

—based to some extent on an experience with a mother black bear and two small cubs disturbed on Vancouver Island—has seemed overdrawn; but when, in mid-January, 1949, I again heard the nocturnal bawling of *Nyctibius*, the adjective *terrifying* seemed apt since it was loud enough to call to mind a creature far larger than a Potoo.

The *Nyctibius* cries heard nightly from January 15 to 19 near Pano Ayuctle (Pumpkin Ford), along the Rio Sabinas, must have been songs, properly speaking, for they followed a definite pattern. Starting with a rough, vibrant, almost bellowed-out *waw, wow, or baw*, repeated with a full second's pause between each cry, the performance increased in tempo and volume, becoming, after the fourth or fifth repetition, a double-note: *baw-baw*. This double-note was repeated four to seven times. The last of the song trailed off somewhat, but the double-note continued to the very end. The whole song might be written thus: *baw, baw, baw, baw, baw-baw, baw-baw, baw-baw, baw-baw, baw-baw*.

Whether *Nyctibius* pairs in January in southwestern Tamaulipas remains to be ascertained. A bird which I flushed high on the foothill west of the Sabinas on April 6, 1941, acted as if it had a nest. It flew from branch to branch uttering harsh cries which sounded excited, if not angry. Never, before or since, have I known a Potoo to cry out in apparent protest at my presence.—George Miksch Sutton, Museum of Zoology, University of Michigan, Ann Arbor, Michigan.

RECENT LITERATURE

Reviews by Donald S. Farner and others

BANDING

(See also Number 5.)

1. Bird-banding in Western Greenland in 1946 and 1947. (Ringmaerking af fugle i Vestergrønland 1946 og 1947.) Finn Salomonsen. 1948. (Reprint without reference to journal) 5 pp. Although a bird-banding program had been conducted by Dr. A. Bertelsen in the twenties little banding was done between 1930 and 1946. Activities were resumed in 1946 under the initiative of the author. During 1946-1947, 4,719 birds were banded. There have been 192 recoveries and returns in Greenland and 31 foreign recoveries. The latter have been reported in *Dansk Ornithologisk Forenings Tidsskrift*, 41: 141-143 (1947) and 42: 100-102 (1948). Species banded in greatest numbers were the Snow Bunting, *Plectrophenax nivalis* (Linnaeus) 522; Iceland Gull, *Larus glaucoides* Meyer 395; Kittiwake, *Rissa tridactyla* (Linnaeus) 564; Arctic Tern, *Sterna macroura* Naumann 874; Little Auk, *Alle alle* (Linnaeus) 298; and White-fronted Goose, *Anser albifrons* (Scopoli) 301.—D.S.F.

2. Bird-banding Activities in Belgium in 1948. (Oeuvre du baguage des oiseaux en Belgique.) Ch. Dupond. 1949. *Le Gerfaut*, 39(3): 129-157. This is a summary of 414 recoveries and returns, mostly for 1948, of birds banded in Belgium. Species for which the greatest numbers of records were accumulated are the Starling, *Sturnus vulgaris vulgaris* Linnaeus 16; Greenfinch, *Chloris chloris chloris* (Linnaeus) 19; Goldfinch, *Carduelis carduelis* (Linnaeus) 30; Linnet, *Carduelis cannabina cannabina* (Linnaeus) 16; Chaffinch, *Fringilla coelebs coelebs* Linnaeus 35; Great Tit, *Parus major major* Linnaeus 46; European Blackbird, *Turdus merula merula* Linnaeus 17; Black-headed Gull, *Larus ridibundus ridibundus* Linnaeus 15. A Magpie, *Pica pica galliae* Kleinschmidt, banded 3 August 1940 was recovered at the banding locality (Turnhout) 17 October 1948. A Swift, *Apus apus apus* (Linnaeus), banded 26 May 1944 as an adult was recovered at the banding locality (Gaurain-Ramecroix) 8 August 1948. A Great Spotted Woodpecker, *Dendrocopos major anglicus* (Hartert), banded 3 June 1936 as nestling, was recovered at the banding locality (Vosselaer) in 1944. A Teal, *Anas crecca crecca* Linnaeus, was banded 1 June 1937 at Ossendrecht as young, and recovered in Ancône, Italy, 18 March 1948.—D.S.F.

3. Birds Banded in Foreign Countries and Recovered in Belgium. (Oiseaux bagués à l'étranger et retrouvés en Belgique.) Ch. Dupond. 1949. *Le Gerfaut*, 39(3): 157-164. This is a summary of 82 records of birds banded in foreign countries and recovered in Belgium. Most abundant are Starlings, *Sturnus*

vulgaris vulgaris Linnaeus, banded principally in Holland, Germany, Scandinavia, and the Baltic area. A Hobby, *Falco subbuteo subbuteo* Linnaeus, was banded at Riga (USSR) in 1944 and recovered in the same season (14 December) 20 kilometers northwest of Brussels.—D.S.F.

4. Fifty Years of Bird Banding. (Ringmärkningen 50 År.) Lars von Haartman. 1948. *Nordenskiöld-samfundets tidsskrift*, 1948: 39-52. This is an interesting brief history of systematic bird banding since its initiation in 1899 by Mortensen in Denmark. Upwards of nine million birds have been banded. The greatest numbers have been banded in the United States (more than four million), Germany (upwards of 1½ millions), England (more than 700,000), Holland (more than 250,000), and Switzerland (more than 212,000). There are brief discussions of the use of banding data in the study of migration, *Ortstreue*, geographic isolation as an evolutionary factor, population dynamics, and longevity. Pertinent examples are given.—D.S.F.

MIGRATION

(See also Numbers 1, 2, 3, 74, and 77.)

5. On the Autumn Migration of the Scandinavian Chaffinch (*Fringilla c. coelebs* L.) C. L. Deelder. 1949. *Ardea*, 37(1/2): 1-88. This monographic treatise is based on the author's own observations during the autumns of 1945, 1946, and 1947 and a careful consideration of previously published material on the migration of this species. The population under consideration breeds in Scandinavia and winters principally in the British Isles, but also in Scandinavia, Denmark, northwestern Germany, northern France, western Belgium, and the Netherlands. There is presumably a slight surplus of males in the breeding population in Scandinavia; there is a pronounced surplus of males in winter in Scandinavia. There is a surplus of females in autumn migration on Helgoland but surprisingly a surplus of males in the Netherlands in autumn. "This can be explained in the following way: The west-coasts of Scandinavia and Denmark, the North-Frisian Coast and the west-coasts of Holland and Belgium are reached during autumn by a 'broadfront-migration' . . . of Chaffinches, which has a WSW direction. Van Dobben and Makkink (1934) have described the behavior of such migrants at the moment they reach a coastline. Some of them put out to sea in the direction in which they have been travelling; the rest turn and follow the coast in the direction which most closely approaches to their original line of flight. The latter birds form a 'concentrated-migration' along the coast and they tend to leave it and cross the sea only when they reach a very sharp angle in the coastline or at the 'end' of an island. This phenomenon may be explained through their desire to avoid water, and it may be supposed that more ♀♀ Chaffinches than ♂♂ cross the sea, as the former have stronger migratory impulse. . . . So on the coast there is a partial separation between the sexes: A broad but diffuse flight, consisting mainly of ♀♀, crosses the sea, and a narrow but concentrated migration, consisting mainly of ♂♂, follows the coast. . . . Indirect confirmation of the conclusions . . . is provided by the catches in fowling-yards at Monster, Ockenburg and Wasenaar. . . . These stations were in operation from 1933 to 1947 inclusive. Four years with a very strong Chaffinch migration occurred in this period, viz. 1934, 1935, 1938 and 1942. These were characterized by a comparatively small excess of ♂♂. A strong migration along the coast presumably means that there is a weak migration across the sea. So we may expect, that in those years proportionately many more ♀♀ than usual migrated along the coast—instead of crossing the sea—thus causing only a small ♂♂ surplus. On the contrary years with an abnormally weak migration (1939, 1940, 1941, 1944 and 1946) were characterized by a high ♂♂ surplus." (pp. 80-81.) E and SE winds, as a consequence of an anticyclone in Scandinavia, result in weak migration of Chaffinches in the Netherlands, presumably because of strong migration across the sea to the British Isles. The direction of the coast exerts an important influence on direction of migration. As the direction of the coast deviates more from the normal direction of migration the tendency to cross the sea increases. There appears to be a tendency to increase altitude on going out to sea. A very interesting paper.—D.S.F.

6. Is the Bohemian Waxwing a Migratory Species? (Is de Pestvogel (*Bombycilla garrulus*) een echte trekvogel?) G. J. van Oordt. 1950. *Ardea*, 37(3/4): 179-181. The occurrence of a flock at the same locality, and showing similar behavior, during the winters of 1946-7, 1948-9, and 1949-50 prompts the author to suggest that the same route has been followed from breeding range to winter area. Therefore the Bohemian Waxwing, according to the author, is to be regarded as a true migrant. To a considerable extent it seems that this is a matter of definition as well as interpretation of the actual observations.—D.S.F.

