

SOME OBSERVATIONS ON THE BIRDS OF SOUTHERN KOREA

By CHESTER M. FENNELL

While working for the United States Army in Korea during the years 1947 and 1948, I spent as much of my leisure time as possible in the field observing the bird life of that country. Since the northern half of the country was under Russian control, my activity was necessarily limited to the region south of the 38th parallel. Furthermore, since all types of Korean transportation were "off-limits" and Army vehicles were extremely difficult to procure for other than strictly official purposes, my field trips were again confined, for the most part, to those areas which I was able to reach conveniently and cover on foot. However, the months of January and February, 1948, were an exception, for during that period Colonel L. R. Wolfe, XXIV Corps Quartermaster, and I were able to obtain a recreation jeep nearly every weekend and we covered the region lying within a radius of some twenty miles of the city of Seoul. Although I was without firearms of any sort, Colonel Wolfe often generously collected and gave me certain specimens. Others I purchased, from time to time, in small bird shops and in the South Gate Market in the city of Seoul. The small collection that I was thus able to acquire is now deposited in the Museum of Vertebrate Zoology, Berkeley, California. Species marked with an asterisk in the list which follows are represented by specimens in that institution.

I arrived in Seoul on October 4, 1947, and was stationed in that city until my transfer to Pusan, on the southeastern tip of the peninsula, on March 16, 1948. I remained in Pusan until October 12 of the same year, except for brief visits to Seoul.

Except for the two months of January and February, 1948, as mentioned above, my observations in the Seoul area were restricted to the banks of the Han River immediately south and northwest of the city and to granite ridges and peaks within some ten miles north of the city. Carrion and Jungle crows, the Black Kite, Whooping Swan, Greater Scaup Duck, Mallard, Common Golden-eye, Red-breasted Merganser and White-tailed Sea Eagle were species typical of the former region, whereas the Meadow Bunting, Rufous Turtle Dove, Rock Dove, Great Tit and Ring-necked Pheasant frequented the latter. (Scientific names of each of these birds may be found in the species accounts which follow.) The Yellow-throated Bunting, Slaty-crowned Redstart, Oriental Dusky Thrush, Rufous Turtle Dove, Black-billed Magpie and Eurasian Sparrow Hawk were generally found in small wooded areas around the shrines and public buildings within the city limits. One such typical area lay directly behind the capitol building at the north end of the city.

Observations in the vicinity of Pusan were divided between the waterfront and piers along the North Inner Harbor and low well wooded mountain slopes surrounding a water reservoir approximately five miles north of the city. Species typical of the former area included the Yellow-billed Loon, Black-tailed Gull, Herring Gull, Eurasian Black-headed Gull, Black-billed Magpie, Carrion Crow, Mallard and Greater Scaup Duck. The water reservoir attracted the greatest concentration of bird life that I found at any one place throughout the entire country in both number of species and of individuals. Species of that particular district were: the Chinese Goshawk, Ring-necked Pheasant, Rufous Turtle Dove, White-rumped Swift, Eurasian Kingfisher, Black-capped Kingfisher, Oriental Broad-billed Roller, Pigmy Woodpecker, Red-rumped Swallow, Black-naped Oriole, Eurasian Jay, Brown-eared Bulbul, Short-tailed Bush Warbler, Japanese Paradise Flycatcher, Gray-spotted Flycatcher, Forest Wagtail, Gray Wagtail, and Yellow-throated Bunting.

The Water-cock, Streaked Heron, Eurasian Kingfisher, Gray Heron, Great White

Egret, Migratory Quail, Skylark, Gray Wagtail and Black-billed Magpie were representative of the species to be found in the flat open wheat and rice fields surrounding the small country villages.

The axes and rakes of the woodchoppers had swept clean one after another of the country's mountain ranges and ridges, leaving barren sandy paths and deeply eroded canyons in their wake. Naturally, the avifauna has been profoundly affected by this ruthless destruction and the forest-loving species have had to retire to small groves of pines, cryptomeria, oak and chestnut which have been spared in the immediate vicinities of temples, shrines and Old Kings' Tombs. Even these small sanctuaries were being threatened seriously at the time I was there.

The following is a list of observations made under the conditions and at the locations mentioned above. It is hoped that they may add just a bit more of interest and value to the present rather scanty knowledge of the avifauna of the Korean peninsula. Unless noted otherwise, species order and systematic treatment follow the usage of Austin (1948); vernacular names have been changed in some cases at the suggestion of the editors of the Condor and pertain to the species as a unit, rather than to any particular race or group of races. The observations reported here supplement those of Wolfe (1950) which were made principally in the vicinity of Seoul.

Gavia adamsii. Yellow-billed Loon. Observed only during the month of March, 1948, on salt water near the city of Pusan: six in North Inner Harbor on March 20, one on the 22nd, and two in the channel between the city and Chollyando, a small island directly opposite Pusan, on the 28th. All appeared to be quite fearless and tame, frequenting the areas close to the piers and native-sculled fishing boats apparently in search of cast-off fish. The sharply-pointed whitish bill stood out clearly against the water and was an unmistakable field mark. On March 20 I examined two roughly-handled dirty skins hanging from the top of a stone wall enclosing a Korean home at the water's edge in North Inner Harbor and observed a single dead individual floating on the water.

