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**A NEW SPECIES OF *PLATYGLOEA* OCCURRING ON  
*PENIOPHORA TAMARICICOLA* IN ARIZONA**

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While examining the first recorded North American collections of  
*Peniophora tamaricicola* Boidin et Malençon, we observed pustules of

another fungus growing on the hymenial surface. Examination of these pustules indicated that they were the fruiting structures of a *Platygløea* which was unlike others known to parasitize basidiomycetes (*P. arrhytidiae* Olive, *P. fungicola* Olive, and *P. peniophorae* Bourd. et Galz.). Because the species is substantially different from any other known *Platygløea*, we are describing it here as new.

*Platygløea mycophila* Burds. et Gilbertson, sp. nov. FIGS. 1-2

Basidiocarpis mycophilis in basidiocarpis *Peniophora tamaricicola* Boidin et Malenç., pustuliformibus; area immaturis albis et puberulis; area maturis luteo-brunneis et glabris; hyphis crassitunicis, septatis, afibulatis; probasidiis tunicis tenuibus vel crassiusculis; metabasidiis  $25-40 \times 4-6(-7)\mu$ , uniseptatis, 2-sterigmatibus; basidiosporis subglobosis vel globosis, (6-)7-9(-10)  $\mu$  diam, levibus, non amyloideis.

HOLOTYPE: RLG 10056, on *Peniophora tamaricicola* Boidin et Malenç. on *Baccharis sarothroides* Gray, Madera Canyon, Santa Rita Mts., Coronado Nat. Forest, Santa Cruz County, Arizona, U.S.A., in herbarium CFMR<sup>1</sup> conservatus; ISOTYPUS in ARIZ conservatus.

*Basidiocarpis* occurring on *Peniophora tamaricicola* as circular, appressed pustules up to 2 mm broad (FIG. 1); immature areas and margin white and pubescent when dry; mature areas yellowish brown and smooth when dry. [Pustules presumably gelatinous when fresh.] *Subiculum* composed of hyphae (3-)4- $\bar{\mu}$  in diam, growing among hyphae of *Peniophora tamaricicola* basidiocarp; septate, lacking clamps, regularly branched, with walls up to 2  $\mu$  thick and slightly refractive; *hymenium* composed of probasidia arising directly from subicular hyphae; *probasidium* (FIG. 2) oval to cylindrical,  $10-25 \times 6-9\mu$ , with slightly thickened walls, septate at the base and lacking a clamp; *metabasidium* (FIG. 2) cut off from probasidium by nonclamped septum,  $25-40 \times (3-5)-\bar{\mu}$  [measured to the point where the second sterigma seems to be differentiated], cylindrical, protruding from among elements of the *Peniophora* hymenium, 1-septate, 2-sterigmate, with sterigmata  $10-25 \times (3-5)-7\mu$ ; *basidiospores* (FIG. 2) (6)7-9(-10) $\mu$  in diam [exclusive of apiculus], globose to subglobose, thin walled, hyaline, smooth, with a large apiculus, germination by repetition.

*Etymology.* — from *myco*, (Gr., n) = fungus + *philus*, (Gr. comp. form., v) = loving, to indicate its occurrence on other fungi.

*Additional specimens examined.* — From Arizona on *Peniophora tamaricicola*: HHB 5948A, 5952, 5953A, Redington Road, east of Tucson,

<sup>1</sup> Herbarium abbreviations are those of Lanjouw and Stafleu (1964) except CFMR which signifies the Center for Forest Mycology Research, Forest Products Laboratory, Madison, Wisconsin 53705. [Formerly BFDL.]

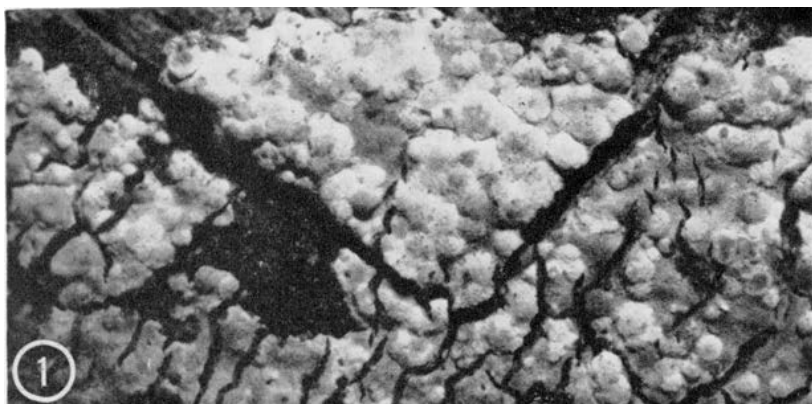


FIG. 1. Basidiocarps of *Platygloea mycophila*,  $\times 10$ .