FOOD HABITS

7. Behavior and Feeding Habits of the Kestrel in the City. (Beitrag zur Lebensweise und Ernährung des Turmfalken *Falco t. tinnunculus* L.—in der Grossstadt.) Heinz-Eberhard Krampitz. 1949. *Vogelkundliche Beobachtungsstation "Untermain" Fechenheim. Jubiläums-Bericht*, 1948/1949: 20-30. The nesting of this species in cities was known as early as the time of the Romans; at present this is known to occur from Spain to central Asia and from the British Isles to Egypt. This paper is primarily an examination of the differences between these "city falcons" and those which live under more "natural" conditions. In Breslau, where nine to eleven pairs may occur in the center of the city, nesting sites are restricted to higher places, principally church steeples. The V-flight (Tinbergen) of the male in attracting the female to a nesting site was observed regularly. Domestic pigeons are the most serious competitors for nesting sites. The Jackdaw, *Coloeus monedula* Linnaeus, is an egg predator. During the courtship period pellets and remains of food are found abundantly; on the other hand they are scarce during the incubation period. The male brings food to the incubating female. Many of the nesting sites appear to be poorly chosen and the author suggests that a part of the loss of young is attributable to this. After leaving the nest the young persistently return to the nest site for some time. Occasional pellets may be found beneath a nest during the winter. It is not certain whether or not these are from the breeding birds of the previous season. Data on feeding habits are tabulated for observations in Breslau (1943, 1944), and Munich (1947). More than 90 percent of the prey was field mice, *Microtus arvalis* Linnaeus; birds constituted about three percent. These data indicate that "... the Kestrels observed by us in large cities live in two spacially separated biotopes so that the distance between the nest site and the hunting area may be a matter of many kilometers . . ." (p. 27.) A compilation of data from various sources gives the curious indication that the Kestrels of large cities feed more extensively (about 94 percent) on field mice than the Kestrels in more "natural" biotopes (77 percent); the utilization of birds by city Kestrels is lower. The author suggests that the hunting areas of city Kestrels probably lie more frequently in intensively agriculturalized areas thus accounting for the greater use of field mice.—D.S.F.

8. Investigations on the Feeding Habits of the House-sparrow (*Passer domesticus*) and the Tree-sparrow (*Passer montanus*). Marie Hammer. 1948. *Danish Review of Game Biology*, 1(2): 1-59. During the course of the investigation on which this important paper is based, 2,657 English Sparrows, collected at several agricultural research stations through the year, were examined. Similarly 501 Tree Sparrows were examined. During the greater part of the year, English Sparrows were found to have fed mostly on grain (primarily oats, wheat having been scarce during the winters of 1940-1 and 1941-2). In summer, insects became an important part of the diet and were fed extensively to nestlings. There was a substantial consumption of weed seeds throughout the year. Ten to ninety percent of the adult birds examined had eaten weed seeds; the monthly means varied from less than one seed per bird examined to 67 per bird examined. Feeding experiments indicate that the consumption of grain would be about 4.7 kilograms of oats or 3.9 kilograms of barley per bird per year. The consumption of insects is estimated at 23,000 per bird per season (April to August). Economically speaking, the English Sparrow is designated as beneficial during the breeding season but injurious during the remainder of the year. In Tree Sparrows, the consumption of grain was much lower (one-third of that of the English Sparrow) and the

consumption of weed seeds and insects (more than twice that of English Sparrow) much higher. This species is designated as a bird of "great benefit."—D.S.F.

9. Observations on the Capture of Bats by Birds of Prey in West-Java. (Waarnemingen over het vangen van vleermuizen door roofvogels op West-Java.) G. F. Mees. 1950. *Ardea*, 37(3/4): 172-177. Predation in a bat colony at Krawang, West-Java, was noted by *Falco peregrinus calidus* Latham, "*Accipiter virgatus* (?) *gularis* (Temminck and Schlegel)," *Haliastur indus intermedius* Gurney, and *Corvus enca enca* (Horsfield). Bat predation was apparently not practiced by *Elanus caeruleus hypoleucus* Gould and *Tyto alba javanica* (Gmelin).—D.S.F.

10. The Food Habits of the Italian House Sparrow. (Sull'Alimentazione del Passero.) Lamberto Loporati. 1948. *Ricerche di Zoologia Applicata alla Caccia*, 20. 22 pp. This paper is based on the analysis of 600 stomachs from *Passer italiae* Vieillot taken throughout the year. The data indicate that the species is predominately granivorous except during the breeding season when it becomes partially insectivorous.—D.S.F.

NIDIFICATION AND REPRODUCTION

(See also Numbers 12, 80, 92, and 93.)

11. Nesting of the Red Crossbill in Pakenham Township, Lanark County, Ontario. Edna G. Ross and Verna M. Ross. 1950. *The Canadian Field-Naturalist*, 64(1): 32-34. The authors correlate observations of the Red Crossbill, *Loxia curvirostra* Linnaeus, in the Pakenham, Ontario, region in the winter of 1947-48 with a heavy cone crop. A nest was discovered on April 4, 1948, at 11:15 a.m., at which time the female was sitting on one egg. On the following date shortly after 1 p.m. she was sitting on two eggs. On April 11 and 17 there were three eggs. Observed incubation was by the female. On April 18 at 3 p.m. the nest held a fully hatched fledgling, a fledgling sitting in a half egg shell, and an unchipped egg. It could not be determined whether the first egg was laid on April 4 or the previous day. It would seem probable that incubation in a species that may nest in sub-zero temperatures would begin with the laying of the first egg and the incubation is thus shown to be 14 or 15 days.—W. Earl Godfrey.

LIFE HISTORY

12. Observations of the Snowy Owl on Hardangervidda Plateau, southern Norway. (Sneugleobservasjoner fra Hardangervidda, Norge.) Edvard K. Barth. 1949. *Vår Fågelvärld*, 8(4): 145-156. Hardangervidda has an area of 7000 square kilometers and an elevation of 1100-1500 meters. Part of this area, about 200 square kilometers, is rather flat with low moraine ridges and gravel mounds, constituting suitable biotope for *Nyctea scandiaca* (Linnaeus). Occasionally Snowy Owls nest on Hardangervidda; peak years coincide with increases in rodents. The author describes a nest observed from 17 June to 29 June 1948. Eggs were laid on bare earth in a circular depression. The nests are always placed on tops of gravel mounds or perching hillocks. The latter consist of a rich soil with a luxuriant growth of grass the result of fertilization by excreta from owls and other birds of prey. The nest observed contained seven eggs, six of which hatched. From the first day the young were fed by the female with pieces of lemmings and mice; pellets were ejected first at 10-12 days.—D.S.F.

13. Bonelli's Eagle. (L'Aigle de Bonelli, *Hieraëtus fasciatus* (Vieillot) 1822.) Andre Rivoire and François Hue. 1949. *L'Oiseau et la Revue Française d'Ornithologie*, 19(2): 118-149. Description, distribution, systematic position, habitat, habit, voice, courtship, nesting, eggs, incubation and food. This paper is a reasonably complete treatise. Unfortunately there is no bibliography although reference (without citation) is made in the text to the investigations of others.—D.S.F.

BEHAVIOR

(See also Numbers 7, 11, 21, 23, 25, 92, 93, and 103.)

14. Young Great Tits and Blue Tits in the same Nest. (Junge Kohlmeisen (*Parus major*) und Blaumeisen (*Parus caeruleus*) im gleichen Nest.) Fritz Amann. 1949. *Der Ornithologische Beobachter*, 46(6): 187-190. Three nest boxes were found containing young of the two species of tits (12 Great Tits + 1 Blue Tit, 8 + 1, and 9 + 1). Great Tits had increased markedly during this season (1949) and apparently in these cases had driven the Blue Tits from the nest boxes. Similar cases involving other species of tits are cited.—D.S.F.

15. The "Rodent-Run" Distraction-Behavior of Certain Waders. Part I.—Field Observations on the Purple Sandpiper. Eric Duffey and N. Creasly. 1950. *The Ibis*, 92(1): 27-38. Kenneth Williamson. Part 2.—Interpretation of "Rodent-Run" Display. *The Ibis*, 92(1): 28-33. In this display in *Calidris martima* (Brünnich) the parent jumps from the nest at range of two or three feet, and with the body feathers fluffed, wings drooped, and head low, runs away with a piping call. An appendix contains an annotated list of eight charadriiform species in which "rodent-run" behavior occurs. "A distinction is drawn between "lure-display" (so-called "injury-feigning") derived from disjointed uncontrolled actions which result from the clashing of strong emotional drives on the appearance of a predator, and displacement activities (which may occur under the same psychological conditions) in which emotional energy finds an outlet in an existing, stereotyped pattern of courtship or other behavior. . . . It is shown that the "rodent-run" belongs to the latter group. . . ." (p. 32.)—D.S.F.

16. Observations on the Beginning of Morning Flight of the Swift. (Beobachtungen über den morgendlichen Flugbeginn des Mauerseglers, *Micropus apus* (L.)) Georg Scheer. 1949. *Die Vogelwarte*, 2: 104-109. Swifts begin flight at 50° N. latitude in Germany about 15 minutes before sunrise. In southern Germany (48°-49°) flight begins about five minutes later; in northern Germany (53°-54°) about one-half hour before sunrise. In southern Finland (60°-63°) morning flight begins about one hour before sunrise. The period between the beginning of morning flight and sunrise increases slowly from the time of arrival in spring until the summer equinox; thereafter it decreases until departure in fall.—D.S.F.