Puffinus leucomelas. Streaked Shearwater. Three to four hundred were observed from the deck of the U. S. Army ferry Hotei on June 21, 1948, while crossing the Korean Straits from Pusan to Hakata, Japan. The largest concentration was observed just outside Pusan Harbor between 7:30 a.m. and 8:30 a.m. Stragglers were observed at 10:30 and a flock of approximately 100 more was seen at 4:00 p.m. near some small islands just outside the harbor of Hakata. All were flying low over the water, apparently in search of food and heading toward the center of the Straits. On July 4, while returning to Korea from Japan, I again observed a flock of approximately 500 individuals some two hours out of Hakata. Stragglers were seen all the way across the Straits on this trip. However, during another crossing of the Straits on October 12 I failed to see a single individual of this species.

Ardea cinerea. Gray Heron. A single individual was observed along a small stream east of Seoul on March 7, 1948, an early spring arrival date. One was observed in flight high over the downtown section of Seoul on July 16. From four to eight at a time were seen from the windows of a train moving between Seoul and Taejon on March 16, April 9 and September 25, 1948. One to twelve a day were observed in the vicinity of Pusan on April 4, May 5, 23, 30 and 31, August 26 and 29 and September 12 and 25. Twelve were observed from a moving train between Pusan and Taegu on September 25. I failed to locate a single nest in the Pusan area but was told that this species nested near the Zoological Gardens in the city of Seoul.

Butorides striatus. Streaked Heron. Common summer resident in the Pusan area, being observed regularly from May 19 through September 18, 1948, in the vicinity of pine groves, small ponds and flooded rice fields. On May 19 two that were perched in the tops of tall pine trees surrounding a small temple approximately five miles north of Pusan displayed considerable concern because of my presence and, in general, acted as though they might be nesting in the immediate vicinity. Several apparently old nests were located in nearby pines some 45 feet above the ground and excrement whitened the ground below the trees in several spots in the area. Adult birds were observed throughout the summer in this locality although I failed to observe any young birds. Inaccessibility of the nests prevented me from examining the contents.

Bubulcus ibis. Cattle Egret. A single individual was observed on May 5, 1948, in a flooded rice field approximately one mile east of Pusan. It was in the company of two Gray Herons. The reddish tan color on head and neck stood out clearly. Austin (1948:39) lists this species as a straggler in Korea.

Casmerodius albus. Great White Egret. Common summer resident, noted in the Pusan area from March 16 until October 8, 1948. One hundred fifteen were counted from windows of a moving train on September 25 between Pusan and Seoul: 50 between Pusan and Taegu, 10 between Taegu and Taejon and 55 between Taejon and Seoul. On January 4, 1948, Wolfe and I observed a single individual flying high over the Kings' Tombs area approximately 15 miles east of Seoul.

Cygnus cygnus. Whooping Swan. Two were observed on January 11, 1948, resting on a stretch of open water in the Han River approximately one mile west of the Yongdongpo highway bridge near Seoul. They were extremely shy and, upon my approach, swam to the opposite bank of the river where they left the water altogether and stood on the sandy bank. Their nervousness increased as I continued to advance and was expressed by a vigorous bobbing of their heads. Finally, they took off at a splashing run across the surface of the water and launched themselves into the air. The run was approximately 50 feet in length and was accompanied by a fast, frantic flapping of the wings.

**Anser fabalis*. Bean Goose. A single dead female, purchased from a Korean peddler in Seoul on February 22, 1948, was saved as a skin. I never observed this species in the field.

**Casarca ferruginea*. Ruddy Sheldrake. A single dead male purchased in the South Gate Market Place in Seoul on February 1, 1948, was saved as a skin. I never observed this species in the field, although Austin (1948:56) calls it a common winter visitor.

Anas platyrhynchos. Mallard. Observed regularly in large flocks of 80 to 400 on the Han River near Seoul from November 2, 1947, until March 7, 1948. Four observed on the Naktung River near Pusan on April 4, 1948.

Spatula clypeata. Common Shoveller. Small flocks of 11 to 24 observed on a small lake near Pier 3, Pusan, on March 20, 22, and 28, 1948.

Aythya marila. Greater Scaup Duck. Observed in North Inner Harbor, Pusan, in flocks of from 75 to 130 on March 17 and 20, 1948. Forty were seen on the Naktung River some eight miles north-west of Pusan on April 4, 1948.

Bucephala clangula. Common Golden-eye. Common and regular winter visitant in the Seoul area. It was observed on the Han River from January 11 until March 7, 1948, in flocks of from five to 75 individuals, often in the company of large flocks of Mallards. In the North Inner Harbor at Pusan and on the Naktung River small flocks of four to 12 were observed from March 17 until April 4, 1948.

Mergus serrator. Red-breasted Merganser. Common winter visitant in the Seoul area, being observed regularly on the Han River in flocks of 14 to 50 from January 11 until March 7, 1948. They are apparently much more wary than the Mallards with which they are often associated, and seem to prefer the center of the river, rarely frequenting the water near the banks.

