FROM FIELD AND STUDY

Notes on the Philippine Brown Hornbill.—During a three-month military assignment (August, September, October, 1945) near the city of Zamboanga, Mindanao, I regularly observed wild flocks of Brown Hornbills (*Buceros hydrocorax*) which inhabited the tree-top level of the dense mountain forests lying a few miles inland from the city. Being large, strikingly colored and noisy, they would have been indeed difficult to overlook during their early morning and late afternoon foraging expeditions when they flew from tree to tree or from hillside to hillside, calling as they went and alternately soaring and beating their heavy wings. The regularity of these excursions is such that their sonorous calls serve to waken the natives in the morning and summon them home from the hillside fields at the end of the day. During the warmer part of the day the hornbills are silent and inactive and, unless unduly disturbed, remain hidden in the foliage of the highest jungle trees.

Throughout the period in which I was able to observe them they flew in small groups which averaged from three to seven in number. Although they were sometimes observed only in the company of others of their species, they were more commonly to be seen amid the much larger flocks of another tree-top species, the White-headed Hornbill (*Aceros leucocephalus*), which seldom flew in groups of less than twenty individuals and were by far the most common hornbills of that region. The White-headed Hornbill was differently colored and marked and considerably smaller than the Brown Hornbill so that the two species were easily distinguishable when they flew in mixed flocks. They associated not only in feeding, but also in their foraging flights over the jungle and in roosting. Despite the well known irritability of hornbills, the relationship seemed to be a peaceable one and on no occasion did I observe any signs of incompatibility. A third species of hornbill, the Tarictic Hornbill (*Penelopides panini*) was never seen to mix with flocks of either of the other two but remained in the central and lower levels of the forest and at that season apparently lived a solitary existence.

During the three-month period the wild birds seemed to feed mainly on insects, wild figs, and feral guavas, which comprised the chief components of stomach contents of several specimens collected. However, feeding preferences expressed by a captive bird then in my possession would indicate that during seasons when more succulent fruits are available to wild birds such may be preferred as a food source. Of the fruits offered, the captive hornbill, an adult male, invariably chose those which were high in both water and sugar content, preferring such types as mango, papaya, sweet sop, tangerine, orange, and mangosteen to drier fruits such as wild figs, guava, marang, and banana or relatively tart ones like pomelo, lime, and tomato. In his choice of fruits, color seemed to play an important part. A variety of papaya with red flesh was always preferable to one of an orange hue, just as any orange colored fruit was always eaten before any interest was evinced in one of a yellow or cream color. Canned fruit salad mix, in which the fruits were diced to a more or less uniform size, seemed to confirm the theory the foregoing observations suggested. Upon being introduced to this artificial mixture of fruits unknown to him, the hornbill immediately selected first the sections of cherry, then those of peach, and last those of colorless pineapple and pear sections and grapes, and when offered the mix on subsequent occasions he never failed to eat its ingredients in exactly the same order. His greatest enthusiasm was expressed for any food of animal origin such as bird eggs, locusts, grasshoppers, frogs, lizards and snails. As he accepted such fare, his head would wobble with excitement much in the manner of a young bird when fed by its parents. The food was taken in the tip of the bill, tossed up and then swallowed, a process accompanied by a convulsive gulp and an erection of the bird's crest. Upon accepting any large insect such as a four- or five-inch grasshopper or a walking stick of similar dimensions, he would run it back and forth through the tip of his beak, crushing the heavy exoskeleton with a series of rapid snappings of his powerful bill. Only when he had rendered it a soggy, shapeless mass, would he attempt to swallow it. In addition to the insects which we caught and carried to him, he was quick to seize any which flew into his cage and he caught them in midair with a speed amazing for so large a bird.

The call of a wild bird in flight was a repeated, clear and resonant honk which in character and timber resembled somewhat that of a large goose. The sound of a flock of calling hornbills carried for miles through the still air of the jungle. When confronted with food, my captive bird usually emitted a single harsh squawk and he gave a short coarse bark whenever he was angry or frightened. This last note he reserved mainly for stray dogs which wandered into our yard and to which he held unmistakable aversion.—KEN STOTT, JR., *San Diego Zoo, San Diego, California, July 17, 1946.*

The Great-tailed Grackle in the Upper Rio Grande Valley.—The Great-tailed Grackle (*Cassidix mexicanus*) has been reported as nesting in New Mexico in the vicinity of Las Cruces, Dona Ana County, and Carlsbad, Eddy County (Bailey, Birds of New Mexico, 1928:658). Peterson (Condor,

41, 1939:217) saw grackles south of Isleta, Bernalillo County, on May 5, 1939, and surmised that they might be nesting. I had the colony that Peterson reported under observation from April, 1938, to September, 1942, and he was correct in his guess that the birds were nesting. The presence of this species along the Rio Grande north of Las Cruces is a considerable extension of its previously reported range and the details of its occurrence are worth recording.