17. Parent-Young Recognition in the Coot, *Fulica atra*. Ronald Alley and Hugh Boyd. 1950. *The Ibis*, 92(1): 46-51. The parent Coots treat all young, unlike their own, as territorial intruders. However, parents with young less than two weeks of age will feed and brood young similar in appearance to their own. After two weeks of age, recognition of young by parents appears well established since strange chicks will not be tolerated by parents with young more than two weeks of age. A soft "kt, kt"-call by the parent is the releaser for the following ("or come-hither") reaction of the young whereas a loud high-pitched note (male) or a harsh "kowk" (female) is the releaser for the fear and concealment reactions. Individual recognition of adults by young develops at about three weeks.—D.S.F.

18. The Distraction Behavior of the Faeroe Snipe. Kenneth Williamson. 1950. *The Ibis*, 92(1): 66-74. The chief components of lure display of *Capella gallinago faeroensis* (C. L. Brehm) ". . . are a crouching posture with wings drooped and spasmodically fluttered, and the tail intermittently twisted and spread in a vertical fan." (p. 73.) Impeded flight was also observed. Drumming flight by the male occurs as a displacement activity, and the flight with the "chippa-cheppa" call note similarly in the female parent. In discussing the nature and origin of the passive distraction ". . . it is held that the main element in the snipes' lure display is a formalized development of a displacement borrowing from epigamic activity."—D.S.F.

19. Towards an Orthography of Bird Song. C. E. G. Bailey. 1950. *The Ibis*, 92(1): 115-122. Discussion of the possibilities of the use of sound spectrographs in the study of bird song.—D.S.F.

20. Transcribing Bird-Song. M. E. W. North. 1950. *The Ibis*, 92(1): 99-114. A discussion concerning methods of recording song in field notes. *Pitch, time, and loudness* are best interpreted in music and recorded as such. *Quality and phonetics* are best recorded by verbal methods. All should be noted and recorded.—D.S.F.

CENSUSES AND POPULATIONS

(See also Numbers 12, 14, 39, 56, 57, and 108.)

21. The Common Eider Duck on Vlieland. (De Eidereenden, *Somateria mollissima* L., op Vlieland.) C. Hoogerheide. 1950. *Ardea*, 37(3/4): 139-161. In 1906 the first breeding records of this species were noted for Vlieland. In 42 years the colony has increased from a few individuals to nearly a thousand breeding pairs and a total population in 1948 of about 4200 individuals. None are seen in fall and winter. The females come ashore first and are less timid. Males were not observed to guard incubating females as is the case in Iceland and the Orkney Islands. Courtship and pairing occurs while the birds are still in flocks. While the females are incubating the males stay in the Wadden Sea and North Sea where they court the unemployed females which are in a minority. "It is not unusual to see 20 males crowding around one female." (p. 159.) Courtship and pairing occur mostly in April and early May. Egg-laying occurs over a long period so that maximum incubation (60 percent of females) does not occur before mid-May. Females with young tend to flock. Duckling mortality is high, the result to a great extent of predation by Herring Gulls, *Larus argentatus* Pontopidan. The number of first-year birds depends closely on the duckling mortality of the previous season. In 1948 there were 750 first-year birds whereas in 1949 there were about 260. The wintering area of the Vlieland population is not known. There are extensive descriptions of courtship behavior and an excellent series of photographs.—D.S.F.

22. The Breeding Population of a Thirty-five Acre "Timber Paddock." P. A. Bourke. 1949. *The Emu*, 49(2): 73-83. The area from which the data were obtained is a 120-acre island of dead trees in a heavily cultivated area. Observations were made during the breeding seasons of 1947 and 1948. The number of breeding species in 1947 was 30; in 1948, 32. Total breeding individuals in 1947 was 335 (95.7 per 100 acres); in 1948, 328 (94.7 per 100 acres). Total nests in 1947 was 165 (47.1 per 100 acres); in 1948, 164 (46.8 per 100 acres). The most abundant species were the Red-backed Parrot, *Psephotus haematonotus* (Gould) (69 in 1947, 73 in 1948); and the Budgerygah, *Melopsittacus undulatus* (Shaw) (24 in 1947, 18 in 1948). Among the breeding species were the English Sparrow, *Passer domesticus* Linnaeus (seven in 1947, and eight in 1948); and the Starling, *Sturnus vulgaris* Linnaeus (nine in 1947, 11 in 1948).—D.S.F.

ECOLOGY

(See also Numbers 7, 8, 9, 12, 22, 28, 38, 39, 56, 84, and 91.)

23. Selection of Feeding Niches by Birds in a Swedish Forest. (Jämförande studier över våra mesarterers näringssökande.) D. W. Snow. 1949. *Vår Fågelvärld*, 8(4): 156-169. In order to ascertain the extent of interspecific competition among closely related species in the same habitat, seven species of Paridae were studied near Uppsala in July and August 1948. The Great Tit, *Parus major* Linnaeus, was common in the forest; it fed at all heights and showed a slight preference for spruce. It dominated mixed flocks. The Willow Tit, *Parus atricapillus* Linnaeus, was also common in the forest and fed at all heights, showing no preference for pine or spruce; in mixed flocks dominated by Great Tits, Willow Tits were usually low; otherwise they fed at all heights. The Crested Tit, *Parus cristatus* Linnaeus, likewise was common in the forest; in flocks dominated by Great Tits they were usually low; otherwise they fed at all heights. The fourth species common in the forest was the Coal Tit, *Parus ater* Linnaeus, which showed a strong preference for spruce, feeding particularly on the twigs and needles. It was less social than the other species. The Blue Tit, *Parus caeruleus* Linnaeus,

occasionally wandered into the forest and always occurred high, usually in the pines. The Marsh Tit, *Parus palustris* Linnaeus, was common around the edge of the forest but seldom entered it; it fed low down, especially in small trees, preferably deciduous species. The Long-tailed Tit, *Aegithalos caudatus* (Linnaeus), was too uncommon to obtain adequate data. At the beginning of July family parties were the main social units. These were followed later by loose associations and then by true mixed flocks.—D.S.F.

24. The Effect of Catastrophic Weather Conditions on Birds. (Wetterkatastrophen und Vogelwelt.) Georg Steinbacher. 1949. *Die Vogelwarte*, 2: 100-101. The breeding population of Blackbirds, *Turdus merula* Linnaeus, in the Cologne Zoological Garden in 1946 was 14-15 pairs; in November the population was 80-100. Severe weather conditions reduced this population drastically so that in April there were only four pairs. Late in May this was increased to ten presumably by infiltration from other populations. The breeding population of Song Thrushes, *Turdus ericetorum philomelos* Brehm, was four pairs in 1946 and seven pairs in 1947. Thus the total thrush population remained the same. Also described is the effect on swifts and swallows of a prolonged rainy period during the summer of 1948.—D.S.F.

25. Birds on Tenerife. David Lack and H. N. Southern. 1949. *The Ibis*, 91(4): 607-626. This paper is based on three weeks' observations by the authors primarily with the object of studying differences in voice and habit between the populations of the same species on the Canary Islands and the British Isles. The avifauna of the Canaries is Palaearctic with strong affinities to the Mediterranean sub-region. Apparently the various species reached the Canary Islands exclusively by over-water flight. There are three endemic species and a number of endemic races. The number of breeding species is much smaller than in comparable habitats on the mainland. The authors account for this on the basis of difficulty of colonization, simplicity of habitat, and the small area occupied by most habitats. Deforestation has been accelerated and has had profound effects on the avifauna. The natural semi-desert flora and fauna have almost completely disappeared as a result of agriculture, goat-grazing, and erosion. Even in the open retama above the tree line the activities of the inhabitants, goats, and rabbits, are beginning to reduce the vegetation. The Raven, *Corvus corax* Linnaeus, occupies not only the coastal and mountainous areas, as in Britain, but also the woods and cultivated fields used by the Carrion Crow, *Corvus corone* Linnaeus, and Rook, *Corvus frugilegus* Linnaeus, respectively in Britain; the last two corvids are absent in the Canary Islands. In Britain the Chiffchaff, *Phylloscopus collybita* (Vieillot), is primarily restricted to areas of bushes with tall trees whereas the Willow Warbler, *Phylloscopus trochilus* Linnaeus, is restricted to areas of bushes without trees. The Chiffchaff is the only species of *Phylloscopus* on Tenerife and occupies both types of habitat. The Blue Tit, *Parus caeruleus* Linnaeus, is the only tit on Tenerife and apparently fills the food niches used by four species of tits in western Europe. Other examples are cited to support Lack's suggestion that competition by other species is an important factor in establishing limits on the habitat used by a species. Detectable voice differences were noted in 16 species between the British and Canary populations. There is an interestingly annotated list of 44 species. The biologic significance of subspeciation would be much greater if there were more studies of this type.—D.S.F.