Milvus migrans. Black Kite. Common permanent resident in the Seoul area, being seen daily soaring over the city, often frequenting the refuse heaps and even perching on the roofs of the larger downtown buildings. They were often attacked by both the Carrion Crows and magpies. Austin (1948:73) lists only the race *lineatus* for Korea. Strangely enough I failed to observe a single individual of this species in the vicinity of Pusan during the entire seven months of my residence there.

**Accipiter soloensis*. Chinese Goshawk. Common summer resident in the Seoul area, according to Wolfe. The first I observed was a pair perched in the top of a large pine tree in the vicinity of Pusan on May 19, 1948; I had them under observation for more than one-half hour. On July 11 I saw three in flight over the same spot and on July 19 discovered a nest along the shore of a water reservoir some five miles north of Pusan. This nest was located in a medium-sized pine tree approximately 16 feet above the ground and contained three small downy young. When I revisited the nest on August 7, one of the young attempted to fly from the nest and fatally injured itself. I saved the skin which is now no. 117659 in the collection of the Museum of Vertebrate Zoology.

**Accipiter nisus nisosimilis*. Eurasian Sparrow Hawk. The author was with L. R. Wolfe when he collected a single female of this species in a small grove of chestnut and pine trees approximately 20 miles southwest of Seoul on February 23, 1948. Another hawk, tentatively referred to this species, flew over our heads as we were approaching the grove. The author saved as a skin a dead female purchased in the South Gate Market in Seoul on February 29, 1948.

Buteo rufinus. Upland Buzzard. Two observed by L. R. Wolfe and the author soaring high over mountainous country about 16 miles east of Seoul on February 8, 1948. Field markings particularly noted were the rounded tail, white from below with a broad dark terminal band, and the dark under surface of the wings with large whitish patches on the first joints. Presumably this was the form *hemilasius*, the only Korean representative listed by Austin (1948:76).

Buteo buteo. Eurasian Buzzard. One was observed perched on the top of an electric pole some ten miles east of Seoul on January 18, 1948. This species was seen regularly throughout the month of February of the same year in the Seoul area by both Wolfe and myself. Four were observed by the author on April 4, 1948, along the Naktung River near Pusan. These were presumably all of the form *burmanicus*, the only race listed from Korea by Austin (1948:77).

Haliaeetus albicilla. White-tailed Sea Eagle. Observed fairly regularly near Seoul during January and February, 1948, by both Wolfe and myself. It was usually seen resting on the ice- or snow-covered river banks at this season. Two on a snow-covered sand bar in the middle of the Han River on February 1 were within 15 feet of a flock of Mallards which paid not the slightest bit of attention to the eagles. Carrion Crows flying overhead occasionally swooped at them or alighted on the sandbar nearby and indicated what I interpreted as concern vocally and by bowing.

**Falco tinnunculus*. Eurasian Kestrel. A dead female, purchased in Seoul on February 29, 1948, was identified as *F. t. interstinctus* by H. G. Deignan. One was observed in flight over rice fields approximately 15 miles east of Seoul on March 14, 1948.

Coturnix coturnix. Migratory Quail. Two were flushed from a grass-overgrown dike along the edge of a dry rice field approximately three miles southwest of Pusan on April 4, 1948. This was my only observation of the species. Strangely enough I never found it in the South Gate Market Place in Seoul which tends to attest to its scarcity in that area.

**Phasianus colchicus*. Ring-necked Pheasant. Common permanent resident in both the Seoul and Pusan areas. I saw as many as 200 dead birds for sale in the South Gate Market Place in Seoul nearly every time I visited the market during the winter of 1947-48. I was told by a Korean friend that the natives poisoned them by inserting cyanide in whole grains of corn and scattering it in the fields. The mass slaughter must have reaped a heavy toll and yet the species seemed to be making a strong stand. The skin of a single female collected for me by L. R. Wolfe on February 8, 1948, along a small stream about seven miles south of Seoul was identified by H. G. Deignan as *P. c. karpowi*. Cocks were heard calling in the Pusan area between March 28 and September 6, 1948. The height of the courtship season in this area, determined by the frequency of crowing, appeared to be around the latter part of April. Two immature birds, well feathered and approximately half grown, were observed in the Pusan area on August 15, 1948.

Grus sp. Crane. The following observations were all made in the general vicinity of Seoul and are tentatively referred to the White-naped Crane (*G. vipio*), which Austin (1948:101) states is the most abundant wintering crane of Korea. All birds were soaring or flying overhead at a great height which made positive identification wholly out of the question. Thirty-seven were observed along the Han River near Yongdongpo on November 2, 1947; 20 on November 9, 1947, approximately five miles west of Kimpo Air Base; 38 immediately north of the city on November 11; two approximately seven miles south of Seoul on February 15, 1948; and four on February 21, two miles north of Kimpo. On each occasion my attention was first drawn by the sounds of their cries.

Gallixrex cinerea. Water-cock. Observed fairly regularly in the Pusan area between June 5 and August 5, 1948, and often heard calling during the middle of the night.

