

## GENERAL NOTES

**Birds of Yang-Do, Korea.**—From November, 1952, until September, 1953, I served with the U. S. Marine Corps in Korea. During this time short periods were spent in Pusan, Masan, Ascom City, and near Munsan-ni. However, owing to the exigencies of military duty, only the most casual sort of bird study was possible in these locations. On March 25, 1953, I reported for duty with the East Coast Island Defense Command and was assigned to the garrison of the Yang-Do island group. From that date until the evacuation of the islands on July 29, 1953, following the Korean armistice, I was able to devote considerable time and effort to collecting and observing the local bird life. The major purpose of this paper is to list the birds of Yang-Do as I was able to observe them and identify them.

Yang-Do consists of a group of four small islands lying far up the North Korean coast in latitude 40° 45' North, almost within sight of the city of Songjin. Three of the islands, West Yang-Do, East Yang-Do, and Konghui-Do, are grouped closely together some 3,900 meters off the coast, and lie in a rough line extending eastward into the Japan Sea. The fourth island, Nan-Do, is separated from the other three. It lies some seven miles to the south-east and out to sea. Nan-Do, or Al-som (both names signifying Egg Island) is one of three islands of the same name on the Korean east coast. The Nan-Do so often mentioned by Austin in his *Birds of Korea* (Bull. Mus. Comp. Zool. 101: 1-301, 1948) apparently lies farther north near the mouth of the Tumen River. The third lies near the coast south of Wonsan Bay. All three apparently have many precipitous cliffs which sea birds utilize for nesting sites, and thus the name "Egg Island" is derived. It has long been the custom of the Yang-Do fishermen to visit Nan-Do in mid-May each year to collect eggs for food.

The westernmost of the group of three islands is Kilchu-Yang-Do or West Yang-Do. Roughly diamond-shaped, 1,000 meters long and 700 meters across, its highest point is 69 meters. This island was my home during most of my stay and was the scene of most of my collecting efforts. Here also was located the fishing village beside the narrow channel dividing West from East Yang-Do. This village was a permanent one despite the scarcity of fresh water. One of the villagers, a man of sixty-five years, had spent his entire life on the island. Most of the villagers, however, were refugees from North Korea. The hilltop is covered with the remains of small terraced fields where rice and barley were once grown. During my stay, however, the civilian populace received a dole of rice from the ROK government, and so concentrated their efforts on fishing. The Japanese had operated a small fish-oil plant there at one time, but only the foundations of the buildings remained.

Myongch'on, or East Yang-Do, is the smallest of the group, separated from West Yang-Do by a shallow channel no more than 100 meters wide. The long axis of the island, about 700 meters, runs north and south. It is in reality only half an island some 400 meters wide, the seaward side rising in a sheer cliff 46 meters to the full height of the island. The channel side is a gentle slope covered by old terraced fields. The north end of the island is connected to the remainder by a narrow neck into which the sea is slowly carving two spectacular sheer-walled clefts nearly a hundred feet deep and forty feet wide. This entire northern tip was blocked off by mines and barbed wire entanglements.

During this period both Yang-Do islands were encircled by mine-fields and wire, and several out-jutting capes were completely blocked off. These fortifications established refuge zones of considerable area in which the tall weeds had not been cut for two summers and in which no man dared prowl. Nesting cover for ground-nesting birds was probably better than it had been for many years. The mine-fields, however, were no deterrent to the semi-wild cats from the village which frequently

hunted among the mines but miraculously emerged unscathed.

Across a 500-meter channel southeast of East Yang-Do rises the steep-sided mass of Konghui-Do, the highest of the islands. At sea level Konghui-Do measures only about 900 by 300 meters, but it rises like a giant haystack to 114 meters in height. So steep are the rocky slopes that one small terraced field and several mounded Korean graves are the sole signs of occupancy. The Koreans fished and gathered seaweed along its rocky shores but rarely landed and were superstitious about the graves. The birds that nested and roosted on Konghui-Do were left relatively undisturbed.