CONSERVATION

26. Wildlife Effects of DDT Dust Used for Tick Control on a Texas Prairie. John L. George and William H. Stickel. 1949. *The American Midland Naturalist*, 42(1): 228-237. An area consisting of 70 percent ungrazed tall-grass prairie and 30 percent trees was dusted with 43.56 pounds 10 percent DDT per acre in mid-July. The breeding population of a 40-acre sample plot within the treated area was ascertained before and after treatment and compared with a 40-acre control area outside of the treated area. The total breeding population was reduced at least 50 percent; the effects being most pronounced among ground and brush-feeding birds. Species which were nearly or entirely eliminated included:

Cardinal, *Richmondena cardinalis* (Linnaeus); Lark Sparrow, *Chondestes grammacus* (Say); Field Sparrow, *Spizella pusilla* (Wilson); Bewick's Wren, *Thryomanes bewickii* (Audubon); Carolina Wren, *Thryothorus ludovicianus* (Latham); Kentucky Warbler, *Oporornis formosus* (Wilson); Yellow-breasted Chat, *Icteria virens* (Linnaeus); Blue Grosbeak, *Guiraca caerulea* (Linnaeus); and Painted Bunting, *Passerina cyanea* (Linnaeus). Other species were affected to a lesser extent. Fifteen dead birds were actually found between the first and fifth days following dusting.—D.S.F.

27. Hunting of Storks by Native Peoples. (Störche als Eingeborenen-Beute.) Rudolf Drost and Ernst Schüz. 1948. *Die Vogelwarte*, 1: 8-18. This is an interesting discussion of the utilization of, and attitudes concerning storks by African natives. Of considerable interest are twelve records of storks which have carried northward from Africa native arrows in their bodies. Usually storks are hunted for food, but in some instances apparently for decorative use of feathers, bills and bones. Bands from storks have been found as decorations on fingers, daggers, and swords. The value of storks as "locust-birds" is well known in Africa; in southern Africa they are particularly esteemed. The author considers the loss of storks because of human activities in Africa to be insignificant compared to that in Europe.—D.S.F.

PARASITOLOGY AND DISEASES

28. Parasites and Other Inhabitants of the Nest of the Bank Swallow. (Les Inquilins et Parasites des Nids de l'Hirondelle de rivage *Riparia riparia* (L.)) Hans Stadler. 1948. *Alauda*, 16: 40-54. This is an account of a most interesting study of the parasites and other inhabitants of the nests of Bank Swallows at Lohr am Main, Germany, throughout the year. At or before the arrival of the Swallows in spring, certain small nidicolous dipterous flies, fleas, and ticks become active; this occurs also when the nests are taken into the laboratory. The list of species of animals (found by author or reported by others) associated, in some way or other, with Bank Swallow burrows numbers more than 70 including six species of birds which use the burrows for nests, beetles, Diptera, fleas, Collembola, myriapods, isopod crustaceans, spiders, and mites (including ticks). Never found in the nests are tineid larvae, protocoeliphorid larvae, Mallophaga, ornithophylous mites (there are five species which parasitize the Bank Swallow), pseudoscorpions, and gastropods.—D.S.F.

29. Some Western Australian Mallophaga. L. Glauert. 1949. *The Emu*, 49(2): 129-132. List of Mallophaga from 18 species of Australian birds. Identifications are by Miss Theresa Clay.—D.S.F.

30. The Blood-sucking Mites of the Genus *Haemolaelaps* (Acarina: Laelaptidae) in the United States. R. W. Strandtmann. 1949. *The Journal of Parasitology*, 35(4): 324-352. Three of the four species included parasitize birds; 17 species of avian hosts are recorded.—D.S.F.

31. *Olssoniella chivosca* n.sp. (Trematoda: Dicrocoeliidae) from the Western Evening Grosbeak. Ivan Pratt and Charles Cutress. 1949. *The Journal of Parasitology*, 35(4): 361-363. The first member of this genus collected in North America.—D.S.F.

32. A Note Concerning Certain Microphallid Trematodes Infecting Shore Birds (*Limosa fedoa* and *Catoptrophorus semipalmatus inornatus*) with Description of a New Species (*Levinseniella charadriiformis*). R. T. Young. 1949. *The Journal of Parasitology*, 35(4): 353-357. *Levinseniella charadriiformis* Young described from Marbled Godwit and the Western Willet.—D.S.F.

33. The Helminth Parasites of Birds. I. A Review of the Trematode Genus *Tanaisia* Skrjabin, 1924. Elon E. Byrd and J. Fred Denton. 1950. *The American*

Midland Naturalist, 43(1): 32-57. The authors record four species of the genus from the urinary tract of 13 species of avian hosts. There are descriptions and detailed discussions of taxonomy.—D.S.F.

AVIFAUNAL DYNAMICS

(See also Numbers 36, 37, 39, 63, 64, 65, and 72.)

34. First Indication of Breeding and Further Records of Occurrence of the Collared Turtle Dove in Germany. (Erste Brutnachweise und weitere neue Vorkommen der Türkentaube (*Streptopelia decaocto*) in Deutschland.) R. Kuhk. 1949. *Die Vogelwarte*, 2: 110-111. The three breeding records cited in this paper are further evidence of the northward expansion of the species.—D.S.F.

35. The Expansion of the Blue Tit Northward in Finland. (Om blåmesens, *Parus caeruleus* L., expansion mot norr i Finland.) T. Brander. 1949. *Ornis Fennica*, 26(3): 80-82. This species has expanded its range northward in western Finland to Torne although the expansion has not proceeded as far as in Sweden.—D.S.F.

GEOGRAPHIC DISTRIBUTION, ZOOGEOGRAPHY AND REGIONAL LISTS

(See also Numbers 34, 35, 107, and 109.)

36. Foundations of Australian Bird Geography. J. Gentili. 1949. *The Emu*, 49(2): 85-129. This is a heterogeneous, but interesting, collection of comments and theories concerning several aspects of avian zoogeography with particular reference to Australia. In respect to movements of avian populations the author recognizes: (1) *sporadic*, caused by catastrophic events such as storms, etc., (2) *occasional*, such as are undertaken by birds in search of food during dry or cold weather, without seasonal regularity, (3) *seasonal*, to and from breeding areas, optimal feeding areas, etc. These may be correlated with day length (latitudinal), temperature (latitudinal and/or altitudinal), "moisture" (longitudinal, latitudinal, or altitudinal). These involve movements of individuals and are in contrast to the slower less perceptible movements which constitute changes in range correlated with changes in environment, which result in adaptation, change in range, or both. *Primary barriers* necessary for speciation, regardless of the actual mechanism of speciation, are classified as (1) *spacial* including geographic barriers (climatic, oceanic, and maritime; continental, isthmic and peninsular; orographic; volcanic) and microgeographic barriers (microclimatic, edaphic, hydric, topographic) and (2) *biological* depending on predators, parasites, competitors, and food supplies. *Secondary barriers*, which are only effective after isolation by primary barriers has operated, include microgeographic, temporal (due to a lag in migration, breeding or availability of food), biological (as listed above with the addition of symbionts and hosts), and intrinsic barriers (selection of mates, incompatibility of copulatory organs, compatibility of gametes, and infertility of hybrids). The author finds Matthew's theory of Asiatic center of origin and Wegener's hypothesis (with subsequent modifications) of continental drift as a compatible basis for explanation of the distribution of many Australian groups. Operating on the supposition of the validity of these theories, the moas, the cassowaries, and emus are presumed to have reached Australia, New Zealand and New Guinea via land bridge from the west from South America. "If the theory of continental drift be accepted the Dromaiidae should have come to Australia by way of South America and Antarctica, *i.e.* from the south. A similar origin might then be suggested for the ancestors of the Psittaciformes, which also show strong South American affinities." (p. 105.) Other groups have arrived, probably in very late Pliocene and Pleistocene, from Asia. At this time New Zealand was becoming isolated. Within Australia the Pliocene brought the development of geographic and climatic barriers with the Kosciuskan uplift and glaciation. Volcanic eruptions added new barriers. Tertiary and Recent factors of paleogeographic origin which still affect bird life in Australia are: (1) presence of uplifted areas which are not orographic barriers but which affect climate,

(2) presence of limestone areas which are dry because of underground drainage, and (3) presence of basaltic areas where formation of soils with high moisture retention is rapid. The main Australian vegetation types of importance in distribution of birds are listed as (1) rain forest, (2) forest (evergreen, semi-deciduous, wet sclerophyllous, sclerophyllous), (3) woodland (grassy, shrubby), (4) shrubland, (5) desert, (6) heath, (7) grassland, (8) mountain, and (9) swamp. Consideration is given to Pleistocene and Recent climates and their influences on the present distribution of birds. The following patterns are recognized: "1. *Fragmentary pattern* of species which have only survived in extremely small refuges in the South-West (exceptionally), in the South-East (rarely), or in the North-East, and have been unable to spread from the refuge because outside conditions have not sufficiently improved. 2. *Monocentric pattern* of species which have been able to spread from the refuge and now inhabit forest areas in the North-East, the South-East or the South-West. The further differentiation of south-eastern species between Tasmania and the mainland is mainly due to the separation imposed by Bass Strait and not to the climatic changes. The gradual increase in humidity along the eastern coast led to a northward spread of the south-eastern species and a southward spread of north-eastern species, gradually giving rise to a more complicated pattern. 3. *Dicentric pattern* with 'twin' species, usually in the South-West and in the South-East, more rarely in the North-East and the South-East. . . . 4. *Tricentric pattern* with species which have clearly spread from three refuges—as evidenced by the magpies, which have probably spread from a south-western, a south-eastern, and a central refuge. 5. *Polycentric pattern* as shown by tree-runners. . . . 6. *Acentric pattern* as shown by a few species which could survive in the arid regions as for instance the Emu." (p. 120-121.)—D.S.F.

