

vultures were "migrating as an integral part of the flight," but they did not indicate whether the species were stratified by altitude.

Swainson's Hawk normally migrates at great heights (Monroe, *ibid.*; Skutch, *Northwest Sci.*, 19:80-89, 1945), however, on overcast days they are forced to fly much lower (Skutch, *ibid.*). The overcast weather coupled with the jutting mountains could have funneled the hawks we observed toward the coastline. This idea is supported by Loetscher's observations of migrating Swainson's Hawks in the vicinity of Jalapa and Las Vigas on 5 April 1939. The weather at that time (4 and 5 April 1939) was mostly fair and clear in the mountains (Loetscher, *pers. comm.*) and on the coastal plain at Tejeria, west of the city of Veracruz (U. S. Weather Bureau records).

On 23 March 1970 the coastal plain was overcast; at Jalapa (elevation 1,400 m) we were in the midst of the clouds, and at Las Vigas (2,450 m) we were above the clouds. Since we observed migrating birds only on the coastal plain, this observation apparently was an example of local weather conditions and topographic features affecting the migration of these birds.—JAMES R. PURDUE, CHARLES C. CARPENTER, DALE L. MARCELLINI, *University of Oklahoma, Norman, Oklahoma*, AND ROBERT F. CLARKE, *Kansas State Teachers College, Emporia, Kansas*, 16 June 1971.

An unusual nest of the Sandhill Crane.—On 7 May 1969 while conducting research on Sandhill Cranes (*Grus canadensis tabida*) at Malheur National Wildlife Refuge, Harney County, Oregon I discovered an unusual crane nest. The nest consisted of two mounds of vegetation with an egg on each mound. One had the appearance of a normal nest, while the other consisted of a small accumulation of broad-fruited bur-reed (*Sparganium eurycarpum*). The second mound was situated 73 centimeters south of the normal structure.

The larger mound had the following measurements: basal diameter 110 × 138 cm; crown diameter 69 × 50 cm; bowl diameter 22 × 25 cm; bowl depth 2.9 cm and nest height above water 11.9 cm. The nest was in 17.8 cm of water and the egg which measured 102.8 × 61.1 mm, was being incubated. The small mound had no definable crown or bowl. It was 3.5 cm above water level in 10.5 cm of water. The egg measured 99.6 × 60.9 mm and had not been incubated.

When I disturbed the incubating bird it showed little interest in the nests; however, a crane was observed incubating on 8 May. Re-examination of the nest in early June revealed both eggs had been destroyed by a raccoon (*Procyon lotor*).

Of 394 Sandhill Crane nests I have inspected on Malheur NWR, this is the first nest observed where the eggs were not deposited on a single mound. I have seen several sites where two mounds had been constructed, but only one was ever utilized.—CARROLL D. LITTLEFIELD, *Department of Biological Sciences, University of Arizona, Tucson, Arizona* 85721, 16 August 1971.

Variability of tail molt in the Burrowing Owl.—Mayr and Mayr (*Auk*, 71: 172-178, 1954) described simultaneous tail molt in one museum specimen of the Burrowing Owl (*Speotyto cunicularia hypugaea*) as well as in other small owls. However, Thomsen (*Condor*, 73:177-192, 1971) in her study of a population of *S. c. hypugaea* in California found simultaneous tail molt to be "not apparent." Coulombe (*Condor*, 73:162-176, 1971) did not study tail molt. This note documents the occurrence of simultaneous or nearly simultaneous tail molt in a captive Burrowing Owl (*S. c. floridana*) and in a natural population of this subspecies.



FIG. 1. Burrowing Owl in nearly simultaneous tail molt (dorsal view).

The captive, an adult female, was kept in a behavioral observation room at the University of South Florida. The bird was under a light-dark cycle set one month ahead of the light cycle outside (i.e. the owl was subjected to March's day length in February, etc;). Between 27 March and 9 May, 1970, the captive was viewed through the observation room window and was not handled. When viewed on 9 May, the owl appeared to have a normal tail but by 11 May, all rectrices had been lost. Examination (Fig. 1) revealed 12 new tail feathers, 3 still in sheath and the remainder partially unsheathed. Judging from the length of the central rectrices, molt must have been in progress before 9 May. On 2 June, no sheathing was seen near the base of the feathers and growth was completed. Wing molt had commenced on 15 March and two primaries were in molt on 11 May. Based on the size relationships of the tail feathers (Fig. 1), the nearly simultaneous molt had a centrifugal order of replacement. The right six rectrices were slightly irregular in order with rectrix 2 being the longest, followed in order by rectrix 1, 3, 4, 6 and 5.