The structure of these islands is plainly volcanic to even the most casual student of geology. The sea cliffs are a combination of dark rock resembling basalt and a porous red and gray rock strangely eroded and broken by the pounding of the sea. Approached in early spring they present a singularly dismal aspect, that of a row of abandoned ant-hills. Yang-Do has no forest cover, but only a few low shrubs, weeds, and grasses. There were a few exotic trees planted about the houses in the village, but no trees elsewhere on the island.

The main massif of Nan-Do is a jagged granite peak rising sheer from the water in a ridge some 600 meters long and 100 meters wide at the water line. The center of the north face rises in one great overhang 81 meters to the crest of the ridge. The south face is a slope of approximately 50 degrees and is convex, dropping off steeply near the bottom. The most spectacular features of the island are two keyholes of magnificent proportions which pierce the entire breadth of the island. The larger of the two is more than 100 feet high from boulder-strewn floor to massive chockstone.

Rising at either end of the main island are three separate smaller peaks, all so sheer that a landing is extremely difficult even in a calm sea. Landings are easily made on the main island in a small cove at the north end of the giant keyhole. Two expeditions were made to Nan-Do, on May 5 and May 19, 1953. Nesting had only just begun on the first occasion, but two weeks later was near its peak. The Koreans estimated that some 3000 eggs were collected on the latter visit. The sole vegetation on Nan-Do is a sparse cover of coarse grass growing among the slabs on the sunny south face.

Despite the lack of proper collecting equipment and storage facilities, 56 specimens representing 24 species were collected and preserved. All of these skins have been deposited with the Denver Museum of Natural History in partial recompense for many courtesies to me in the past. Sea-bird skins were identified by Dr. A. M. Bailey, land-bird skins by James C. Greenway. Specimens of two other species were obtained but were accidentally destroyed. Identifications not based on actual skins were either species that had been previously identified on the mainland or were identified largely on the basis of correspondence with Dr. O. L. Austin, Jr. These merit inclusion since the Yang-Do area has been little explored by ornithologists. Identification of many other species was unreliable and these have been omitted. Nomenclature and sequence are those of Austin's *Birds of Korea*.

*Podiceps ruficollis poggei* Reichenow. Chinese Little Grebe. One specimen was collected on the Naktong River near Pusan in December, 1952. Two grebes seen in the Yang-Do channel (March 28 and July 12) appeared to be the same species. Grebes were seen on numerous occasions but always too far out to be identified.

*Puffinus leucomelas* (Temminck). Streaked Shearwater. Two specimens were obtained at Nan-Do on May 5, when Koreans pulled them from holes under the rocks where they were apparently preparing to nest. The female was not yet ready to lay, however. None was ever seen around Yang-Do proper. One specimen was lost on evacuation of the islands.

*Phalacrocorax carbo hanedae* Kuroda. Japanese Cormorant. One specimen was collected on Yang-Do on May 5, 1953.

*Phalacrocorax capillatus* (Temminck and Schlegel). Temminck's Cormorant. One specimen was collected on Yang-Do on April 4, 1953.

Cormorants were numerous around Yang-Do throughout the observation period. Because of the difficulty of differentiating between the two species in the field, they are discussed together. On the May 5 trip to Nan-Do cormorants were found nesting on the overhanging north face along with and in numbers about equal to the murre. Most nests observed held two or three eggs. On the May 19 trip cormorants and their nests were found in about the same numbers as on the previous visit.

*Ardea cinerea* Linné. Gray Heron. This species was first observed at Yang-Do on March 27. A group of ten was found roosting on top of a crag at Nan-Do on May 5. They were frequently seen at Yang-Do during May and June, standing on the rocks off the beach.

*Egretta alba* (Linné). Great White Egret. One bird seen on July 7 flying up the middle of the Yang-Do channel.

*Mergus serrator* Linné. Red-breasted Merganser. Tentative identification of two birds seen on March 27 in Yang-Do channel. One bird was previously observed on the Han River below Seoul.