37. A Survey of the Characteristics and Evolution of the Avifauna of the Channel Islands. (Aperçu des caractères du peuplement avien des îles anglo-normandes et son évolution.) Noël Mayaud. 1948. *Alauda*, 16: 97-108. The avifauna of the Channel Islands is very similar to that of Normandy except for the notable absence of a number of species. Some of these species do not occur because of the lack of ecologically suitable conditions, some (such as woodpeckers) because they do not readily cross open water, and some apparently because their true westward limits lie in Normandy and Brittany. The absence of certain species, including the Marsh Tit, *Parus palustris* Linnaeus; Redstart, *Phoenicurus phoenicurus* (Linnaeus); and others, is difficult to explain. Differences among avifaunae of the various islands may be explained on the basis of differences in size of the island, amount of cultivation, and relative location with respect to the mainland. The Red-legged Partridge, *Alectoris rufa* (Linnaeus), disappeared after 1875. The Quail, *Coturnix coturnix* (Linnaeus), apparently no longer breeds on the islands, a part of a general picture of decrease of the species in Europe. The Corncrake, *Crex crex* (Linnaeus), disappeared about 20 years ago as it did in France and England. The House Martin, *Delichon urbica* (Linnaeus), and the Bank Swallow, *Riparia riparia* (Linnaeus), have begun to breed after interruptions of 20 and 33 years respectively. The Carrion Crow, *Corvus corone* Linnaeus, has become a breeding species since 1938. There are notes on other species whose status has changed since the beginning of recording of accurate data. There are also notes on the subspecific status of the populations of the various species.—D.S.F.

38. Birds Observed and Collected during the Whaling Expeditions of the "Willem Barendsz" in the Antarctic, 1946-1947 and 1947-1948. W. H. Bierman and K. H. Voous. 1950. *Ardea*, 37 (Extra number), 127 pp. The materials on which this interesting report is based consist of 127 specimens, of which many were brought back frozen for anatomical studies, and the extensive field notes of the senior author. The first expedition departed from Cape Town in early December and was in the general vicinity of the South Sandwich Islands from mid-January to early April. The authors arrange the distribution of many of the observed oceanic species on the basis of the temperature of surface water: (1) *Antarctic zone* (1.9°-3.5° C.). Emperor Penguin, *Aptenodytes forsteri* Gray; Adelle Penguin, *Pygoscelis adeliae* (Hombron and Jacquinot); Antarctic Penguin, *Pygoscelis antarctica* (Forster); Macaroni Penguin, *Eudyptes chrysolophus*

(Brandt); Grey-headed Mollymawk, *Diomedea chrysostoma chrysostoma* Forster; Antarctic Petrel, *Thalassoica antarctica* (Gmelin); Antarctic Fulmar, *Priocella glacialisoides* (Smith) (breeding season only); Cape Pigeon, *Daption capensis* (Linnaeus) (breeding season only); Snow Petrel, *Pagodroma nivea* (Forster); Antarctic Whale Bird, *Pachyptila desolata desolata* (Gmelin); Kerguelen Petrel, *Pterodroma lugens* (Kuhl); Blue Petrel, *Halobaena caerulea* (Gmelin); Black-bellied Storm Petrel, *Fregetta tropica* (Gould); and South Georgian Diving Petrel, *Pelicanoides georgicus* (Murphy and Harper). (2) *Antarctic and Subantarctic Zones including the subantarctic convergence* (19° - 18° C.). Black-browed Mollymawk, *Diomedea melanophris* Temminck; Sooty Albatross, *Phoebastria fusca* (Hilsenberg); Giant Petrel, *Macronectes giganteus* (Gmelin); White-headed Petrel, *Pterodroma lessoni* (Garnot); and the Diving Petrel, *Pelicanoides urinatrix* (Gmelin). (3) *Antarctic, subantarctic, and subtropical zones* (19° - 22° C.). Wandering Albatross, *Diomedea exulans* Linnaeus; Cape Hen, *Procellaria aequinoctialis* Linnaeus; and Soft-plumaged Petrel, *Pterodroma mollis* (Gould). (4) *Subantarctic convergence* (11° - 18° C.). Jackass Penguin, *Spheniscus demersus* (Linnaeus); Shy Albatross, *Diomedea cauta* Gould; Salvin's Whalebird, *Pachyptila salvini salvini* (Mathews); and Atlantic Petrel, *Pterodroma incerta* (Schlegel). (5) *Subantarctic and subtropical zones* (3.5° - 22° C.). Great-winged Petrel, *Pterodroma macroptera macroptera* (Smith), and White-bellied Storm-petrel, *Fregetta grallaria* (Vieillot). (6) *Subtropical zone* (18° - 22° C.). Yellow-nosed Mollymawk, *Diomedea chlororhynchos chlororhynchos* Gmelin. (7) *Subtropical and tropical zones* (18° - 29° C.). Great Shearwater, *Puffinus diomedea* (Scopoli); Bulwer's Petrel, *Bulweria bulwerii* (Jardine and Selby); White-faced Storm-petrel, *Pelagodroma marina hypoleuca* (Moquin-Tandon); and Madeiran Fork-tailed Petrel, *Oceanodroma castro castro* (Harcourt). (8) *Tropical zone* (22° - 29° C.). *Puffinus diomedea* (Scopoli). Principal food of the penguins is krill (*Euphausia*) although the Antarctic Fulmar and the Cape Pigeon are "specialists" in feeding on cephalopods. Snow Petrels in catching fish, whereas the Antarctic Petrel, Blue Petrel, and Arctic Tern, *Sterna paradisaea* Pontoppidan, show specialized feeding on crustaceans. Squids of all sizes are sources of food for a variety of species in accordance to size, Wilson's Petrel, *Oceanites oceanicus oceanicus* (Kuhl), taking the smallest. The stomachs of petrels were found regularly to contain gizzard stones. In petrels heart weight varies from 1.9 percent of body weight in the Storm Petrel, *Hydrobates pelagicus pelagicus* (Linnaeus) to 0.5 percent in *Diomedea*. Most of the paper (pp. 20-116) consists of a richly annotated list of 63 species collected and/or observed. A new southernmost ($65^{\circ}55'S$, $10^{\circ}00'W$) record of the Black-bellied Storm Petrel, *Fregetta tropica* (Gould), was obtained.—D.S.F.

39. Birds of the Lake St. John Region, Quebec. W. Earl Godfrey and A. L. Wilk. 1948. *National Museum of Canada Bulletin*, 110. 32 pp. The avifauna of Lake St. John, 120 miles north of Quebec City, was studied in the period June 7 to September 9, 1946. The introduction gives a brief account of the topography, climate, and vegetation. The systematic list, which comprises 133 bird species, furnishes data on numerical status, breeding, and habitat preference. Preserved specimens in the National Museum of Canada from the region are listed and taxonomic comments based on the study of these specimens are made in all cases where reasons for subspecific identifications given are not obvious.—W. EARL GODFREY.

40. Birds of the Alta Lake Region, British Columbia. Kenneth Racey. 1948. *The Auk*, 65(3): 383-401. This is a supplement to a list published by the same author two decades earlier (*Auk*, 43: 319-325, 1926). Habitat damage by logging operations in the intervening years is described. Notes on occurrence of 143 species and subspecies are given, the subspecific determinations being based on specimens collected.—RALPH S. PALMER.

41. Bird Distribution along the Peace, Slave and Little Buffalo Rivers of Canada. Stephen W. Eaton. 1948. *The Auk*, 65(3): 345-352. Two persons traveling by canoe, raft, and afoot in June and July, 1940, identified 89 species. Data on numbers seen are given in tabular form.—Ralph S. Palmer.

42. Notes on Birds of Sandwich Bay and Vicinity, Newfoundland Labrador. Virginia Orr. 1948. *The Auk*, 65(2): 220-225. Trips were made in 1938 and 1946 to "Sandwich Bay, with brief excursions to nearby Gannet Clusters and Mason's Island in Hamilton Inlet. Observations were confined to the first three weeks in July both years, and only those data are included in the list which appeared to augment information already at hand." Annotated list of 39 species.—Ralph S. Palmer.

43. Observations on Certain Birds of the Region of Kodiak, Alaska. Joseph C. Howell. 1948. *The Auk*, 65(3): 352-358. Frequent field trips were made over a limited coastal strip along the northeastern shore of the island, near the town of Kodiak, between April 22 and July 9, 1944. Notes are given on 47 species observed.—Ralph S. Palmer.

44. An Early Illinois Record of "Cory's Least Bittern." Charles Knapp Carpenter. 1948. *The Auk*, 65(1): 80-85. Thirty specimens of this color phase of the Least Bittern, *Ixobrychus exilis* (Gmelin), have been recorded, all taken in the period 1885-1915 and mainly from two localities, one in Florida and the other in Ontario. Although the specimens are melanistic in varying degrees, most of them also show some degree of albinism.—Ralph S. Palmer.

45. The Discovery of the Habitat of Gould's Hummingbird, *Hylonympha macrocerca*. William H. Phelps and W. H. Phelps, Jr. 1948. *The Auk*, 65(1): 62-66. A series of specimens was obtained in September, 1947, in subtropical forest on the summit of Cerro Azul (altitude 920 meters), a mountain ". . . immediately back of Cristóbal Colón (Macuro) at the tip of the Paria Peninsula . . ." Venezuela.—Ralph S. Palmer.

