Cal Poly Plays Key Role in Fight Against Sudden Oak Death

SAN LUIS OBISPO – Cal Poly is taking to the skies this week to help fight Sudden Oak Death, a mysterious fungus destroying valuable and scenic oak trees in California and parts of Oregon.

Thanks to ongoing annual grants from the U.S. Department of Forestry and California’s Agricultural Research Initiative, Cal Poly Professor Walter Mark and Forest Health Technician Amy Jirka have flown over California counties every spring since 2001, looking to spot any spread of the tree disease.

The two climb into chartered airplanes equipped with high-tech mapping equipment linked to geographic information systems software that aids them in mapping stretches of forest for inspection. Their next scheduled flights are June 18, 19 and 20.

“We’re looking for stands of dead or dying oak,” Jirka explains. The two use a digital sketch mapper with a screen featuring a rolling topographical map of the terrain passing under the plane. They sketch suspect areas on the screen. The mapper feeds the info into a larger GIS system, which comes up with even more detailed maps of the target areas. Once the initial flights are done, the two return in a helicopter to get a closer look at target areas.

Back on the ground, they review their maps and findings to prioritize their list of target sites, then go back to the area and hike in with ground crews to the stands they spotted from the air. Once there, they take samples and send them back to labs to test for the presence of the fungus that causes Sudden Oak Death: Phytophthora ramorum.

Presence of the fungus in the samples triggers a quarantine on oak and some 40 other plant species by the California Department of Food and
Agriculture. So far, 12 California counties are under the quarantine, and Lake County is soon to be declared the 13th, said Mark. Cal Poly’s aerial survey found the infected stand of dead oaks outside Middletown.

So far, San Luis Obispo County – home to Cal Poly – is not on the quarantine list, but Mark and Jirka will be flying over San Luis Obispo, Santa Barbara and San Benito counties to see if the disease has spread there. Each county borders a quarantined county. “Last year, we found P. ramorum 10 miles north of the San Luis Obispo County border in Monterey County – on Plaskett Creek. That was very significant,” Jirka said.

Several counties in Oregon have also detected the disease.

The Cal Poly effort is part of the larger California Oak Mortality Task Force, which includes members from UC Berkeley, UC Davis, the U.S. Forest Service and the state Department of Food and Agriculture.

The Phytophthora ramorum fungus appears to be naturally occurring in some areas, the task force has discovered. But so far the task force has been unable to determine how the fungus is spread – whether through water, air, parasites, or some other source. Though the fungus can cause sudden death in oaks, it also damages but does not as frequently kill the other 40 plant species identified as hosts.

To learn more about Sudden Oak Death, including host plant species and what to do if you suspect an oak tree is infected, visit the task force web site at: www.suddenoakdeath.org.

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Editors please note: Mark and Jirka expect to fly out of the San Luis Obispo and Paso Robles airports June 18, 19, and 20. Contact them for interviews and photos or copies of photos shot from the air. (The aircraft has seats/space for only the pilot, Mark and Jirka; fly-alongs are not possible.) Both Mark and Jirka are eager to let the public know about the fight against Sudden Oak Death.