

*Trisetum* last fall which were very badly rusted, and planted in the garden. However, this spring I can see the telia on only one leaf, and that is the *Trisetum*." Even the rust on the one leaf may have been another species. The evanescent character of this species corresponds to that of *Puccinia Eatoniae* Arth., having aecia on *Ranunculus abortivus* from a diffused mycelium and appearing over the whole surface of the leaf early in spring.

As the rust is now for the first time clearly recognized, it is herewith distinctively named and characterized.

***Puccinia monoica* (Peck) n. nom.** (*Aecidium monoicum* Peck, Bot Gaz. 4: 230. 1879.)

O. Pycnia amphigenous, thickly scattered over large areas, preceding or among the aecia, honey-yellow becoming brownish, sub-epidermal, flattened-globose, 90–160 $\mu$  in diameter by 60–112 $\mu$  high; ostiolar filaments 30–90 $\mu$  long.

I. Aecia chiefly hypophyllous, evenly and thickly scattered, usually occupying the whole under surfaces of the leaves, cupulate or short cylindrical, 0.3–0.4 mm. in diameter; peridium whitish, the margin erect or spreading, somewhat lacerate, the peridial cells rhomboidal, 29–34 $\mu$  long, the outer wall 7–10 $\mu$  thick, striate, the inner wall 3–3.5 $\mu$  thick, verrucose; aeciospores globoid, 15–23 by 18–25 $\mu$ , the wall colorless, 1.5–2.5 $\mu$  thick, rather finely verrucose.

II. Uredinia chiefly epiphyllous, somewhat gregarious, oval or oblong, 0.5–1 mm. long, cinnamon-brown, pulverulent; urediniospores broadly ellipsoid or obovoid, 19–21 by 24–31 $\mu$ , the wall cinnamon-brown, about 2 $\mu$  thick, finely and closely echinulate, the pores 6–8, scattered.

III. Telia chiefly epiphyllous, more or less gregarious, oval, oblong, or roundish, 0.5–1 mm. long, pulvinate, chocolate-brown or cinereous by germination at maturity, early naked; teliospores ellipsoid or clavate-oblong, 16–24 by 34–45 $\mu$ , the wall cinnamon-brown, 1–1.5 $\mu$  thick, thicker at apex, 5–10 $\mu$ , smooth; pedicel nearly or quite colorless, rather slender, once to twice length of spore.

O and I. Pycnia and aecia on various species of *Arabis* throughout the Rocky mountain region, type collection from Colorado, on *Arabis retrofracta*, made by T. S. Brandegee.

II and III. Uredinia and telia on various species of *Trisetum*, the present known geographical range not so great as for the aecial stage.

3. GYMNOSPORANGIUM NELSONI Arth. (*G. durum* Kern), on *Juniperus utahensis* (Engelm.) Lemmon, sent by Mr. E. Bethel from Delta, Colo., was sown April 5 on *Amelanchier vulgaris*,