American Museum Novitates

PUBLISHED BY THE AMERICAN MUSEUM OF NATURAL HISTORY
CENTRAL PARK WEST AT 79TH STREET, NEW YORK 24, N.Y.

NUMBER 2021 OCTOBER 14, 1960

Systematic Notes on Palearctic Birds. No. 43 Strigidae: The Genera *Otus*, *Aegolius*, *Ninox*, and *Tyto*

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The present paper completes the study of the Strigidae. The papers published earlier on this family (Vaurie, 1960a, 1960b) dealt with the genera *Bubo* and *Athene*. This paper discusses the relationships of *Otus brucei* and *O. scops* and some of their populations, and includes also notes on *O. leucotis*, *Ninox scutulata* and its nomenclature, *Tyto alba*, and a complete review of *Aegolius funereus*.

This study is based primarily on the collections of the American Museum of Natural History, but it would have been impossible to review some forms, especially *Aegolius funereus*, without the kind cooperation of several institutions which have lent me material, some of critical importance, such as the types of forms known only from one or two specimens. I express my gratitude to the following institutions and individuals for their assistance: Chicago Natural History Museum (Dr. A. L. Rand and Mr. M. Traylor), Museum of Zoology of the University of Michigan (Dr. R. W. Storer), Zoological Museum of the State University of Moscow (Dr. G. P. Dementiev and Mme. M. A. Sudilovskaya), Zoologisches Museum, Berlin (Dr. E. Stresemann), and Zoologische Sammlung des Bayerischen Staates (Dr. G. Diesselhorst) of Munich.

OTUS BRUCEI AND *OTUS SCOPS*

The Striated Scops Owl (*O. brucei*) and the Scops Owl (*O. scops*) are sympatric over a very wide region, which extends from the Near East

eastward through Iraq and the Iranian region to western India and north to Transcaspia and Russian Turkestan. They differ from each other very clearly morphologically and are considered to be related but separate species by all authors with the exception of Meinertzhagen (1948), who states that *O. brucei* is "a poor race of *Otus scops*." The two owls are also said to have very different notes and calls, a behavioral difference that one would expect between two closely related sympatric species, but all the differences in vocalization or morphology were dismissed by Meinertzhagen as instances of "individual variation." He subsequently (1954) even denied "individual variation" in vocalization, stating "The call [of *brucei*] is identical with that of *O. s. scops* in spite of many assertions to the contrary," but Cheesman (1922, p. 417), who was familiar with the two owls, states "The note [of *brucei*] is quite different to that of [*O. scops*] *pulchellus*." The morphological differences are discussed below.

Dementiev (1933, p. 506) mentions that *brucei* is a paler, grayer bird than *scops*, lacks the ochraceous pigments of the latter and its white spots on the hind neck and nape, has a different wing formula, a longer tail and tarsus, and is more feathered on the toes, the feathers coming farther down. These many differences are confirmed by the specimens I have examined, and I find also that young birds are very easy to identify as to species, as the juvenal plumage of *brucei* is barred, not vermiculated or streaked as in *scops*. A young *scops* resembles the adult, but its markings are paler and much less accentuated, whereas a young *brucei* is quite different from the adult. The wing formula of *scops* varies geographically, as Meinertzhagen (1948) states, but it is of interest to note that it differs clearly from that of *brucei* in the zone of overlap. In the three races (*cycladum*, *pulchellus*, and *turanicus*) of *scops* that are sympatric with *brucei*, the first (outer) primary is always clearly longer than the sixth and the second is subequal to the third, whereas in *brucei* the first is clearly shorter than the sixth and the second is shorter than the third. Individual variation may affect the relative lengths of the feathers, and in some specimens of *brucei* the first is subequal to the sixth, but not clearly longer, being equal to the seventh in most specimens, rather than subequal to the fifth as in *scops*. The two species differ also very clearly in their proportions, as shown below.