**Otis tarda dybowskii*. Great Bustard. During the early afternoon of February 21, 1948, Wolfe and I saw a group of three feeding along grass-covered dikes of frozen rice fields about eight miles northwest of Seoul. They were extremely shy and as soon as Colonel Wolfe had taken a few steps in their direction, they rose in flight and settled another several hundred feet distant. Lt. Col. E. J. Teberg of the XXIV Corps Engineer Section in Seoul said that on or about February 7, 1948, he had observed two birds of this species along the Han River some 15 miles east of Seoul. He was successful in shooting one of the birds with a carbine at long range and said that it weighed 25 pounds and proved to be good eating. A female was purchased in Seoul on March 4, 1948, and its stomach was filled with green grass.

Actitis hypoleucos. Common Sandpiper. Observed only in the spring and fall in the Pusan area:

one on May 5, 1948, along a deep, grass-overgrown ditch in a flooded rice field; four on August 29 along a dike of a flooded rice paddy; and one on September 12 along a small stream near railroad tracks.

Capella sp. Snipe. A single bird was observed on September 2, 1948, and two on September 9, in a grassy, swampy area approximately five miles north of Pusan.

Larus crassirostris. Black-tailed Gull. Common along the piers in North Inner Harbor, Pusan, during the latter half of March, 1948, and the first half of September. They were generally seen in flocks of approximately 100, occasionally in the company of the larger Herring Gull. None was observed in the vicinity of Pusan between March 28 and the last week of August.

Larus argentatus. Herring Gull. About 75 birds at Incheon Harbor on November 23, 1947, were flying among the ships and fishing boats, picking up scraps of refuse. Another group of nearly the same number was resting on rocks in the center of a large pond near Pier 3, North Inner Harbor, Pusan, on March 20, 1948.

Larus ridibundus. Eurasian Black-headed Gull. Three were observed along the shore of a large pond near Pier 3, North Inner Harbor, Pusan, on March 20, 1948. Two were still in winter plumage with only dark spots behind the ears while the third had the entire head a dark, grayish-brown in color.

**Columba livia rupestris*. Rock Dove. A group of 14 was observed in flight just below the summit of a high granite peak about ten miles northeast of Seoul on December 7, 1947. A single dead bird was observed for sale in the South Gate Market Place in Seoul on February 4, 1948, and five on February 18. A group of three was observed in the gravel road ahead of the Army vehicle in which I was riding in mountains north of Chinhae, Kyongsang Namdo, on May 23, 1948.

**Streptopelia orientalis orientalis*. Rufous Turtle Dove. Common permanent resident in both the Seoul and Pusan areas. They were often observed in the heart of Seoul, wading around in the shallow water of the canals picking up bits of food. I flushed a flock of 15 from the ground on the grass- and weed-overgrown southeastern slope of Nam-san, a small mountain at the southern end of the city of Seoul, on December 21, 1947. Birds of this species were heard calling in the vicinity of Pusan from April 24 through the middle of September, 1948. Based upon the numbers of calls heard and courtship flights observed it appears that the courtship season was at its height in the Pusan area during late May and early June.

Cuculus canorus. Eurasian Cuckoo. Common summer resident in the vicinity of Pusan from the latter part of May until the first of August. The first one of the season was heard calling from a pine-wooded ridge approximately five miles north of Pusan on May 22, 1948. A total of 19 was heard calling from mountain slopes some four miles northwest of Heundae, Kyongsang Namdo, on May 30. This date apparently marked the height of the courtship period. I often heard a peculiar chicken-like "cackle" voiced soon after a performing bird began its series of regular "cuckoo" calls. Another variation seemed to be a rapid-fire succession of high-pitched "coo-coo-coo-coo-coo" cries generally given apart from the usual series of "cuckoo" calls. Wolfe reported this species as fairly common also during the summer in the Seoul area, although too shy and elusive to collect or even to observe well.

**Otus bakkamoena ussuriensis*. Oriental Screech Owl. I made a skin of a single dead male purchased in Seoul on February 1, 1948. Wolfe collected one on February 28, in a small grove of pines approximately eight miles northwest of Seoul. It flew out of an old Black-billed Magpie nest as Wolfe kicked the base of the tree in which the nest was located. Another dead bird found in the South Gate Market Place on February 29 proved too old and decayed to save as a skin. Concerning usage of the specific name *bakkamoena*, see Deignan (1950:192).

**Asio otus otus*. Long-eared Owl. I purchased a single dead male in the South Gate Market Place in Seoul on February 1, 1948, but never observed the species in the field.

Apus pacificus. White-rumped Swift. A single flock of approximately 100 birds was observed in flight low over a high mountain ridge some six miles north of Pusan on June 6, 1948. The white rump was particularly conspicuous in flight.

Alcedo atthis. Eurasian Kingfisher. Common summer resident along small streams and flooded rice paddies in the vicinity of Pusan from July 11 through September 19, 1948. They were quite tame and fearless, often permitting one to approach to within 15 or 20 feet.

Halcyon pileata. Black-capped Kingfisher. Observed fairly regularly in the vicinity of a water reservoir in the mountains approximately five miles north of Pusan from July 31 through September 19, 1948. The bright red bill, brilliant purplish blue of the upper parts, white collar and white visible

in the wings while in flight are distinctive field marks. One uttered a loud, clear call as it left its perch on a pine branch and flew out over the reservoir on August 1.