46. Notes on the Birds of the States of Pernambuco and Paraíba, Brazil. Donald W. Lamm. 1948. *The Auk*, 65(2): 261-283. A brief description of the region is followed by an annotated list of 204 species based on 450 hours afield (and some collecting) over a period of four years.—Ralph S. Palmer.

47. The Albatrosses and Petrels of Southern Chile. (Albatrosser och stormfåglar i Sydchile.) Erik Dahl. 1949. *Fauna och Flora*, 1949(6): 225-241. This paper consists principally of observations on all species of albatrosses and petrels between October 1948 and July 1949 in the northern part of the Chilean Archipelago in conjunction with the Lund University Chile Expedition.—D.S.F.

48. The Avifauna of Pearyland, North-Greenland. Observations of "Dansk Pearyland Ekspedition" during the Summer of 1947. (Fuglelivet på Pearyland, Nordgrønland. Iagttagelser på Dansk Pearyland Ekspedition" sommeren 1947.) U. Møhl-Hansen. 1949. *Dansk Ornithologisk Forenings Tidsskrift*, 43(2): 109-129. Annotated list of 11 species with description of the area.—D.S.F.

49. The Breeding Birds of the Shetland Islands. (Les Oiseaux nicheurs des Iles Shetland.) G. K. Yates. 1949. *L'Oiseau et la Revue Française d'Ornithologie*, 19(1): 1-10. An annotated list of 47 species of which only ten are passerine. Two of the latter are represented by endemic races.—D.S.F.

50. Ornithological Observations from Ulfshale and Nyord, Denmark. (Ornithologiske iagttagelser fra Ulfshale og Nyord.) J. Chr. Harboe. 1949. *Dansk Ornithologisk Forenings Tidsskrift*, 43(2): 175-178. Notes on 46 species.—D.S.F.

51. Some Notes on the Avifauna of Rovejaure Lake Region, Lule Lappmark (Sweden) during the Summer of 1948. (Några anteckningar om fågellivet i Rovejaureområdet, Lule Lappmark, sommaren 1948.) Harold Wedérus. 1949. *Fauna och Flora*, 1949(1): 1-10. There are notes on 18 species observed in this interesting area (900-1000 meters above sea level) in northern Sweden.—D.S.F.

52. Notes on the Avifauna in an Area of Härnösand (Sweden). (An-teckningar om fågellivet i trakten av Härnösand.) Axel Bucht. 1949. *Fauna och Flora*, 1949 (4/5): 178-194. Annotated list of 174 species.—D.S.F.

53. The First Record of the Roseate Tern in Sweden. (Dougalls tjärna (*Sterna dougallii* Montague), en för Sverige ny fågelart.) E. Nyqvist and G. Otter-lind. 1949. *Vår Fågelvärld*, 8(3): 132-133. A specimen taken 10 June 1949, Lake Vänern.—D.S.F.

54. Avifauna of Lits Parish, Jämtland, Sweden. (Fågler i Lits socken, Jämtland.) Per N. Jonsson. 1949. *Fauna och Flora*. 1949(2/3): 76-84. An-notated list of 146 species.—D.S.F.

55. Avifauna of Andrarum Parish (Skane, Sweden). (Fågelfaunan i Andrarums socken.) Allan Fredriksson. 1949. *Fauna och Flora*, 1949(6): 242-254. Annotated list of 117 species based principally on observations in 1943-1948. Seventy-one are regularly breeding species.—D.S.F.

56. The Avifauna of Lake Kuokkalampi in Ruokolahti Parish (Fin-land). (Ruokolahden Kuokkalammen linnustosta.) T. A. Putkonen. 1949. *Ornis Fennica*, 26(3): 76-79. This lake is surrounded by a meadow zone of 50-400 m. The open water is bordered with *Typha*; area is 40 hectares. During the spring of 1949 there were about 300 nesting pairs. Most abundant were Black-headed Gull, *Larus ridibundus* Linnaeus 150; Sedge Warbler, *Acrocephalus schoenobaenus* (Linnaeus) 30; Mallard, *Anas platyrhynchos* Linnaeus 30; and Shoveller, *Anas clypeata* Linnaeus 15.—D.S.F.

57. Observations on the Avifauna at Sukajärvi in the Years 1944-47. (Havaintoja Siikajärven lähiympäristön linnustosta vuosina 1944-47.) Jarmo Visakorpi. 1949. *Ornis Fennica*, 26(1): 1-11. Notes on 47 species and a tabula-tion of abundance according to habitats.—D.S.F.

58. Some Observations on the Avifauna of the Island of Högsåra and its Environs (Finland) 1938-1939. (Några iakttagelser över fågelfaunan på ön Högsåra med omnejd i hitis skärgård åren 1938-39.) Stig Bergroth. (Pre-pared by Henrik Bruun and Karl August Fredrikson.) 1949. *Ornis Fennica*, 26(1): 12-16. Briefly annotated list of 72 breeding species.—D.S.F.

59. A Contribution to the Ornithology of St. Helena, and Other Notes from a Sea-Voyage. C. W. Benson. 1950. *The Ibis*, 92(1): 75-83. An an-notated list of 29 species based on the author's observations and collections on 20 January as well as material from the literature; also miscellaneous observa-tions from Beira Harbour, coast of Portuguese East Africa, Capetown harbor, and Acension Island.—D.S.F.

60. Observations on the Birds of Tristan da Cunha Islands and Gough Island in February and Early March 1948. G. J. Broekhuysen and W. Macnae. 1949. *Ardea*, 37(1/2): 97-113. This is an interesting series of notes on twelve marine and four land species for Tristan da Cunha with a smaller set of notes from Gough.—D.S.F.

61. Avifauna of Zuid-Beveland, Netherlands. (Avifauna van Zuid-Beveland.) D. A. Vleugel, J. A. M. Warren, and G. F. Wilmink. 1948. *Ardea*, 36(1/2): 1-39. Annotated list of 224 species.—D.S.F.

62. A Record of a Duck Hawk Breeding in the Netherlands. (Een geslaagd Nederlands broedgeval van de Slechtvalk (*Falco peregrinus* Tunst.)) A. B. Wigman. 1950. *Limosa*, 22(4): 337-341. A record for 1949 in a deserted sand-dune region in central Holland. Previous breeding records are for 1926 and 1930.—D.S.F.

63. Further Breeding Records of the Gull-billed Tern in the Nether-lands. (Nieuwe broedgevallen van de lachstern, *Gelochelidon nilotica* (Gm.), in Nederland.) F. P. J. Kooijmans. 1950. *Limosa*, 22(4): 342-346. Three

breeding pairs were noted in June 1949 on the bird island "de Beer" near Hook of Holland. This is the fourth case of breeding of this species in the Netherlands.—D.S.F.

64. Three Breeding Pairs of the Gull-billed Tern in the Netherlands. (Drie broedparen van de Lachstern, *Gelochelidon nilotica* (Gm.), op "De Beer", Rozenburg, in 1949.) Simon De Waard. 1950. *Ardea*, 37(3/4): 161-167. This paper also describes the records noted in the review above.—D.S.F.

65. The First Breeding Record of the Black-winged Stilt in Germany. (Erstmaliges Bruten des Stelzenläufers (*Himantopus himantopus* (L.)) in Deutschland. Wolfgang von Westernhagen. 1949. *Die Vogelwelt*, 70(5): 129-130. A breeding pair recorded in June 1949 on Hohwachter Bucht in East Holstein.—D.S.F.

66. The Distribution of the Alpine Ring Ouzel in the "Mittelgebirgen." (Zur Verbreitung der Alpenringdrossel in den Mittelgebirgen.) Rich. Heyder. 1949. *Die Vogelwelt*, 70(1): 8-14. A discussion of the status of *Turdus torquatus torquatus* Linnaeus and *Turdus torquatus alpestris* (Brehm) in the lower mountains of Germany.—D.S.F.

67. The Distribution of the Barred Warbler in Southern Germany. (Zur Verbreitung der Sperbergrasmücke (*Sylvia nisoria* Bechst.) in Süddeutschland.) Heinz-Eberhardt Krampitz. 1949. *Die Vogelwelt*, 70(3): 65-71. A careful analysis of the records of this species for southern Germany where it is an infrequent breeder.—D.S.F.

68. Ornithological Observations in Macedonia. (Ornithologische Beobachtungen aus Macedonien.) Wolfgang Makatsch. 1949. *Die Vogelwelt*, 70(2): 44-49. Notes on 14 species.—D.S.F.

69. Blue-winged Teal in Italy. (Marzaiola americana (*Anas discors* L.) in Italia.) Angusto Toschi. 1949. *Rivista Italiana di Ornithologia*, 19: 69-72. Male taken 12 November 1948, Valli Fiorentine, Medicina (Bologna).—D.S.F.

70. The Hazel Grouse in the Massif Central (France). (La Gélinotte des bois *Tetrastes Bonasia* (L.) 1758 dans le Massif Central.) Gérard Berthet. 1948. *Alauda*, 16: 187-192. Evidence is presented indicating that the Hazel Grouse occurs occasionally or rarely in the Massif Central.—D.S.F.

