

selves than to each other. They may represent different colonizations or introductions. Now they seem equivalent to two ecological subspecies kept apart by habitat preferences. Perhaps heritable wildness versus tameness is the controlling factor. The fact that one strain has been developed by man does not make it less real. These fowl in the Philippines seem to present a model of how ecological speciation can take place.—D. S. RABOR, *Silliman University, Dumaguete, Negros, Philippine Islands*, and A. L. RAND, *Chicago Natural History Museum, Chicago, Illinois, November 12, 1957*.

#### A Correction in Identification of the Zone-tailed Hawk as a Mexican Black Hawk.

—In the Condor (59, 1957:143), a northern breeding record for the Mexican Black Hawk (*Buteo gallus anthracinus*) in New Mexico was reported. A follow-up study was made in this same nesting area in the following year, 1957.

An adult female was collected August 23, 1957, at the conclusion of nesting, and it is now identified as a Zone-tailed Hawk (*Buteo albonotatus*) rather than as a Mexican Black Hawk. This bird was identified by J. Stokley Ligon, Carlsbad, New Mexico, and is now in his collection, numbered 2029.

Between April 11 and August 23, 1957, the nest in a ponderosa pine, occupied by hawks in 1956, was observed periodically by the authors. The same nest platform was used again in 1957 with dead branches, fresh limbs of skunk brush, and *Ribes* added. On April 11, one adult was found near the nest site, and it was presumed that a second bird was also in the area. On April 27, the female flushed from the nest; on May 13, the nest was inspected and it contained two well-incubated eggs; on June 26, two fuzzy white young hawks were in the nest. Only one young survived to leave the nest. The adult female was taken on August 23 to document the species identification. The juvenile and the adult male were still present in the area at the date of collection. No further check was made of the remaining birds.

The northernmost published record of the Zone-tailed Hawk in New Mexico was reported from southwestern New Mexico near Fort Bayard on May 21, 1911, by Mrs. Bailey (Birds of New Mexico, 1928:166). Cited also in Bailey, one Zone-tailed Hawk was noted August 8, 1901, in Turkey Canyon of the Guadalupe Mountains, just a few miles from the New Mexico border inside Texas. This species has been seen in New Mexico in recent years in the White and Capitan mountains, Otero and Lincoln counties, more than in any other area (letter from J. Stokley Ligon, November 1, 1957). In the same letter, Mr. Ligon stated that Mr. V. Montgomery of Roswell, New Mexico, had seen two hawks, August 15, 1957, in the Pine Lodge area on the northeast slope of the Capitan Mountains.

The nest discovered in Mills Canyon, seven miles west of Mills, Harding County, in 1956, and under more detailed observation in 1957, indicates a sizeable northern extension of the previous range of this bird. The airline distance from Fort Bayard to the nest site in Mills Canyon is 307 miles north-east. The second most northern sight record, the Pine Lodge area in the Capitan Mountains, is approximately 175 miles slightly southwest from Mills Canyon. From these observations, it can be tentatively concluded that the Zone-tailed Hawk may soon be reported from new northern New Mexico locations.

We are indebted to Richard Johnston, Joe T. Marshall, Jr., George Sutton, and Alexander Wetmore, whose interest in the earlier Condor article led to further analysis of the identification of this hawk.—WAYNE H. BOHL and ELMO TRAYLOR, *New Mexico Department of Game and Fish, Santa Fe, New Mexico, November 27, 1957*.

**Specific Relationships in the Genus *Elanus*.**—As many as five species have been recognized within the kite genus *Elanus* (Mathews, Birds of Australia, vol. 5, 1916:205). The generally accepted treatment of the genus is that of Peters (Birds of the World, vol. 1, 1931:192–193), who recognized seven forms divided among four species (other subspecies have been described or revived in subsequent years). Of all of these forms, only two, the Australian *notatus* and *scriptus*, are sympatric. The latter differs not only from *notatus* but from all the other forms in a number of characters, some of which will be discussed here. I have examined all the forms of this genus, including the unique type of *wahgiensis* Mayr and Gilliard, in the American Museum of Natural History. Omitting *scriptus*, the situation is one of a widely-ranging group of allopatric, geographically-replacing forms. Most of the authors who have written of *Elanus* have mentioned the striking similarity of all forms, particularly between the Australian *notatus* and the American *leucurus* (cf. Hartert, Die Vögel der Paläarktischen Fauna, vol. 2, 1914:1185). The differences among this group of forms are all relatively minor, involving principally size, shade of gray of the upper parts, and degree of development of the

pattern of the under side of the wing. In any of these characters, the forms may be arranged in a progressive intergrading series. None of them is separated from any other by differences approaching the extent of those between the sympatric *notatus* and *scriptus*.

