

THE CATTLE EGRET IN CENTRAL BAJA CALIFORNIA, MÉXICO

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The Cattle Egret (*Bubulcus ibis*) now seems to be established in northern and western México. Zimmerman (Condor 75:480, 1973) reported numerous sightings in Coahuila in 1971 and 1972, and in Chihuahua, Nuevo León, and San Luis Potosí in 1972. On the western mainland the Cattle Egret was reported in Sinaloa (Alden, Finding the birds in western México, Univ. Arizona Press, 1969) and Guerrero (Dickerman, Wilson Bull. 76:290, 1964) in 1964, and in Chiapas (Hubbard, Wilson Bull. 78: 121, 1966) in 1965. Other records also exist (Hubbs Condor 70:92, 1968).

In Baja California the only records we are aware of are those of Hubbs. One, near the southeastern extremity of the peninsula, is a sight record by A. J. Sloan who, in 1964, found the species in a mangrove lagoon near the south end of Isla San José, in the Golfo de California. The other was based on a newspaper photograph which showed a lone Cattle Egret onboard a sport fishing boat off northwestern Baja California near Punta San Isidro in 1967. The nature of these records and the importance of documenting the occurrence of the Cattle Egret for studies on the dynamics of range expansions prompt us to report our observations of this species in Baja California.

NOTES ON NESTING IN THE DOUBLE-STRIPED THICK-KNEE (*BURHINUS BISTRATUS*) IN COSTA RICA

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Little is known about the nesting habits of the Double-striped Thick-knee (*Burhinus bistriatus*) as well as several other members of the family Burhinidae. This paper reports on two separate observations of nesting by the Double-striped Thick-knee in Guanacaste Province, Costa Rica. This cursorial bird inhabits savannahs in the savannah-and-forest mosaic of northwestern Costa Rica. The savannahs are dominated by almost pure stands of an introduced African grass called "jaragua" (*Hyparrhenia rufa*) and are dotted with occasional trees and scrubby growth. The savannahs, created by extensive deforestation, are used for cattle grazing, and often are burned during the dry season which lasts from December to May. Because of the continuing conversion of forest to pasture, suitable habitat for the Double-striped Thick-knee is increasing in Guanacaste.

Typical of the Burhinidae, this species is monog-

On 8 May 1973, while working in the vicinity of Guerrero Negro, Baja California Sur, midway down the Pacific coast of the peninsula, we observed three Cattle Egrets feeding in a dry, scrubby field adjacent to a canal. On 9 May, a flock of at least five was seen in a similar habitat and one female was obtained. This specimen is now in the Santa Barbara Museum of Natural History and bears the following information: SBMNH 2366; wt. 380 g; bill orange-yellow, irides yellow, tibiotarsus mostly yellow, tarso-metatarsus and feet black; largest ovum 2 mm; stomach contained several grasshoppers, two lizards (*Uta stansburiana*, 135 mm long; *Sceloporus* sp., 155 mm), and one lizard tail.

Most of Baja California is arid and sparsely populated. The area around Guerrero Negro, however, is lowland adjacent to Scammon's Lagoon and has isolated mangrove swamps, *Salicornia* salt marshes, and canals leading to man-made embayments. No domestic animals were seen. The reproductive condition of the specimen we obtained suggests that these egrets may have been stragglers in that region.

Even though the first observation of the Cattle Egret off western Baja California was made five years earlier than ours, there is no indication that the species is now established on the peninsula. We did not see other *Bubulcus ibis* during May 1973, while working in coastal marshes and lowland habitat near La Paz (5 May), Mulegé (6, 7, 11, and 12 May), San Ignacio (10 May), Magdalena Bay (13 and 14 May), Bahía San Quintín (21 and 22 May), and south of Mexicali (23 May).

Throughout our stay in Baja California we were accompanied and aided by José Torres Ayala and Felipe Viramontes V., students at the Universidad de Nuevo León, Monterrey; we are also indebted to Arturo Jiménez G. of that Universidad.

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amous and the young are nidifugous (Lack, Ecological adaptations for breeding in birds, Methuen and Co. Ltd., London, 1968). The only previous notes I have found on nidification in this species are provided by Dickey and Van Rossem (The birds of El Salvador, Zool. Ser., Field Mus. Nat. Hist., 23, 1938) from El Salvador: "The natives say that two eggs are laid and that the shallow depression in the ground which forms the only nest is usually situated in the open field so that the sitting bird may command a view to all sides. However, we have no first-hand knowledge on this point." They further noted that a mated pair which they shot had finished breeding by 7 April and that the male appeared to have done most, if not all, of the incubating. Egg development in the ovaries of females collected in January indicated "that the breeding season was still some weeks distant."