71. Observations in the Spring and Summer of 1948 in Les Hautes-Vosges. (Observations de printemps et d'été dans les Hautes-Vosges en 1948.) Louis Hertzog. 1948. *Alauda*, 16: 193-199. Notes on the Ring Ouzel, *Turdus torquatus* Linnaeus; Nutcracker, *Nucifraga caryocatactes* (Linnaeus); Citril Finch, *Carduelis citrinella* (Pallas); and Crossbill, *Loxia curvirostra* Linnaeus.—D.S.F.

72. Some Notes on the Reproduction of the Collared Pratincole in France. (Quelques notes sur la reproduction de la Glaréole *Glareola pratincola* (L.) en France.) G. K. Yeates. 1948. *L'Oiseau et la Revue Française d'Ornithologie*, 18: 98-103. The author believes that the colony of 15 pairs observed by him in 1937 in Camargue is the first definite breeding record, at least for a number of years, for the area by this desert species. Subsequent observations by others and by the author in 1947 indicate it to be a limited breeder at present in Camargue. The typical breeding places are dried flats with zig-zag cracks, caused by the heat of the sun, with dwarfed and dried *Salicornia*.—D.S.F.

73. Notes on the Avifauna of the Megève Region. (Notes sur l'avifaune de la Région de Megève (Haute-Savoie).) G. de Vogüé. 1948. *Alauda*, 16: 128-146. An annotated list of 82 species based on observations made during 1941-1947.—D.S.F.

74. Some Notes on the Family Falconidae Observed at Luanshya, Northern Rhodesia. Edward L. Haydock. 1949. *The Ostrich*, 20(1): 28-30. Notes on abundance, migration, breeding dates, etc., for 17 species.—D.S.F.

75. Field Notes on Northern Rhodesian Birds. E. L. Haydock. 1949. *The Ibis*, 91(4): 656-659. Notes on 18 species.—D.S.F.

76. A Midwinter Survey of the Birds of East London (South Africa). R. S. Cumming. 1949. *The Ostrich*, 20(1): 5-19. Annotated list of 74 species.—D.S.F.

77. Notes on the Martins, Swallows and Swifts; Fort Benfont, Cape Province. J. Sneyd Taylor. 1949. *The Ostrich*, 20(1): 26-28. This paper is important in that it contains information not only on the local breeding species but also notes on migrant species from the Northern Hemisphere.—D.S.F.

78. Contribution to the Ornithology of Eastern Ubangi-Shari. (Contribution a l'étude des oiseaux de l'Oubangui-Chari Oriental (Haut-Mbomou).) L. Blancou. 1948. *L'Oiseau et la Revue Française d'Ornithologie*, 18: 33-77. Annotated list of 155 species.—D.S.F.

79. Ornithological Observations in the Regions West of Lake Albert and Principally from the Ishwa Plain. (Observations ornithologiques en région occidentale du lac Albert, et principalement de la plaine d'Ishwa.) J. M. Vrijdagh. 1949. *Le Gerfaut*, 39(1/2): 1-115. Notes on 318 species and subspecies observed and/or collected in this area of Belgian Congo.—D.S.F.

80. Notes on the Birds of South-Western Nigeria. William Serle. 1950. *The Ibis*, 92(1): 84-94. Annotated list of 69 species based on observations and more than 700 specimens taken in September 1941-June 1944 mainly in the vicinity of Abeokuta, an area of considerable agriculture. There are breeding dates and some descriptions of nests and eggs.—D.S.F.

81. Notes on Some Birds of Somaliland. (Annotazioni su alcuni uccelli Somali.) Augusto Toschi. 1948. *Rivista Italiana di Ornitologia*, 18(1): 18-31. Annotated list of specimens of 92 species and subspecies taken principally by A. Philips and R. Tozzi.—D.S.F.

82. Notes on the Vertebrates of the Massif of Mau (Kenya). (Su alcune comunità di vertebrati del massiccio del Mau (Kenya).) Augusto Toschi. 1949[?]. *Supplemento alle Ricerche di Zoologia Applicata alla Caccia*, 2(2), 24 pp. Included is a briefly annotated list of 58 species of birds.—D.S.F.

83. The Ornithological Results of a Zoological Expedition in Libya. (Risultati di escursione zoologica in Libia (dicembre 1938-febbraio 1939) Uccelli.) A. Toschi. 1947. Laboratorio di Zoologia Applicata alla Caccia. Università degli Studi di Bologna. (Reprinted and renumbered from *Rivista Italiana di Ornitologia*, 17.) Annotated list based primarily on 154 specimens of 65 species and subspecies and supplemented by observations.—D.S.F.

84. The Birds of High Elevation in Morocco. (Les oiseaux des biotopes de grande altitude au Maroc.) H. Heim de Balsac. 1948. *Alauda*, 16: 75-96. This is principally an extensive annotated list of fifty species observed primarily above 2300 meters with descriptions of the ecologic characteristics of the area.—D.S.F.

85. Observations from the Upper King River District, Victoria. Donald Shanks. 1949. *The Emu*, 49(2): 132-141. Briefly annotated list of 123 species of which five are introduced.—D.S.F.

86. Notes on Birds Observed in South Arabia. P. W. P. Browne. 1950. *The Ibis*, 92(1): 52-65. Annotated list of 124 species based on observations during 1946-1948.—D.S.F.

87. The Birds of Lhasa. F. Ludlow. 1950. *The Ibis*, 92(1): 34-45. An annotated list of 118 species based on observations made during 1942-1943.—D.S.F.

88. Birds of Tsurugi and Ishizuchi Mts. in Shikoku. (In Japanese.) Uykiasu Kiyosu. 1949. *Tori*, 12(58): 144-161. An annotated list of 52 species collected and/or observed in the course of two weeks during the summer of 1943. Among the breeding records reported as new for Shikoku are the nutcracker, *Nucifraga caryocatactes japonicus* Hartert, and the chickadee, *Parus atricapillus restrictus* Hellmayr. (In part from English résumé.)—D.S.F.

89. A Reconnaissance of the N'Mai Hka Drainage, Northern Burma. B. E. Smythies. 1949. *The Ibis*, 91(4): 627-648. An annotated list of 125 species observed and/or collected in this interesting region.—D.S.F.

90. Additional Notes on the Hainan Birds. Masauji Hachisuka. 1948. *Tori*, 12(57): 63-66. Supplementary notes and data to the author's *Contribution on the Birds of Hainan* (1939).—D.S.F.

91. Notes on Birds of the Philippines. Kenton C. Lint and Ken Stott, Jr. 1948. *The Auk*, 65(1): 41-46. Observations were made in 1945 and 1946, mostly on the islands of Leyte, Samar, and Mindanao. These notes deal mainly with habits and habitat of 27 species, mostly larger birds, and data either supplement or do not concur with previously published material.—Ralph S. Palmer.

92. The Avifauna of the Botanical Garden at Buitenzorg (Java). (De avifauna van de Plantentum te Buitenzorg (Java).) A. Hoogerwerf. 1950. *Limosa*, 23(1/2): 159-280. The Botanical Garden has an area of 285 hectares and an elevation of 260 meters. This monograph is principally an extensively annotated list of 139 named forms with brief notes in abundance, habits, voice, food, nest, breeding habits, eggs, and breeding season.—D.S.F.

93. The Avifauna of Tjibodas and Vicinity Including the Natuurmonument Tjibodas-Gn.Gede (West Java). (De avifauna van Tjibodas en omgeving, inclusief het natuurmonument Tjibodas-Gn.Gede (West Java).) A. Hoogerwerf. 1950. *Limosa*, 23(1/2): 1-158. This is principally a richly annotated list of 191 named forms generally with brief notes on abundance, general habits, taxonomy, voice, food, nest, breeding habits, eggs, and breeding season. There are 21 colored plates, prepared by Goesti Abdoel Kadir, illustrating more than 250 forms included in this monograph and in the author's "De avifauna de Plantentum te Buitenzorg" (*Limosa*, 23(1/2): 159-280.).—D.S.F.

94. Notes on the Birds of Long Island, Abrolhos Group, Western Australia. Harold E. Tarr. 1949. *The Emu*, 48(4): 276-282. Extensively annotated list of 40 species.—D.S.F.

SYSTEMATICS

(See also Numbers 25 and 100.)

95. The Morphological, Anatomical, and Distributional Relationship of the Arctic and Antarctic Fulmars. K. H. Voous. 1949. *Ardea*, 37(1/2): 113-122. It is concluded that there is no basis for a generic separation of *Fulmarus glacialis* (Linnaeus) and *Priocella glacialisoides* (Smith).—D.S.F.

96. A new Subspecies of *Saxicola rubetra* (Linnaeus) from the Western Palearctic Region. P. A. Clancey. 1950. *Limosa*, 22(4): 369-370. *Saxicola rubetra hesperophila* Clancey is described as the breeding race of Ireland, Scotland, and northern England.—D.S.F.

97. Review of the Wren-Babblers of the genus *Turdinus*. K. H. Voous. 1950. *Limosa*, 22(4): 347-351. Recognized are *macrodactylus macrodactylus* (Strickland), *macrodactylus beauforti* Voous, *macrodactylus lepidopleurus* (Bonaparte), *atrigrularis* (Bonaparte), *rufipectus* Salvadori, *marmoratus marmoratus* Ramsay, *marmoratus grandior* Voous.—D.S.F.

98. The Development of Theories Which Affected the Taxonomy of Birds. Erwin Stresemann. 1950. *The Ibis*, 92(1): 123-131. An address to the

British Ornithologists' Union 25 October 1949. Primarily an analysis of the historic development and fate of taxonomic philosophies to the time of Charles Darwin.—D.S.F.