On April 12, 1938, a male Great-tailed Grackle was seen at Elmendorf, 18 miles south of Socorro, Socorro County, and five males were seen at a pond one mile south of Isleta. On May 8, 1938, one male was seen one mile north of Isleta and 12 males and 5 females were found at the pond south of Isleta. A female collected at the pond on this date had enlarged overies, the largest measuring 10 mm. in diameter. This specimen is no. 86711 in the Museum of Vertebrate Zoology and has been identified by Dr. Alden H. Miller as *Cassidix mexicanus prosopidicola* (see A.O.U. Check-list Supplement, Auk, 61, 1944:460).

During the period of these observations, the pond at Isleta was shallow and weedy with a rank growth of cattails (*Typha*). It was frequented by many species of aquatic birds. The pond was visited again on June 12, 1938, and the grackles were found nesting in a dense patch of cattails at its west side. There were five grackle nests in these cattails: one with 2 eggs; one with 3 eggs; one with 2 newly hatched young; and two that were empty, but excrement about their margins indicated that they had contained young birds. Four young grackles, able to fly awkwardly, were perched in the cattails near the empty nests.

Great-tailed Grackles were seen at the Isleta pond each summer from 1938 to 1942, but I did not again search for their nests. The pond was not visited at regular intervals, and dates of seasonal arrival and departure of the birds are only approximate. In 1939, there were no grackles at the pond on March 22, but on April 2, two males were seen. In 1940, Mr. Barney Hodgin of the Soil Conservation Service saw about twelve grackles at the pond on March 13, and on March 16 I saw one male. A flock of about 25 was seen at the pond on November 10 and again on November 16, 1940. One male was seen November 30, 1940. On November 16, 1940, ten grackles were seen in trees alongside the highway 3 miles south of Los Lunas, Valencia County.

This species nests and also winters at Las Cruces, New Mexico. A flock of 20 was seen in trees near the Loretta Academy in Las Cruces on January 16, 1940. On January 18, 1940, a flock of approximately 200 was found at the south edge of the town, and on January 21 flocks of 10 to 30 birds were seen within the town. This grackle also winters and nests in Juarez, Chihuahua, Mexico. I saw adults and young in the trees of the plaza at Juarez on May 31, 1940, and found adults there in January, 1931.

Mr. Adrey E. Borell of Albuquerque, New Mexico, reports to me that on May 15, 1943, he observed a male Great-tailed Grackle at a pond on the Ojo del Espírita Santa Grant, 18 miles northwest of San Ysidro, Sandoval County.

In summary, the Great-tailed Grackle nests one mile south of Isleta, which is about 170 miles north of Las Cruces and Carlsbad, where previously it was known to nest. The farthest north that it has been seen in New Mexico is 18 miles northwest of San Ysidro.

I am indebted to Dr. Alden H. Miller for identification of the grackle specimen and to Mr. Adrey E. Borell for allowing me to use his observations.—LAWRENCE V. COMPTON, *Soil Conservation Service, Washington, D.C., November 1, 1946.*

Anna Hummingbird at Play.—I had an interesting experience with a hummingbird while watering my garden in Benicia, California, on June 13, 1946. Frequently I have enjoyed watching a hummer flit through the spray while watering in my yard with the garden hose. On this occasion the water was flowing from the hose in a solid stream about three-quarters of an inch in diameter. A hummingbird, an adult female Anna (*Calypte anna*), flitted alongside the flowing stream and eyed it, then dipped her bill into the stream of water, not apparently drinking as she did not open her mandibles. Then she took a position facing the stream, brought both feet forward and dipped them into the water. Finally she came at right angles to the flow and attempted to light on it as though it were a twig or limb and rode down the stream a way, repeating this stunt over and over again.

When she flew away, I remained motionless holding the hose, suspecting that she might return. This she did after a brief interval and went through almost the same maneuvers, apparently enjoying her fun as much as I enjoyed watching her.—EMERSON A. STONER, *Benicia, California, June 13, 1946.*

The Blue Goose in Yolo County, California.—C. G. Fairchild, United States Game Management Agent, of Sacramento, California, has just brought my attention to the following significant record. On the afternoon of January 8, 1946, Joe Patterson of Elk Grove, Sacramento County, California, killed a Blue Goose (*Chen caerulescens*) in a rice field near Sycamore Slough, Yolo County. This bird had been feeding with a mixed flock of Snow and White-fronted geese in a field between