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Fluttering Into Oblivion?

Fires may have driven 2 rare butterfly species to extinction

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Two of Southern California's rarest butterflies, the tiny Hermes copper and Thorne's hairstreak, could become the first known species in the state to be driven into extinction after the sweeping autumn wildfires.

The butterflies are among two dozen endangered and threatened species that researchers are tracking after the devastating blazes, which scorched more than 740,000 acres and destroyed thousands of homes.

Endangered gnatcatcher birds could have a difficult time finding food this year. Mountain yellow-legged frogs, long a favorite of summer campers in the San Bernardino Mountains, probably lost their largest population when a creek burned twice, then was buried in mudslides.

"When I saw the magnitude of devastation, I realized in my lifetime I might see one, possibly two species . go extinct," said Michael Klein, a biological consultant who toured known butterfly colonies while the fires still smoldered. "I felt sick to my stomach."

While the wildfires may have provided the final blow, environmentalists and some scientists say the real reason the butterflies are threatened is because their habitat has been devoured by development. Federal wildlife officials also have failed to act despite decades of evidence chronicling the decline, critics say.

"There's been totally ridiculous bureaucratic bumbling on the [U.S.] Fish and Wildlife Service's part . resulting in a very tragic situation today," said David Hogan of the Center for Biological Diversity in San Diego, who lost a bid to declare both butterfly species endangered in 1992.

However, regulators said that, while they are concerned, reports of the demise of the two rare butterflies are premature.

"Of course we're worried about these species, but until we do some surveys this spring, I'm not going to go into crisis mode," said Alison Anderson, a federal biologist in Carlsbad.

If the butterflies do disappear, they will be part of a surge of extinctions worldwide because of encroaching development, some scientists say.

"The Hermes copper is one of the most unique butterflies in North America millions of years old," said Greg Ballmer, a UC Riverside entomologist. "It's just like the Pleistocene era. The humans came in and all the large mammals disappeared from North America. The woolly mammoths, the saber-toothed cats, the camels, the wild horses.. We wiped out species and we're doing it again."

In a 1998 Harris Poll, nearly 70% of biologists surveyed said that a mass extinction is underway. But because it is difficult to document and can take a few hundred years for some species to truly be gone, it is difficult to sound the alarm.

Fire is a natural, even necessary part of the Southern California landscape. But so much of the region's habitat has been developed that there may no longer be room for species on the edge to make a comeback.

"I'd give [Hermes] a 20% to 25% chance of recovery," said David Faulkner, a forensic entomologist who has studied San Diego butterflies for decades.

Hermes were in the egg stage when the Cedar fire hit, tiny smudges on the ends of spiny red berry bush branches that were engulfed by flames.

His prognosis for the Thorne's hairstreak is even more grim: "Right now I give it - knowing what I know - probably less than a 5% chance of recovery, and it may be even lower," he said. Nearly 100% of Otay Mountain, the only known home for the Thorne's, burned.

Even if any caterpillars or butterflies survived the fires, Faulkner said, the Hermes could starve and the Thorne's may not have any place to reproduce because each depends on a single plant to survive. The Hermes, which catches California sunlight brilliantly in its yellow underwings, feeds only on the spiny red berry bush. The Thorne's, unique for its purple-brown underside with iridescent green sheen, only reproduces in the cool branches of the rare Tecate cypress tree.

The fact that both depend on just one host plant highlights the region's rich diversity of plants and animals, and their increasing fragility.

Southern California is recognized by academics as one of the world's top "biological hot spots," with the second-highest number of endangered species in the U.S. after Hawaii. San Diego County, with 75 endangered species, tops all other counties in the nation, federal and county officials said.

"California is a biological island, with lots of rare plants and animals," said John Brown, an entomologist for the U.S. Department of Agriculture at the Smithsonian Institution. "Throw in all this development . and you just have the biggest mess you can imagine."

San Diego County will add a projected 1 million people and 300,000 homes by 2030, according to regional and state studies.

"This is an area with a very sensitive environmental community but the reality is we're also not meeting our housing needs," said Paul Tryon, chief executive officer of the Building Industry Assn. of San Diego.

While the Hermes is long gone from heavily populated coastal San Diego, it has hung on inland. But the Cedar fire wiped out the world's largest known population in a state-owned preserve in Crest. All that remains is a blasted heath of charred sticks, with occasional green curling from burned roots.

"Each event like the Cedar fire exponentially increases the likelihood of extinction, because you've lost so much already," Hogan said. "All signs point to a need for emergency federal protection for these species."

Such protection would ban landowners or developers from damaging or destroying the butterflies and their habitat without permits. Policy planners say in the current national and local political climate, it is hard to envision any such protections being adopted.

"Let's put it this way: The developers will win, and the species will lose," said Steve Erie, director of urban studies and planning at UC San Diego. "Butterflies don't vote."

Federal wildlife officials said there are two problems with listing the Thorne's hairstreak in particular as endangered or threatened: First, there is still debate about whether it is a separate species, or a subspecies of a desert butterfly; second, because its only known habitat is already on public land, it is tough to prove the species should receive extra protection under the Endangered Species Act.

As for the Hermes, federal officials are less worried about its survival because there are known nesting sites that did not burn, including a new population found last spring.

Environmentalists and government regulators agree that the key to saving the Thorne's will be to prevent any more fires from ravaging the Tecate cypress trees that remain - most of which had burned in 1995.

Otay Mountain has a well-known immigrant highway from Mexico with frequent campfires, one of which is suspected of sparking last fall's wildfire.

This week, Klein, Hogan and others will begin scouring the few unburned trees to see if any of the diminutive brown butterflies emerge from thick needle litter, or flutter out of cracks in the earth.

In May, they will look for the delicate Hermes copper.

"I got seven of them right here last June!" shouted Klein on a January visit to a patch of chaparral in the shadow of Interstate 8 at Descanso. "It's not much to scream about but when you're trying to keep a species alive, it's 'Woo-hoo!' "