Japanese rose rust - *Phragmidium rosae-rugosae*

This rust attacks species of *Rosa* native to Asia. None of these host species are related to species of common ornamental roses, thus this rust species does not appear to be a threat to the North American rose industry.

*Phragmidium rosae-rugosae* Kasai 1910

**Aecia** forming a large dense cushion on petioles, stems or fruits, and lower surface of leaves often causing conspicuous deformation, pulvinate, more or less pulverulent, bright orange-yellow; aeciospores subglobose, broadly ellipsoid or somewhat angular, 20-28 × 16-22 µm, minutely verrucose, 1.8-3 µm thick, hyaline, walls orange-yellow; paraphyses numerous, clavate, 50-85 × 14-20 µm, walls smooth, uniformly thin, nearly hyaline.

**Uredinia** hypophyllous, scattered or in groups, minute, round, 0.2-2 mm, pale yellow, pulverulent; urediniospores globose, subglobose, obovate, or broadly ellipsoid, 18-25 × 15-24 µm, walls 1.5-3 µm thick, hyaline, finely verrucose, germ pores obscure, numerous, scattered; paraphyses clavate, 54-150 × 9-20 µm, erect or incurved, wall 1.5 µm; hyaline, sometimes slightly thicker at apex, up to 3.5 µm.

**Telia** hypophyllous, scattered or gregarious, round or subround, 0.4-1 mm diam., pulverulent, reddish brown; teliospores cylindrical, 3-10-, mostly 5-7-celled, 60-138 × 32-47 µm, rounded at apex, walls 4-7 µm, yellowish brown, coarsely verrucose with subhyaline tubercles, apical papilla obscure, up to 5 µm long, with 3 germ pores in each cell, pedicels hyaline, persistent, 45-168 µm long.

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

**Host range:** Species of *Rosa* subfamily Rosoidea tribe Roseae, specifically *Rosa pimpinellifolia*, *R. rugosa* (Japanese rose), *R. sericea*, *R. sericea* subsp. *omeiensis*, and *R. pimpinellifolia*.

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

This species is one of the numerous rust fungi on *Rosa* in Asia that can be distinguished using the key in Wei (1988).

**References:**


Teliospore of *Phragmidium rosae-rugosae* on *Rosa rugosa* (x20)

Telia of *Phragmidium rosae-rugosae* on *Rosa rugosa* (x2)

Uredinia of *Phragmidium rosae-rugosae* on *Rosa rugosa* (x2.5)

Urediniospores of *Phragmidium rosae-rugosae* on *Rosa rugosa* (x40)