RECORDS OF SNOWY OWLS IN CALIFORNIA

STANLEY W. HARRIS and CHARLES F. YOCOM
Division of Natural Resources
Humboldt State College
Arcata, California 95521

Although the 1957 edition of the A.O.U. Check-list records the "occasional" winter distribution of the Snowy Owl (*Nyctea scandiaca*) to be as far south as Los Angeles County, a search of the literature reveals only one published record of this species in California since 1916, a bird from near Davis, California, in early January 1967 (Hunter, Calif. Fish and Game 53:213–214). Grinnell and Miller (The Distribution of the Birds of California, Pacific Coast Avifauna No. 27, 1944) summarized earlier Snowy Owl records in the state, and of 17 specific records mentioned, 12 were from either Humboldt or Del Norte counties, two were from Alameda County, and one each from Santa Cruz, Sonoma, and Butte counties, and none more recent than late 1916. If this species has occurred in the state in the past 50 years, as seems likely, the records do not appear to have been published.

During early 1967 we were able to obtain observations and (or) reports on several Snowy Owls in California. Archie Mossman of Humboldt State College reported a heavily barred Snowy Owl in a pasture north of Humboldt Bay and approximately three miles west of Arcata, Humboldt County, on the evening of 31 January 1967. It was observed in the same place the next day by several observers, including the authors, but was apparently gone on 2 February when a search of the area failed to reveal it. Two Humboldt State College students reported seeing a white Snowy Owl on the south spit of Humboldt Bay on 2 February, and another student reported a dark bird in the beach dunes west of Arcata on 3 February. The spits and dunes were searched repeatedly in the next few weeks, and Snowy Owls were subsequently observed in a section of large open sand dunes interspersed with small ponds of rain water directly west of Arcata. Between 12 February and 16 April, at least 18 visits were made to this area by either the authors or other competent observers. On 12 February two Snowy Owls, one white, and one barred, were observed. On subsequent visits from one to three owls, one white and two barred, were seen and photographed until 26 March, when the last known observation, of a barred bird, was made by Mrs. Violet Homem of San Francisco. These owls habitually perched on large nearly bare sand dunes 100–400 yards back from the ocean beach and flew parallel to the beach when flushed. In all, they stayed within an area no more than two miles long and one-half mile wide during the times they were under observation. It is possible that some of them may have used other areas at times because all three could not be found on every visit. The white owl seemed particularly elusive.

In addition to these records, a Humboldt State College student, Perry Baycroft, reported seeing a white Snowy Owl in the hills approximately four miles southeast of Arcata on 18 February at the same time that a white owl was under observation on the beach. This means that at least four separate Snowy Owls occurred in the vicinity of Arcata during February. So far as we know, the latest date a Snowy Owl was seen in Humboldt County in 1967 was 24 April when California Department of Fish and Game Warden Terry Grosz observed a white Snowy Owl on Table Bluff approximately five miles south of Eureka. Warden Grosz also reported seeing Snowy Owls in northeastern California in April, as follows: 14 April: one bird in white plumage observed one-half mile north of Wilson Valley, Modoc County. 17 April: one bird in white plumage eating a male Ring-necked Pheasant (*Phasianus colchicus*) on state-line road at Klamath National Wildlife Refuge, Siskiyou County. While he was watching this bird, two additional Snowy Owls, one white, and one barred, flew south across the highway into California, being carried along by very strong northerly winds.

Accepted for publication 12 September 1967.

