



Figure 1. A male California Hooded Oriole, *Icterus cucullatus californicus*, sipping nectar from a hummingbird feeder.

suspect that when available nectar undoubtedly fills a larger place in the diet of all orioles than is commonly recognized. Their opportunistic exploitation of hummingbird feeders indicates that this may have always been true.

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**Turkey Vultures casting pellets.**—Pellet formation (the regurgitation of indigestible food portions) is known in a number of different avian taxa: Ardeidae, Acciptridae, Tetraonidae, Laridae, Strigiformes, Caprimulgidae, Apodidae, Coraciiformes (Alcedinidae, Meropidae), and a few Passeriformes (Corvidae, Cinclidae, Turdidae, Sylviidae, Meliphagidae, Dicaeidae) (Thompson, Ed., *A new dictionary of birds*, New York, McGraw-Hill Book Co., 1964, p. 608-609; Welty, *The life of birds*, Philadelphia, Saunders Co., 1962, p. 91). The phenomenon apparently never has been reported in Cathartidae, the New World Vultures.

While preparing a skeleton of a Turkey Vulture, *Cathartes aura*, found dead on 28 November 1969, Maricopa Indian Colony, Maricopa County, Arizona, I discovered the additional skeletal remains of one small passerine bird and several small mammals. As I had removed the vulture's stomach previous to preparation, these extra skeletons apparently originated either in the intestine or crop. Examination showed at least two young woodrats, *Neotoma albigula*, parts of a smaller rodent, and an immature Bank Swallow, *Riparia riparia*, identified by the following elements: an apneumatic cranium, mandible, premaxilla, ulna, partial scapula, coracoid, carpometacarpus with manual phalanges, and two humeri.

On 6 August 1969 I collected an adult female vulture at a roost in Santan Pima village, Pinal County, Arizona. The crop contained 120 g of putrid flesh but no bones or other indigestible material. I took three adult females at this roost on 19 August 1969. In addition to putrid flesh in the crop, the stomach of each bird contained a well-formed pellet consisting of rodent bones wrapped in hair. These measured approximately  $30 \times 50$  mm. One individual had ingested the tails of two large *Neotoma (albigula?)*. A partially formed pellet in the gullet of another contained an immature Mourning Dove, *Zenaidura macroura*, with the skull intact. The pellet from another contained snake scutes, feathers, and rodent remains.

I revisited Santan 13 March 1971 to learn that the roost was again in use, after the presumed winter absence of vultures. On the canal bank beneath the several large cottonwoods, *Populus fremontii*, I gathered about a dozen cast pellets. These were composed principally of mammal and snake remains. (As horses had walked on most of the pellets, accurate measurements were not possible.)

On 10 June 1971 I secured an adult Turkey Vulture from a roost at Fort Apache, White Mountain Apache Reservation, Navajo County, Arizona. Its stomach contained one well-formed pellet of hair. Search below the roost trees failed to reveal expelled pellets, although the abundant "whitewash" indicated long usage by vultures.

At an Acoma sheep camp, Acoma Indian Reservation, Valencia County, New Mexico, I obtained an adult vulture on 18 June 1971. The stomach contained one well-formed, rounded, dry pellet  $40 \times 33$  mm; the proventriculus contained a less compact pellet ca.  $35 \times 45$  mm; the gullet contained a loosely formed bolus; all appeared to be formed largely of sheep wool.

As Turkey Vultures now scavenge along roadways, small items may be more frequently ingested than historically was the case. They apparently are equipped to swallow for later processing large portions (heads, tails, hindquarters) of animals as large as a woodrat or dove. On the other hand, I have watched Black Vultures, *Coragyps atratus*, feeding along coastal Venezuela and Río Amazonas, Peru, fastidiously avoiding ingesting even small fish bones. This species may not form pellets.

My thanks to Lyndon L. Hargrave, who, while studying numerous fossil cathartids from Grand Canyon, Arizona, consulted me on the problem of pellet formation in this group. Thus small faunal remains excavated from caves might have been brought there by cathartid vultures as well as by hawks and owls. Work and Wool (Condor, 44: 149, 1942) make no mention of pellet formation by Turkey Vultures, but two pellets appear in the photograph of a nest (p. 153).

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