Mayr, Linsley, and Usinger (Methods and Principles of Systematic Zoology, 1953:104) conclude a lucid discussion of the problem "Subspecies or Allopatric Species?" by stating that "the use of trinomial conveys two important pieces of information: (1) closest relationships and (2) allopatry . . . . To treat such allopatric forms as separate species has few practical advantages." I believe that this principle is exceptionally well illustrated in *Elanus*. The distinctiveness of *scriptus* from the sympatric *notatus* and from all other members of the genus strongly suggests that all of the latter are more closely related to one another than any is to *scriptus*. In order to express these degrees of relationship, the logical step would be to combine all these geographically replacing forms into a single species under the oldest name, *Elanus caeruleus*, leaving *E. scriptus* as the only other species in the genus. As suggested by Mayr, Linsley, and Usinger (and many others), taxonomic judgment must be substituted for concrete evidence of conspecificity in these strictly allopatric forms; it may be pointed out in this connection that the various races here assigned to *Elanus caeruleus* resemble one another more closely than do some of those currently accepted as belonging to single widely ranging falconiform species (for example, *Accipiter gentilis*, *Accipiter striatus*, *Falco peregrinus*, and others).

The species *Elanus scriptus* is confined to Australia, where it overlaps the range of *E. caeruleus notatus*. Condon and Amadon (Records of the South Australian Museum, 11, 1954:193-196) have published good comparative descriptions of the two species. One of the distinguishing characters they use needs to be somewhat modified. They state (p. 194) that the small outer primary of *scriptus* differs from that of *notatus* in being uniformly gray rather than "white on the outer web and gray on the inner." Actually the feather in question is, in *notatus*, gray on both webs, but it has a white edge which is obsolete or absent on the inner web and fairly well developed on the outer web. In *scriptus*, only the tip is white. The various races which I propose to combine into *caeruleus* all have the *notatus* pattern with various degrees of development of the white edge.

A good distinguishing character for the two sympatric species of *Elanus* in Australia, not mentioned by Condon and Amadon, lies in the fact that in *E. scriptus* the shafts of all the white tail feathers (that is, all rectrices except the central pair) are white; in *E. c. notatus* these shafts are dark. This is not, however, a specific character for *E. caeruleus* throughout its range; in *E. c. hypoleucus* and *E. c. intermedius*, the shafts of the white rectrices are white, except that in some individuals the shafts of the innermost white rectrices are somewhat darkened. In other races of *E. caeruleus*, the shafts of the outermost pair of rectrices are frequently white.

Unlike Condon and Amadon, I would interpret the similarity of the Australian *notatus* to the American *leucurus*, and the distinctiveness of the Australian *scriptus*, as evidence that the latter, not the former, was the earlier arrival in the putative "double invasion" of Australia by *Elanus*. I have discussed this with Dr. Amadon, and he is now inclined to agree with this interpretation.

Salomonsen (Vidensk. Medd. Dansk Naturh. Foren., 115, 1953:209-210) has recently reviewed the races of *E. caeruleus* in its former restricted sense. He synonymized *intermedius* Schlegel with *hypoleucus* Gould. However, Javanese specimens are quite noticeably paler gray above, particularly on the crown, than are Philippine and Celebes specimens. I believe that *intermedius* is worthy of recognition for the Black-winged Kite population of Java.

The following arrangement of the species and subspecies of *Elanus* is proposed:

- Elanus caeruleus caeruleus* (Desfontaines)
- vociferus* (Latham)
- sumatranus* Salomonsen
- hypoleucus* Gould
- intermedius* Schlegel
- wahgiensis* Mayr and Gilliard
- notatus* Gould
- leucurus* (Vieillot)
- majusculus* Bangs and Penard

*Elanus scriptus* Gould.

—KENNETH C. PARKES, Carnegie Museum, Pittsburgh, Pennsylvania, August 28, 1957.