



Multiagency Collaboration Assesses Two Defoliator Outbreaks in New Mexico

Forest Health Protection (FHP) worked collaboratively with Rocky Mountain Youth Corps (RMYC) and New Mexico State Forestry's (NMSF) Forest Health Program to assess the impact and gain additional knowledge about two native defoliators, Janet's looper and Douglas-fir tussock moth, currently in outbreak status in New Mexico.

Janet's looper



Janet's looper, *Nepytia janetae*, has likely been in outbreak status for two years on the Santa Fe National Forest. The outbreak spans >9,000 acres, impacting Douglas-fir, bristlecone pine, corkbark fir, and Engelmann spruce. Little is known about this insect's life cycle, host preference, and impact to forests.

Rocky Mountain Youth Corps helped FHP and NMSF assess the forest stand conditions in the looper outbreak; hang traps to learn more about the adult flight period; examine parasitism levels by collecting caterpillars; call defoliation classes to determine host preference and impact; and tag defoliated trees to assess the potential interaction with bark beetles.



Forest Health Protection and NMSF introduced the RMYC crew to some of the insects and diseases they'd encounter during the surveys and in the forests of New Mexico and taught them how to use the survey equipment. The crew was trained in tree species identification, cruising prisms, recording tree diameter with a diameter tape, Biltmore stick, and tree calipers, and using fixed-radius plots to record different tree diameter classes.



The RMYC crew collected forest stand data in 10th, 100th, and 1,000th acre plots within and outside the looper outbreak to characterize current stand conditions, host preference, and impact of the outbreak. The data will help FHP and NMSF determine the level of tree mortality associated with the looper outbreak.

Douglas-fir tussock moth



Outbreaks of Douglas-fir tussock moth (DFTM) commonly occur every 10 to 12 years and tree mortality is common among severely defoliated trees. The DFTM outbreak is in its second year on the Sandia Ranger District, Cibola National Forest. Forest Health Protection and NMSF are monitoring the survival of defoliated trees and interested when trees are subsequently attacked by bark beetles.



The RMYC crew hung bark beetle funnel traps and sticky panel traps on severely defoliated trees to monitor the flight period of fir engraver, a common tree killer of stressed white fir. The crews also collected forest stand data using variable radius prism plots to establish baseline tree mortality levels.

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