

on *Salix* leaves strongly indicates that *Myrioconium* is an imperfect stage of certain species of *Sclerotinia*.

Mr. Ivar Tidestrom has kindly named the specimens of host material with the exception of the *Carex* species, which were determined by the late Dr. H. Hasselbring.

1. SCLEROTINIA SCLEROTIORUM (Lib.) DeBary. (PLATE 36, FIGS. 1-3.)

On *Mertensia lanceolata* (Pursh) DC., 388 and 397, June 20; 416, June 23; 445, June 26. Mesa Lakes.

On *Aconitum columbianum* Nutt., 389, June 20. Mesa Lakes.

This *Sclerotinia* was very common in the region on *Mertensia*, fruiting abundantly when first found on June 20 and continuing as late as July 12. In the old stems and among the rotting remains of plant tissue, the large solid sclerotia could easily be found. Frequently several discs occur on a single sclerotium.

It was definitely determined as occurring on the two hosts here given, but it is quite likely that a number of others are also affected. It is thought that it also occurs on the poisonous larkspur common in this region, but this was not definitely demonstrated, although sclerotia were observed on old stems of this plant. The fact that this fungus has been reported on so many herbaceous hosts might lead one to suppose that under favorable conditions it would occur on almost any herbaceous plants. However, observations in the vicinity of Mesa Lakes indicate that it is selective in this respect, for several hosts which grew side by side with *Mertensia* and just as abundantly, were not infected by the fungus. Sclerotia were planted in moist sand in the laboratory, but no conidial or ascus stages developed.

2. **Sclerotinia Veratri** Cash & Davidson, sp. nov. (PLATE 36, FIG. 4.)

The sclerotia are flat, elliptical to irregularly elongate, embedded in stems and, when infection is severe, diffused over considerable area, dark reddish brown to black, white within, 3-7 mm. long by 1-3 mm. broad and 1 mm. thick; apothecia reddish brown, cupulate at first, with inrolled margins, becoming almost flat, usually 3-7 mm. broad, sometimes larger, up to 1 cm., wrinkled when dry, hymenium brown, becoming lighter grayish brown at maturity; stipe black, swollen toward the base, 0.5-1

cm. long by 0.5–1 mm. thick; asci cylindrical, attenuated near base, wall thickened at apex, $140\text{--}150 \times 11\text{--}13 \mu$; spores irregularly uniseriate, unicellular, biguttulate, oblong-elliptical, hyaline, $15\text{--}17.6 \times 5\text{--}6.5 \mu$; paraphyses filiform, septate, simple or branched near the base, pale brown, $2\text{--}2.5 \mu$ at apex.

Sclerotiiis applanatis, ellipticis vel elongatis, nigro-brunneis, in caulibus immersis, intus albidis, 3–7 mm. longis, 1–3 mm. latis, 1 mm. crassis; conidiis $13\text{--}17 \times 5\text{--}7.5 \mu$ in sclerotiiis cultis; apotheciis rufo-brunneis, primitus cyathiformibus, margine incurvato, denique patelliformibus, plerumque 3–7 mm., interdum 1 cm. diam., disco griseo-brunneo; stipite nigro, versus basim inflato, 0.5–1 cm. longo, 0.5–1 mm. diam.; ascis cylindricis, base attenuatis, apice incrassatis, $140\text{--}150 \times 11\text{--}13 \mu$; sporis irregulariter uniseriatis, simplicibus, oblongo-ellipticis, hyalinis, biguttulatis, $15\text{--}17.6 \times 5\text{--}6.5 \mu$; paraphysibus filiformibus, septatis, simplicibus vel ad basim ramosis, dilute brunneis, apice $2\text{--}2.5 \mu$ crassis.

On *Veratrum californicum* Durand, 390 (type) June 20, on the south shore of Mesa Lakes Reservoir, around pools of cold spring water; 392 (sclerotia) same data.

