

The new genus *Phialographium* is proposed for those synnematal conidial states of *Ceratocystis* which have phialides producing enteroblastic-phialidic conidia in mucilage. Interestingly enough, adequate illustrations, which are diagnostic to the point of actually showing the respective methods of conidiogenesis, already exist in the literature.

***Phialographium* Upadhyay & Kendrick, gen. nov.**

*Graphium similis*, sed cum conidiis ab phialidibus oriundis.

*Species typica*: *Phialographium sagmatosporae* sp. nov. = *Phialographium* state of *Ceratocystis sagmatospora* Wright & Cain. Latin description of conidial forms is given in *Canad. J. Bot.* **39**: 1227, Fig. 30-32, 1961.

Phialoconidial species of *Graphium* should be placed in this genus. *Phialographium* is fairly close to *Dendrostilbella*, but that genus lacks the dark pigmentation so characteristic of "*Graphium*" synnemata.

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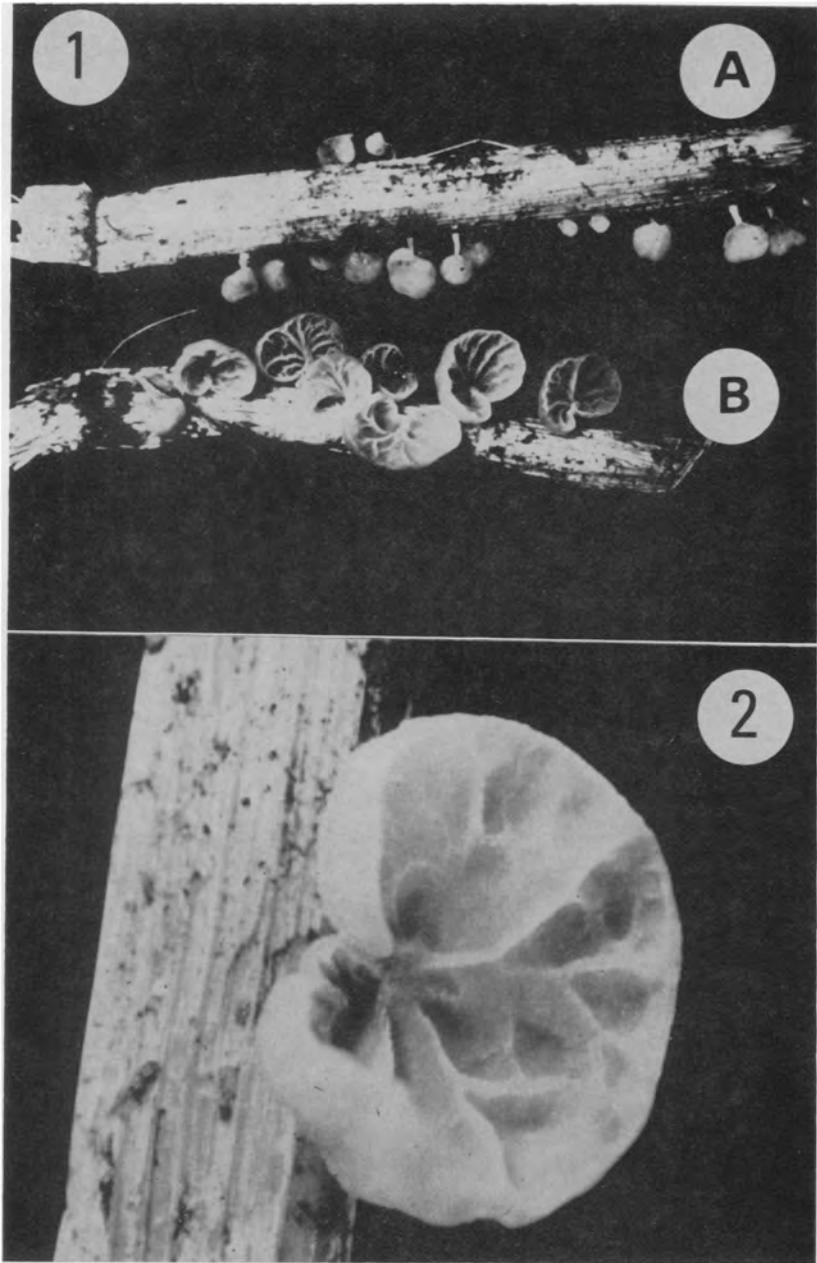
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A NEW SPECIES OF *CAMPANELLA* FROM NORTH AMERICA

