Kamtschatka rose rust—*Phragmidium kamtschatkae*

Numerous rust fungi occur on *Rosa* especially in Asia and Europe. This rust attacks a variety of species of *Rosa* and has been reported in the Middle East and northern Europe and thus is considered a potential threat to the North American rose industry.

*Phragmidium kamtschatkae* (H.W. Anderson) Arthur & Cummins 1933

**Spermogonia** epiphyllous (on upper surface of leaves), numerous, punctate, irregularly and closely aggregated or scattered, minute, at first honey yellow, then reddish brown.

**Telia** amphigenous (on both surfaces of leaves), or on stipules, densely developed over entire leaf surfaces, early exposed, confluent, somewhat pulverulent, reddish brown, ruptured epidermis conspicuous; teliospores broadly ellipsoid or oblong to oblong-ellipsoid, 2- (rarely 3-) celled, 30-50 × 16-35 µm, rounded at apex, rounded or somewhat attenuated at base, slightly constricted at septum, 2 or 3 germ pores in each cell, walls 2-3.5 µm, pale yellow-brown, with 3 to 5 rows of warts; pedicels persistent, very short.

See Hiratsuka et al. (1975) and Wei (1988) for a more detailed description.

**Host range:** *Rosa acicularis*, *R. chinensis* (Bengal rose, China rose), *R. davurica*, *R. majalis* (cinnamon rose, May rose), *R. marretii*, *R. moschata* (musk rose), *R. pimpinellifolia* (burnet rose, Scotch rose), *R. rugosa* (Japanese rose, rugosa rose, Turkestan rose), and *R. webbiana* as well as *Rosa* spp.

**Geographic distribution:** Most frequently reported from Far East Asia (China, Japan, Korea, Pakistan, Taiwan) but also known from Central Asia (Afghanistan, Pakistan) and most recently from Europe (Finland, Norway and Russia).

**Notes:** The numerous species of *Phragmidium* that occur on *Rosa* are difficult to distinguish. Wei (1988) provides a key to those species known from China that includes many also common in North America. *Phragmidium kamtschatkae* is distinct in having two-celled teliospores.

**References:**


Teliospores of *Phragmidium kamtschakae* on *Rosa* sp.

Teliospores (x40)

Teliospore (x40)