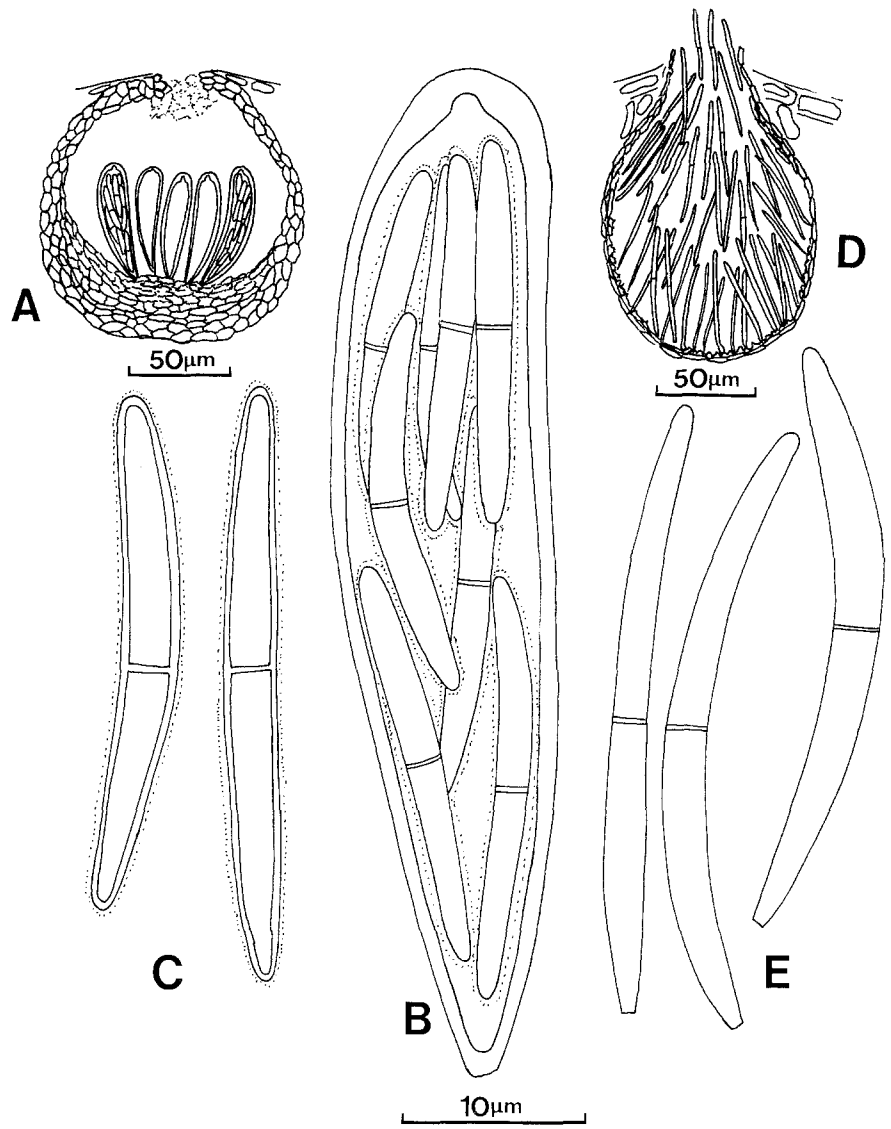
Mycopathologia **109**: 55–56, 1990.

CMI Descriptions of Pathogenic Fungi and Bacteria No. 987

MYCOSPHAERELLA POPULI



A. Ascoma in vertical section; B. Ascus; C. Ascospores; D. Pycnidium in vertical section; E. Conidia

Mycosphaerella populi (Auersw.) Schroeter in Cohn, *Kryptogamen-Flora von Schlesien* **3:** 36, 1894.
Sphaerella populi Auersw. in Gonnerm. & Rabenh., *Mycologia Europaea* **5/6:** 11, 1869.
Mycosphaerella balsamopopuli Nev., *Fungi of the U.S.S.R.* Fasc. I, No. 7, 1952.
Anamorph: *Septoria populi* Desm., *Ann. Sci. Nat. sér.* 2, **14:** 345, 1843.

Leaf spots circular, 3–6 mm diam, or angular following main veins and, usually, coalescing into a necrotic zone, white or pale in the centre, darkening towards the edge and surrounded by a narrow, slightly raised margin.

Ascomata immersed in rounded leaf spots, subglobose, ostiolate, up to 150 μm diam, with a pseudoparenchymatous wall. *Asci* more or less clavate, bitunicate, 8-spored, 90–95 × 12–18 μm. *Ascospores* colourless to very pale olivaceous, 1-septate, cylindrical, smooth, 38–45 × 4–5 μm, surrounded by a mucilaginous sheath. *Pycnidia* amphigenous, mostly epiphyllous, subglobose to globose, ostiolate, thin-walled, up to 200 μm wide. *Conidia* straight to curved, fusoid to falcate, mostly 1-septate, colourless to pale olivaceous, with rounded ends, 30–40 × 3–4 μm, formed on subglobose to ampulliform, colourless conidiogenous cells lining the pycnidial cavity.

HOSTS: *Populus* spp.

DISEASE: Leaf spot of poplar.

GEOGRAPHICAL DISTRIBUTION: Asia: Iran. Europe: Austria(?), Czechoslovakia, Italy, Spain, USSR. South America: Argentina.

PHYSIOLOGIC SPECIALIZATION: None reported.

TRANSMISSION: Presumably by windborne ascospores and conidia.

NOTES: Conidia germinate best at 21, 24 and 27 °C (**23,** 365, 366). Potato glucose agar is most suitable for growth and sporulation. Mycelial growth is best at 28 °C. Microconidial sporulation is part of life cycle development and appears at low temperatures (**65,** 5885). Bordeaux mixture, Cu chloroxide and basic $CuSO_4$ are very effective in controlling the disease (**4,** 2250). On poplar, two other *Mycosphaerella* species, *M. populicola* Thompson and *M. populorum* Thompson have been described, and they can be easily distinguished from *M. populi* by differences in conidial septation and size and in the size of the ascospores.

LITERATURE: Andrianova, *Mikologiya i Fitopatologiya* **20:** 5–11, 1986; Sarasola, *Revista Argentina de Agronomia* **11:** 20–43, 1944; Sivanesan, *The Bitunicate Ascomycetes and their Anamorphs*, 1984.

A. Sivanesan

[Numbers in brackets, e.g. (**55**, 1234), refer to abstracts in the *Review of Plant Pathology*]

Issued by the CAB International Mycological Institute, Ferry Lane, Kew, Surrey, England.

Kluwer Academic Publishers. Printed in The Netherlands.