

FROM FIELD AND STUDY

The Aerial Capture of a White-throated Swift by a Pair of Falcons.—On June 10, 1942, while camping at Horse Tank, a permanent desert watering tank within the boundaries of the Kofa National Game Range in the Castle Dome Mountains, about 50 miles northeast of Yuma, Arizona, I had occasion to witness a contest between two masters of flight—a large falcon and a White-throated Swift (*Aeronautes saxatalis*). [On the basis of color, the falcons were identified as Duck Hawks (*Falco peregrinus*), but since no specimen was obtained, the writer feels that a positive record of this species should not be claimed.]

When first sighted at about 100 feet above the tank, the hawk was pursuing the swift. The falcon was about ten feet behind the smaller bird and both were apparently straining every muscle in an effort to gain more speed. As though in an attempt to discourage its pursuer, the swift made an almost perpendicular dive. Although the falcon followed the smaller bird down almost to the ground, it could not seem to shorten the distance between itself and its prospective prey. At about ten feet from the ground the swift pulled out of the dive and strove to gain altitude. The falcon followed closely behind it. Judging from this performance, I assumed that the race would be a fair one. However, just as the swift was regaining altitude, another, smaller falcon of the same species came into view a little above and behind the two birds I had been watching. This smaller falcon, probably the male of the pair, swooped down upon the swift from behind, but a slight change in course by the swift caused the hawk to miss its mark. The larger falcon, presumably the female, continued its dogged chase close to the tail of the swift while the smaller falcon circled and gained altitude. After several moments, the smaller hawk again dove at the swift. This time it hit its mark squarely. When last seen, the pair of hawks was flying off into the distance. The smaller hawk was carrying the swift in its talons.

It will always remain a question in my mind whether or not the larger hawk could have mastered the situation without the cooperation of its apparent mate. Of particular interest was the fact that the two falcons chose to capture a bird as small and agile as a White-throated Swift within a few feet of a desert tank which at that time was frequented daily by several hundred White-winged Doves (*Melopelia asiatica*), Mourning Doves (*Zenaidura macroura*), and Gambel Quail (*Lophortyx gambelii*).—LEE W. ARNOLD, *Arizona Game and Fish Commission, Phoenix, Arizona, August 4, 1942.*

Southern Record Station for the California Pine Grosbeak.—On July 25, 1942, at a point $\frac{1}{4}$ mile above the junction of Evolution Creek with the South Fork of the San Joaquin River at an elevation of about 8900 feet, in Fresno County, California, I watched a pair of California Pine Grosbeaks (*Pinicola enucleator californica*) feeding on the ripening fruit of a twinberry bush. These birds were watched for a period of 15 minutes in good light with 8-power binoculars, at distances of 20 to 30 feet. The male was in full red breeding plumage and from various actions I felt sure that the birds were breeding. This is the southernmost location at which I have observed this species in the Sierra Nevada.—JOSEPH S. DIXON, *Berkeley, California, August 15, 1942.*

Relationships of the Hawaiian Avifauna.—In a recent paper on the limits of the Polynesian Subregion, Mayr (Proc. Sixth Pacific Sci. Cong., 4, 1940: 191-195) excludes Hawaii from Polynesia because in agreement with most other ornithologists he believes that the great majority of the endemic land birds of Hawaii is of Holarctic, usually Nearctic, or of Neotropical derivation. The only Polynesian elements in the avifauna of these islands are two "superspecies" of the Meliphagidae (*Moho*, *Chaetoptila*), one species of the Muscipidae (*Chasiempis*) and perhaps two species of extinct or nearly extinct rails. In a paper in the same volume (pp. 185-189) Bryan in an article on Hawaiian birds reaches the opposite conclusion (p. 188) that "the relationship of most of the . . . endemic land birds is with species to the southwest," that is, Polynesian species. He lists several species in addition to those mentioned above which he considers to be of Polynesian origin, but in every case the evidence for considering them to be of American or Palearctic derivation seems to be far more convincing and in some instances conclusive. An example of this is Bryan's treatment of the Hawaiian thrushes of the genus *Phaeornis*. He states (p. 188) that, "they seem to be most closely related to Pacific species of the genus *Turdus*" (*Turdus poliocephalus* and subspecies). As long ago as 1889 Stejneger (Proc. U. S. Nat. Mus., 12: 383-384) carefully investigated the relationships of *Phaeornis* and concluded that it is closely allied to the American solitaires of the genus *Myadestes*. After noting the many striking similarities of structure and color pattern to be seen in both adults and immatures of representatives of the two genera, he wrote: "In fact, were it not for the different proportions of wing, tail, and legs the two birds could hardly be separated generically." Before I knew of this paper, I had reached the same conclusion after comparing *Phaeornis*