

tal slopes end and the deep ocean basins begin, hence is a good indicator of the physical boundaries of the continent.

On this basis, the present record is the first for *Pelagodroma marina* for the Check-List area, Ridgway's specimen having been taken beyond the 1000-fathom contour.

The writer's thanks are due Commander David C. Nutt, USNR, owner and master of the *Blue Dolphin* (the research vessel from which the observation was made), for having made the writer's presence on the vessel possible. Dr. Charles G. Sibley and Messrs. Walter Bock, William C. Dilger, Richard E. Harrison, John T. Nichols, and Richard H. Pough have all very kindly given their opinions in regard to the above definition.—MALCOLM S. GORDON, *Department of Conservation, Cornell University, Ithaca, New York.*

Sandhill Cranes in Yellowstone Park.—The distribution records for the Greater Sandhill Crane (*Grus canadensis tabida*) as outlined by Walkinshaw (The Sandhill Cranes, 1949, Cranbrook Inst. of Science Bull. 29), include five observations in Yellowstone National Park, Wyoming. These were recorded during the period 1925 through 1941. Observations made during the summer of 1953 in conjunction with a research project approved by the National Park Service indicate that this bird may be using that wildlife sanctuary as a nesting ground to an extent greater than is generally known.

Census.—The area surveyed is that portion of Hayden Valley, Yellowstone Park, which is inclosed between the Yellowstone River and the park highway connecting Canyon Junction to Dragon's Mouth Spring. This seven-mile strip does not exceed three-quarters of a mile in width, is generally treeless, and supports a vegetative cover of sagebrush on the knolls and sedge-rush in the lowlands. Elevation is approximately 7750 feet. Late afternoon counts were made from nine good vantage points along the highway. Six counts were made on separate days between May 29 and June 21, and the numbers of these birds observed per day were four, seven, five, eight, nine, eight. These were seen singly or in pairs from five of the vantage points; cranes were not seen from the other four points. Park records of 1953 indicate that the Sandhill Crane was also resident in the meadows bordering Fairy Creek, Sentinel Creek, Nez Perce Creek, and in the Fountain Flats area. In addition, they were reported from Gibbon Meadows, the Nymph-Twin Lake area, and Elk Park, all within Yellowstone Park.

Nesting.—Two crane nests were discovered on May 31, in the Hayden Valley study plot. Both were located in river-front marshes which supported a luxuriant growth of rushes, and these plants were the only building material utilized. One nest had base diameters of 95 × 106 cm., top diameters of 77 × 83 cm., and was cupped 2 cm. The height above water level was 17 cm.; the water depth, 5 cm. Both nests contained two smooth, ovate, olive-colored eggs on which lavender spots were so concentrated at the larger ends as to form nearly complete caps. Measurements of two eggs from the same nest averaged 60.2 × 92.7 mm., conforming closely to the averages of those measurements recorded for this subspecies by Walkinshaw (1949) in Michigan and Canada. No egg weights were taken. On June 1 one of the nests was found empty, and no clue could be found which might suggest the fate of the eggs. Hatching dates of the eggs in the other nest were June 7 and June 9.

Defensive Behavior.—The behavior patterns exhibited by one of these pairs of cranes, when alarmed, were so at variance with those described by Walkinshaw (1949) in his extensive study that some pertinent description seems worthwhile. It is probable that the frequency of my almost daily visits somewhat modified their reactions, particularly since I always approached rather slowly over the same route.

Following the discovery, when the nesting bird was flushed at a distance of seven meters, the behavior of the birds during my intrusions became almost routine. As I appeared, about seventy meters distant, the incubating bird lowered its head and neck from the alert upright position until they lay forward along the outside of the nest with the head resting on the surface of the water. When I was approximately fifty meters away, the bird arose slowly from the nest and walked silently toward me. When it was some twenty meters from the nest, it sounded an alarm call which was answered immediately by the mate which was feeding nearby, and it, too, then walked rapidly toward me. While they advanced, both birds called, quivered their half-stretched wings, splashed water by stamping their feet, and picked large beakfuls of rushes which they shook violently and then discarded. When within twenty meters of me, they swung out of the line of my approach and then followed me to the nest. They shortened the distance between us, as they followed, and increased the tempo of their alarm call. They watched silently while I briefly examined the nest, then, as I left, they again followed me and resumed the call and the acrobatics previously described. When I was about thirty meters from the nest, one bird hastened back to it, while the other stopped following me but continued to call as long as I remained in sight. Variations of this pattern seemed largely dependent upon weather conditions; once, during a brief snowstorm, the incubating bird walked seven meters from the nest, watched silently as I measured an egg, and returned to incubate before I had retraced thirty paces.

A similar behavior pattern was exhibited by the newly-hatched chicks. When less than a full day old, both simply squatted in the nest as the adult sounded the first alarm call from a distance of about twenty meters. When more than a day old, however, the young scurried immediately into the surrounding rushes as the adult quietly walked away.

Both chicks were brooded in the nest during the night of June 10; this was the fourth night of occupancy for the older chick. By sunset on June 11, the new family had moved to higher ground some eighty meters distant, and it is probable that they had abandoned the nest.

Too few observations were made on the foraging of this family to discover a detailed pattern of defensive behavior, if any, under those circumstances. During visits on June 12, 19, and 21, however, it became apparent that the bold aggressiveness which characterized the adults during the nesting period had changed to a timid wariness while they cared for their young. They were constantly alert and either outdistanced me when I approached from afar, or hid when I came into view nearby. In the latter case, when flushed, they flopped about on the ground, with wings outstretched, mandibles agape, and they voiced a previously unheard moaning call. The young birds remained hidden during this effective distraction.

The group remained in the nesting marsh until mid-July. It is probable that the increased incidence of fishermen along the river front then induced these cranes to seek a more secluded area.—JAMES W. CASLICK, *Newfield, N. Y.*

A Case of Cannibalism by a Captive Tufted Titmouse (*Parus bicolor*).—Cannibalism is not a particularly unusual nor a surprising event in the case of raptorial birds. However, for a small insectivorous bird to eat the flesh of another individual of its own species when the body of the victim is almost entirely intact would seem sufficiently unusual to be worthy of record.

Shortly after sunset on October 27, 1953, two Tufted Titmice were taken from a banding trap and placed in a large outdoor cage adjacent to the Ornithological Laboratory at Ohio State University. The birds were left in the cage which had been