In the list of specimens that follows, notice that a specimen of *brucei* and one of *scops* were collected at the same date and locality (El Hauwidsche, Palestine, on May 7, 1911), the specimen of *scops* being a female. The collector of both was Aharoni, who had taken also a female

of *brucei* at the same locality five days earlier, and in 1940 Koelz collected a female of *brucei* and one of *scops* in Fars which were breeding, as he labeled them as "laying." In these four females the tail measures 72, 79 and the tarsus 29, 32 in the two specimens of *brucei*, as against, respectively, 64, 65 and 23, 25 in the two of *scops*. The proportions in the length of the wing, tail, and tarsus are quite distinct, as shown below, and the two individuals of *brucei* differ also very sharply from the two of *scops* in their wing formula and coloration. The morphological differences shown by these and the other specimens listed cannot be denied and dismissed as instances of "individual variation" (as Meinertzhagen apparently would do), because to do so would rob the concept of individual variation of any meaning. Furthermore, the two species are undeniably sympatric, and, as I have emphasized, all the specimens that I have seen can be identified to species with ease and certainty, whether adult or young.

The adult birds that I have examined from the regions where the two species are sympatric are listed below. To avoid repetition, the first measurement mentioned is the length of the wing, followed by that of the tail and tarsus, and the proportions are expressed in per cent of the length of the tail to that of the wing, and of the length of the tarsus to that of the wing. *Brucei* is monotypic. The races of *scops* involved are *cycladum* (Near East), *pulchellus* (Ferghana), and *turanicus* (the rest of the range).

Otus brucei

El Hauwidsche, Palestine, May 2, 1911, female: 152, 72, 32; 47, 21.
Same locality, May 7, 1911, male: 152, 70, 33; 46, 21.6.
Aleppo, Syria, May, 1919, female: 155, 72, 29; 46.5, 18.6.
Podagi, southeastern Iran, June 24, 1898, female: 165, molting, 31; –, 18.9.
Saadatabad, southeastern Iran, December 24, 1939, male: 155, 76, 31; 49, 20.
Niriz, Fars, southern Iran, March 29, 1940, female: 160, 79, 29; 49, 18.1.
Ferghana, April 6, 1903, female: 159, 77, 30; 48.5, 18.8.
Same locality and date, female: 166, 82, 33; 49.5, 20.

Otus scops

El Hauwidsche, Palestine, May 7, 1911, female: 154, 65, 23; 42, 14.9.
Jericho, Palestine, April 17, 1920, male: 153, 65, 23; 42.5, 15
Jerusalem, Palestine, March 27, 1920, female: 163, 68, 24; 41.5, 14.7.
Karaj, northern Iran, April 29, 1943, female: 159, 65, 25; 41, 17.2.
Talimansur, southwestern Iran, April 28, 1940, male: 150, 60, 23; 40, 15.4.
Taze, southwestern Iran, May 6, 1940, male: 150, 62, 22; 41, 14.7.
Durud, southwestern Iran, April 13, 1941, male: 157, 60, 25; 38, 15.9.
Shiraz, Fars, southern Iran, March 14, 1940, female: 158, 64, 25; 40.5, 15.8.
Jurm, northeastern Afghanistan, August 6, 1937, male: 160, 64, 24; 40, 15.

Same locality and date, male: 151, 65, 22; 43, 14.5.
Same locality and date, male: 155, 63, 24; 40.5, 15.5.
Same locality and date, male: 156, 65, 26; 41.5, 16.7.
Same locality, August 7, 1937, male: 161, 65, 24; 40.5, 14.9.
Same locality and date, female: 165, 70, 25; 43, 15.2.
Aq Cha, northwestern Afghanistan, September 8, 1937, female: 156, 63, 25; 40.5, 16.
Daulatshah, eastern Afghanistan, May 31, 1937, male: 154, 63, 26; 41, 16.9.
Transcaspia, 1907, male: 163, 63, 25; 38.5, 15.3.
Same region, June 9, 1892, female: 154, 60, 26; 39, 16.8.

