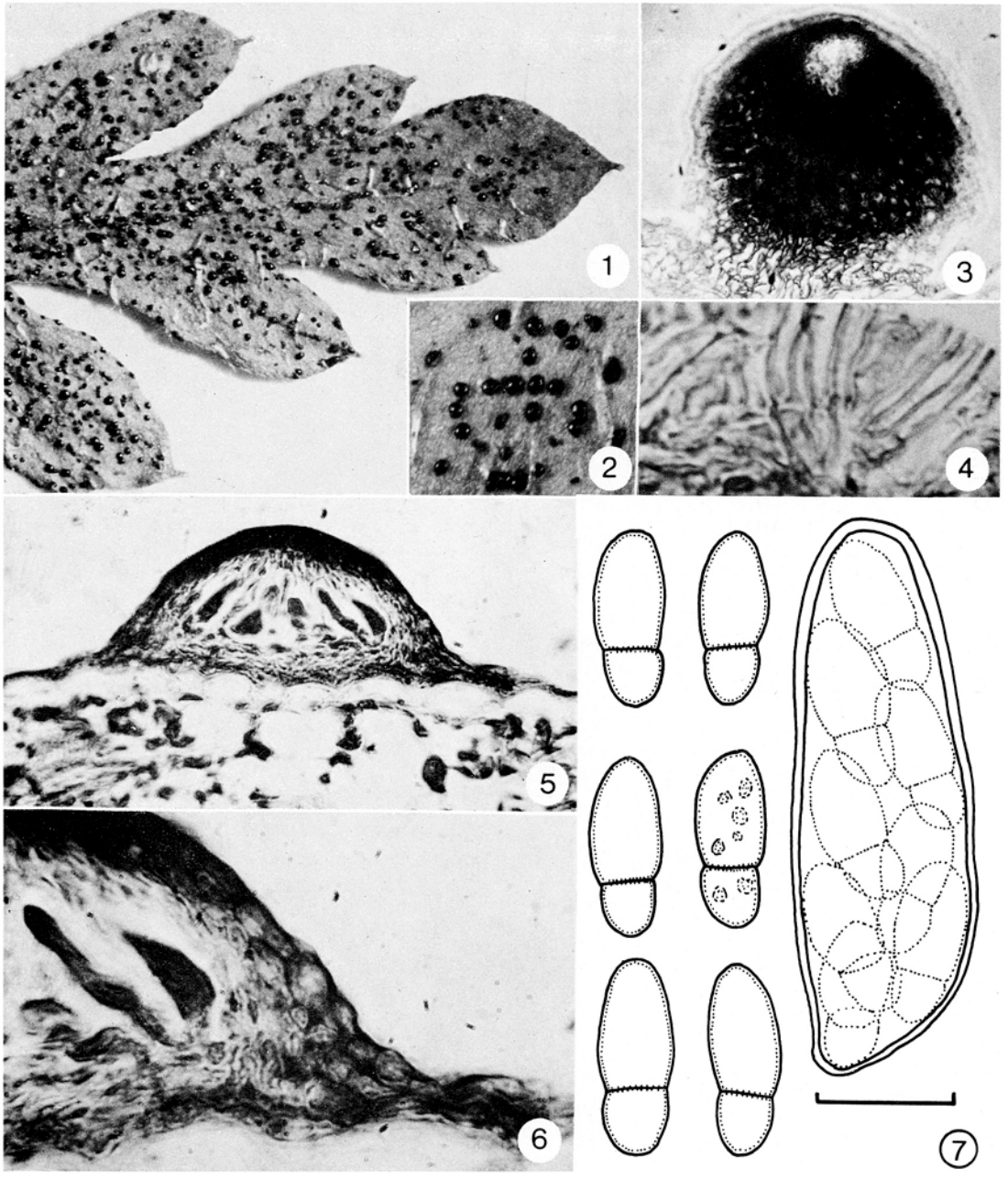
COLEROA ROBERTIANI



1, 2, 3, Ascostromata, surface view of leaf (1, × 10; 2, × 20; 3, × 450); 4, surface view of dendritic subcuticular mycelium (× 1200); 5, 6, section through ascostroma and host (5, × 500; 6, × 1200); 7, ascus and ascospores (scale = 10μ). 1, 3, 4, from DAOM 15610; 2, DAOM 132238; 5, 6, DAOM 41159; 7, DAOM 14033.

