

## FROM FIELD AND STUDY

**Cyanide Poisoning of Songbirds by Almonds.**—On February 15, 1955, a call was received by the California Department of Fish and Game reporting that hundreds of birds were dead in a residence area in the Sacramento Valley. Ernest Clark investigated the locality that afternoon and picked up about fifty birds and a sample of the almonds on which they were feeding. The property is located in Citrus Heights, about fifteen miles east of Sacramento, and was an old almond orchard which had been built up to homes. However, many of the almond trees remain. Several hard shell almond trees (*Prunus amygdalis*) were on the property and unharvested almonds were on the lawn as well as in the trees. All the dead birds proved to be American Goldfinches (*Spinus tristis*), although Scrub Jays (*Aphelocoma coerulescens*) were also feeding on the nuts.

Mr. Clark checked the area again on February 16 and picked up birds. These were brought in and examined by the Department's Disease Laboratory in Berkeley, with negative results. On February 18, Macgregor checked the area and observed approximately fifty American Goldfinches feeding on the almonds. One male, while feeding on the lawn, went into convulsions and somersaulted over and over for about ten seconds, then spread his wings out in a final spasm and died. A few minutes later another male dropped from one of the trees onto the lawn. This bird was immobile, but his heart kept beating for three minutes before stopping.

Assistance and advice were sought from Dr. Stuart A. Peoples of the University of California at Davis. Dr. Peoples' analysis of several of the partly eaten almonds showed that they had a cyanide content of approximately 0.2 milligrams per nut. He suggested that we take some amylnitrite and administer it to some of the birds just after they fell. This was done by placing a drop or two on a cloth and holding it next to the nostrils of the stricken bird for about twenty seconds. The effect of this was spectacular, for when so treated, the apparently lifeless bird came to, shook its head, and after about three minutes regained its equilibrium and was able to fly again.

One bird so treated was held for observation. It vomited bits of almond but was in good condition for 24 hours. It died the following afternoon, but this probably was due to conditions of captivity rather than the poison. The amylnitrite is a specific antidote for cyanide poison and reacts with the cyanide, neutralizing it so that it can be removed from the system.

Auld in 1908 (*Jour. Chem. Soc. (London) Trans.*, 93:1251-1280) has shown that amygdalin and an emulsion are coexistent in the seeds of almonds and when water is added the emulsion hydrolyzes the amygdalin, forming benzaldehyde, hydrocyanic acid, and dextrose:  $C_{20}H_{27}ON + 2 H_2O \rightarrow C_6H_5CHO + HCN + 2 C_6H_{12}O_6$ . This is evidently the reaction which took place at the Citrus Heights location. This is an unusual situation because normally the nuts would have been harvested and not available to the birds.

Ross Waggoner of the Department investigated a situation at an almond shelling plant near Yuba City, California. He reported that 3000-5000 dead birds, mostly goldfinches and some House Finches (*Carpodacus mexicanus*), were found in the vicinity of a pile of almond shells. These almond shells had been there all winter, but recently the top layer of almonds had been removed, thus exposing unweathered shells. Small bits of almond meat adhered to the shells and the birds were feeding on this almond meat. A rain occurred on February 14, and this evidently provided the water for the hydrolysis. Almost all of the birds died during a 48-hour period following the rain.

In all the years this plant has been in operation this is the first time there has been an incident of this nature. Although no analysis of the nuts was made, it seems probable that the birds were being poisoned by hydrocyanic acid in the same way as those at Citrus Heights.—WALLACE G. MACGREGOR, *California State Department of Fish and Game, Sacramento, California, March 28, 1955.*

**The Rufescent Mourner in Chiapas, Mexico.**—The Rufescent Mourner (*Laniocera rufescens*) apparently has not been found heretofore north of Guatemala. During late April of 1955 while collecting in the jungles known as El Ocote, some fifty kilometers northwest of the town of Ocozacoautla, Chiapas, I collected four specimens of this species at an altitude of 2000 feet. At this locality I found

that the species is not at all rare. The bird lives at medium heights in the rain forest and at this season its very conspicuous whistle call can be heard all morning. Its behavior and general aspect is that of the Thrush-like Manakin (*Schiffornis turdinus*) excepting for its color. In the field this bird may be confused with the Rufous Mourner (*Rhytipterna holerythra*) which also lives in the same habitat.—MIGUEL ALVAREZ DEL TORO, *Instituto Zoologico del Estado, Tuxtla Gutierrez, Chiapas, México, August 10, 1955.*

