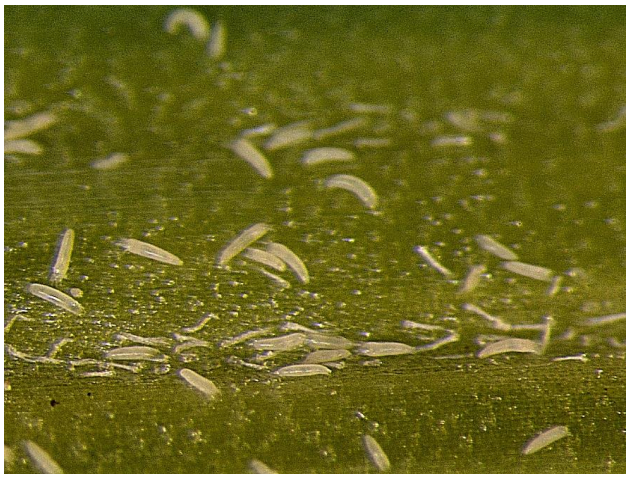
Hemp Russet Mite



Hemp russet mite is similar in appearance to the eriophyid mite illustrated above (wheat curl mite) Photograph courtesy of David Shetlar, The Ohio State University.

Hemp russet mite (*Aculops cannibicola*) is extremely small – much smaller than the twospotted spider mite - and cannot be observed without some magnification (15-20X). They have an elongate body and pale color, typical of most eriophyid mites (the mite family Eriophyidae). During heavy infestations flowering structures may take on a beige appearance, the combined result of leaf injuries and the color of the mites observed when as the mass on the heads.

The biology of hemp russet mite is very little studied but is likely similar to related species of leaf-dwelling (rust/russet) eriophyid mites, such as tomato russet mite (*Aculops lycopersici*). It reproduces by production of eggs that, upon hatch, is followed by two immature stages (protonymph, deutonymph), followed by an adult. The entire life cycle (initially laid egg through first egg laying by the adult) of the tomato russet mite is reportedly completed in about a month at temperatures of 77^0F. Each adult will produce from 10-50 eggs.

A slight rolling along the leaf edge is a symptom of infestation by hemp russet mite.

Cannabis is the only known host for hemp russet mite and similar rust mites (e.g., tomato russet mite) do not produce any resistant stages. Therefore, nymphs and adults off the host are unlikely to survive for more than a few days to a couple of weeks, at the most. On their own, hemp russet mites can crawl only very short distances. However, they are readily carried on air currents and fans will quickly spread mites in enclosed areas. Some hemp russet mites may also be transferred from plant to plant on hands and clothing.

Initial signs of infestation are subtle and easily missed. They can also vary among cultivars. A slightly curling along the edges of leaves is the most common symptom observed, but this is not expressed in all plants. Others respond to having a general dullness of leaves (russetting). As infestations progress areas of leaves may have visible yellow or brown spotting. Foliage also may become brittle foliage, often resulting

in breaks at the leaf petiole. Ultimately, highest populations usually occur on developing buds, which results in buds that are smaller and of reduced quality.

Hemp russet mite has only been observed associated with indoor-grown *Cannabis* that is propagated by cuttings, conditions that continuously provide live plants that can sustain it. Hemp russet mite is unlikely to cause significant injury to outdoor grown at sites where there are extended periods of cold and without live hemp plants.

Acari: Eriophyidae

Links to additional images of hemp russet mite. There two excellent images by Karl Hillig of hemp russet mite and the leaf rolling symptom it produces. These are posted at BugGuide.Net and are copyrighted but can be seen at:

http://bugguide.net/node/view/287723/bgimage

http://bugguide.net/node/view/287734/bgimage