Pima County; HHB 5994, Sycamore Canyon, Atascosa Mountains, Coronado Nat. Forest, Santa Cruz County; RLG 10061, Madera Canyon, Santa Rita Mts., Coronado Nat. Forest, Santa Cruz County; RLG 10577, Peck Canyon, Tumacacori Mts., Coronado Nat. Forest, Santa Cruz County. All at CFMR and ARIZ.

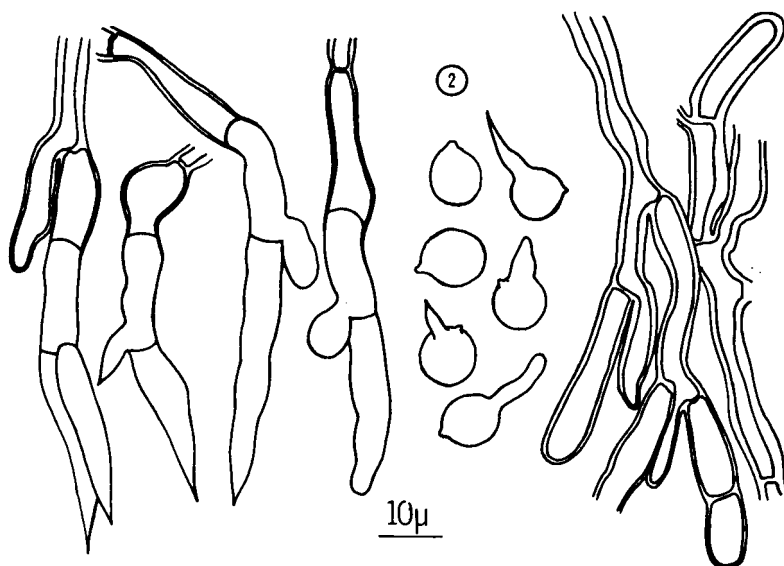


FIG. 2. Camera-lucida drawings of basidia, basidiospores, and hyphae of *Platygloea mycophila*, HOLOTYPE.

*Remarks.*—An *Acremonium* sp. was also found, occurring as gray pustules on the *Peniophora tamaricicola* basidiocarps. These are very similar to the inconspicuous, white, appressed pustules of *Platygløea mycophila*. Since neither the *Platygløea* nor the *Acremonium* has been cultured, the relationship between the two remains uncertain.

The occurrence of *Platygløea mycophila* on *Peniophora tamaricicola* has led us to assume that the former is parasitic on the *Peniophora*. Although this assumption is equivocal in the absence of proof, we have never encountered this species on substrates other than *Peniophora tamaricicola*. *Peniophora nuda* (Fr.) Bres., another member of the "Coloratae group," occurs in the same habitats as *Peniophora tamaricicola*, but to date it has not been found to be infested with *Platygløea mycophila*.

The only previously described *Platygløea* that occurs on Homobasidiomycetes is *P. peniophorae* Bourd. et Galz., which differs from *P. mycophila* in lacking a well-developed probasidium, possessing clamps, having a 3-septate, 4-sterigmate metabasidium, and producing ovate basidiospores measuring  $5-7(-10) \times 3.5-4(-6) \mu$  (Bourd. and Galz., 1910, p. 17.).

*Platygløea arrhytidiae* Olive, which occurs on members of the Dacrymycetaceae, also possesses a 3-septate, 4-sterigmate metabasidium; the ovate to short cylindrical basidiospores measure  $7.5-10.5 \times 3-5 \mu$  (Olive, 1951, p. 103).

The three known species of *Platygløea* with 1-septate, 2-sterigmate metabasidia are *P. pustulata* Martin et Cain, which possesses spores measuring " $(16-20-22(-24) \times (4-5-6.5) \mu$ " (Martin, 1940, p. 691); *P. lagerstroemia* Coker, with depressed ovate spores  $11-13 \times 6-7 \mu$  and without a defined probasidium; and *P. caroliniana* Coker, with the entire basidium measuring less than  $25 \mu$  in length. None of these is known to occur on other fungi, nor can they be confused microscopically with *P. mycophila*.

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