, in culmine radiate ramosis. Ramis 12-20 $\mu$  longis, basis 3-5 $\mu$  latis apice irregulariter tumidis papillis usque ad 8 $\mu$  crassis. Conidiis singulis in papilla, oblongo-ovatis non-septatis, fulvis vel fuscis, levibus 5-7.2(9)-2.5-3.6 $\mu$ .

#### DISCUSSION

In 1954 Krzemieniewska and Badura (1) described a new genus, *Pseudobotrytis* with type species *P. fuska*. Apparently unaware of the existence of the genus *Pseudobotrytis* Morris in 1955 (2) also described a new genus *Umbellula*, with *Spicularia terrestris* Timonin (4) as a type species.

Since the description and figures of *P. fuska* Krzemieniewska and Badura, *Umbellula terrestris* (Timonin) Morris and *Spicularia terrestris* Timonin show that all these fungi are identical and congeneric, and since of the two generic names, *Pseudobotrytis* and *Umbellula* the former has priority, and since Timonin's specific epithet appeared to be the earliest applied to the fungus, Subramanian (3) proposed a new combination *Pseudobotrytis terrestris* (Timonin) Subramanian.

The new species *P. bisbyi* differs from *P. terrestris* by having amersporous conidia whereas *P. terrestris* contains didimosporous conidia. Furthermore, conidia of *P. bisbyi* produce only one germ tube on germination whereas conidia of *P. terrestris* in the majority of cases produce two germ tubes, that is, each cell produces one germ tube.

The organism grows well on Czapek's, soil extract, Peptone dextrose, corn meal agar media as well as on bamboo and *Ceiba* (*Ceiba* sp.) wood shavings; in all cases, however, it produced only amersporous conidia.

When *P. bisbyi* and *P. terrestris* were grown side by side (potato dextrose agar) anastomoses of the hyphae of these fungi was not observed. At first an inhibition zone occurred and *P. bisbyi* developed abnormally shaped colony. Mycelium of *P. terrestris* however, continued to grow through the inhibition zone and overgrew the colony of *P. bisbyi*.

In view of these facts, it was thought the creation of a new species was justifiable.

The epithet of *P. bisbyi* is given in memory of the late Dr. G. R. Bisby, one of the great Canadian mycologists, who made a considerable contribution to the taxonomy of the fungi.

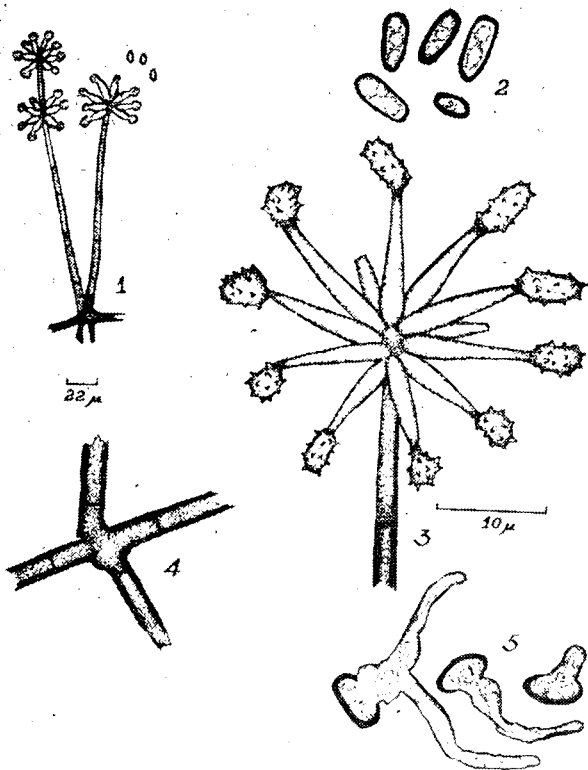


Fig. 1. (Top). *Pseudobotrytis bisbyi*: 1) Habit, note the double whorl of sporogenous cells; 2) Conidia; 3) A whorl of sporogenous cells; 4) conidiophores originated from aerial mycelium; 5) Germinating conidia.

Fig. 2. (Bottom). *Pseudobotrytis bisbyi*: Conidiophores originated from aerial mycelium (note no rhizoid-like cells produced at the basal cell of conidiophore).

#### ACKNOWLEDGEMENT

I am greatly indebted to Dr. S. J. Hughes for examination of the cultures and to Dr. B. Boivin Plant Research Institute, Canada Department of Agriculture for correcting the Latin diagnosis.

#### LITERATURE CITED

1. KRZEMIENIEWSKA, H., AND BADURA, L. 1954. A contribution to the knowledge of the microorganisms from the litter and soil of beechwood. *Acta Soc. Bot. Poloniae*. 23:727-81.
2. MORRIS, E. F., 1955. A new genus of Dematiaceae. *Mycologia*. 47:602-605.
3. SUBRAMANIAN, C. V., 1956. On *Spicularia terrestris* Timonin. *Proc. Ind. Acad. of Science*. 43:276-78.
4. TIMONIN, M. I., 1940. The interaction of higher plants and soil microorganism. I. Microbial population of rhizosphere of seedlings of certain cultivated plants. *Canadian Journal Res. C*. 18:307-17.