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## BRIEF ARTICLES

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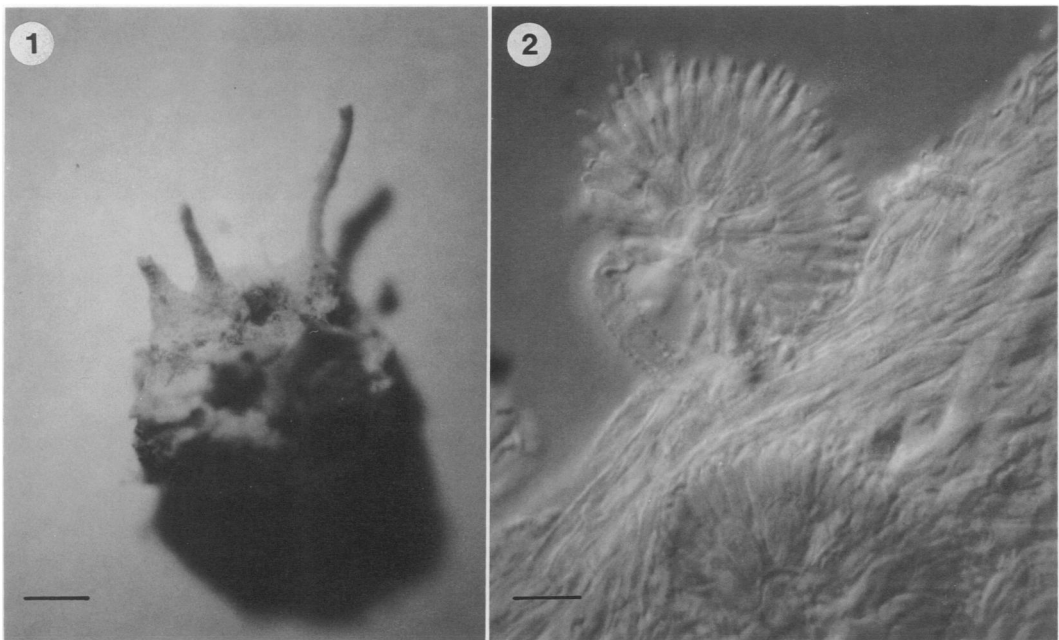
### *GIBELLULA PULCHRA* FROM A SPIDER (SALTICIDAE) IN NOVA SCOTIA, CANADA

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*Gibellula pulchra* (Sacc.) Cavara and *Gibellula leiopus* (Vuill.) Mains are the only two species of *Gibellula* reported to be pathogenic on spiders in North America (Mains, 1950). The geographical distribution data for these fungi on this continent suggest that they occur mostly in the eastern United States (Mains, 1950). Records show the northern limit for *G. pulchra* is Maine (Mains, 1950), and for *G. leiopus* there are two reports on spiders from Canada: one was collected at Brookside, Nova Scotia (Mains, 1950), and the second was a 1979 collection (DAOM 189850) by N. Binyamini from Gatineau Park, Quebec deposited in the herbarium of the Biosystematics Research Centre, Ottawa, Ontario (BRC).

This is the first report of *G. pulchra* from Canada and represents an extension of the known geographical range for the fungus. A chance find, the spider was attached to the inside of an old pine cone in litter at the north end of Vinegar Lake, Nova Scotia (50 km southeast of Halifax). The host was identified as a salticid spider *Neon nellii* Peckham & Peckham and was covered by a dense yellowish mycelium with characteristic synnemata and conidial heads (Figs. 1, 2). Measurements of the prophialides (avg  $8 \times 6 \mu\text{m}$ ), phialides (avg  $9 \times 3 \mu\text{m}$ ) and conidia (avg  $4.5 \times 1.5 \mu\text{m}$ ) agreed well with the species description in Mains (1950). No teleomorph was observed. The specimen was deposited at BRC as



FIGS. 1, 2. *Gibellula pulchra* from a spider (*Neon nellii*). 1. Synnemata on the host. 2. Conidiophore with typical prophialides and phialides. Scale bars: Fig. 1 = 5 mm; Fig. 2 = 10  $\mu\text{m}$ .

DAOM 212360. The subsequent examination of 250 cones (pine and fir, 125 each) from the collection site yielded 2 living spiders for a total of 3, including the specimen with *G. pulchra*. Since these spiders are mobile hunters, an extensive search in the leaf litter may have provided more infected specimens.

Some interesting observations emerged from my review of the published data on species diversity and distribution for *Gibellula*. In North America the diversity is restricted to two species with *G. leiopus* more common (33 collections) than *G. pulchra* (9 collections) (Mains, 1950). In contrast to this data, diversity of *Gibellula* species is higher in tropical areas (Mains, 1949, 1950; Samson and Evans, 1973). Furthermore, data from Ghana showed that *Gibellula pulchra* was more common on spiders than *G. leiopus* prompting the authors to comment on the ubiquitous nature of *G. pulchra* in the area and suggest that it could be an important mortality factor in spider populations (Samson and Evans, 1973).

What factors may account for the observed differences in frequency and distribution of these two species in tropical vs. temperate locations? Biotic factors such as host population and habitat characteristics as well as abiotic factors (e.g., humidity and temperature) are known to affect the

occurrence and thus geographical distribution of fungi pathogenic on insect hosts (Samson *et al.*, 1988). Data on these factors are generally lacking in reports for spider pathogens. Therefore, more detailed information on host species and habitat should be included with new records especially if these fungi are important mortality factors in spider populations as has been suggested (Samson and Evans, 1973).

#### ACKNOWLEDGMENTS

I thank C. D. Dondale, BRC, for identifying the spider and J. Bisset, BRC, for confirming the identification of *G. pulchra*.

Key Words: *Gibellula pulchra*, Canada, spider

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## PODOSPORA FIBRINOCAUDATA, A NEW SPECIES FROM CALIFORNIA

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In the course of a continuing study of coprophilous fungi, a field collection of dusky footed wood rat (*Neotoma fuscipes*) dung from California was examined. This mammal has rather specialized feeding habits with the result that this substrate has been found to harbor a rather specialized population of fungi. Thus, it was not surprising to isolate from this habitat a rather unusual species of *Podospora* Ces.

Numerous species of *Podospora* have been de-

scribed or added to the genus (e.g., Niessl, 1883; Winter, 1885; Cain, 1962; Cailleux, 1969). It has been treated in detail by several authors (e.g., Mirza and Cain, 1969; Lundqvist, 1972) and, subsequently, a number of additional taxa have been described (e.g., Garcia-Zorron, 1977; Udagawa and Ueda, 1985; Mouchacca, 1986; Krug and Khan, 1989). Since our fungus does not appear to be identical with any of the known species, it is described here as a new taxon.