Pandora Moth
Coloradia pandora (Blake)

Hosts: Ponderosa pine

Symptoms/Signs: Adult pandora moths are very large and heavy bodied, about 2.5 to 4.0 cm long, with a wingspread of 7 to 11 cm. The forewings are brownish gray and hindwings are light pinkish gray, each marked with a black dot and a dark wavy line. The males are distinguished by having large, feathery antennae. The globular eggs, bluish green to bluish gray, are deposited in clusters of 2 to 50. Early instar larvae are about 5 mm long. They have shiny black heads and black to brownish bodies that are covered with short, dark hairs.

Figure 19. Adult pandora moth.

Fifth instar larvae grow to about 6 to 8 cm long and are brown to yellowish green. Pupae are dark purplish brown, 2.5 to 3.5 cm long, and have a tough shell.

Figure 20. Early instar larva of pandora moth.

Biology: The pandora moth has a 2-year life cycle. Adults emerge between late July and late August. The moths mate and females deposit their eggs within a few days. The egg stage lasts at least 40 days and most larvae emerge in October. Larvae are gregarious and extremely cold hearty. They feed in groups on the foliage on warm days throughout the winter. Fifth instar larvae leave the host trees in late June and enter

Figure 21. Late instar larva of pandora moth.

the ground where they pupate. They remain in the pupal stage for the next 12 to 13 months.

Figure 22. Pupae of pandora moth.

Effects: During outbreaks, defoliation can be severe over large areas. Due to the 2-year life cycle, however, defoliation occurs only during alternate years. Outbreaks on the Kaibab Plateau have subsided without causing any lasting damage. However, some growth loss and even mortality can occur especially if trees are severely stressed from additional factors such as drought or heavy dwarf mistletoe infections.

Similar Insects and Diseases: May be confused with sawfly larvae and defoliation. However, sawfly larvae have smooth bodies, are smaller, 18 to 25 mm long, and have eight pairs of leg-like appendages on the abdomen. Defoliation caused be sawflies usually occurs on an individual or small group of trees and is not widespread like that of a pandora moth outbreak.

Figure 23. Defoliation of ponderosa pine caused by pandora moth on the Kaibab NF, Arizona.

References:
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