Otus scops

The Scops Owl is widely distributed in the Palearctic and Oriental regions and varies geographically, Peters (1940, pp. 89–93) recognizing 21 subspecies. The races represented in the Palearctic region belong to two groups, the nominate *scops* group in the western Palearctic, and the *sunia* group in the east. These two groups are isolated from each other by a very broad gap in distribution in Siberia and a narrower one in western India and are characterized by differences in the shape of the wing and in coloration. The wing is more rounded in the *sunia* group, although this group includes at least one highly migratory race (*stictonotus*) which exhibits a gray or red phase, but a true red phase is not found in the nominate *scops* group, although individuals may vary in one population from grayish to rufous brown. The birds of the nominate *scops* group also vary much less individually, individual variation being quite slight in some of its populations or races, especially the insular ones and those of North Africa.

All the races of the nominate *scops* group are restricted to the Palearctic region, and I recognize seven: *mallorcae* (Iberian Peninsula and Balearic Islands), *cycladum* (Crete, Cyclades, and Near East), *cyprius* (Cyprus), nominate *scops* (western and southern Russia westward through central and southern Europe, including Corsica and Sardinia, to northwestern Africa), *pulchellus* (eastern Russia eastward to the Yenisei, northern Mongolia, and Russian Turkestan), and *turanicus* (Iraq eastward to Baluchistan and north to Transcaspia and eastern Uzbekistan).

This number is one more than is usually recognized by most authors, including Peters (*loc. cit.*), who consider that *mallorcae* von Jordans, 1923, type locality, Mallorca, is a synonym of nominate *scops* Linnaeus, 1758, type locality, Italy. I find, however, that a series of 20 birds from the Balearic Islands and Spain represent a geographical form about as distinct as any separated nomenclaturally in the nominate *scops*

group, with the exception of *cyprius*, which is the most strongly differentiated of all. These birds from the Balearic Islands and Spain show only a very slight amount of individual variation and differ from nominate *scops* by being grayer, less brownish, above and below, by having whiter, less buffy, spots on the upper parts and scapulars, and by being more sharply and narrowly streaked in the great majority of the specimens. This series of *mallorcae* consists of 10 specimens each from the islands (Ibiza and Mallorca) and Spain (seven from Salamanca, one from Aguilas, and one each collected near Valencia and near Madrid). The birds from the islands and Spain can be matched perfectly, skin for skin, with the exception of the one taken near Madrid (on June 1, 1953) which is the grayest and most sharply streaked of all. *Mallorcae* is partly migratory, and I have seen two specimens which appear to be this race, one collected on November 6, 1922, at Bilma Oasis in the central Sahara, and one March 19, 1903, at Boulaban in the Grand Atlas in Morocco.

Sharply streaked races (*pulchellus* and *turanicus*) are found at the eastern end of the range of the nominate *scops* group, but *pulchellus* is browner, less grayish, above, and paler below than *mallorcae*, while *turanicus* is very pale, the palest race. *Cycladum* is grayish above, but the ground coloration is darker, the white spots are more conspicuous, and the black shaft streaks are heavier than in *mallorcae*. *Cycladum* is intermediate in coloration between nominate *scops* and *cyprius*, the latter being dark gray, with very prominent white spots and heavy black shaft streaks. The birds of the Near East are best called *cycladum*, though they are slightly more brownish. I have not seen specimens from Rhodes or southwestern Asia Minor, but, as the birds of these regions are said to be more grayish than nominate *scops*, I suspect they are similar to or differ only slightly from *cycladum*.

OTUS BRUCEI

This species appears to be monotypic, although Mukherjee (1958, p. 301) states that the birds of Iraq, Iran, and Baluchistan are smaller than *brucei* from "Bombay State," and has named them *exiguus*, type locality, Baghdad. The wing length, according to Mukherjee, measures 148, 152, 156 in three males and 154 in one female of *exiguus*, as against 158, 164 in two males and 163, 165, 165 in three females from India. However, in specimens from Iran measured for me by Mr. M. A. Traylor of the Chicago Natural History Museum and those that I have measured, the wing length measures 151, 153, 155, 155, 155, 162 in males and 160, 165 in females. No difference in size seems to exist,

therefore, and I question also the differences in coloration mentioned by Mukherjee, although I have not seen specimens from India.