**A Supposed Record of a Fossil Cormorant.**—Shufeldt (Auk, 32, 1915:485-488, pl. 30) described in considerable detail a fragment of fossil bone from the Miocene of the Arikaree Sandstone, collected in southeastern Montana, and identified the specimen as *Phalacrocorax macropus* (Cope). This record has been carried in the two editions of the check-list of the fossil birds of North America that have appeared since, but with definite uncertainty, since *P. macropus* otherwise is known only from the Pleistocene deposits of Fossil Lake, Oregon. Although the specimen has been in the collections of the United States National Museum (Div. Vert. Paleo. cat. no. 3251), it has not been expedient to check the identification until recently. Careful examination indicates that while the bone is avian, and superficially suggests a cormorant, it is so crushed that there can be no certainty as to its allocation; there is even doubt as to the family to which it belongs. The record therefore is one that must be dropped from our list. Shufeldt's illustration (fig. 2) shows clearly the form and condition of the specimen.—ALEXANDER WETMORE, *Smithsonian Institution, Washington, D.C., July 14, 1955.*

**Hermit Warbler at Roswell, New Mexico.**—On the morning of May 8, 1955, I observed a lone Hermit Warbler (*Dendroica occidentalis*) at Roswell, New Mexico, which I tentatively identified as a female. I returned later that day to the site of observation and took the bird for a record specimen. The skin was sent to the United States Fish and Wildlife Service, where J. W. Aldrich reported that as far as known the only other definite previous records for the Hermit Warbler for the state are a female specimen in the United States National Museum, taken on August 3, 1908, at 8000 feet on Animas Peak, and two specimens in the Peet collection at the University of Michigan Museum of Zoology, taken on September 13 and 19, 1927, at Reserve. Both places are near the Arizona line and approximately 200 air miles west of Roswell, which is in the Pecos Valley.—VESTER MONTGOMERY, *Roswell, New Mexico, August 17, 1955.*

**Notes on Food Habits of the White-tailed Kite in Southern California.**—Since 1951 a pair of White-tailed Kites (*Elanus leucurus*) has been under observation by the writer in the area along Ballona Creek, 2 miles northeast of the Pacific Ocean, Los Angeles County, California. Recently vandals have shot one of the pair. Fearing that the other bird might also be shot and no longer available for study, the writer collected a number of pellets and loose skeletal material from beneath the bird's roost in a dead tree. The vegetation surrounding the roost is largely *Salicornia ambigua*.

The average size of 9 pellets, which had not been loosened by recent rains, was 33×17×15 mm. While the possibility exists that some of the material examined represents food eaten by another species of predatory bird, repeated observations have shown the White-tailed Kites to be the only raptorial species using this roost. Following is a tabulation of the contents of the pellets.

Species	Number of specimens	Per cent of total
<i>Mus musculus</i>	15	53.8
<i>Microtus californicus</i>	4	15.3
<i>Reithrodontomys megalotis</i>	3	11.5
<i>Thomomys bottae</i>	1	3.9
<i>Sylvilagus</i> sp.	1	3.9
<i>Sorex ornatus</i>	1	3.9
<i>Peromyscus</i> sp.	1	3.9
Bird (unidentified passerine)	1	3.9

Although most investigators have reported high percentages of *Microtus* in the diet of the White-tailed Kite (Bond, Condor, 42, 1940:168; Hawbecker, Condor, 42, 1940:106-111, and 44, 1942:267-276), in another section of Los Angeles County, Bond (Condor, 44, 1942:231-232) similarly found that the kites were feeding largely on *Mus*.—JOHN D. CUNNINGHAM, *Department of Zoology, University of California, Los Angeles, California, February 18, 1955.*