

claimed it in 1941) on guard on an electric wire. A few minutes later he left and the male Costa arrived, perching on a twig of a bird-of-paradise shrub.

From March 4 until April 6 I visited the preserve to see if the Costa would settle on the premises of the Black-chin. Not only did he settle there but he drove off the Black-chin, for after March 16 the Costa was in sole possession. Now and then an intruding Black-chin would steal in to feed from the blooming *Aloes*, but would be instantly routed out by the new owner. On March 16 the Costa engaged in aerial display, as though courting. On my next visit, March 28, he displayed even more vigorously, taking successive dives from a height of seventy-five feet. If a female Costa was present, she escaped my observation.

By March 30 the male Costa had acquired five guarding perches—an electric wire, a tall scape of an *Aloe*, a twig of a palo verde, a higher twig on another palo verde, and the tip of an ocotillo—stations from which he maintained continual vigilance of a plot 500 to 1000 square feet in area. Tiring of one perch, he would fly to another, tolerating no intruding hummer save a female Costa that visited to feed from the *Aloes*. There could be no doubt the Costa had taken possession of preserve No. 7.

Of the twelve or thirteen species of hummingbirds frequenting Arizona only the Black-chin is known to breed in this locality (see Swarth, *Birds of the Papago Saguaro National Monument and the Neighboring Region, Arizona*, Dept. Interior, Nat. Park Service, 1920:55). This locality lies within the northern limits of the Costa's breeding range, as listed in standard handbooks on western birds.

The climate here is typical of the Lower Sonoran Zone in which the Costa breeds. The elevation is 1100 feet, and the vegetation is characteristically Lower Sonoran, with the exception of some exotic plants recently introduced, such as the *Aloe* (a South African succulent), tree tobacco (a shrub, *Nicotiana glauca*, which, since its introduction from Argentina, grows wild in the Southwest), a species of *Pentstemon*—all excellent sources of floral food for hummers. All around the botanical garden proper one finds Lower Sonoran herbs, shrubs, cacti, and microphyllous trees, among the most prominent being ocotillo, cholla and saguaro cacti, and mesquite and palo verde trees. This "desert" island is surrounded by patches of citrus groves, farms, and gardens.

Five hundred yards east of the botanical garden proper runs an irrigation canal, along the banks of which tree tobacco abounds. Its long, tubular blooms hold a copious supply of nectar, which doubtless has attracted the male Black-chins that have established preserves along the banks of the canal. I have located as many as six individual preserves along a mile strip. But not once from 1939 to 1942, during which period I have made systematic observations of this locality, have I seen a Costa.

The conditions described are suitable for the life needs of Costa Hummingbirds and there is no reason why they should not establish breeding grounds here. What remains to be seen is the future territorial behavior of the bird that has settled on preserve No. 7. It would be interesting to see if the areas occupied by Costas and Black-chins will become co-extensive as the populations expand. Or, will Costas compete for possession of the grounds at the expense of Black-chins? Not least important in deciding the final outcome of territorial competition is the food supply available for individuals that attempt to settle in this locality.—FRANK BENE, *Bethlehem, Pennsylvania, July 23, 1942.*

A New Fossil Bird Locality.—Dr. Chester Stock of the California Institute of Technology has kindly given me the privilege of examining and recording a fragment of bird bone which was taken during the excavation of a Pleistocene mammal fauna in the Highland Park district of the city of Los Angeles, California.

The specimen consists of the basal two-thirds of a coracoid which is identified as the California Turkey, *Parapavo californicus* (L. Miller). The excavation was made upon a building site at Avenue 45 and Lincoln Avenue, not far from the Occidental College Campus.

Bison, horse, and mammoth were the characteristic mammals removed. The bird bone was recovered from the matrix of the mammoth skull during preparation of the latter. About fourteen feet of silt and clay covered the fossil-bearing stratum and mineralization of the bird bone seems complete. There is no corrosion or sand chafing of the specimen, the only defect being fracture, and the broken surfaces are sharply edged. Entombment must have been fairly prompt.