Mukherjee does not say when his specimens were collected, other than that the type of *exiguus* was collected in July, but the differences he mentions suggest that he has compared birds in worn breeding plumage from Iraq and Iran with birds from India in fresh or relatively fresh plumage. I suspect this because *Otus brucei* is known from India only as an autumn migrant and winter visitor. It certainly does not breed in "Bombay State," although it may breed in Gilgit and Sind, but this is not certain and, according to Baker (1934, p. 522), "The only record of its breeding in India . . . [is from] certain localities round Quetta," northern Baluchistan. That country was controlled politically by India but forms a part of the Iranian region. In short, I believe that *exiguus* is not valid and is a synonym of *brucei* Hume, 1873, type locality, Bombay Presidency, which was based on a winter visitor collected on January 26, 1870, according to Meinertzhagen (1948, p. "163" [=9]).

OTUS LEUCOTIS

The White-faced Scops Owl is an African species which ranges in the dry belt south of the Sahara from Senegal eastward to Somaliland, southward, with the exception of the equatorial forest where the species does not occur, to the Orange River and Natal. In the Sudan, it is found north at least to Atbara, or somewhat south of the limits of the Palearctic region, but in the southern Sahara it breeds north to the Aïr Massif, an area that I include in the Palearctic region.

The population of the Sudan differs from all the other populations of the species (nominate *leucotis* Temminck, 1820, type locality, Senegal, and *granti* Kollibay, 1910, type locality, southwest Africa) by being much paler, much more "sandy," throughout in coloration, more yellowish, less gray, less black, on the crown, less broadly barred with brown on the primaries, and by being more narrowly streaked with black, especially below. This pale population is *margarethae* von Jordans and Neubar, 1932, type locality Zankab (or Zankhab), Bahr el Abiad (or the White Nile between Khartoum and the Bahr el Ghazal). The validity of *margarethae* has been denied by Mackworth-Praed and Grant (1938, p. 767), who state that it is a synonym of nominate *leucotis*, but the material that I have compared from Senegal and the Sudan (including the cotype of *margarethae*) shows incontrovertibly that *margarethae* is a very well-differentiated subspecies. *Granti*, which inhabits the regions south of the equator, is the darkest

race, darker and grayer than nominate *leucotis* and more broadly streaked and barred.

The only specimen of this species that has been collected so far in the Aïr is an adult female that was taken on July 26, 1922, at Tebeig by Buchanan. This specimen was identified as nominate *leucotis* by Hartert (1924, p. 18), along with another female and an immature male from Hausaland, northern Nigeria, collected also by Buchanan. I find, however, that the specimen from the Aïr is considerably paler than the adult from Nigeria and than four additional adults from Hausaland and, in fact, is even paler than topotypical *margarethae*, especially on the tail and primaries. This specimen suggests that a distinct form may inhabit the Aïr, but, until more material becomes available, it is best to refer the population of that region to *margarethae*. The specimens from Hausaland are similar to nominate *leucotis* but average slightly paler than birds from Senegal.

AEGOLIUS FUNEREUS

Tengmalm's Owl, or the Boreal Owl, as it is called in North America, inhabits the forests of northern North America and northern Eurasia, and, farther south, some of the mountain forests of Europe, the Caucasus, Tian Shan, western Himalayas, and western China. The distribution appears to be continuous in the American or Eurasian taiga, but the montane populations are isolated from those of the taiga and from one another, a type of distribution that suggests that they represent relicts. *Aegolius funereus* varies geographically, and Peters (1940, pp. 172–173) recognized eight subspecies; he made no mention of *juniperi* from the western Himalayas, which was described by Koelz in 1939 but too late to be considered by Peters. Eight of these nine forms are Palearctic, but it seems to me that it is quite ample to recognize only four in that region, making a total of five valid subspecies with the addition of *richardsoni* from North America.

Peters' list was based on the revisions of Hartert (1913) and of Dementiev (1933, 1934) and notes by Steinbacher (1936), but these authors were unable to examine some forms and, hitherto, specimens of *caucasicus, beickianus,* and *juniperi* have not been compared, although the diagnoses of the last two suggest that they might be similar to *caucasicus*. My review was made possible by the cooperation of several colleagues. Professor Dementiev lent me, among other specimens, two of *caucasicus* which apparently is not represented in collections outside Russia. Dr. Rand and Mr. Traylor sent me the type of *juniperi;* Dr. Storer, another specimen of *juniperi;* and Professor Stresemann, the

type of *beickianus*. The last, and the two specimens of *juniperi* mentioned, are the only ones known. Dr. Diesselhorst sent me the type of *pallens* and other specimens.

