

GENERAL NOTES

Notes on some Chiapas birds.—During a trip to the state of Chiapas, México, in March and April 1965, information was obtained on several species of birds which supplements the “Check-list of the Birds of México” (1950, 1957. *Pacific Coast Aviifauna* 29, 33) and the “Lista de las Aves de Chiapas” (Alvárez del Toro, 1964. Instituto de Ciencias y Artes de Chiapas). Specimens cited are now at the University of Michigan Museum of Zoology, mainly in the form of skeletons. I am grateful to Robert W. Storer and Guy G. Musser for their contribution to this study. I also appreciate financial support from the National Science Foundation and permission to collect specimens from the Departamento de Conservación de la Fauna Silvestre.

Several species of birds were found on Cerro Mozotal (10,000 feet in the extreme southeastern Sierra Madre de Chiapas which had previously been reported in this state only from the central highlands. These include the Green Violetear (*Colibri thalassina*) (female, 5.5 grams) and the Black-capped Siskin (*Spinus atriceps*) (male, 12.5 grams; female, 14.5 grams), which were collected on 17 April. In addition, the Ocellated Quail (*Cyrtonyx ocellatus*) the flicker (*Colaptes cafer mexicanoides*) and the Olive Warbler (*Peucedramus taeniatus*) were seen but not collected in the period 15–17 April. The siskin and quail were rare or uncommon in the pine-oak forest, while the other species were fairly common.

Three species reported only from the Atlantic lowlands were found on the Pacific slope. On 20 March a Blue-crowned Motmot, (*Momotus momota*) was collected (male, 100 grams) in cut-over tropical evergreen forest near Mapastepec, and the following day a Flint-billed Woodpecker (*Phloeocastes guatemalensis*) was seen and heard in the same area. The White-winged Tanager (*Piranga leucoptera*) was collected (2 males, one 18 grams) between Unión Juárez and Cacaohatán in coffee plantations on the lower slopes of Volcán Tacaná. Both specimens of the tanager showed enlargement of the testes (3 × 4 mm) and appeared to be paired. They sang thin, reedy songs consisting of alternating short phrases and pauses, quite different from the full-throated utterances of some of the larger, more northern members of the genus.

Also of interest was an apparent migratory movement of Scissor-tailed Flycatchers (*Muscivora forficata*) on 30 March near the Pacific Ocean near Pijijiápan. Hundreds if not thousands of these birds streamed past in small flocks or individually flying in a northwesterly direction at heights of 100 feet or less above the savanna. The flight lasted from dawn to mid-morning and terminated with the gradual disappearance of the birds from the area.—JOHN P. HUBBARD, *Division of Birds, U.S. National Museum, Smithsonian Institution, Washington, D.C. 20560, 26 May 1966.*

Egrets serving as “beaters” for Belted Kingfishers.—Many birds associate with another organism in order to secure prey disturbed by the activities of their associate, the “beater.” A classic example is that of the Cattle Egret (*Bubulcus ibis*) and its many foraging associates, especially hoofed mammals (Meyerriecks, 1960. *Nat. Hist.*, 69:46–57). Rand (1954. *Chicago Nat. Hist. Mus. Fieldiana: Zoology*, 36 (1)) and Meinertzhagen (1959. *Pirates and Predators*. Oliver & Boyd, Edinburgh) provide numerous examples of this phenomenon. We had several opportunities to observe such a relationship between Belted Kingfishers (*Megaceryle alcyon*) and two species of egrets, the Common Egret (*Casmerodius albus*) and the Snowy Egret (*Egretta thula*).

At 0830 on 22 December 1964, along the Hillsborough River, Hillsborough County,

Florida, Nellis saw a kingfisher hovering over a foraging Snowy Egret. The egret was using the "wade slowly" technique of foraging (Meyerriecks, 1960. "Comparative Breeding Behavior of Four Species of North American Herons." Publ. Nattall Ornith. Club, Cambridge, Mass., No. 2). While the egret was foraging in an area of sparse submerged vegetation, mainly *Elodea*, the kingfisher flew back and forth, hovering over the egret several times. The kingfisher dived into the water near the egret 3 times, and it made several false dives as well. None of the kingfisher's dives were successful. The egret noticed the kingfisher but did not appear to be disturbed by it. When Nellis's boat came too close, both birds flew away. Similar behavior was noted by Nellis at the same place late in January, 1965.

On 22 August 1965, at 1030, Meyerriecks watched the foraging behavior of one Common Egret and two Snowy Egrets in a small pond in Tampa, Florida and saw a perched kingfisher fly over the pond and dive unsuccessfully three times. Next, the kingfisher flew directly towards the Common Egret, which was using the "stand and wait" foraging method. The kingfisher hovered over the egret for about 5-10 seconds, then flew off, only to return again. This behavior was continued for about 2-3 minutes. Both birds failed to make a strike. The foraging Snowy Egrets were at the other end of the pond, about two hundred yards from the Common Egret. Then the kingfisher flew directly towards a Snowy Egret that was using the stand and wait technique. It hovered over this egret for about one minute then flew back to its former perch.

The second Snowy Egret then began to use the "disturb and chase" method of foraging (Meinertzhagen, 1949. *Ibis*, 91:465-482), and at once the kingfisher flew directly to it, hovering over the actively foraging egret. The kingfisher dove three times and made two kills. The "beater" egret also caught several tiny fish during this period. When the egret flew away the kingfisher followed it for a few moments then returned to its perch. Meyerriecks watched kingfishers and egrets at this pond on a number of occasions during the fall of 1965, but did not see this relationship again.

It is of interest that the kingfisher and the egret were successful when the egret used an active foraging technique, presumably having disturbed more prey with this method. One might speculate that the kingfisher flew directly to the egret using the more active foraging method because of some previous success with an associate foraging in an active manner.—ANDREW J. MEYERRIECKS, *Department of Zoology, University of South Florida, Tampa*, AND DAVID W. NELLIS, *Box 96, Brandon, Florida*. 25 May 1966.

Wood Duck ducklings captured by bullfrogs.—On 4 June 1956, I visited a Wood Duck (*Aix sponsa*) nest at the Olentangy Wildlife Experiment Station, Delaware County, Ohio, planning to mark the ducklings by toe-clipping. The ducklings were emerging from the nesting box on my arrival, but I was able to capture five before they made their exit. After toe-clipping, the five were released onto a pond. They promptly entered a small clump of cattails (*Typha latifolia*) as they swam toward their brood mates. When they emerged from the cattails moments later, only four of the five were present. To find what happened to the missing duckling, I immediately captured the remaining four. On one leg of each of two a band was placed, the band being attached in turn to a large fish hook, a line and a bamboo fishing pole. The two were returned to the site where their brood mate had disappeared less than an hour earlier. Within 10 minutes both ducklings were attacked by large bullfrogs (*Rana catesbeiana*).

The ducklings were hidden from view among cattails so I could not see the manner of attack. One frog released the duckling after being towed a short distance on the water. The other frog was swallowing the duckling headfirst and was towed to shore with its