Eurystomus orientalis. Oriental Broad-billed Roller. Two were observed in a small grove of pines on September 5, 1948, approximately five miles north of Pusan, and single individuals in the same general region on September 6, 18 and 19. I never observed them "rolling" in flight as mentioned by Cumming (1933:42).

Dendrocopos major. Great Pied Woodpecker. One was observed by Wolfe and the author in the pine forest surrounding the Old Kings' Tombs approximately 15 miles east of Seoul on January 4, 1948. One was collected by Wolfe on January 18 in deciduous woods about ten miles northwest of Seoul. I saw a single bird flying over a wooded, park-like area near the Seoul Zoological Gardens on October 7, 1948.

**Alauda arvensis*. Skylark. This species was common in the Seoul area, January through March, 1948, being seen as a rule in groups of three to 18 feeding on the ground in open cultivated fields. It was observed in the vicinity of Pusan only along the Naktung River on April 4, 11, and May 23. A single female collected for me by Wolfe on January 25, 1948, three miles east of Seoul represents the wintering race *pekinensis*, according to H. G. Deignan.

Hirundo rustica. House Swallow. Common summer resident in the vicinity of Pusan from April 4 until at least October 10, 1948.

Hirundo daurica. Red-rumped Swallow. A flock of approximately 50 birds was observed on August 8, 1948, busily circling and apparently feeding within a grove of insect-infested alders located halfway up a high wooded ridge some five miles north of Pusan. They captured the insects by flying in under the half-eaten foliage of the trees, hovering in one spot as they picked the insects from the leaves and branchlets. They occasionally perched momentarily on the more open bare branches. On September 1, one was observed skimming over the surface of a small pond north of Pusan in company with a group of 15 House Swallows. Two were observed in flight along the Naktung River near Pusan on September 12.

Oriolus chinensis. Black-naped Oriole. Common and regular summer resident in the vicinity of Pusan from May 19 until August 21, 1948. The height of the courtship season, as indicated by vocal activity, appeared to be from the middle of May through the early part of June, although three were still heard in song as late as August 15. Generally they were quite noisy, often interrupting their melodious whistled songs with cat-like mewling calls and pursuing one another from the top of one pine tree to another.

**Corvus corone orientalis*. Carrion Crow. Common throughout the Seoul area, both within the city and in rural districts surrounding the capital, during my entire stay from October 5, 1947, until March 17, 1948. They were often seen in large flocks around the refuse heaps in company with the Jungle Crows or again in large flocks on the frozen rice fields in company with Rooks and Jackdaws. Common, also, throughout the Pusan area during my entire stay in that city from March 18 until early October, 1948.

**Corvus leuallantii mandschuricus*. Jungle Crow. Common throughout the vicinity of Seoul from my arrival in early October, 1947, until February 21, 1948. They were often observed in large flocks of 75 to 100 around the refuse heaps along the Han River in company with Carrion Crows. In the vicinity of Pusan they were observed infrequently and irregularly from April 18 until September 5.

**Corvus frugilegus pastinator*. Rook. A total of ten was observed in open frozen fields in the vicinity of Seoul from January 4 until February 15, 1948, at which time they suddenly increased in numbers and appeared in large flocks with Carrion Crows, Jungle Crows, and Jackdaws. The species was apparently totally absent from the Pusan area during my entire stay there.

Corvus monedula. Jackdaw. Thirty-two were observed on February 21, 1948, in frozen rice fields about eight miles northwest of Seoul in company with a large flock of Carrion Crows, Jungle Crows, and Rooks. Two days later, in the vicinity of Seoul, Wolfe collected a single individual which he said was very thin and emaciated. Jackdaws were never observed in the vicinity of Pusan.

**Pica pica japonica*. Black-billed Magpie. Abundant throughout both the Seoul and Pusan areas and in all the countryside between. I counted a total of 500 nests in trees and on telephone poles and steel electric line towers from one side of a moving train while en route from Pusan to Seoul on April 6, 1948. Even though the nests are quite substantial and perhaps last for several years, this may

help to give some idea of the abundance of the species. Nesting seems to begin very early in the season since L. R. Wolfe and the author observed several individuals carrying sticks from one nest to another on February 8, 1948, within the city limits of Seoul. A nest located in the steel framework of an electric crane on Pier 4, Pusan, contained six eggs on April 20. A fully-feathered young bird out of the nest was observed near Pusan on July 11 being fed by the parent birds.

**Garrulus glandarius brandtii*. Eurasian Jay. Four dead birds were observed on February 29, 1948, hung up for sale in the South Gate Market Place in Seoul. Two were observed in the top of a large fir tree in the park-like grounds surrounding the Seoul Zoological Gardens on October 7, 1948. I observed jays regularly in small numbers on low, well-wooded mountain slopes about a reservoir five miles north of Pusan throughout my stay in that area. They were generally sluggish in action and made little attempt to remain hidden from sight. I am quite convinced that they nested in the vicinity although I was not successful in obtaining any definite proof.

