same species and about 20 White-crowned Sparrows (*Z. leucophrys*).

White-throated Sparrow. *Zonotrichia albicollis.* An immature male was collected at the banding trap in my yard in San Jose on 25 November 1961.

McCown's Longspur. *Rhynchophanes mccownii.* On 16 October 1949 an adult male was collected near the marsh in Deep Springs Valley, Inyo County. There were at least six others of this species in the mixed flock of three species of longspurs totaling about 120 birds.

Lapland Longspur. *Calcarius lapponicus alascensis.* On 13 October 1949 an adult female was collected from the abovementioned flock. There were at least 40 others. Another female was collected four miles E of Calipatria, Imperial County, on 11 February 1939. It was in a flock of Horned Larks (*Eremophila alpestris*).

Chestnut-collared Longspur. *Calcarius ornatus.* Three specimens were collected from the Deep Springs Valley flock: a female on 12 October, a female on 13 October, and a male on 16 October 1949.

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OCCURRENCE AND NESTING OF WILSON'S PHALAROPES AT VANCOUVER, BRITISH COLUMBIA

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On 8 June 1965 three Wilson's Phalaropes (*Steganopus tricolor*), two females and a male in breeding plumage, were observed on the bank of one of five settling ponds at the Iona Island sewage treatment plant north of the International Airport at Vancouver, British Columbia. Another male was flushed from the shore of a small open marshy area nearby, and, after a short search, a nest containing four eggs was found.

The nest was a mere depression in the sand among short vegetation and was scantly lined with short pieces of fine grasses and wood chips. The eggs were ovate pyriform and a ground buff-brown, heavily blotched and speckled with dark brown. The clutch was collected, set mark 224/665 in my collection. The eggs averaged 33.8 × 23.6 mm and incubation was slightly advanced.

A year later, on 7 June 1966, Lowell Orcutt located three young Wilson's Phalaropes among the grasses near the two center settling ponds. He counted five pairs of adults in the immediate vicinity.

On 10 and 11 June 1967 Robert E. Luscher located a nest with four eggs and a brood of three young Wilson's Phalaropes among the grasses in the same area. Nest materials were typical but the nest itself was well concealed by overhanging grasses. Color transparencies of the young were secured.

The earliest arrival date for Wilson's Phalaropes at Iona Island (two pairs) was recorded by Madelon A. Schouten on 13 May 1967. The latest departure date was recorded as 9 September 1967 by Ian Yule. Robert E. Luscher recorded a maximum population of 20 birds, adults and immatures, on 3 August 1967.

Godfrey (Natl. Mus. Canada, Bull. 203:167, 1966) shows the breeding range of Wilson's Phalaropes in western Canada as extending into interior central and southern British Columbia. Outside the recorded breeding range (that is, west of the Cascade Mountains and central Interior Plateau of British Columbia) the bird is considered a casual migrant (AOU Checklist, p. 211, 1957).

A small breeding population (up to six pairs) of Wilson's Phalaropes has become established at Iona Island, Vancouver, British Columbia. This extends the known breeding range for this species approximately 250 miles west to the southern coast of British Columbia.

Small numbers of Wilson's Phalaropes have been recorded by Robert E. Luscher, Gwen Wright, myself, and others during the summers of 1966 and 1967 at the Ladner sewage pond and the George C. Reifel Waterfowl Refuge, both areas about 10 miles S of Iona Island. It appears that Wilson's Phalarope is now locally a common summer resident near Vancouver.

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THE TAXONOMIC POSITION OF THE HORNBILL *RHYTICEROS PLICATUS SUBRUFICOLLIS* (BLYTH) AS INDICATED BY THE MALLOPHAGA

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Sanft (1953) regarded *Aceros subruficollis* (Blyth) as synonymous with *A. undulatus* (Shaw). He found that one specimen from SW Siam matched the four characters commonly used to identify *A. subruficollis*, but 15 specimens from other areas had mixed characters for the two species. He stated that, among others, Peters (1945) and Delacour (1947) "agree in considering *Aceros subruficollis* (Blyth) a valid species. . . ." However, both Peters and Delacour listed *subruficollis* as a subspecies of *plicatus*. Deignan (1963) divided the genus *Aceros* into *Aceros* and *Rhyticeros*, and kept *R. plicatus subruficollis* and *R. u. undulatus* in two distinct species.

The present study was made in memory of H. G. Deignan, who was pleased that his opinion would seem to be confirmed by the amblyceran Mallophaga. *Chapinia boonsongi* Elbel was found on both subspecies of *Rhyticeros undulatus* in the Oriental region, and *C. hirta* (Rudow) was found on *R. plicatus subruficollis*. These two species of *Chapinia* were so different that Elbel (1967) placed them in different species groups. This would suggest that the birds have been separated for a considerable length of time. Kellogg (1896) stated that Mallophaga spent their entire lives on the host bird and that infestation of new hosts was accomplished by the actual migration of individuals from one bird to another during copulation, nesting, or roosting. However, if the bird populations became isolated so that they could not interbreed, the Mallophaga would be isolated on the host population and could not interbreed with lice of different host populations. With time and isolation, both host and Mallophaga might separate into different species (Elbel and Emerson 1959).