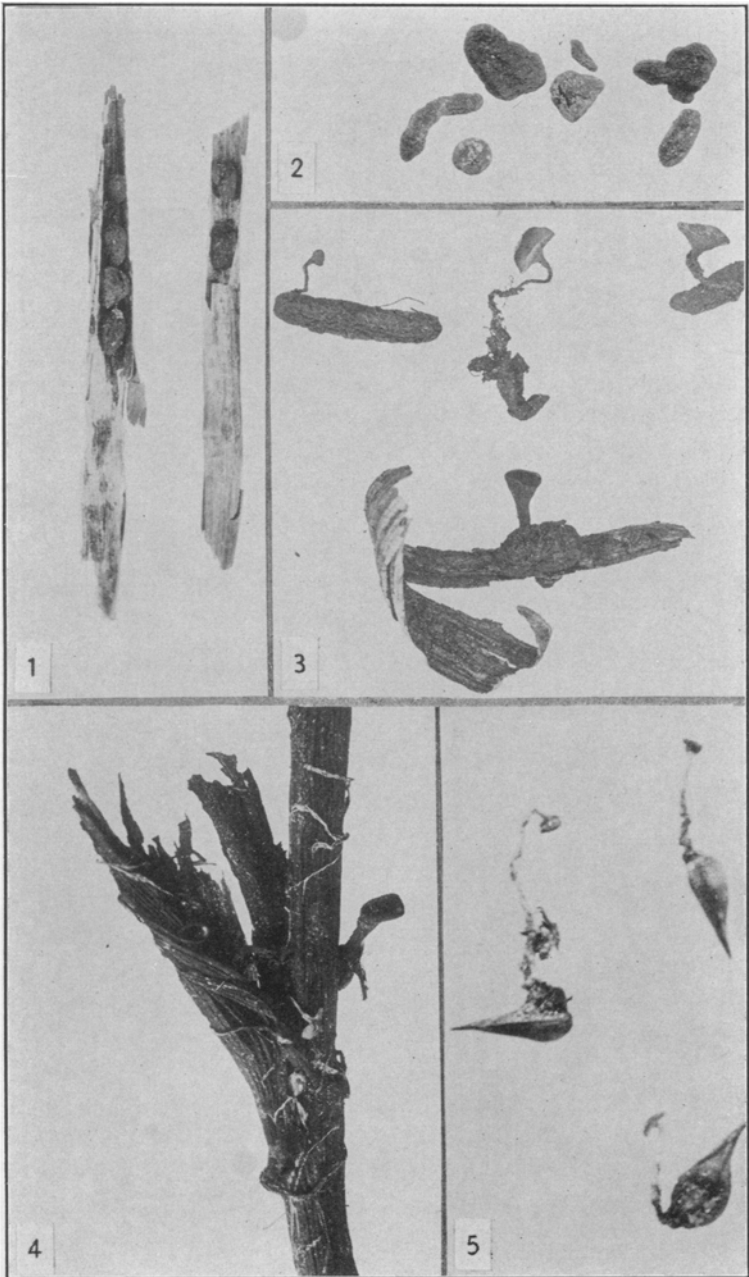
The sclerotia were noticed frequently on old stems but the perfect stage was seldom found and then under only the most ideal conditions.

A species of *Botrytis* with spores $13\text{--}17 \times 5\text{--}7.5 \mu$ developed on sclerotia that were placed in damp sand.

3. *Sclerotinia coloradensis* Cash & Davidson, sp. nov. (PLATE 38, FIG. 12.)

Sclerotia on stems and seed pods were thin, flat, elongated, sometimes confluent, black, white within, 0.2–3 cm. long, 2–5 mm. broad, 0.5 mm. thick, inconspicuous on weathered material. Apothecia one to several from each sclerotium, cup-shaped, becoming flat, pale brown, 2–3.5 mm. in diameter, hymenium pale brown, margin thin, inrolled when dry; stem brown, $4\text{--}7 \times 0.5$ mm.; asci cylindrical, blunt and thick walled at apex, short-pedicellate, $135\text{--}155 \times 7.5\text{--}9.5 \mu$; paraphyses filiform, septate, unbranched, 2.5μ at apex; spores unicellular, elliptical, hyaline, $10\text{--}12 \times 4\text{--}5 \mu$.

Sclerotiiis tenuibus, applanatis, elongatis, interdum confluentibus, nigris, intus albidis, 0.2–3 cm. longis, 2–5 mm. latis, 0.5 mm. crassis; apotheciis singulis vel pluribus ex quoque sclerotio, cyathiformibus vel patelliformibus, pallide brunneis, 2–3.5 mm. diam.; hymenio pallide brunneo, margine tenui, sicco incurvato; stipite brunneo, aequale, $4\text{--}7 \times 0.5$ mm.; ascis cylindricis, apice obtusatis et incrassatis, breviter pedicellatis, $135\text{--}155 \times 7.5\text{--}9.5 \mu$; paraphysibus filiformibus, septatis, non ramosis, apice 2.5μ crassis; sporis simplicibus, hyalinis, ellipticis, $10\text{--}12 \times 4\text{--}5 \mu$.



SCLEROTINIA

EXPLANATION OF PLATES

PLATE 36

Figs. 1-3, *Sclerotinia sclerotiorum* on *Aconitum*; 1, sclerotia in stems, $\times 1$; 2, sclerotia, $\times 1$; 3, apothecia growing from sclerotia, about $\times 2$; fig. 4, *Sclerotinia Veratri*. Apothecia on stem of *Veratrum californicum*, $\times 2$; fig. 5, *Sclerotinia utriculorum* Boud. Apothecia growing from *Carex* seed, $\times 5$.

PLATE 37

Figs. 6-7, *Sclerotinia paludosa* on *Carex*, $\times 5$; 6, apothecia on leaves; 7, sclerotia; figs. 8-9, *Sclerotinia foliicola* on *Salix*. Apothecia and sclerotia, $\times 5$.

PLATE 38

Figs. 10-11, *Sclerotinia gregaria*. Apothecia on fruit of *Amelanchier*, $\times 5$; fig. 12, *Sclerotinia coloradensis*. Apothecia and sclerotia on stems of *Pedicularis*, $\times 5$.

Photographs made by J. F. Brewer.