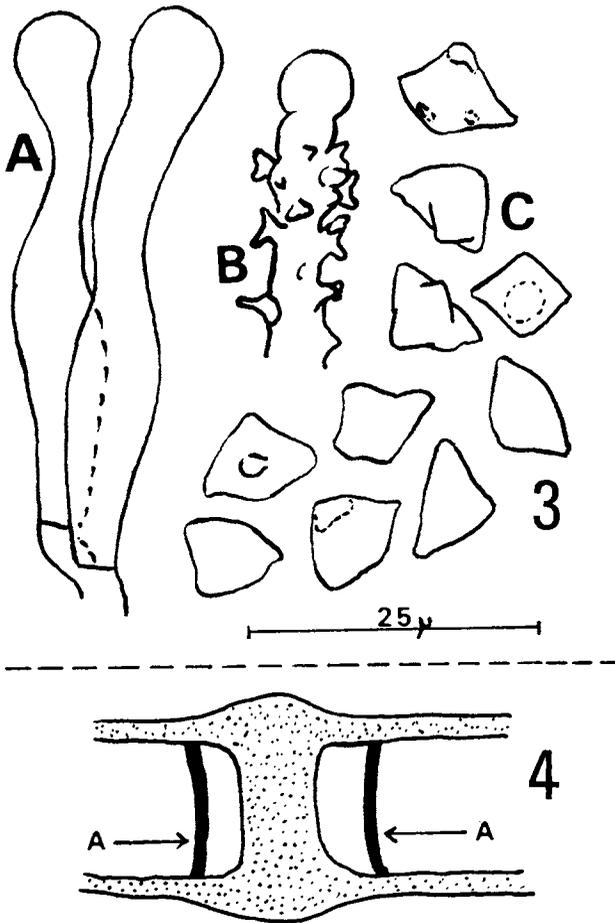
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In the fall of 1972, a small agaric resembling a white form of *Campanella dendrophora* Sing. was collected on grass culms in Van-



FIGS. 1-2. Basidiocarps of *Campanella subdendrophora* on grass culms. 1. Abhymenial surface (A), hymenial surface (B),  $\times 1.5$ . 2. Pseudolamellae,  $\times 6.5$ .



FIGS. 3-4. *Campanella subdendrophora*. 3. Cheilocystidia (A), a portion of a dendrophyoid cystidium from the pileus margin (B), basidiospores (C). 4. Diagrammatic representation of a longitudinal section of a grass node showing the relative positions of the black plates (A).

couver, British Columbia. After corresponding with Dr. Rolf Singer, I decided that the fungus represented an undescribed species and it is therefore described below :

*Campanella subdendrophora* Redhead, sp. nov.

FIGS. 1-4

Pileo albo reticulato, rugato, semipellucido, convexo, necnon conchato in circulum; in pilei latus brevi adfixo stipite, albo vel cinnereo. Carpophoro toto 5-11.6 mm lato. Hymenophoro sublamelloideo, anastomosante; pseudolamellae non