*Buteo indicus* (Gmelin). Gray-faced Buzzard-eagle. A flight of seven birds which passed over Yang-Do on May 20 and continued north into Hamgyong Pukto were tentatively identified as this species.

*Aquila heliaca* Savigny. Chinese Imperial Eagle. One bird was observed flying north over Yang-Do on March 29.

*Circus cyaneus* (Linné). Hen Harrier. One bird observed hunting low over West Yang-Do on April 25.

*Falco peregrinus* Tunstall. Siberian Peregrine Falcon. Frequently observed hunting singly on Yang-Do during May and June. A nest was discovered on Nan-Do on May 5, which contained three downy young. On the return visit on May 19 the young birds were beginning to feather out. Pictures were taken at that time.

*Falco tinnunculus* Linné. Kestrel. Observed on several occasions in April and May hunting singly on West Yang-Do.

*Scolopax rusticola* Linné. Woodcock. One bird flushed several times from the tall grass near the top of West Yang-Do on the evening of May 13.

*Larus crassirostris* Vieillot. Black-tailed Gull. The most common sea bird of the area, abundant about Yang-Do until early June and common throughout the period of observation.

On May 5 gulls were roosting in large numbers on Nan-Do but few eggs were found. It was estimated that gulls made up 90 percent of the population of Nan-Do at this date. On May 19 the gulls were nesting in earnest. The 3000 eggs collected by the Koreans were almost all gull eggs.

*Uria aalge* (Pontoppidan). Bering Island Murre. This species was seen infrequently on the sea south of Yang-Do in April. They were roosting in large numbers on Nan-Do on May 5. No eggs were seen, however. Three specimens were collected, but the skins were lost in the evacuation. Shotgun fire brought the entire flock up off the rocks in a cloud which fled north and continued out of sight. On May 19 murre were scarce on Nan-Do and no nests were observed. Infrequent observations were made on the sea near Yang-Do until mid-July. Most of the large flock seen on Nan-Do on May 5 is believed to have continued on up the coast.

*Cephus carbo* Pallas. Sooty Guillemot. Common on the sea around Yang-Do throughout the period, singly or in flocks of up to 250 birds. They nested on Kong-

hui-Do. On May 19 they were abundant on the sea around Nan-Do. Five specimens were procured and are now in the Denver Museum.

*Synthliboramphus antiquus* (Gmelin). Ancient Murrelet. Common around Yang-Do until mid-May but there were no observations made after that time. The May 19 visit to Nan-Do found them in considerable numbers on the sea near the rocks. Four specimens were procured.

*Cerorhinca monocerata* (Pallas). Hornbilled Puffin. Occasionally seen on the sea south of Konghui-Do. Five specimens were collected on Konghui-Do in early April by Korean fishermen.

*Columba livia* Gmelin. Blue Hill Pigeon. One specimen was brought in by a Korean boy on April 17 but was accidentally destroyed. Only two other observations were made, two birds on April 2 and one more on April 22, both on Yang-Do.

*Apus pacificus pacificus* (Latham). Large White-rumped Swift. Swifts first appeared over the islands on May 2 when two birds were seen. The following evening a large flock was observed swirling about the crest of West Yang-Do. These birds were seen throughout the remainder of the period in flocks of 300 or more. No nests were observed although they spent much time about the seaward cliffs on East Yang-Do. Two specimens were collected.

*Upupa epops saturata* Lonnberg. Tibetan Hoopoe. One was collected on April 25 while feeding on beetles and caterpillars in the old terraced fields on West Yang-Do. No other observations were made of this unusual bird.

*Alauda arvensis* (Linné). Skylark. Frequently observed soaring above Yang-Do from April 1 to mid-July.

*Hirundo rustica* Linné. House Swallow. First observed on April 6. At least three pairs were resident on the islands through May and June. Two pairs nested under the eaves of an old house on East Yang-Do. On June 14 one nest contained three eggs and on July 8 four young were hatched. The second nest was destroyed.