Sanft's opinion would seem to be confirmed by

the ischnoceran Mallophaga since the same species of lice were found on both hosts. *Buceronirmus* new species 1 and *Paroncophorus javanicus* (Rudow) were found on both subspecies of *Rhyticeros undulatus* and on *R. plicatus subruficollis* (Elbel, unpublished). If these two hosts represent distinct species, the ischnoceran genera *Buceronirmus* and *Paroncophorus* have not speciated as rapidly as the amblyceran genus *Chapinia*. Clay (1957) stated that rates of speciation have been so different in the Amblycera and Ischnocera that comparisons of these rates on the same host group have little value. If the hosts, *R. undulatus* and *R. p. subruficollis*, represent the same species, the amblyceran lice, *Chapinia boonsongi* and *C. hirta*, must have been sympatric species on both host populations. Suppose that *C. boonsongi* became extinct on *R. p. subruficollis* and that *C. hirta* became extinct on *R. undulatus*. Then the two forms of *Rhyticeros* would be closer than their Mallophaga indicated. Clay (1949) was the first to mention this type of distribution. The fact that two species of *Chapinia* have not been found on any hornbill (Elbel 1967) would seem to suggest that sympatric pairs were not involved and that the hosts should remain as distinct species. However, as mentioned by Clay (1957), the evidence of relationship provided by one genus of Mallophaga is less convincing than if more genera were involved.

In the Australian region a different relationship was found. *Buceronirmus* new species 2, *Chapinia hirta*, and *Paroncophorus javanicus* were found on all subspecies of *Rhyticeros plicatus* (Elbel, unpublished). The speciation that has occurred in the *Buceronirmus* would suggest that the Australian forms of *R. plicatus* have become isolated from the Oriental *R. p. subruficollis* and thus should be specifically distinct; but again the evidence of relationship provided by one genus of Mallophaga is less convincing than if more genera were involved. Clay (1949) stated that if one of the louse species of a host species with an extensive range became extinct in the middle portion of that range, the two louse populations at either end would be isolated, and that by the time the louse species again spread throughout the population of the host, some kind of sexual isolating mechanism might have developed in one of the louse populations. If this were the case, one would expect to find both species of *Buceronirmus* on the same subspecies of *R. plicatus* somewhere within its range. Since this has not been found, perhaps critical ornithological work will show that *R. p. subruficollis* is reproductively isolated and should be separated specifically from the subspecies of *R. plicatus* in the Australian region.

In these two examples the mallophaga afford a suggestion as to the distinctiveness of the host *Rhyticeros plicatus subruficollis*. Mallophaga are considered only as contributory evidence to the morphological and biological data from the host birds (Elbel and Emerson 1959).

In summary, Mallophagan evidence suggests that *subruficollis* is not a synonym of *Rhyticeros undulatus* as Sanft (1953) thought, and may in fact, be specifically distinct from *plicatus*, of which *subruficollis* has been considered a subspecies by recent authors.

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EXTENSION OF ZONE OF SYMPATRY OF *QUISCALUS MEXICANUS* AND *Q. MAJOR*

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In 1960 the zone of sympatry between the Great-tailed Grackle (*Quiscalus mexicanus*) and the Boat-tailed Grackle (*Q. major*) was known to extend from near Green Lake and Port Lavaca, Calhoun County, Texas, eastward through the Houston-Galveston area to the vicinity of Sulphur, western Calcasieu Parish, Louisiana (Selander and Giller, Condor 63:33–38, 1961). Distributional data from the early literature suggested that *Q. mexicanus*, extending its range along the Gulf coastal plain from southern Texas, reached the Houston-Galveston area between 1912 and 1938, and invaded southwestern Louisiana between 1938 and 1959.

In 1960 no breeding records of *Q. mexicanus* were available from localities east of Calcasieu Lake and Calcasieu River (Selander and Giller, op. cit., figs. 2, 3). Apparently the eastward movement of *Q. mexicanus* is continuing, for on 29 and 30 May 1968 we found it at Grand Lake, Cameron Parish, and in the Gibbstown-Bell City area, eastern Calcasieu Parish, 21 mi. SE of Sulphur, where it was nesting in mixed colonies with *Q. major* in patches of pine between farms. Specific localities of colonies are: 5 mi. E of Grand Lake; points 4.7, 5.0, 6.0, 6.3, and 6.7 mi. N of Gibbstown; and 7.5 mi. W of Bell City on state road 14. Since *Q. mexicanus* was common in the Gibbstown-Bell City area, it seems probable that its range extends even farther east in the coastal prairie region toward Lake Arthur.

A total of 134 adult and first-year specimens of *Quiscalus* was collected east of Lake Calcasieu for studies of variation in biochemical characters. All