A SECOND REPORT ON THE BASIHYALE IN AMERICAN SONGBIRDS, WITH REMARKS ON THE STATUS OF *PEUCEDRAMUS*

WILLIAM G. GEORGE
Department of Zoology
Southern Illinois University
Carbondale, Illinois 62901

The basihyale of the hyoid apparatus is a cylindrical bone in most families of songbirds, but not within the New World "nine-primaried" Oscines (George, Am. Mus. Novitates No. 2103, 1962). Every family belonging to this assemblage was sampled, and 116 of the genera and 255 of the species were examined in the previous survey. A cylindrical basihyale proved to be characteristic of only (1) Vireonidae, a disjunct, partly 10-primaried group whose real relationships are thought by many to lie outside the New World "nine-primaried" songbird assemblage; (2) *Tersina*, the notoriously odd swallow tanager whose relationships no one can discern; and (3) one additional form, a supposed wood warbler, *Peucedramus*. In other Parulidae, and in the rest of the assemblage as well, a laterally compressed basihyale was found. Further, none of the examined vireos displayed this or a comparable condition.

Prior to the emergence of these findings, *Peucedramus* seemed to me, as to others who knew the bird in life, to be a typical member of the parulid-coerebidae-thraupid complex at the heart of the assemblage. Some authors (for instance Webster, Auk 25:469–473, 1958) even expressed a desire to merge the bird with *Dendroica*, of which there is no more typical parulid genus. Little or none of the internal anatomy of *Peucedramus* had been described, however, up to the time when the distribution of basihyale alternatives began to throw a disconcerting cloud of doubt around the bird's relationships. Its life history, too, had remained very little investigated. Consequently, a more comprehensive study of the *Peucedramus* appeared desirable, was undertaken, and revealed the bird to have (George, *op. cit.*): (1) jaw muscle

patterns not known to exist in any other member of the assemblage, including *Tersina* and vireos; (2) atypical eggs for a wood warbler; (3) an exceptional nest, in construction like those of kinglets (*Regulus*); and (4) an assortment of minor anatomical distinctions. Thus was the aberrance of one bird exposed as a result of a hint provided by its basihyale.

To determine more fully the occurrence of the cylindrical basihyale within the assemblage, and hoping thereby to detect a possible near ally of *Peucedramus*, I have examined the following additional forms, listed here for the most part in the order of Meyer de Schauensee (The Species of Birds of South America with Their Distribution, Philadelphia Academy of Sciences, 1966). A largely successful attempt has been made to include particularly the monotypical and endemic, aberrant, and little-known neotropical honeycreepers, tanagers, and sparrows. Among such birds it seemed to me a *Peucedramus*-like form might be found if one existed in the assemblage. However, in all such forms examined, as in the typical ones, the basihyale is laterally compressed. The problem of classifying *Peucedramus* thus not only remains as before, but deepens; and I am happy to see that Webster (Wilson Bull. 74: 417–425, 1962) has withdrawn his suggestion that this genus be combined with *Dendroica*.

Icteridae. *Molothrus bonariensis, Cacicus holosericeus, Quiscalus quiscula, Agelaius thilius, Icterus mesomelas, Leistes militaris, Pezities militaris.*

Parulidae. *Geothlypis aequinoctialis, Myioborus melanocephalus, Basileuterus chrysogaster, B. tristiatus, B. fraseri.*

Coerebidae. *Conirostrum cinereum, Oreomanes fraseri, Diglossa caerulescens, Iridophanes pulcherrima, Dacnis lineata, Xenodacnis parina, Euneornis campestris.*

Thraupidae. *Pyrrhuphonia jamaica, Tanagra chlorotica, T. lanirostris, Tangara velia, T. chilensis, T. punctata, T. xanthogastra, T. cyanicollis, T. gyrola, Iridosornis analis, I. reinhardti, Stephanophorus diadematus, Anisognathus igniventris, A. lacrymosus, Buthraupis montana, Wetmorethraupis sterrhopteron, Dubusia castaneoventris, D. taeniata, Thraupis cyanocephala, T. bonariensis, Thlypopsis ornata, T. ruficeps, Chlorospingus parvirostris, Hemispingus atropileus, Conothraupis speculigera, Chlorornis reifferii, Cissopis leveriana, Schistoclamys melanopis.*

