The aptly named spider mite destroyers, Stethorus spp., are ladybugs that specialize in hunting down, and destroying, two spotted spider mites. Larval and adult spider mite destroyers are commonly found on the underside of hop leaves, where they feed primarily on two spotted spider mite eggs, larvae, nymphs, and adults. Thus, they are widely appreciated for tackling one of the biggest pest problem Northeastern hop growers face.

Although they are in the ladybug family of beetles, adult spider mite destroyers look much different than other ladybugs in that they are very small, hairy, oval-shaped, and all black (Figure 1). Adult spider mite destroyers will consume 20 or more spider mites per day and can have a lifespan of up to two years. During this time, they are also laying dozens of eggs which hatch into small, gray, hair covered larvae (Figure 2). A single spider mite destroyer larva can consume up to 240 spider mites as it goes through its development. When they are ready to pupate, the larvae tend to move toward the lower portions of the bine, and most often to the underside of leaves. The pupae resemble toasted sesame seeds (Figure 3), and can be found long after the adults have emerged to hunt down more spider mites.

It is important to consider the compatibility of spider mite destroyers, and other natural enemy populations, with pesticide applications before making any management decisions. Pesticide applications can be directly harmful to spider mite destroyers through adverse effects on their development, emergence, and reproduction, or indirectly through a reduction in their food supply.

These guys are increasingly available to purchase for release, but caveat emptor (let the buyer beware) there is nothing stopping them from leaving the hopyard just as quickly as you let them out of the container.

Figure 1. Adult spider mite destroyer.

Figure 2. Spider mite destroyer larvae.

Figure 3. Spider mite destroyer pupae.