A new disease of common poppy in Canada caused by a downy mildew

J.P. Tewari[1] *and W.P. Skoropad*[2]

The downy mildew *(Peronospora arborescens)* parasitising the common poppy *(Papaver somniferum)* is described. The material was collected from a house backyard in St. Albert, Alberta and this note is the first report of this disease in Canada.

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L'auteur décrit le mildiou *(Peronospora arborescens)* qui parasite le pavot somnifere commun *(Papaver somniferum)*. Le materiel provient d'une arrière-cour a Saint-Albert (Alberta) et cette note est la premiere mention de la maladie au Canada.

Common poppy *(Papaver somniferum* L.) is a native of Europe and Asia. It is cultivated and grows as an escape in Newfoundland to Ontario (1) and is also infrequently grown in the backyard gardens in other parts of Canada.

Common poppy is susceptible to a number of fungal pathogens (1,2). During the late summer of 1977, diseased leaves of common poppy were received for disease diagnosis at the Department of Plant Science, The University of Alberta, from a homeowner in St. Albert, Alberta. This material was diagnosed to have a disease caused by the downy mildew *[Peronospora arborescens* (Berk.) de Bary (3, 4)]. This fungus, though reported on Mexican pricklepoppy (*Argemone mexicana* L.) from U.S.A. (2), has not been reported from Canada (1). However, *Peronospora corydalis* de Bary is reported on *Corydalis aurea* Willd., *C. sempervirens* (L.) Pers., and *Dicentra canadensis* (Goldie) Walp from Canada (1). All of these plants are closely related to the common poppy.

The diseased leaves of common poppy contained extensive necrotic, angular spots limited by the major veins in the early stages (Fig. 1). Many of these necrotic spots showed profuse hypophyllous sporulation of a *Peronospora.* The conidiophores showed the characteristic dichotomously branched apices (Fig. 2). The taxonomy of the species of *Peronospora* on Papaveraceae is based on the host and dimensions of the conidia (3, 4). The conidia in our material average 24.9 X 19.5 μm (range 22.3 - 26.0 X 13.6 - 22.3 μm) which is within the range described for *P. arborescens* (3, 4).

The diseased specimens have been deposited in the National Mycological Herbarium, Biosystematics Research Institute, Ottawa, as DAOM 179533.

Literature cited

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[1] *Biological Sciences Electron Microscopy Laboratory, University of Alberta, Edmonton, Alberta, Canada T6G 2E9*

[2] *Department of Plant Science, University of Alberta, Edmonton, Alberta, Canada T6G 2P5*

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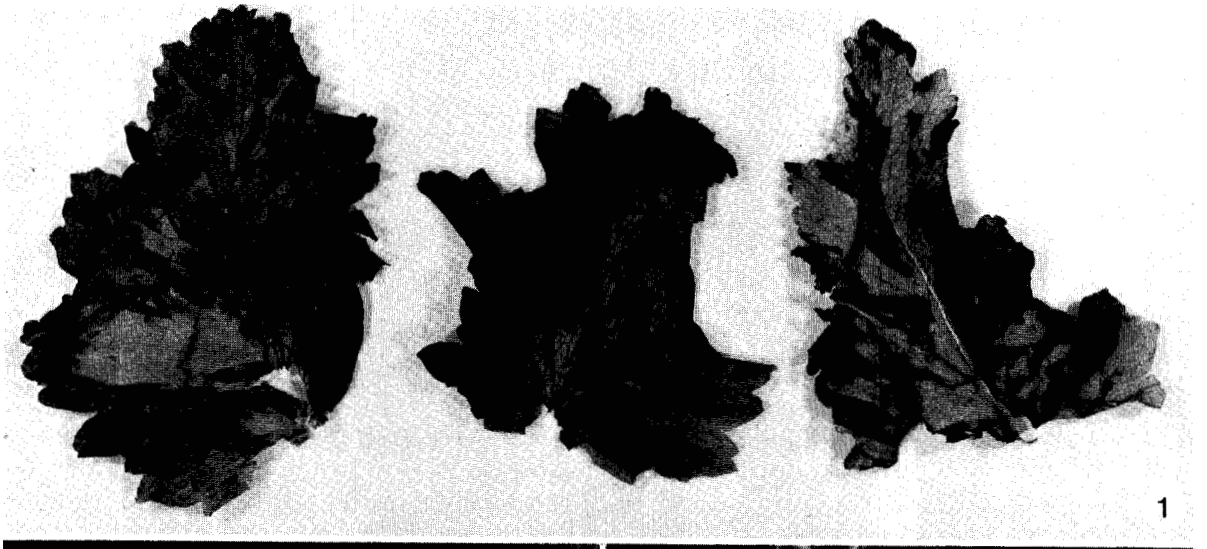

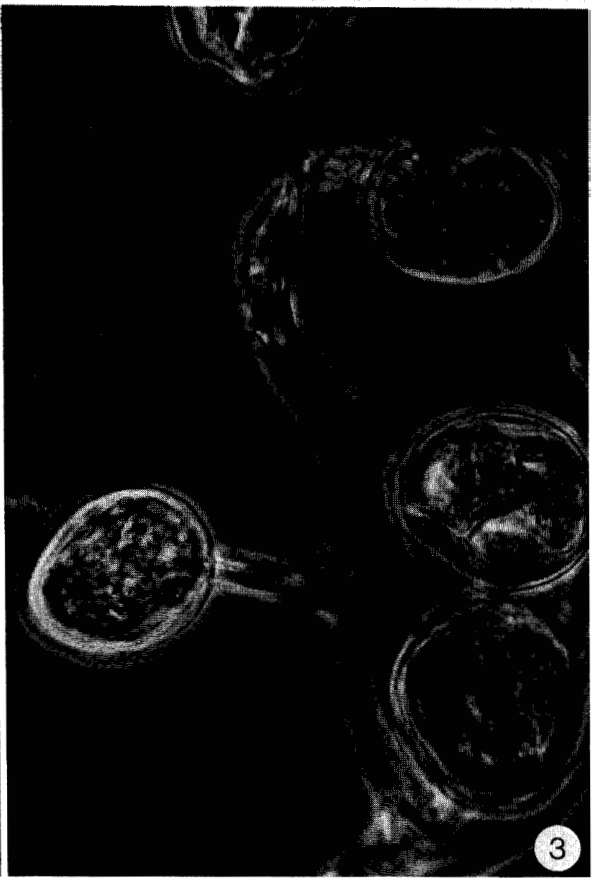

Peronospora arborescens on common poppy

Fig. 1. Parts of the leaves showing symptoms. Note dark necrotic areas which appear angular in the early stages. X 0.9.

Fig. 2. A conidiophore. Note the dichotomously branched apices X 400.

Fig. 3. Part of the conidiophore with conidia. X 1700.