

# DDT remnants threatening survival of condors in Big Sur

By JOHN MOIR  
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BIG SUR — Four years ago, in a musky, leaf-lined cavity halfway up a 200-foot redwood tree here, two California condors made the region's first known nesting attempt in more than a century.

Joe Burnett, a senior wildlife biologist with the Ventana Wildlife Society and the lead biologist for the Central California condor recovery program, who had been monitoring the condor pair, was delighted with this promising development in the continuing effort to save the nation's largest bird from extinction. When this first breeding attempt proved unsuccessful, Burnett attributed it to the young birds' inexperience. But when he climbed the giant tree to examine the abandoned nest, he was stunned at what he uncovered: the first evidence of a potentially significant new hurdle for the condor program.

"The eggshell fragments we found appeared abnormally thin," Burnett said. "They were so thin that we had to run tests to confirm that it was a condor egg." The fragments reminded him of the thin-shelled eggs from birds like brown pelicans and peregrine falcons, which had been devastated by DDT but are now on the rebound.

The discovery raised a disturbing question: Could DDT — the deadly pesticide that has been banned in the United States since 1972 — produce condor reproductive problems nearly four decades later?

To find out, the Ventana Wildlife Society, which manages the Central California condor releases, has collected as many subse-



Big Sur's condors, many of whom feed on dead sea mammals, produce eggs with much thinner shells than do condors who live further inland.

quent wild-laid eggs as possible. The handful of Big Sur breeding pairs lay a single egg once every other year. Ventana biologists brave the region's trackless terrain to exchange a wild-laid egg with one from the zoo-based captive-breeding program. The unsuspecting condor pair then hatches the substitute egg as if it is their own.

In addition, Ventana biologists began to look for possible sources of DDT. Condors are carrion eaters, and in recent years the Big Sur birds have turned to what was historically a major food source: marine mammals. Burnett now sus-

pects that animals like California sea lions may present a hidden danger to condors. Even today, sea lion blubber contains high levels of DDE, a toxic metabolic breakdown product of DDT.

Ventana biologists have been comparing the thickness of the eggshells recovered from the Big Sur birds with those produced by the Southern California condor flock that lives many miles from the coast. The Southern California birds do not feed on marine mammals, and their eggs are normal. Burnett says that preliminary results from Ventana's study suggest that

the Big Sur eggs are "substantially thinner" than those from the inland birds, and that early indicators point to DDT as the principal cause of the thinning.

Although no known source of DDT exists near Big Sur, a large DDT hot spot in the marine sediments off the Southern California coast called the Palos Verdes Shelf has attracted Burnett's attention because it is near a breeding ground for California sea lions that eat the area's fish. The sea lions then migrate up the coast. Hundreds of these sea lions use a rocky beach near Big Sur.

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