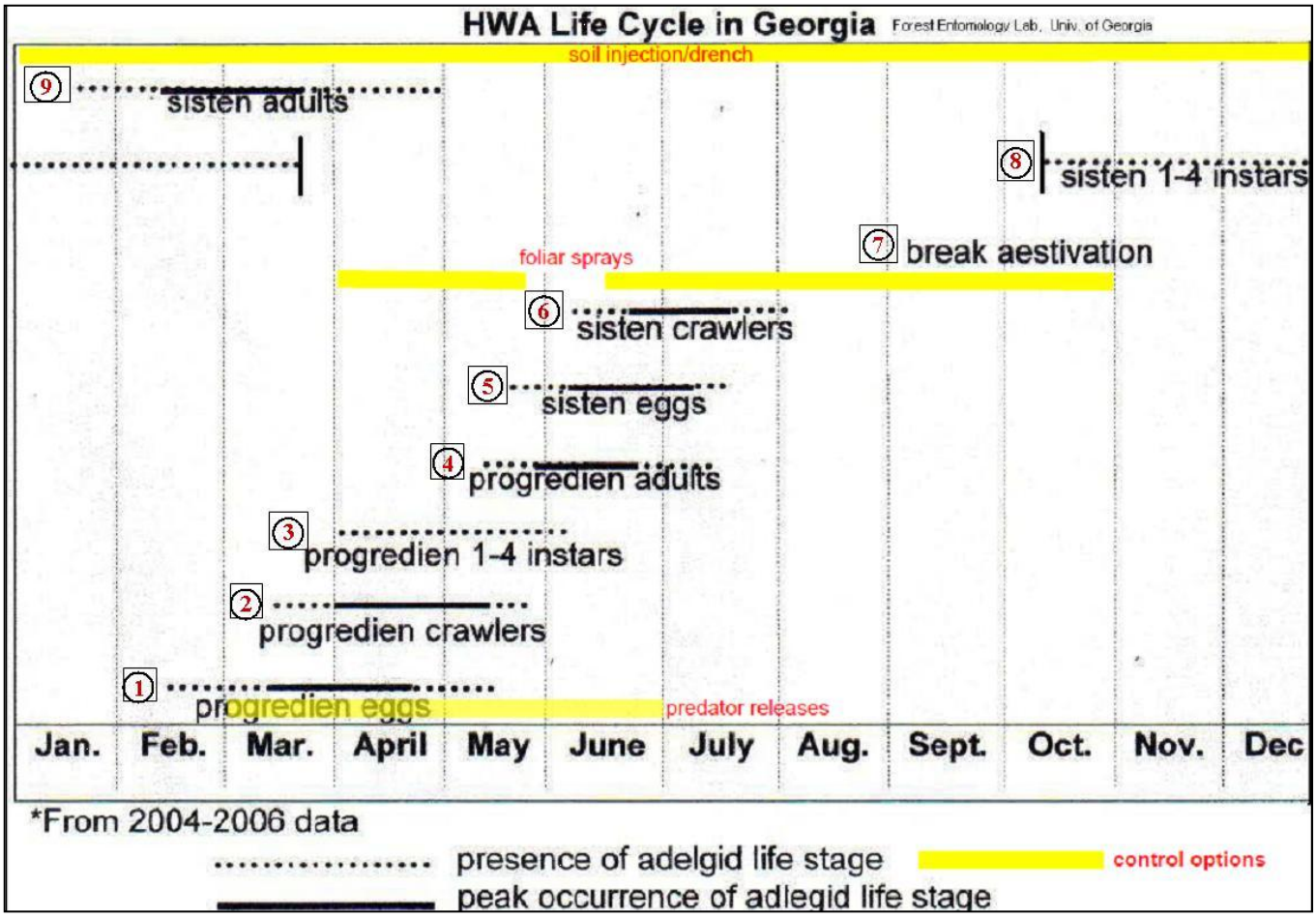

This diagram (courtesy of Mark Dalusky, Research Coordinator, Forest Entomology, University of Georgia) depicts the HWA lifecycle in Georgia.

1. In early spring, the white woolly HWA egg sacs are most easily observed on the Hemlock. Inside the egg sacs are masses of brownish-orange eggs.
2. In mid-spring, first-generation crawlers hatch from the egg sacs. Newly hatched crawlers are black, oval, flat, and so tiny as to require a hand lens to see them. They migrate to new growth, molt, lose their legs, and settle down at the base of the needles and begin to feed.
3. In late spring through early summer, the HWAs go through several "instars" as nymphs on their way to adulthood.
4. By mid-summer, the HWAs are adults.
5. In June and early July, these adults lay eggs for the second generation of the year.
6. In mid-summer, the second generation of crawlers hatches out, settles at feeding sites, feeds briefly, and then enters a period of dormancy called aestivation.
7. In early fall, the HWAs emerge from their aestivation and then feed all through the winter.
8. In October the nymphs cover themselves with white cottony wax. Then through the fall and early winter, they progress through a series of "instars" as nymphs mature into adults.
9. By mid to late winter, the fall generation HWAs has reached adulthood and is ready to reproduce again in early spring.

HWA are prolific breeders. Each egg sac can contains as many as 300 insects. If each of these survives and reproduces again in the fall, a single egg sac can result in 90,000 offspring in one year! So it is not difficult to understand that they can quickly overwhelm and kill even a large Hemlock within just a few years.