magis 2 mm distant, hyalinae, membranae-gelatinosae. Sporis  $8-10 \times 6-7 \mu$ , a latere aspicienti triangularibus, angulis nonnumquam in latus additis, hyalinis, inamyloideis. Basidiis autem  $28-35 \times 7-8 \mu$ , clavatis. Cystidiis tibiiformis, ad  $45 \mu$  longis ad  $8 \mu$  latis, quorum in pseudolamellarum marginibus, plurima sita sunt. Cystidiorum tamen dendrophysioeorum pauca in pseudolamellarum marginibus, plurima in pilei margine superficieque sita sunt; hanc superficiem etiam structurae dendrophysioeae operiunt. Tramae contextusque hyphis saeptatis super saeptam frequenter semiorbibus unciis similibus positus, inaequaliter textis, gelatinatis  $1.5-2 \mu$  diametro. Ad culmos *Phalaris arundinacea* L., Canada, British Columbia, Vancouver, September 15, 1972, Redhead (BI), (DAOM) Typus; (UBC), (F), (USDA) Isotypus.

Mature pilei circular to ear-shaped, convex, somewhat translucent, white, minutely canescent, dry, 11.5 mm across, with a short lateral minutely canescent, gray stripe. Pseudolamellae anastomosing, entirely white, up to 2 mm distant. Fresh basidiocarps lack distinctive color changes from bruising or drying, distinctive odors were not noticed and the fungus was not tasted. Herbarium specimens become yellowish brown with age. Spores hyaline, inamyloid, triangular, pyramidal or tetrahedronlike in shape,  $8-10 \times 6-7 \mu$ , sometimes guttulate. Basidia  $28-35 \times 7-8 \mu$ , clavate, 4-sterigmate. Tibiiform cystidia abundant on the pseudolamellae and pileus margin, occasionally intermixed with dendrophysoid elements forming a "Ramaeles" structure on the pileus. Trama and context hyphae with clamp connections, gelatinized,  $1.5-2 \mu$ , in diam. Cultures obtained from spore deposits are deposited in the UBC culture collection #5060 and the ATCC.

*Campanella subdendrophora* is distinguished from all other species of *Campanella* except *C. dendrophora* by the presence of dendrophysoid cystidia and angled spores measuring  $8-10 \times 6-7 \mu$ . From *C. dendrophora* it is distinguished by the lack of metuloids and the whiter color of the pileus.

Sporulating basidiocarps of *Campanella subdendrophora* were observed repeatedly in the same small area from September to November. In November heavy frosts apparently stopped the production of basidiocarps. During this time period, one isolated basidiocarp was discovered 2 miles from the primary collecting site, on a dead grass culm. At both sites the fructifications were present only at the base of dense growth or in the interior of grass piles on the borders of forested areas. The primary site was checked again in the spring (April 2, 1973) and only one sporulating basidiocarp was found. This basidiocarp arose from a node in the culm. The node had associated with it two black plates, one on either side (FIG. 4). These plates were entirely composed of much convoluted, frequently septate, thick-walled, pigmented hyphae. The hyphae formed a continuous, solid, nonporous sheet approximately  $5 \mu$  thick. The plates were presumably formed from the mycelium of *C.*

*subdendrophora* as similar structures were formed on areas of aerial mycelium in pure culture of the fungus on a number of media. The hyphae and grass tissue within the internode regions of the grass culm were water soaked and contained bacteria. In contrast, the area delimited by the plates was dry and free of bacteria. Although the node was not separated entirely by these black plates, it is suggested that it acted as a pseudosclerotium in much the same way as areas delimited by black plates do for *Xylaria polymorpha* (Pers.) Grev., *Armillaria mellea* (Vahl) Quel. and *Polyporus squamosus* (Huds.) Fr., Campbell (1933a, b) and Campbell and Munson (1936).

Otieno (1968) pointed out that most species of the poroid agaric complex, to which *Campanella* is allied, are tropical. This is borne out by data on most of the better-known species of *Campanella* by Singer (1945, 1950, 1955). *Campanella subdendrophora* is the second species reported from North America, the first being a subtropical species from Florida, *C. floridana* Sing., Singer (1950) and Murrill (1951). *Campanella subdendrophora* is of interest as the first temperate species found in North America and by its formation of pseudosclerotium.

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