*Corvus leuillanti* Lesson. Jungle Crow; Thick-billed Crow. A single crow was observed on April 8 and two more on May 3. All three appeared to be the thick-billed species, probably visitors from the forested hills just a few miles away on the mainland.

*Pica pica* (Linné). Korean Magpie. One bird was observed in an old field on the north side of West Yang-Do on April 5.

*Parus major* Linné. Great Tit. One bird was observed in a mine field on East Yang-Do on April 17 and another, possibly the same bird, in the same place two days later.

*Turdus hortulorum* Sclater. Gray-backed Thrush. One specimen was collected by a Korean on Nan-Do on May 5. None was observed on Yang-Do.

*Turdus pallidus* Gmelin. Pale Ouzel. One specimen collected on Yang-Do on April 22 was a male in breeding condition.

*Turdus obscurus obscurus* Gmelin. Gray-headed Thrush. One specimen collected on Yang-Do on May 20 was also a male in breeding condition. Nondescript thrushes were observed infrequently on Yang-Do from early April until the evacuation. Unfortunately it was not possible to identify these species in the field.

*Monticola solitarius magnus* (LaTouche). Large Red-bellied Rock-Thrush. First appeared on Yang-Do on April 22 and several remained through July 12. On May 29 several birds were carrying insects in their beaks as though feeding nestlings, and this behavior continued through June 25. Two specimens, a male and a female, were collected on June 6 and 7.

*Tarsiger cyanurus cyanurus* (Pallas). Siberian Blue-tail. Five specimens were collected by Korean children, four on April 9 and another on April 27. All were

collected near the minefields behind West Yang-Do village where they probably were nesting.

*Larvivora sibilans* Swinhoe. Swinhoe's Red-tailed Robin. A pair was collected on May 17 and 18. The male was in breeding condition.

*Larvivora cyane* (Pallas). Siberian Bluechat. One female collected on West Yang-Do on May 20 was not in breeding condition at the time.

*Urosphena squameiceps ussuriana* (Seebohm). Short-tailed Bush-Warbler. Two specimens were collected by Korean children on West Yang-Do on April 27. The sex was not determined with certainty, but probably both are males.

*Regulus regulus japonensis* Blakiston. Golden-crowned Kinglet. One specimen was collected by a Korean boy on West Yang-Do on May 7.

*Siphia mugimaki* (Temminck). Japanese Robin Flycatcher. Two specimens were collected on May 12 and 13 by Koreans. One was a male in breeding condition, but sex of the other was not determined.

*Muscicapula narcissina* Temminck. Narcissus Flycatcher. Two specimens were collected on May 17 and 18 near West Yang-Do village, both males in breeding condition.

*Muscicapula cyanomelana cyanomelana* (Temminck). Japanese Blue Flycatcher. Two males in breeding condition were collected by a Korean boy on West Yang-Do on May 13 and 14.

*Motacilla alba lugens* Linné. Pied Wagtail. A common summer resident, this species was first observed on March 27 shortly after my arrival at Yang-Do and was seen singly or in pairs almost every day until the evacuation. They were apparently nesting on the island although no nests were seen. Several birds were seen carrying insects in mid-June, apparently to nestlings. Four specimens were obtained.

*Passer montanus dybowski* Domaniewski. Ussurian Tree Sparrow. Three specimens were collected by Koreans, one female on May 10 and two juvenile males on June 6. The species was common around the village on West Yang-Do.

*Fringilla montifringilla* Linné. Brambling. One specimen was collected on April 11 by a Korean boy on West Yang-Do. The bird was very fat and apparently in breeding condition.

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**On *Cuculus canoroides* S. Müller.**—*Cuculus canoroides* was described by Salomon Müller in a footnote on page 235 of his "Bijdragen tot de kennis van Timor en eenige andere naburige eilanden" in "Verhandelingen over de Natuurlijke Geschiedenis der Nederlandsche overzeesche bezittingen," edited by Temminck. This description, which appeared in 1845 (for the dates of publication of the different parts of the above mentioned work cf. Austral Avian Record, 1: 24, 1912) states