Yellow-spotted millipede

January 2016

Harpaphe haydeniana

Field Notes

General Description

Harpaphe haydeniana, in the Order Polydesmida (flat-backed millipede), is also known as the almond-scented millipede or the cyanide millipede. Similar to other flat-backed millipedes worldwide, these names come from the toxic hydrogen cyanide that it exudes, which smells like almond extract. Other names are the night train millipede and clown millipede. *H. haydeniana* is about 4-5 cm (1.5-2 in) long. When mature, the upper surface of its body is usually black, with yellow patches along the sides. It has twenty body segments with 31 pairs of legs on females, and 30 pairs of legs on males; the difference in number is because in males, one pair is modified to form gonopods. *H. haydeniana* live for 2-3 years.

Mature *H. haydeniana*. Photo Credit: Franco Folini

Habitat

This millipede lives in moist forest floors along the Pacific coast from southeast Alaska to California but has also been seen inland as far as the Sierra Nevada. It is commonly found in redwood and Douglas-fir forests.

Behavior and Feeding

The bright spots on the yellow-spotted millipede are an example of aposematic (warning) coloration that wards off potential predators. The millipede also protects itself by curling into a ball which resembles a snail. *H. haydeniana* also releases cyanide which is toxic to small predators. This millipede is not dangerous to humans as the amount of cyanide is small and the millipede does not bite; nonetheless, its secretions can irritate human eyes and skin, and sometimes stain skin. While this millipede has few predators, one ground beetle (*Promecognathus laevissimus*) is known to be a specialized predator.

Promecognathus laevissimus - the specialized millipede predator. Photo Credit: Joyce Cross.

Mature millipedes feed on a variety of dead leaves and decayed wood including Douglas-fir, true fir, cedar, and several deciduous species. Immature millipedes feed on humus.

This species is possibly the most critical shredder in forests of the Pacific coast. It is estimated that *H. haydeniana* alone eats 33 to 50 percent of all dead leaves that are on the forest floor. The chewing increases leaf surface area, giving microbial communities increased access to nutrients. Most of the litter that the millipede consumes is passed through the gut and excreted as fecal pellets. The pellets are an important food source for smaller invertebrates.

Breeding and Reproduction

Millipedes usually mate in the spring; they often gather in groups and mate in one spot. Females lay several hundred eggs in a moist, protected location, commonly under a log. Pupae are immobile so eggs are laid where there is a ready food supply. The young hatch after three or more weeks of incubation. Immature millipedes are pale in color and have fewer segments than mature millipedes. As they molt, they get darker in color, the spots get brighter, and they add body segments.

Immature *H. haydeniana*. Photo Credit: Natalie McNear

Where to See

H. haydeniana can be seen in moist, mid to low elevation forests in the Pacific Northwest, and are quite common in the spring. Due to its lack of predators, this millipede is able to venture out during the day.

More Information

https://bioweb.uwlax.edu/bio203/f2013/crain_alex/index.htm
http://www.ccffa-oswa.org/NWWoodlands/soil-water/2001summer-invertibrates.pdf
https://open.library.ubc.ca/cIRcle/collections/ubctheses/24/items/1.0072616