Suthora webbiana. Crow-Tit. A single flock of 40 birds was observed among low underbrush in the Old Kings' Tombs area some 15 miles east of Seoul on January 4, 1948. Crow-Tits were common in flocks of 10 to 40 among low wooded mountains in the vicinity of Pusan from the latter part of July until early October, 1948. However, during April, May, and June, they were seen only in groups of two to four individuals. Two young birds on the wing were observed being fed by adults on August 11, five miles north of Pusan.

Parus major. Great Tit. Abundant throughout both the Seoul and Pusan areas, particularly in pine woods and on low mountain slopes or ridges. On June 5, 1948, I observed a pair carrying food into a small cavity of a pine branch five miles north of Pusan. The nesting hole was located approximately 12 feet above the ground and situated in such a manner that closer scrutiny without the aid of a ladder was impossible. Several caged birds were also seen in small bird shops in the city of Seoul.

**Parus varius*. Varied Tit. A favorite cage bird in the city of Seoul, although I failed to find it in the field in this area. A pair was attracted by "kissing" the back of my hand on a thickly wooded mountain slope five miles north of Pusan on June 6, 1948. Two others were observed in this same general area on October 3 in company with a flock of approximately 40 Long-tailed Tits and Great Tits.

Aegithalos caudatus. Long-tailed Tit. A group of six was observed in pine woods surrounding the Old Kings' Tombs about 12 miles east of Seoul on January 4, 1948. Three were observed on March 14 in company with a small group of Great Tits in the same area. Groups of 5, 25, and 20 were observed in the vicinity of Pusan on March 24, September 6, and October 3. Apparently the Long-tailed Tit does not nest in that area. They are always very active and keep up a constant *tsee-tseeing* among themselves. The wings make a loud sputtering sound as the bird flies from tree to tree. They were observed foraging anywhere from four to 40 feet above the ground in low underbrush and high trees.

Sitta europaea. Eurasian Nuthatch. A single bird was seen on the main trunk of a large decayed chestnut tree in the park-like area surrounding the Seoul Zoological Gardens on October 7, 1948. I never observed this species in the vicinity of Pusan.

Microscelis amaurotis. Brown-eared Bulbul. Common in low, well-wooded mountains five miles north of Pusan throughout the entire period of my stay in that area. They were always very noisy, flying from one tree to another, screaming their cat-like calls. On July 24 I observed a pair attacking a Japanese Buzzard in flight, while on August 8 one was noted similarly attacking a Black-billed Magpie on the wing. Upon two separate occasions I have seen this species snatching insects out of the air in typical flycatcher fashion, although I must admit they appeared quite inept and clumsy during the attempt. On October 7, 1948, I observed four bulbuls greedily feeding upon the black berries of an osier-like tree in the wooded park-like grounds surrounding the Seoul Zoological Gardens. Austin (1948:199) calls it "a not uncommon winter visitor to the southern half of Korea, from Kyonggi Do southward" although I found it regularly and common in the Pusan area from March through early October, 1948.

Troglodytes troglodytes. Holarctic Wren. One was observed among low underbrush in the vicinity of the Old Kings' Tombs some 12 miles east of Seoul on January 4, 1948. A total of six was observed upon two different occasions, March 21 and 28, 1948, along small streams in the Pusan area.

**Turdus sibiricus sibiricus*. Siberian Thrush. A single immature male which I purchased in a small bird shop in Seoul on July 19, 1948, was my sole encounter with this species.

Turdus hortulorum. Gray-backed Thrush. I purchased a single male in a small Korean bird shop in Seoul on March 7, 1948. It survived in a small cage for several weeks, and daily throughout the spring poured forth a rich, full song. This song consisted of a series of short, choppy warbled phrases, each repeated once and separated by short pauses. In both timbre and rhythm it was not unlike the performance of the Brown Thrasher (*Toxostoma rufum*) in the eastern United States. I did not observe this species in the field.

**Turdus naumanni*. Oriental Dusky Thrush. Common winter resident in wooded areas throughout the Seoul area, generally noted singly or in small groups up to five in number. In all its actions, it reminds me of the American Robin. I frequently found it among the deciduous ornamental shrubbery around the Chosun Hotel in the very heart of the city and in a small wooded patch behind the capitol building. This thrush was usually of a confiding nature when found within the city limits and often permitted close and extended study. A single dead male purchased in Seoul on February 29, 1948, is now a skin in the United States National Museum. Mr. Herbert G. Deignan identified it as *T. n. eunomus*; however, the nominate race is the common winter form (Austin, 1948:206).

Monticola solitarius. Blue Rock-Thrush. I observed a single male on March 28, 1948, perched on a large rock on the summit of a ridge on Chollyando directly opposite the city of Pusan at an elevation of approximately 1300 feet. The bird was quite tame and permitted close study. An occasional raising and lowering of the tail appeared to be a characteristic action. A single caged immature bird was observed in a small Korean bird shop in Seoul on July 19.

