Cedar-Apple Rust — *Gymnosporangium juniperi-virginianae* Schweinitz

CRABAPPLE LEAF (bottom on left showing aecia; top on right): Font Hill Wetland Park, 8/7/2016, *R. Orr.*
CLOSEUP (immature), Centennial Park, 3/20/2011, *R. Orr.*
MATURE: Mount Pleasant, 5/1/2013, *J. Solem.*
CLOSEUP (more mature): Centennial Park, 3/20/2011, *R. Orr.*
CLOSEUP (overwintering form): North Laurel Park, 2/3/2012, *R. Solem.*

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Pucciniaceae

J	F	M	A	M	J	J	A	S	O	N	D
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ID: Galls in cedar trees producie jelly-like horns. Yellow to red spots on alternate host leaves.

Habitat: Cedar and apple trees (alternate hosts)

Fruiting Body (on cedar):1 – 2 " gall [2.5 – 5 cm]
Small, greenish-brown swelling on upper surface of cedar needles in fall. Overwinters as reddish dark-brown gall w/ small, circular depressions. In spring produces orange (immature) to orange-brown (mature) jelly-like horns (3/8 – 3/4" [1 – 2 cm] from depressions.

Fruiting Body (on crabapple): Small, pale yellow spots appear on the upper surfaces of the leaves, usually during late April or May on the eastern seaboard of the United States. These spots gradually enlarge and turn orange or red and may show concentric rings of color. Drops of orange liquid may be visible on the spots. Later in the season, black dots appear on the orange spots on the upper leaf surface. In late summer, tube-like structures develop on the undersurface of the apple leaf.

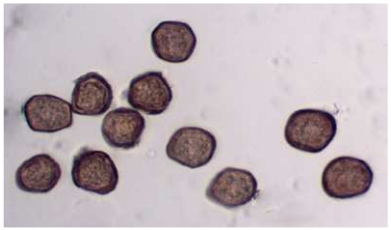
Aeciospores (on crabapple): Thick walled, 5- to 7-sided, dark brown

Frequency: Fairly common.

Locations: ALRGL, CENPK, FHWLP, HOUCH, HIRIP, MTPLT, NOLAP, OTHER, WINTR

Notes: Mycobank 140481. Galls die but remain on host for more than a year. Horns germinate to form spores that infect apple leaves. Major agricultural pest for both cedars and apples.

References: BBF 469, 19. BRBD 333, 90. BBH 376. E&S 331. W&L 470-1. http://plantclinic.cornell.edu/factsheets/CedarAppleRust.pdf



AECIOSPORES (21.1-25.4 X 18.3-20.5 µm): Font Hill Wetland Park, 8/7/2016, *R. Solem.*