On 30 March 1972, I found a Double-striped Thick-knee nest containing two eggs in Santa Rosa National Park (10.8° N, 85.8° W) near the middle of a small, flat, recently burned "jaragua" savannah surrounded by forest. Before finding the nest, I saw the two parents walking quickly and silently away from its vicinity. The nest consisted of a slight depression 20 to 22 cm in diameter and 1.5 to 2.0 cm deep in the bare, light-brown soil. The pointed-ovate eggs were olive buff with large and small brown blotches and a few greenish gray blotches. The cryptically



FIGURE 1. The first-hatched Double-striped Thick-knee chick, probably one to two days old.

colored eggs and inconspicuous nest were difficult to see when I was a few meters from the nest.

At about 11:30 on 25 April, I revisited the nest, and again the adults quickly left the area as I approached. The nest now contained one peeping chick and one unhatched egg. The chick was buff with black markings (fig. 1). It could walk, but not strongly, and remained within 1 m of the nest. The chick, too, was almost indiscernible at a few meters owing to its cryptic coloring. The next day, 26 April, I visited the nest at 07:45 and saw no adults when I approached the nest. The other egg was hatching, the chick inside pecking at the large end of the egg. Both chicks were peeping. The older chick, still walking weakly, stayed within a meter of the nest. When checked at 11:20, the second chick had hatched and

both were peeping in the nest. The new chick appeared approximately one-third smaller than the older one. Most of the eggshell, which was bright white on the inside, was gone. Neither chick moved away from the nest and there was no sign of the parents. On 27 April I checked the nest at 07:30 and found the younger chick dead in the nest, but no sign of the older chick or the parents.

Another nest of this species was recently observed in Guanacaste by Alexander F. Skutch, who has kindly offered his notes. On 22 January 1973, while driving near Palo Verde over a low, level area with an open growth of palo verde trees, he noticed a Double-striped Thick-knee sitting on the ground about 16 m away. It remained sitting until he approached closely. The bird's departure revealed an egg lying in a slight, unlined depression in an open area rough from the dried hoofprints of cattle. When visited two days later, an adult was still incubating the single egg, its mate standing a few meters away. Again it permitted a close approach, and one member of the pair returned to the egg as soon as Skutch returned to the car. The mate followed but stopped a few meters from the nest. The single egg measured 57 mm by 41 mm in diameter. It was pointed-ovate, dark gray, with large and small blotches of dark brown and pale lilac. Skutch notes, that, in his experience, Double-striped Thick-knees are not shy.

At the nest that I observed, the incubation period of the second egg was at least 27 days. Lack (1968) placed the usual incubation period for *Burhinidae* at 26 days and the interval between the laying of successive eggs at two days. Thus, it is possible that the second egg had not yet been laid at the nest observed by Skutch. A clutch of two in this species would conform to the normal clutch size of the other seven species in the family, although the two *Esacus* species often lay only one egg (Maclean, *Auk* 89: 314, 1972).

These observations bear out Lack's (1968) characterization of the nest and parental behavior of Thick-knees.

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GRAY HAWK FEEDING ON WORM LIZARD

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On 30 September 1973, at the end of Gamboa Pipeline Road, Canal Zone, Panama, I startled a Gray Hawk (*Buteo nitidus*) that had been sitting on the ground. On the chance that the bird might have been feeding, I walked to the spot and found the distal portion of a small snake-like creature which I collected for identification.

Later, Professor Eustorgio Mendez, vertebrate zoologist, Gorgas Memorial Laboratory (GML), Panama

City, Republic of Panama, identified the specimen as a worm lizard (*Amphisbaena fuliginosa*); it is now preserved at GML.

Professor Mendez felt this record was unusual because lizards of this family (*Amphisbaenidae*) are subterranean. His specimens of this worm lizard from the same general area were obtained only from fresh road cuts. My specimen was fresh when collected about 10:30, indicating it had just been taken. As there was no construction underway in that area of the Canal Zone, the worm lizard was, for reasons unknown, stranded above ground and captured by the Gray Hawk.

I thank Professor Mendez for the identification of the specimen.

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