**Phoenicurus auroreus auroreus*. Slaty-crowned Redstart. Presumably winter resident, five males being observed in the vicinity of Seoul between January 1 and February 23, 1948. One male observed on January 10 in a small wooded area directly behind the capitol building in Seoul was in company with a small group of Great Tits, Tree Sparrows and Yellow-throated Buntings. Three males were observed in the Pusan area, one each on March 21 and 28 and on August 1 of the same year. This species was generally seen in low underbrush or perched on the lower branches of small trees. I failed to observe females at any time.

Phylloscopus coronatus. Crowned Willow Warbler. Common summer resident in low wooded mountains five miles north of Pusan from April 18 until September 12, 1948. They were frequently seen in company with Great and Long-tailed tits. Apparently they were in height of the song season from late April until early June. Presumably this species nests in this area although I observed neither nests nor young.

Urosphena squameiceps. Short-tailed Bush Warbler. Common summer resident in low wooded mountains five miles north of Pusan. Usually they frequent the tops of such trees as pine, chestnut, oak and alder. The wiry, high-pitched, insect-like song and short tail are distinct field marks. They were in full song between late April and early June. An adult with food in its bill and six well-feathered young were observed on June 6, 1948.

Terpsiphona atrocaudata. Japanese Paradise Flycatcher. A single male was observed on May 30, 1948, on a rocky, wooded mountain slope at approximately 1000 feet elevation some 15 miles northeast of Pusan. This bird attracted my attention by its song which consisted of a series of rapidly repeated mellow whistled calls not unlike the more mellifluous portion of the song of the Cardinal of the eastern United States. The bird was readily decoyed to within four or five feet of me by an imitation of its call. It also gave voice to a cat-like mewling cry between portions of the whistled song. Another male was observed in a grove of pine trees on September 6, approximately five miles north of Pusan. This latter bird was in company with a flock of some 25 Long-tailed Tits and was observed to make several playful aerial sorties upon them from time to time. It failed to utter a single note during the entire time it was under observation.

Hemichelidon griseisticta. Gray-spotted Flycatcher. Common fall migrant in low wooded mountains five miles north of Pusan. They were observed from August 28 until September 15, 1948, and were silent and quite fearless.

Siphia mugimaki. Japanese Robin-Flycatcher. On October 7, 1948, a total of approximately 17 was observed feeding on small black berries of an osier-like tree in park-like grounds surrounding the Seoul Zoological Gardens. Only two appeared to be males in breeding plumage. The others were of a lighter gold color on the breast and had gray upper parts.

Muscicapula cyanomelana. Japanese Blue Flycatcher. Two males were observed in low wooded

mountains five miles north of Pusan on April 24, 1948. One of these was in full song. Again, on September 12, in the same general area, two males were seen. The species was not noted in the Seoul area.

Prunella collaris. Alpine Accentor. A single bird was observed on October 19, 1947, perched on a large granite boulder on the summit of Pukhansan, a peak some 3000 feet in elevation and approximately seven miles north of Seoul. The bird, which was probably a migrant, was quite tame and wholly silent during the period of observation.

**Prunella montanella*. Mountain Accentor. A single individual purchased in a bird shop in Seoul on September 26, 1948, was my sole encounter with this species.

Anthus spinoletta. Water Pipit. A group of six was observed on March 6, 1948, feeding on the ground along the edge of a large pond near Pier 3, Pusan. They appeared quite dirty and bedraggled from frequenting the refuse and rubbish heaps scattered all around the Korean shacks in that area.

Motacilla alba. Pied Wagtail. Common along nearly all the streams and canals in the vicinity of Seoul from January 3 until at least the time of my transfer to Pusan in the middle of March, 1948. Common in the Pusan area from early April until the end of May and again from late August until the latter part of September. Strangely enough I failed to record this species from May 29 until August, although I observed individuals in full song on April 10, apparently establishing nesting territories among rock piles above the city. In view of these facts it is difficult to say whether it actually nests in the vicinity of Pusan.

Motacilla cinerea. Gray Wagtail. Regular summer resident along small streams in the mountains north of Pusan; present from early April until my departure in early October, 1948. Anxiety and concern of certain individuals observed during late May and early June may have indicated either a nest or young in the vicinity, although I failed to locate either.

Dendronanthus indicus. Forest Wagtail. One was observed in full song on May 31, 1948, along the coast some 15 miles northeast of Pusan and others, also singly, in low wooded mountains five miles north of Pusan on August 11 and 15 and September 6. These latter were all silent except for certain metallic scolding notes. Pine and cryptomeria trees seemed to be most favored retreats.

Lanius bucephalus. Bull-headed Shrike. A single dead male purchased in the South Gate Market in Seoul on February 29, 1948, was prepared and is now in the United States National Museum. H. G. Deignan identified the specimen as belonging to the nominate race.

Lanius cristatus. Red-tailed Shrike. Common summer resident; observed regularly from May 19 until the middle of September, 1948, in pine groves and on barbed wire fences along open weed fields five miles north of Pusan. Well-feathered immature birds were seen on August 1 and 4 and on September 6 and 12. Large field insects, such as grasshoppers, seemed to form a large part of their diet since I often saw individuals drop into the weeds and return to a position along the barbed wire fence near my billet to feed.

