Multiflora rose rust - *Phragmidium rosae-multiflorae*

Among the many species of rust fungi that occur on *Rosa*, this species attacks multiflora rose and thus could be of economic importance if introduced outside its native range.

*Phragmidium rosae-multiflorae* Dietel 1905

Spermogonia not seen.

**Aecia** hypophyllous or petiolicolous, occasionally on fruits or young shoots, generally elongated on veins of leaves, petioles and shoots, up to 2 cm long, pulvinate, finally somewhat pulverulent, rupturing through epidermis, orange-yellow; paraphyses none; aeciospores globose, subglobose or ellipsoid, 20-30 × 15-22 µm, walls verrucose, 1.8-2.8 µm thick, nearly hyaline, contents orange-yellow.

**Uredinia** hypophyllous, scattered or in small groups, minute, round, 0.1-0.6 mm diam, orange yellow to pale yellow, pulverulent; paraphyses clavate, erect or incurved, 25-65 × 10-18 µm, hyaline, walls smooth, 1-2.5 µm; urediniospores globose, subglobose, broadly ellipsoid or obvoid, 18-27 × 15-21 µm; walls 2-3 µm thick, verrucose, hyaline; contents orange yellow.

**Telia** hypophyllous, scattered or gregarious, minute, round or irregular, 0.2-0.4 mm diam, pulverulent, black; teliospores cylindrical, 4-10 (mostly 7-8) celled, 65-126 × 20-30 µm, rounded at apex, not constricted at septum, walls 2.4-4 µm, yellowish brown, minutely verrucose (smooth fide Hirastuka, 1992), apical papillae conical, up to 8-10 µm long with 3 germ pores in each cell, pedicels yellowish-brown in upper portion, hyaline below, persistent, 60-129 µm long.

See Hiratsuka et al. (1992) and Wei (1988) for a more detailed description.

**Host range:** Species of *Rosa* subfamily Rosoideae tribe Rosae, specifically *R. acicularis, R. banksiopsis, R. bella, R. chinensis, R. cymosa, R. dahurica, R. henryi, R. laevigata, R. luciae, R. maximowicziana, R. multiflora, R. multiflora var. adenochaeta, R. multiflora var. cathayensis, Rosa multiflora var. thunbergiana, Rosa roxburghii Tratt. var. hirtula, R. rugosa, R. sambucina, R. sertata, R. xanthina

**Geographic distribution:** Asia (China, Japan, Korea, Taiwan)

**Notes:** This fungus is similar to *Phragmidium mucronatum* in characters of teliospores. However, there are distinguishable based on the width of teliospores (*P. mucronatum* 29-36 µm wide) and color of pedicels (*P. mucronatum* hyaline) (Wei, 1988).

**References:**

Uredinia and telia of *Phragmidium rosae-multiflorae* on *Rosa* sp. (x3.2)

Teliospores of *Phragmidium rosae-multiflorae* on *Rosa* sp. (x40)

Urediniospore of *Phragmidium rosae-multiflorae* on *Rosa* sp. (x40)