

right. Mist had been falling for several minutes. He fluffed out his feathers and, holding very tightly on the branch, started flapping his wings rapidly and raised himself to an almost vertical position, except for his beak, which stayed half-way between vertical and horizontal. Obviously this was to shake some of the water from his body. After finishing he stooped over.

After a few moments he sat upright, opened his bill three or four times, closed it rapidly, and looked around. He continued sitting upright with his crown feathers slightly raised for several minutes, and then started to move around in the tree in search of more berries, slowing working his way to its top, where he found a large cluster of berries that perhaps were riper than others. The bird moved around the tree by hopping, as do other toucans. The bird took each berry and held a nearly horizontal pose with it in the tip of his beak, juggled it there for about 6 sec, and then threw it slightly up and back into its mouth. The bird left the tree at 1545 with a berry in the tip of his beak.

I thank Mike Knee, botanist at Summit Gardens, Canal Zone, for the identification of the *Hampea* tree and Robert Dressler, Smithsonian Tropical Research Institute, Balboa, Canal Zone, for its current nomenclature.—STEVE WEST, *PCS Box 5171, Howard AFB, Canal Zone*. Accepted 27 Jan. 75.

**Notes on the Long-billed Curlew in Saskatchewan.**—Very little information has been published on the Long-billed Curlew (*Numenius americanus*), and the following notes appear to add significantly to the information presently available on the species.

Our data on the Long-billed Curlew were gathered incidental to studies of ground nesting passerines on shortgrass prairie in southern Saskatchewan, Canada. The site was within 8 km of the former Canadian Committee for the International Biology Program (CCIBP) research station, 38.6 km north and 4.8 km east of the city of Swift Current, Saskatchewan. Detailed descriptions of the soil, weather, climate, and biology of the region can be found in the CCIBP Technical Report Series, and a general description of the geography, flora, and climate is given in Maher (1973).

The study was conducted from 1967 through 1971 as part of the IBP grasslands study and continued for the three subsequent years. Only 3 curlew nests were found in these 8 seasons, 2 with 4-egg clutches and 1 with a 5-egg clutch. According to Bent (1929), the clutch is 4, occasionally 5 eggs. The two 4-egg clutches hatched normally. One egg of the 5-egg clutch hatched and the adults immediately abandoned the nest. Although none of the eggs was pipped, the embryos of the remaining eggs appeared to be within a day or two of hatching. The presence of a fencing crew near the nest on the day the first egg hatched probably caused the abandonment.

Graul (1971) reported that one egg of a four-egg curlew clutch did not hatch and he assumed it was infertile. Bannerman (1960) says that infertile eggs are left in many European Curlew nests (*Numenius arquata*).

We banded 25 young curlews (parts of 10 broods) during the study, including the young from each four-egg clutch, which we banded the day they hatched. On 18 June 1968, a brood that had been banded in the nest on 12 June, was located with its parents slightly more than 6.5 km from the nest site, and this was our only sighting of banded birds. We do not know if this movement is normal, and if not, what caused it.

Twice we saw curlews preying on the nests of other birds. On the evening of 3 July 1970, as a curlew chick was approached, the adults became defensive and their cries made the chick crouch and remain motionless. When the chick was seen moving again, a male Horned Lark (*Eremophila alpestris*) was following about 30 to 40 cm behind it. When an adult curlew again swooped over crying its alarm, the young curlew repeated its crouching response, and the lark attacked it vigorously. At this point we retrieved and banded the curlew chick and returned it to where it was caught. Shortly afterwards a female Horned Lark was seen near the curlew chick moving nervously, and continually fluffing her feathers. The landing of an adult curlew about 3 m from her immediately triggered a distraction display by the lark. The adult curlew moved away from the decoying lark towards a clump of low *Symphoricarpos* shrub. At this the lark's distraction became so intense that she frequently brushed the curlew's head with her wing tips. She ceased as the curlew approached the *Symphoricarpos* however, and fluttered to a perch nearby where she watched with her feathers fluffed. The curlew strode directly to the *Symphoricarpos*, probed with its long bill and swallowed what appeared to be a very young nestling. The curlew swallowed a second nestling, then flew off to resume scolding the observer. The Horned Lark nest in the *Symphoricarpos* still contained one newly hatched young, which was gone the next afternoon.

The second observation occurred on 8 June 1971. Two curlews were seen harassing a Common Crow (*Corvus brachyrhynchos*). One flew after the crow while the other returned to the ground 200–300 m away and foraged 50–75 m toward the observer in about 12 min. Suddenly a Horned Lark flushed 2 to 3 m from the curlew, giving a distraction display. The curlew stood for 1 to 2 sec watching the Horned Lark, then proceeded directly to the point from which the lark had flushed. At this the lark flew at the back of the curlew's neck and struck it repeatedly. The curlew crouched as it walked the last meter to the nest and began to eat the contents. The lark struck the base of the curlew's neck continuously with no effect. Both birds were then flushed to examine the nest, which contained one whole egg and one broken egg just outside the nest. The embryo appeared to be in its 7th or 8th day.

Two aspects of these feeding observations are impressive: the apparent skill of the curlew at locating the nests, and the behavior of the Horned Larks. Timken (1969) reported an altricial nestling in the digestive tract of an adult curlew that he collected in June in South Dakota. He thought it was a nestling Lark Bunting (*Calamospiza melanocorys*). To our knowledge no other observations of Long-billed Curlews preying on birds have been reported. In Wickersham's (1902) description of the Long-billed Curlew, toads are the only vertebrate mentioned in their diets. Unfortunately he does not say how his information on food habits was obtained. Apparently the Long-billed Curlew is an opportunistic feeder, and these observations indicate that it may be an efficient predator on the young and eggs of small ground nesting birds. In the second observation above, the curlew saw the lark flush from the nest, but in the first instance the curlew did not have this advantage, yet still went directly to the nest. It is possible that it could hear the young in the nest, but in both cases it is obvious that the curlews immediately recognized the situation, ignored the distraction displays of the adult larks, and exploited this food source. The remarkable thing about the behavior of the Horned Lark in these interactions is its deviation from that elicited by human intrusion near the nest. Usually the female leaves the nest 50 to 200 m in front of an

approaching human, and even when surprised underfoot, seldom gives any distraction display at all. She usually flies to a perch within 100 m of the nest and begins such movements as preening or bill stroking until the intruder withdraws, or simply flies away and feeds.

The potential of the Long-billed Curlew to be a significant predator on the eggs and young of ground-nesting passerines is limited in this region by its numbers. We estimate approximately one pair of breeding curlews per 6 or 7 km<sup>2</sup> each season in what would seem suitable habitat. Unfortunately few data are available in the literature for comparison, and the comments of recent observers who rate the species at its present density as "fairly common" in the Matador area (Roy 1964) are impossible to interpret quantitatively. Certainly the accounts of Sugden (1933) and Forsythe (1970) indicate that breeding densities much greater than this do occur.

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**Countershading on the feet and legs of the Common Loon.**—Audubon's (1966: plate 409) original painting of the Common Loon (*Gavia immer*) shows only the upper surface of the left foot of a loon in breeding plumage. The foot is mostly black, with gray on the toes and in the center of each web. Gromme (1963: 3) painted the feet of a breeding Common Loon a uniform gray. Most other artists have painted the loon swimming, sitting on a nest, or in flight without the feet or legs showing. Wilson (1840: 651) noted "the outside of the legs and feet is black, inside pale blue." Maynard (1881: 493) on the other hand thought that the