

CALIFORNIA CONDOR FORAGING ON A LIVE CALIFORNIA SEA LION PUP

MIKE TYNER, L. JOSEPH BURNETT, and MIKE M. STAKE, Ventana Wildlife Society, 19045 Portola Drive, Suite F-1, Salinas, California 93908; mikestake@ventanaws.org

California Condors (*Gymnogyps californianus*) feed on a variety of wild and domestic carrion, but are not known to take live prey in the wild (Snyder and Snyder 2000, Snyder and Schmitt 2002). There exists, however, an historical account (Townsend 1848) of a California Condor apparently attempting to take a live salmon along a river bank in the Pacific Northwest. However, the bird was collected before the fish was killed, and it is not clear if feeding was observed. A sister species, the Andean Condor (*Vultur gryphus*), has, however, been reported to take live prey (Murphy 1925), and smaller species of New World vultures, the Black (*Coragyps atratus*) and Turkey (*Cathartes aura*) Vultures have also been reported to take live prey occasionally (Parmalee 1954, Kirk and Mossman 1998, Buckley 1999, Paves et al. 2008). While not providing clear evidence of taking live prey, Townsend's account indicates the opportunistic foraging by California Condors is not confined to dead animals. Nevertheless, occasions for documenting California Condors with live prey have been limited, because, historically, few individuals have been available for observation. Even with intensive conservation efforts during the past 20 years that have resulted in increased numbers of birds in the wild, the practice of provisioning carcasses at designated feeding sites limits opportunities for observation of natural foraging, especially rare events such as attempts to take live prey.

In 1997, Ventana Wildlife Society began releasing captive-reared California Condors along the central California coast. The restored population of this region, including condors released by the National Park Service at Pinnacles National Park, numbered 66 birds as of 2012. This population continues to be fed supplementally, like populations reintroduced in southern California, Arizona, and Baja California. Although in each region condors have been observed feeding on carcasses of land mammals other than those provided through the reintroduction program, the central California population is unique among reintroduced populations because it also feeds on carcasses of marine mammals naturally occurring along the ocean shore (Burnett et al. 2013). Because at least several hundred California Sea Lions (*Zalophus californianus*) congregate most days in a single rocky cove near Big Sur (36° 12' N, 121° 43' W), condors regularly find and consume sea lion carcasses at this site. We first observed condors feeding on sea lion carcasses at this location in 1999. Since then, the site has provided numerous opportunities for observation of condors foraging, not only of birds feeding on carcasses but also of interactions between condors and live sea lions.

On 20 June 2010, Mike Tyner witnessed a California Condor attempting to forage on a live sea lion at the Big Sur site. The observation began at 11:05 PDT with four condors perched on a large rock on the beach near a dozen or more sea lions. These birds, identified by numbered wing tags, had been feeding on carcasses at this location almost daily for more than a month. On the ground about 1 m below the condors was a live sea lion pup appearing weak and malnourished. One of the condors (#222, Figure 1), a 10-year-old breeding female, approached the sea lion and began pecking at the posterior of the pup. The condor grasped the pup with its beak as the sea lion struggled slowly in the direction of the water, leaving a trail of blood. The sea lion then turned toward a shady spot closely overhung by a second large rock about 1 m away. The pup did not strike back at the condor during the observation, and none of the adult sea lions in the area defended the pup. Eventually, both the sea lion and

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Figure 1. Adult female California Condor that killed and consumed a debilitated pup of the California Sea Lion near Big Sur, California, 20 June 2010.

Photo by Tim Huntington

the condor were under the rock where the condor could be seen tugging at the sea lion pup. A few minutes later, the condor dragged the now lifeless pup from under the rock and began reaching with its head into the anal orifice. After feeding for 20 minutes, her crop appeared full, and she left the carcass. During the next hour, 11 other condors fed on the sea lion pup, reducing the carcass to mostly bones.

Species of the vulture family are primarily scavengers, but many can kill live prey, as supported by our observation, those of Black Vultures feeding on live seal pups in Chile (Paves et al. 2008), and even observations of California Condors killing and eating live rats and mice in captivity at the Los Angeles Zoo (M. Clark pers. comm.). Nevertheless, special circumstances likely fostered the observation reported here. In June 2010, an unusually large number of sea lion pups was abandoned along the central California coast. Many of these were emaciated, a condition attributed by Melin et al. (2010) to anomalous oceanographic conditions in 2009, warmer sea-surface temperatures reducing the availability of sea lion prey within the normal foraging range of sea lions. This necessitated sea lions having to make longer foraging trips (Melin et al. 2010) under conditions that persisted through the period of pupping. The consequences were seen in females giving birth before reaching normal offshore pupping areas, females abandoning pups, and, ultimately, a nutritional deficit in many pups (Melin et al. 2010). The end result was an unusual abundance of malnourished pups in a predictable location that provided condors with consistent and easy opportunities for foraging (Figure 2).