99. The Argentine Woodpeckers. (Los Picidos Argentinos.) Maria J. Pergolani de Costa. 1949. *El Hornero*, 9(1): 1-12. Synonymy, descriptions, and distribution for *Tripsurus flavifrons* (Vieillot), *Leuconerpes candidus* (Otto), and *Trichopicus cactorum* (d'Orbigny).—D.S.F.

EVOLUTION

(See also Number 25.)

100. Fossil Evidence of Avian Evolution. Hildegard Howard. 1950. *The Ibis*, 92(1): 1-21. The author does not agree with Lowe's rejection of *Archaeopteryx* and *Archaeornis* as primitive birds. Contrary to the assertions of Lowe, active flight had been attained by birds in the Cretaceous. Apparently ratite birds may have evolved by the close of the Cretaceous although they may not be ancestral to modern ratites. The late Mesozoic was apparently a period of extensive radiation resulting in several groups which may be associated with orders recognized today. The orders were all established in the early Tertiary. By mid-Tertiary, modern families and many modern genera had assumed recognizable characteristics. Many modern species were well-established in the Pleistocene. The bulk of the paper is devoted to résumés of the histories, as indicated by fossils, of the Colymbiformes, Gaviiformes, Sphenisciformes, Procellariiformes, Pelecaniformes, Ciconiiformes, Anseriformes, Falconiformes, Galliformes, Gruiformes, Charadriiformes, Strigiformes, Passeriformes, and the "ratites."—D.S.F.

101. The Restoration of Moa Heads. (In Japanese.) Masuji Hachisuka. 1947. *Tori*, 12(56): 19-21. The author presents (p. 21) drawings of reconstructions of the heads of *Dinornis*, *Anomalopteryx*, *Emeus*, and *Eurypteryx*.—D.S.F.

102. The Origin and Relationships of *Turdus celanops*. (In Japanese.) Kazuo Fujimuro. 1948. *Tori*, 12(57): 57-62. This distinctive thrush is confined to the Seven Islands of Izu except Torishima. It is suggested that *Turdus celanops* Stejneger, *T. chrysolaus* Temminck, *T. obscurus* Gmelin, and *T. dissimilis* Blyth were derived from the same ancestral stock on the Asiatic continent. (From English résumé.)—D.S.F.

BOOKS AND MONOGRAPHS

103. Lundy Isle of Puffins. Richard Perry. 1946. Lindsay Drummond, Ltd. 2 Gylford Place, W.C. 1, London. 267 pp. 6/. There is much evidence of patient watching during the five months spent on Lundy observing Razorbill Auks, *Alca torda* Linnaeus; Common Murres, *Uria aalge* (Pontoppidan); Puffins, *Fratercula arctica* (Linnaeus); and Kittiwakes, *Rissa tridactyla* (Linnaeus). The book reads easily and has excellent photographs. The study would have been greatly improved had Mr. Perry shown more knowledge of the observations of others recorded in the world literature. The many references to behavior of individual birds, noting their sex and family relationships regardless of their presence in these crowded colonies, would have been more convincing had the author reported any easy way of distinguishing the sexes or the individuals without banding or handling the birds involved.—R. A. Johnson.

104. Handbook of Norwegian Birds. (Håndbok over Norges Fugler. 5. Hefte.) Herman L. Løvenskiold. [1949] Gyldendal Norsk Forlag. Oslo. pp. 629-887. 6.00 Norwegian kroner. This volume completes the Handbook of Norwegian Birds. (See *Bird-Banding*, 20(4): 207. 1949.) It contains the accounts of the Colymbiformes, Columbiformes, Charadriiformes, Ralliformes, and Galliformes. There is a brief bibliography (pp. 871-873), an index of common Norwegian names, and an index of scientific names.—D.S.F.

105. Audubon's Birds of America. Popular Edition. With introduction and descriptive captions by Ludlow Griscom. 1950. The Macmillan Company, 60 Fifth Avenue, New York 11, N. Y. 320 pp. \$2.95. This book consists of reproductions of 288 selected Audubon plates preceded by an interesting introduction by Ludlow Griscom. This introduction contains a brief biography of Audubon and a similarly brief description of the evolution of the philosophy of wildlife conservation in America. The reduced plates (about 3½" by 5½") convey a poor idea of the natural colors of the species figured—there is something the matter with nearly every one, either too dark, too yellow, too green or off center. Since there are no descriptions, any misguided amateur who might attempt to use this book as a field manual will doubtless bring in some weird identifications.—J. L. Peters.

106. The Avian World. (Die Welt des Vogels.) Leo von Boxberger. 1949. Franckh'sche Verlagshandlung, Stuttgart. 80 pp. This is an unusually interesting and well formulated introduction to general avian biology. There are discussions of evolution, systematics, morphology, reproduction, ecology, and geographic distribution.—D.S.F.

107. Annotated Check-list of the Birds of Utah. Angus M. Woodbury, Clarence Cottam, and John Sugden. 1949. *Bulletin of the University of Utah, Biological Series*, 11(2). 40 pp. A briefly annotated list of 436 names of which 36 are hypothetical, "a by-product of studies made by the writers since 1926 in gathering material for a work on The Birds of Utah which is now completed." A very useful list.—D.S.F.

108. The London Bird Report, No. 13, 1948. Edited by C. B. Ashby. 1949. London Natural History Society. 60 pp. 2 shillings & sixpence. This is principally an annotated list of species observed within 20 miles of St. Paul's Cathedral during 1948. "The Census of Great Crested Grebes 1948" by E. R. Perrinder indicated 278 for 1946, 228 for 1947, and 300 for 1948. (pp. 35-36.) A separate section, prepared by R. C. Homes, concerns winter duck populations in the London area. (pp. 46-56.)—D.S.F.

109. Birds of Southern Alberta. A. L. Rand. 1948. *National Museum of Canada Bulletin* No. 111. 105 pp. This brings together information derived from specimens and notes from southern Alberta that have accumulated in the National Museum of Canada in the past several decades. This information is combined with that obtained by the author in southern Alberta in the summer of 1945. The six-page introduction defines the area as Alberta south of Red Deer River and Banff; gives the author's sources of information; and describes the more salient factors influencing bird distribution in the area. The 99-page systematic list, although not intended to include all the birds known to have occurred in the area, nevertheless adds a mass of definite distributional information to the relatively little that has heretofore been written on birds of the area. Specimens in the National Museum of Canada from the area are listed and the author's taxonomic comments are numerous and far transcend the area discussed—W. Earl Godfrey.

110. Life Histories of North American Wagtails, Shrikes, Vireos, and their Allies. Arthur Cleveland Bent. 1950. United States National Museum Bulletin No. 197. U. S. Government Printing Office, Washington 25, D. C. 411 pp. \$1.50. This volume, following the same general outline and style of the previous volumes, deals with 28 species (48 species and subspecies), five of which are of accidental occurrence and two of which are introductions. Eighteen of the 48 life histories in this volume were prepared by others than the author. These contributions are by Bernard W. Tucker, Winsor M. Tyler, Alden H. Miller, Wendell Taber, Alexander F. Skutch, Alexander Sprunt, Jr., and Robert S. Woods. There is an interesting review of the expansion of the Starling, *Sturnus vulgaris vulgaris* Linnaeus; unfortunately, partly because the manuscript was closed in 1943, the account is very incomplete for western North America. It is unfortunate that the period between closing of the manuscript and its publication should have been so long.—D.S.F.

111. Studies in Bird Migration being the Collected Papers of H. Chr. Mortensen. Edited by Poul Jespersen and Å Vedel Tåning. 1950. Published for the Dansk Ornithologisk Forening by Ejnar Munksgaard, 6, Nørregade, Copenhagen. 272 pp. 18 Danish kroner. The Dansk Ornithologisk Forening, with the assistance of a grant from the Rask-Ørsted Foundation, has performed a most commendable service in making available this historically important series of papers a half century after the instigation of scientific bird-banding by Mortensen. Practically all of these papers were originally published in Danish and in journals generally unavailable to American ornithologists. In addition to the 19 papers republished in translation there is an interesting biography of Mortensen and a tabulation of birds banded by him. This little paper-covered book is attractively printed and well edited. It is highly recommended to ornithologists in general and in particular to those interested in banding.—D.S.F.

Editing often seems, to an editor, to be a thankless task. As one who has been on both ends of the editorial stick, I cannot let the change of editors, which becomes effective with the January, 1951, number of *Bird-Banding*, pass without extending to James Lee Peters the most cordial thanks of the Northeastern Bird-Banding Association for a task well done and for his unstinted labors of the past eleven years. He has certainly earned our thanks and his release.

The Association is fortunate in securing the services of another active bander, E. Alexander Bergstrom, to take over the editorship. For him, I bespeak forbearance, that the troubles which are prone to attend a change of editors may be got over easily, and especially the same loyal support which has been given the staff of *Bird-Banding* in the past.

CHARLES H. BLAKE

Corrections

Bird-Banding, 20(4), October, 1949, p. 207, line 30, read: Håndbok over Norges Fugler.

Bird-Banding, 21(2), April, 1950, p. 76, review no. 55, read: *Troglodytes musculus* (not *Thraupis episcopus*).