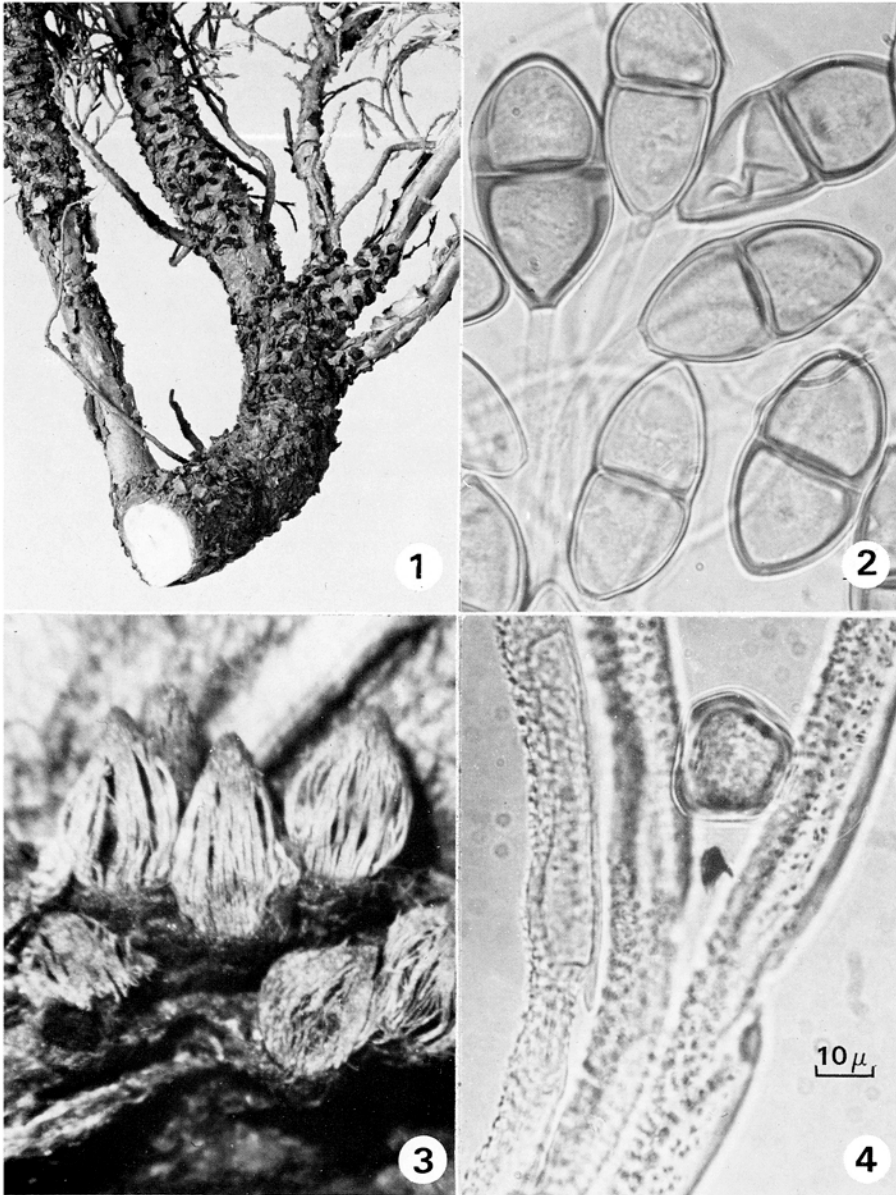


GYMNOSPORANGIUM FUSCUM



1, Telia on *Juniperus*, $\times 1/2$; 2, teliospores; 3, aecia showing typical balanoid shape, $\times 7$; 4, peridial cells verrucose and slightly curved, and aeciospore.

Gymnosporangium fuscum DC., Fl. Fr. 2: 217.1805.

= *G. sabinae* (Dicks.) ex Wint., Hedw. 19: 55. 1880 [III not described].

[≡ *Tremella sabinae* Dicks., Plant. Crypt. Brit. I: 14. 1785.]

PYCNIA epiphyllous, yellow becoming black on chlorotic spots. AECIA hypophyllous, petioliculous, causing considerable hypertrophy of host, pale brown, balanoid, finely lacerate along sides but apex usually intact. AECIOSPORES globoid or broadly ellipsoid, $26-40 \times 22.5-29\mu$, wall $2.0-2.7\mu$ thick, brown, densely and shallowly verrucose, pores 6-8 scattered. Peridial cells regularly seen in side view, verrucose on sides, inner wall verrucose, indistinctly $6.5-8.0\mu$ thick, outer wall smooth, 1.5μ thick, cells slightly curved in lactophenol. TELIA dark red-brown, bluntly conical on slightly fusiform enlargements of branches. TELIOSPORES elliptical, slightly or not constricted, $39-64 \times 19-29\mu$; wall $0.7-2.4\mu$ thick, pale to dark yellow-brown, pores 1-2 per cell at septum; pedicel hyaline, cylindrical, $4-6\mu$ diam. near attachment to spore, many times length of spore.

HOSTS: O I on *Pyrus communis* L., III on *Juniperus sabina* L. vars.

DISTRIBUTION: British Columbia, environs Victoria and lower Fraser River Valley.

COLLECTIONS: O I on *Pyrus communis* [cult. pear]: B.C., Victoria: 30 June 1945, DAOM 118697 (Hibberson) [0 only]; 6 Sept. 1945, DAOM 118699 (Hibberson) [0 aborted]; 16 Sept. 1969, DAOM 70931 (DAVFP 11448, Harvey & Corbett); 18 Oct. 1960, DAOM 136237 (DAVFP 12357, Ziller). III on *Juniperus sabina* L.: B.C., Victoria, 1 June 1960, DAOM 70930 (DAVFP 12000, Ziller); Vancouver, date unknown, DAOM 132994.

NOTES: *G. fuscum* (trellis rust) is well known throughout central Europe. It has been intercepted in Eastern Canada on imported nursery stock of *Juniperus sabina* from Europe since 1932. Although interceptions have been made at ports of entry on the Niagara Peninsula where pears are grown, there is no evidence of the rust becoming established in Ontario. Elsewhere in Eastern Canada interceptions have been made at Quebec, Montreal, Ottawa, Toronto, Oakville, Guelph, Winona and Windsor.

In British Columbia, Ziller (Pl. Dis. Rep. 45: 90-94. 1961) reported that trellis rust had become established in the region of Victoria and that it was completing its full cycle on juniper and pear. An eradication program followed but was discontinued because of difficulties encountered in completing the program. Rust is now known on the B.C. mainland in the lower Fraser River Valley and has been reported as far inland as Chilliwak. To combat further spread, Canadian authorities have placed an export embargo on juniper stock from that area and pathologists in British Columbia have begun investigations on spore dispersal.

Trellis rust is most like *G. clavariiforme* (Pers.) DC. in aecial characters but can be distinguished by its late aecial maturation (September-October in B.C.), the balanoid rather than open, fimbriate peridium and the much less conspicuous verrucae on the aeciospore walls. The dark brown, conical telia are readily distinguishable from the bright orange-brown and pillar-like telia of *G. clavariiforme*, which appears only on *Juniperus communis* L.

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