

## A fungal disease that attacks fruit and leaves of hawthorn

Cedar-Hawthorn Rust has two life stages. The first occurs as rust spots on leaves and fruit of hawthorn and the second occurs as galls on juniper. The disease can be quite devastating to the appearance and health of hawthorn and treatment on this host is necessary to prevent infection. On juniper the galls may be unsightly when the orange spores are seeping, but otherwise they can be easily removed from the infected trees.

## Infected trees require treatment for control

Hawthorn and Juniper trees are susceptible to Cedar-Hawthorn Rust and require a topical treatment for control. Once damage is obvious, it is usually too late to treat. However, treatments can be timed to prevent an outbreak of the disease.

## What to look for

- Yellow spots on hawthorn leaves.
- Rust colored fingers on hawthorn fruits.
- Large woody galls on juniper.
- An orange finger-like substance seeping from galls.

## Life Cycle

- Spores are spread by wind.
- Spores move from hawthorn to junipers in late summer or fall.
- Spores remain on junipers through winter.
- Fungal galls form in the spring on juniper species.
- Spores can be spread to apple hosts within several miles.
- Most infections occur within a few hundred yards.
- New leaves are susceptible to infection.

## Treatment and Prevention

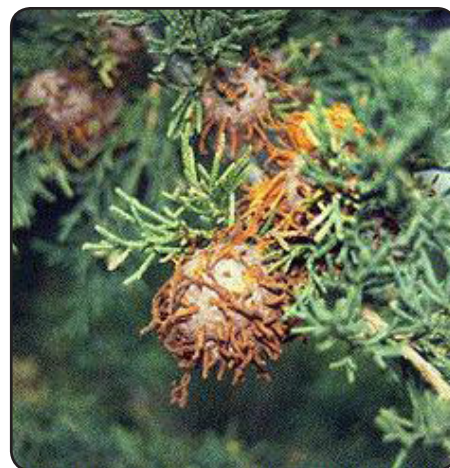
- Reduce moisture around foliage.
- Re-direct sprinkler heads so that irrigation does not hit foliage.
- Do not plant junipers near hawthorns.
- Remove galls from infected junipers in the winter.
- **Topical spray applications are required in the spring and again in early summer for prevention and protection.**



Rust spots on hawthorn leaves.



Cedar hawthorn rust on hawthorn fruits



Mature cedar apple rust galls.