Fringillidae. *Saltator aurantiirostris, S. albicollis, Piezorhina cinerea, Sporophila luctuosa, S. nigricollis, S. obscura, S. peruviana, S. simplex, S. castaneiventris, S. telasco, Loxigilla sp., Catamenia analis, C. inornata, C. homochroa, Gnathospiza taczanowskii, Sicalis lutea, S. uropygialis, S. olivascens, S. flaveola, S. luteola, Diuca speculifera, Phrygilus gayi, P. fruticeti, P. plebius, P. alaudinus, Coryphospingus pileatus, Atlapetes rufinucha, A. schistaceus, A. albiceps, Myospiza aurifrons, Rhynchospiza stolzmanni, Incaspiza pulchra, I. watkinsi, Emberizoides herbicola, Xenospingus concolor, Poospiza hispaniolensis, Poospizopsis caesar, Fringilla coelebs, F. montifringilla, Emberiza elegans, E. citrinella.*

An extralimital form, *Nesospiza acunnae*, of Nightingale Island, Tristan de Cunha, also was examined.

The American "nine-primaried" songbird genera which have yet to be examined in this continuing study include 14 Icteridae, 3 Drepaniidae, 1 Parulidae, 1 Coerebidae, 18 Thraupidae and 25 Fringillidae. These will be compared when and if suitable specimens become available.

The present study was supported by a Frank M. Chapman Fellowship in 1961–62 and by the American Museum of Natural History and the National Science Foundation (NSF G-34383) in 1962–64. It is a pleasure to acknowledge my appreciation for these splendid benefactions and to thank Dean Amadon, Eugene Eisenmann, Wesley E. Lanyon, Charles O'Brien, and Allan O'Connell for the many kinds of help they gave me during those years. Thanks are due as well to Hans and Maria Koepcke, whose extensions of courtesy were invaluable to me in Perú during 1962–63; to the late Walter Markl, who donated the specimen of *Conothraupis*; and to George Lowery, who loaned me the specimen of *Wetmorethraupis*. The specimens examined, excepting *Wetmorethraupis*, are in the collections of the American Museum of Natural History.

Accepted for publication 21 December 1967.

RAPTORS AND OTHER NORTH AMERICAN MIGRANTS IN MÉXICO

ROBERT F. ANDRLE
Buffalo Museum of Science
Humboldt Park
Buffalo, New York 14211

The communication by Bussjaeger *et al.* (Condor 69:425–426, 1967) on the Turkey Vulture migration near Tecolutla, Veracruz, focuses attention on a facet of migration in México and Central America that occasionally has been mentioned in the literature but about which few details have usually been given. Spring and autumn raptor migrations in these low-latitude areas are often a conspicuous event, and it seems appropriate to supply more data on them, as has recently been done for similar flights near the Great Lakes in the United States.

In the mid-afternoon of 7 March 1960 between Matamoros and San Fernando, Tamaulipas, México, on highway 101, we observed an estimated 800 Turkey Vultures, *Cathartes aura*, passing toward the northwest in a generally linear alignment composed of long lines of birds extending for several kilometers. Most of the vultures were pursuing a fairly direct course without spiraling at an altitude between about 200 and 300 meters above ground. At this time the sky was partly cloudy with scattered cumulus, and the vultures were assisted by a southeast wind about 25 kph. No other species of raptors were noted with them. Preceding this flight, from 3–6 March, weather maps show that a fairly strong high-pressure cell moved southeast into southeastern United States behind a cold front which penetrated across the Gulf of México as far as southern Veracruz. Northeastern México at this time was receiving fresh north and then northeasterly winds. On 7 March we noted early in the day that the wind in extreme northeastern Tamaulipas was still light northerly, but it is apparent from the maps that the anticyclone was weakening and lower pressure becoming established over central México, with Tamaulipas on the warmer side of a stationary front situated approximately across the international border. The resultant wind shift to southeast and warming trend that day apparently