Coleroa robertiani (Fr.) E. Müller, in Müller and v. Arx, Beitr. Krypt. Fl. Schweiz 11(2):416. 1962.
≡ *Dothidea robertiani* Fr., Syst. Mycol. 2: 564. 1823.
≡ *Stigmatea robertiani* (Fr.) Fr., Summa Veget. Scand. p. 421. 1849.
≡ *Ascospora robertiani* (Fr.) O. Kuntze, Rev. Gen. Plant. 3(2): 444. 1898.
≡ *Munkiella robertiani* (Fr.) v. Höhn., Ann. Mycol. 16: 172. 1918.
≡ *Hormotheca robertiani* (Fr.) v. Höhn., Hedwigia 62: 44. 1921.
= *Cryptosphaeria nitida* Grev., Fl. Edin. p. 363. 1824.
= *Sphaeria geranii* Wallr., Crypt. Germ. 2: 771. 1833.
≡ *Hormotheca geranii* (Wallr.) Bon., Abhandl. Naturf. Ges. Halle 8: 149. 1864.

MYCELIUM subcuticular; hyphae dendritic, closely appressed, forming a thin flat plate usually one cell thick. ASCOSTROMATA mostly epiphyllous, originating from subcuticular mycelium, appearing superficial but covered by cuticle even at maturity, black, shiny, glabrous, scattered or clustered, usually separate but occasionally crowded with the walls of two or three ascostromata confluent, flattened hemispheric, circular in outline, 80-160μ diam., 40-80μ high. In vertical section, upper ascostroma wall 8-17μ thick, composed of 2-3 layers of prismatic brown to blackish brown cells; basal wall flattened, 4-8μ thick, composed of 1(-2) layers of compressed, light brown cells which are continuous with the subcuticular mycelium. OSTIOLE irregular in outline, 16-24μ wide, apparently lysigenously formed, sometimes plugged with hyaline to pale centrum cells. SETAE absent. PSEUDOPARAPHYSES hyaline, septate, 1-2μ wide. ASCI bitunicate, hyaline, oblong to saccate, (22-)32-38(-46) × (9-)10-13 (-15)μ, lacking a distinct basal foot. ASCOSPORES greenish yellow to olivaceous brown, obovoid to elliptic, (10-)11-12.5(-14.5) × (3.5-)4-5(-6.5)μ, symmetrical to slightly inequilateral with extremities obtusely rounded, septate in lower third, constricted at septum; upper cell twice as long as lower cell; wall smooth.

HOST: *Geranium robertianum* L.

DISTRIBUTION: Nova Scotia, Quebec and Ontario.

COLLECTIONS (selected): N.S.: Inverness Co., Cheticamp, 16 Aug. 1956, DAOM 43043 (D.B.O. Savile). Que.: Abbotsford, 1 Sept. 1936, 14033 (D.B.O.S.); Pink Lake, 3 Sept. 1945, 15610 (D.B.O.S.); Rouville Co., Rougemont, 19 Oct. 1954, 41159 (L. Cinq-Mars and R. Crête). Ont.: Rockwood, 6 July 1946, 132238 (W. D. Sutton).

NOTES: From the descriptions of *Cryptosphaeria nitida* Grev. and *Sphaeria geranii* Wallr., it is very probable that these names are based on *Coleroa robertiani*.

M.E. Barr (Can. J. Bot. 46: 799-864. 1968) distributed the North American species of *Coleroa* into subgenus *Coleroa*, characterized by spherical and usually setose ascostromata, and a new subgenus, *Hormotheca* (Bon.) Barr, characterized by hemispheric, non-setose ascostromata.

Only three species of *Coleroa* are represented in DAOM by Canadian collections: *C. robertiani* on *Geranium robertianum*, from Nova Scotia to Ontario; *C. rubicola* (Ell. and Ev.) E. Müller (Fungi Canadenses No. 92) on *Rubus* spp., from Nova Scotia to British Columbia; and *C. chaetomium* (Kunze ex Fr.) Rabenh. (Fungi Canadenses No. 20) also on *Rubus* spp., from Alberta and British Columbia. *C. robertiani* and *C. rubicola* are referred to subgenus *Hormotheca*, while *C. chaetomium* (which is the type species of the genus) is in the subgenus *Coleroa*. Another species, *C. circinans* (Fr.) Wint., occurs in British Columbia on *Geranium* (Barr, loc. cit.). *C. circinans* (subgenus *Coleroa*) can be distinguished from *C. robertiani* by its spherical and usually setose ascostromata and by differences in ascospore morphology. Other North American species of *Coleroa* (Barr, loc. cit.) not occurring or not yet collected in Canada are *C. sporoboli* (Greene) M.E. Barr on *Sporobolus* spp. from Wisconsin, and *C. plantaginis* (Ell.) M.E. Barr on *Plantago* spp. from central and eastern U.S.A.

Coleroa is closely allied to *Atopospora*, another venturiaceous genus (see Fungi Canadenses No. 88, *Atopospora betulina* (Fr.) Petrak).

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