**Sturnia philippensis*. Red-cheeked Myna. A single immature bird was purchased in a Korean bird shop in Seoul on July 19, 1948; it succumbed the next day upon my return to Pusan. The skin is now no. 117740 in the collection of the Museum of Vertebrate Zoology. I never observed it in the field. Austin (1948:248) states that "This species is a straggler from the southward, having been taken but twice."

Zosterops palpebrosa. Oriental White-eye. A single bird was observed on May 9, 1948, in a chestnut tree on a wooded hillside approximately one and a half miles south of Agasaki near Pusan. It was probably a migrant.

**Passer montanus dybowskii*. Eurasian Tree Sparrow. Abundant permanent resident in the vicinity of both Seoul and Pusan. More than 100 were observed strung up on straw ropes for sale in the South Gate Market Place in Seoul on February 1, 1948. Apparently a favorite food item of the natives.

Eophona migratoria. Black-headed Hawfinch. A common cage bird in the city of Seoul from the middle of July until early October, 1948. Wolfe reported this species as fairly common and nesting in the Seoul area during the summer.

**Chloris sinica ussuriensis*. Oriental Greenfinch. A flock of 25 was observed perched on electric wires alongside a road some 15 miles southwest of Seoul on February 23, 1948. This species is a common cage bird in the city of Seoul and a regular although never common summer resident in the vicinity of Pusan. One was observed carrying a large dry leaf as though in the process of nest building on April 18, 1948, in low wooded mountains five miles north of Pusan.

Carduelis spinus. Eurasian Siskin. Two were observed in a small Korean bird shop in Seoul on March 7, 1948. A single bird was seen in the same shop on July 19 and again on September 26. Although I tried to purchase the last two, the old shopkeeper flatly refused to part with them, implying that they were quite rare. I never observed it in the field, a circumstance which parallels Austin's (1948:254) statement, "The winter of 1945-46 was evidently one of its off years, for though I looked for it constantly, I never found it."

**Fringilla montifringilla*. Brambling. Eight caged birds were observed in a small Korean bird shop in Seoul on March 4, 1948. Fukusei Cho, the director of the National Science Museum in Seoul, gave me a single male collected on the Museum grounds on March 4, 1948. Two observed in low wooded mountains some five miles north of Pusan on April 18, 1948, constituted my sole field contact with the Brambling.

**Emberiza rutila*. Chestnut Bunting. Common cage bird in the city of Seoul during July, September, and October, 1948. A male which I purchased in Seoul on July 19 proved to be an excellent singer even during the hot summer months and survived for six months. I never observed the species in the field.

**Emberiza elegans elegans*. Yellow-throated Bunting. Common in small flocks of five to 15 in wooded areas throughout the Seoul area from the latter part of November until the time I was transferred to Pusan in mid-March. It also appeared to be a common cage bird in Seoul. This bunting proved to be a fairly common summer resident in low wooded mountains some five miles north of Pusan from late March until early September. Two pairs which I observed in that area on June 6 appeared particularly anxious and fairly flew into a frenzy when I "kissed" the back of my hand in imitation of a distressed bird. This occurrence naturally led me to believe that they were nesting in the vicinity although I failed to find any more definite proof.

**Emberiza cioides*. Meadow Bunting. Easily the most abundant bunting throughout the entire countryside of south Korea. Common in groups of two to ten in patches of weeds and low underbrush throughout the Seoul area during the entire winter of 1947-48, often being observed in company with small groups of Yellow-throated Buntings. It was also a common cage bird in Seoul. In the vicinity of Pusan it was common from the time of my arrival in March until my departure in October. The courtship period there seemed to be at its height about April 25, although I observed an immature bird well-feathered and out of the nest on May 9. A male taken 10 miles east of Seoul on February 8, 1948, was determined by H. G. Deignan as representing the race *weigoldi*, while another male, taken seven miles south of Seoul on February 15, represents *castaneiceps*. According to Austin (1948:264), the latter subspecies is the one to be expected in summer in central and southern Korea.

**Emberiza rustica rustica*. Rustic Bunting. Common winter resident in fairly large flocks throughout the rural areas in the vicinity of Seoul. Two were collected for me by L. R. Wolfe from the top of a tall leafless tree about seven miles south of Seoul on February 15, 1948. Austin (1948:267) also "found it by far the commonest of the wintering small birds in the Suwon area" and called it "an abundant winter visitor from Kyonggi Do southward."

**Emberiza tristrami*. Tristram Bunting. I purchased a single male in a Korean bird shop in Seoul in early January, 1948. It succumbed two months later and I saved it as a specimen. I never observed the species in the field.

LITERATURE CITED

- Austin, O. L., Jr.
1948. The birds of Korea. Bull. Mus. Comp. Zool., 101:1-301.
- Cumming, D. J.
1933. Notes on Korean birds. Trans. Korean Royal Asiatic Soc., 22:1-94 (*vide* Austin, 1948).
- Deignan, H. G.
1950. The races of the collared scops owl, *Otus bakkamoena* Pennant. Auk, 67:189-201.
- Wolfe, L. R.
1950. Notes on the birds of Korea. Auk, 67:433-455.

Kyoto, Japan, December 1, 1950.