The general locality has been known to the writer for over thirty years and prior to its artificial drainage, it was more or less marshy terrain. A perennial spring of good drinking water still flows from it. The remains of large mammals in fairly concentrated occurrence is at least suggestive of a boggy ground in which they had been mired in Pleistocene time. Dr. Stock is of the opinion, tentatively held, that the age is fairly late Pleistocene.

Localities previously recorded that have yielded specimens of the California Turkey are as follows:

- (1) Rancho La Brea, asphaltic matrix, type locality, specimens very abundant.
- (2) Carpinteria, asphaltic matrix, specimens abundant.
- (3) Workman Street (Los Angeles), fluvial matrix, two bones.
- (4) La Habra (California), fluvial matrix, one specimen.
- (5) Cita Canyon (Texas), fluvial matrix, one bone.

The locality here discussed is known as the York Valley site.

All records except the one from Texas are from the coastal plain of the San Diegan Faunal District. The extensive deposits from the interior of the state, that is, McKittrick and the caverns of the Sierran foothills, have yielded none, although a turkey of uncertain identity occurs in the cavern fauna and a smaller species is recorded from Niles Canyon north of San Jose. Pleistocene and sub-Recent caverns in Nevada, Arizona, and New Mexico are likewise lacking in records of *Parapavo*. The one Texas record is of Pliocene age. A smaller species replaces it in the Pleistocene of northern Mexico just south of the Texas border.

Was the last stand of a declining species made in the San Diegan District of California?—LOVE MILLER, *University of California, Los Angeles, September 14, 1942.*

Townsend Solitaire Uses Camp Table for Nest Site.—Townsend Solitaires (*Myadestes townsendi*) use a variety of crannies for nesting. Normally these are found on cliffs in or near forests, about stumps, or at the sheltered bases of trees on steep slopes. The construction of elaborate camp ground tables may likewise offer protected niches that are well drained. The accompanying

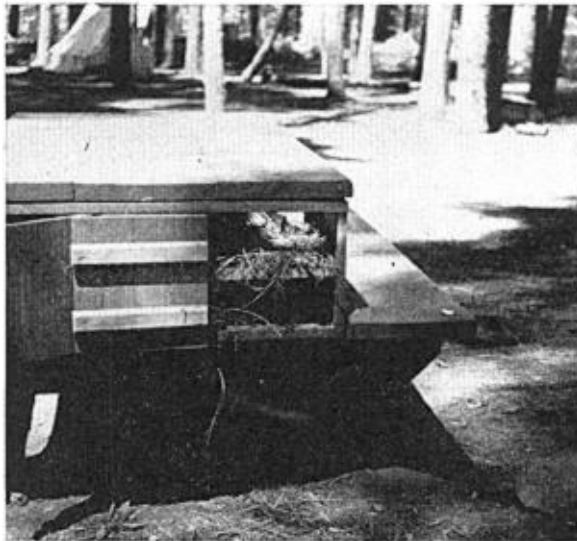


Fig. 84. Townsend Solitaire on nest built in camp table.

photograph (fig. 84) shows a solitaire's nest built in an open cupboard of a table in a camp ground at Lake Almanor, Plumas County, California. On June 12, 1942, the nest had 3 eggs and one of the birds was incubating.—C. ANDRESEN, *San Rafael, California, July 28, 1942.*

Notes on the Food of the Horned Owl Near Fallon, Nevada.—On February 26, 1942, an adult Horned Owl (*Bubo virginianus*) was seen on a nest near the south bank of the Carson River, 4 miles west of Fallon, Churchill County, Nevada. This nest had been used the previous year by a pair of Swainson Hawks. The nest, situated near the top of a cottonwood tree (*Populus fremonti*), was estimated to be about thirty feet from the ground. I was unable to examine the contents of the nest, for the limbs supporting it were judged to have insufficient strength to support a person's