

# Pine Butterfly

## Larvae feed on older needles

**Name and Description**— *Neophasia menapia* (Felder and Felder) [Lepidoptera: Pieridae]

This insect can be identified easily during any season. Look for single rows of emerald green eggs from September to June on needles, colonies of immature pale green larvae with black heads, or individual full-grown larvae about 1 inch (2.5 cm) long with two white, lateral stripes and green heads (fig. 1) from June to August. Pupae, usually found during August, are also green with white stripes and are attached to needles, branches, or stems. Adults are white butterflies with black wing markings and are seen flying around tree canopies from August through September (fig. 2).

**Hosts**—Ponderosa pine

**Life Cycle**—Adults fly and lay their green eggs from August through October (fig. 3). The eggs overwinter, and the larvae hatch the following June about the time new foliage appears. The small larvae feed in clusters with their black heads oriented toward the tip of the needle. As the larvae mature, they feed singly. They pupate in late July for approximately 15-20 days (fig. 4).



Figure 1. Pine butterfly larva. Photo: Ladd Livingston, Idaho Department of Lands, Bugwood.org.



Figure 2. Pine butterfly adult. Photo: Jerald E. Dewey, USDA Forest Service, Bugwood.org.



Figure 3. Pine butterfly eggs. Photo: Intermountain Region, Ogden Archive, USDA Forest Service, Bugwood.org.

**Damage**—Repeated defoliation can kill ponderosa pine, reduce radial growth up to 70%, or weaken trees enough to attract bark beetles. Under ordinary conditions, larvae feed only on older needles and are not a big problem, but during epidemics, they also consume new needles. In normal years, pine butterfly feeding causes the twigs to be defoliated with the exception of the current year's growth. Tree crowns then appear thin, and only tufts of new needles remain (fig. 5).

**Management**—Management is generally not warranted. Natural control agents often keep populations in check and end epidemics. No correlation has been found between crown classes or diameters and resultant mortality from defoliation. Tree vigor prior to defoliation is important in a tree's recovery from defoliation.

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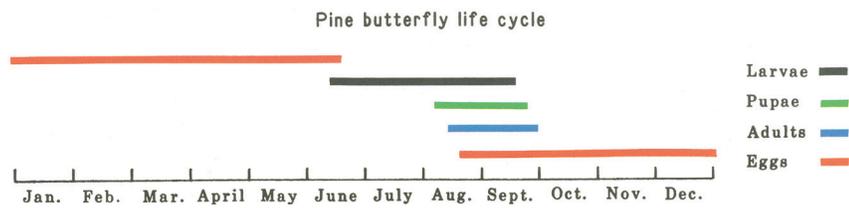


Figure 4. Pine butterfly life cycle (from Johnson 1982).



Figure 5. Pine butterfly defoliation. *Photo: Intermountain Region, Ogden Archive, USDA Forest Service, Bugwood.org.*

1. Cole, W.E. 1971. Pine butterfly. Forest Insect and Disease Leaflet 66. Washington, DC: U.S. Department of Agriculture, Forest Service. 4 p.
2. Furniss, R.L.; Carolin, V.M. 1977. Western forest insects. Misc. Publ. 1339. Washington, DC: U.S. Department of Agriculture, Forest Service. 654 p.
3. Johnson, D.W. 1982. Forest pest management training manual. Lakewood, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Region. 138 p.