Our observation has at least one important implication for condor management, namely, in further documenting the ability of condors in recovered populations to locate prey independent of human intervention and demonstrating their ability to take advantage of unusual circumstances opportunistically. For populations supported

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Figure 2. Two California Condors feeding on the pup of a California Sea Lion near Big Sur, California.

Photo by Tim Huntington

by conservation management, such ability can be interpreted as a positive sign that condors will be able to forage successfully if supplemental feeding is scaled back in the future. However, as long as lead poisoning threatens the sustainability of condor populations (Finkelstein et al. 2012, Rideout et al. 2012), providing carcasses is important not only to ensure a source of uncontaminated food but also to facilitate other necessary management, such as trapping for health exams, providing treatments for lead exposure, and maintaining equipment for tracking. The risk of lead exposure for condors feeding on marine mammals along the central California coast is likely reduced, but other harmful contaminants might be present in marine carcasses (Burnett et al. 2013), and the threat of lead exposure persists for these birds when they forage on carcasses of land mammals (Sorenson and Burnett 2007). Our observation need not prompt changes in condor management but provides more information on the condor's capabilities to take advantage of opportunities for foraging.

On 30 November 2011, lead author Mike Tyner (age 35) was killed by a falling branch while monitoring a newly released California Condor at Big Sur. Mike was best known for his unassuming leadership, his love of outdoor adventure, and his dedication to avian conservation. In five years as a field crew leader for Ventana Wildlife Society, Mike played an important role in the California Condor recovery program, by supervising releases, assisting with condor-rescue efforts during a major wildfire, training young field biologists, and contributing field observations that have advanced our knowledge of condor biology.

LITERATURE CITED

- Buckley, N. J. 1999. Black Vulture (*Coragyps atratus*), in *The Birds of North America* (A. Poole and F. Gill, eds.), no. 411. Birds N. Am, Inc., Philadelphia.
- Burnett, L. J., Sorenson, K. J., Brandt, J., Sandhaus, E. A., Ciani, D., Clark, M., David, C., Theule, J., Kasielkie, S., and Risebrough, R. W. 2013. Eggshell

NOTES

- thinning and depressed hatching success of California Condors reintroduced to central California. *Condor* 115: in press.
- Finkelstein, M. E., Doak, D. F., George, D., Burnett, J., Brandt, J., Church, M., Grantham, J., and Smith, D. R. 2012. Lead poisoning and the deceptive recovery of the critically endangered California Condor. *Proc. Natl. Acad. Sci.* 109:11449–11454.
- Kirk, D. A., and Mossman, M. J. 1998. Turkey Vulture (*Cathartes aura*), in *The Birds of North America* (A. Poole and F. Gill, eds.), no. 339. Birds N. Am., Inc., Philadelphia.
- Melin, S. R., Orr, A. J., Harris, J. D., Laake, J. L., DeLong, R. L., Guiland, F. M. D., and Stoudt, S. 2010. Unprecedented mortality of California sea lion pups associated with anomalous oceanographic conditions along the central California coast in 2009. *Calif. Coop. Oceanic Fish. Inv. Rep.* 51:182–194.
- Murphy, R. C. 1925. *Bird Islands of Peru*. Putnam, New York.
- Parmalee, P. W. 1954. The vultures: their movements, economic status, and control in Texas. *Auk* 71:443–453.
- Paves, H. J., Schlatter, R. P., and Espinoza, C. I. 2008. Scavenging and predation by Black Vultures *Coragyps atratus* at a South American sea lion breeding colony. *Vulture News* 58:4–15.
- Rideout, B. A., Stalis, I., Papendick, R., Pessier, A., Puschner, B., Finkelstein, M. E., Smith, D. R., Johnson, M., Mace, M., Stroud, R., Brandt, J., Burnett, J., Parish, C., Petterson, J., Witte, C., Stringfield, C., Orr, K., Zuba, J., Wallace, M., and Grantham, J. 2012. Patterns of mortality in free-ranging California Condors (*Gymnogyps californianus*). *J. Wildlife Diseases* 48:95–112.
- Snyder, N. F., and Schmitt, N. J. 2002. California Condor (*Gymnogyps californianus*), in *The Birds of North America* (A. Poole and F. Gill, eds.), no. 610. Birds N. Am., Inc., Philadelphia.
- Snyder, N. F., and Snyder, H. 2000. *The California Condor: A Saga of Natural History and Conservation*. Academic Press, San Diego.
- Sorenson, K. J., and Burnett, L. J. 2007. Lead concentrations in the blood of Big Sur California Condors, in *California Condors in the 21st Century* (A. Mee and L. S. Hall, eds.), pp. 185–195. Nuttall Ornithol. Club, Cambridge, MA.
- Townsend, J. K. 1848. Popular monograph on the accipitrine birds of N.A.—No. 11. *Literary Record and Journal of the Linnaean Association of Pennsylvania College* 4:265–272.

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