The advanced light-dark cycle of the captive owl and the lack of a mate might explain its early molt compared to molt in a natural population of 37 Burrowing Owls in the vicinity of the University. Most owls in the natural population were observed at least twice a week. Eight of these birds were observed to undergo a simultaneous tail molt. Four owls were seen with all new rectrices in sheath and equally long, while the other four were seen with new rectrices partially unsheathed but appearing to be of equal length (unlike Fig. 1). By 6 August, the new tails were between one-third and one-half developed. At the start of simultaneous molt, the eight birds (4 females, 3 males, and one unsexed) either had no young or had flying young at least 11 weeks old. Each

bird had begun wing molt before the onset of tail molt. The flight of owls lacking functional tails seemed unimpaired except for the takeoffs which were slow and wobbly when compared to takeoffs with normal length rectrices. The effect of simultaneous tail molt on aerial foraging was not observed.

The other 29 owls did not undergo a simultaneous tail molt during the summer of 1970. Some of them were known to have undergone a gradual tail molt. Two were seen to begin gradual tail molt by loss of the central rectrices first when their young were 30 days old. It is interesting to note that the simultaneous tail molt in the field occurred after the young had reached some measure of independence and that a majority of the wild, breeding population did not undergo a simultaneous or nearly simultaneous tail molt.

These results supplement Mayr and Mayr's (loc. cit.) finding of a simultaneous tail molt in a museum specimen of *S. cunicularia*. Burrowing Owls can successfully secure insects on the ground without flying. If these owls can capture a sufficient number of prey on the ground, then the short period of complete tail loss may only represent a slight hindrance to foraging activities of the species.

The Department of Zoology, University of South Florida provided support for the work. Noel Snyder and Andrew J. Meyerricks provided helpful comments on the manuscript.—WILLIAM D. COURSER, *Department of Zoology, University of South Florida, Tampa, Florida 33620, 9 June 1971.*

Another record of a short incubation period for the Robin.—Taft's note (Audubon Field Notes, 24:652, 1970) on the possible 7- or 8-day incubation period for a Robin (*Turdus migratorius*) prompts me to add a verifying observation made by one of my students, Ruth Ellen Sands, in 1956 in Athens, Ohio. She found a nest with 2 eggs on 20 April. On 22 April there were three eggs, the third having been laid between noon of 21 April and noon of 22 April. The three eggs hatched during the day on 30 April, from 8 to 8½ days after the laying of the last egg. All three young left the nest on 16 May, 2 in the morning and one around supper time.—HENRI C. SEIBERT, *Department of Zoology, Ohio University, Athens, Ohio 45701, 10 June 1971.*

Discovery of the nest of the Kauai Akepa.—The Hawaiian Islands are inhabited by a unique family of birds—the Hawaiian Honeycreepers (family Drepanididae). Of the twenty-two full species of drepanidids, eight are already extinct and eight others currently considered to be in danger of extinction (Fisher, Simon, and Vincent, *Wildlife in danger*. New York, 1969). The six remaining species have at least one race each in danger of extinction.

The Akepa (*Loxops coccinea*) has distinct subspecies on four of Hawaii's main islands: *Loxops coccinea caeruleirostris* on Kauai; *L. c. rufa* on Oahu; *L. c. ochracea* on Maui; and *L. c. coccinea* on Hawaii. The species is fairly common only in the Alakai Swamp region of Kauai, less common at Kokee State Park on Kauai; it is extinct on Oahu, and rare on both Maui and Hawaii.

The nest, eggs, and nestlings have not been described previously for any of the subspecies of Akepa. Perkins (Aves. *in* Fauna Hawaiiensis 1 (4):365-466, 1903) wrote:

"On one occasion I saw a pair of the Maui species building their nest high up in a tall ohia, near the extremity of a horizontal branch. Both sexes kept coming to the ground for material and were carrying off the wooly down or 'pulu' of some stunted tree-ferns, probably as a lining for the nest. This was so well concealed that even with glasses