Aegolius funereus richardsoni Bonaparte, 1838

Type locality, Maine.

This American race is poorly differentiated from nominate *funereus*, being "*äusserst ähnlich*" to it, as Hartert (*loc. cit.*) had noted, but it averages somewhat darker and a little larger. In *richardsoni*, the ground color of the upper parts is darker, the streaks below are broader and darker, the feet are more spotted with brown, and the white spots are less abundant, but it should be emphasized that these differences are evident only in series and are slight or relatively so. The measurements overlap, and I list them individually, as, to my knowledge, no series of measurements have been compared. Wing length, *richardsoni*, 10 males, 168, 170, 170, 171, 171, 171, 172, 173, 182, 189 (173.7), eight females, 168, 176, 178, 178, 182, 184, 184, 185 (179.3); nominate *funereus*, nine males, 164, 164, 165, 166, 167, 169, 169, 172, 175 (167.9), 12 females, 165, 167, 169, 172, 173, 173, 176, 176, 177, 177, 180, 181 (173.8). Tail length, *richardsoni*, males, 83, 90, 92, 93, 94, 95, 97, 98, 103, 103 (94.8), females, 93, 95, 97, 100, 101, 102, 105, 106 (99.9); nominate *funereus*, males, 91, 92, 92, 92, 92, 92, 95, 97, 102 (93.9), females, 90, 91, 92, 93, 93, 95, 96, 96, 97, 98, 100, 104 (95.4).

The breeding range of *richardsoni* is restricted to Alaska and Canada, but in the winter the bird may wander occasionally south to north central and northeastern United States.

Aegolius funereus funereus Linnaeus, 1758

Type locality, Sweden.

The nominate race inhabits the forests of northern Europe from about latitudes 69° N. in the Scandinavian Peninsula and Finland, about latitude 65° N. in the Gouvernement of Archangel, and about latitude 62° N. on the upper Pechora River, south to East Prussia, White Russia, central Russia, and the southern Urals, and also, as isolated populations, the Carpathians, the mountains of Germany, the Vosges, Jura, and the Alps south to France and northern Italy, the mountains of central Europe and of the Balkans.

The geographical variation is clinal from west to east in northern Eurasia, the populations becoming paler and larger as they range farther east, but the cline appears to be well marked only in northern Siberia, the birds (*magnus*) of northeastern Siberia being well differ-

entiated from nominate *funereus*. In western, southern, and southeastern Siberia, the birds (*pallens*) differ from nominate *funereus* only by being slightly paler, a little grayer, less chocolate-brown, a little more spotted with white, and, perhaps, by averaging very slightly larger. The cline begins apparently in western Siberia, where about half of the individuals can be distinguished from nominate *funereus*, according to Johansen (1956, pp. 212–213). This author states that the wing length in *sibiricus* (but equals *pallens*, see below) measures "165–183," as against "160–178" in nominate *funereus*, but the measurements of the latter given above and the comparative measurements of Dementiev (1951, pp. 392–396) show that the overlap is virtually complete and the differences in average negligible. According to Dementiev, the wing length of *sibiricus* measures 156–173 (166.25) in 19 males and 166–183 (176.1) in 23 females, as against 154–170 [no average] in 21 males and 163–181.4 (174.7) in 34 females of nominate *funereus*. In the specimens that I have seen, a male from Krasnoyarsk measures 173, a female from Sakhalin 173, and three males of doubtful origin measure 169, 173, 175.

The specimen from Krasnoyarsk is distinctly paler than any specimen of nominate *funereus* that I have seen, but the one from Sakhalin is darker than the one from Krasnoyarsk and about as dark as nominate *funereus*, but more grayish brown, less rufous chocolate-brown. In both, the upper parts are better spotted with white than is usual in nominate *funereus*. The fact that the bird from Sakhalin is darker suggests that the coloration may become darker again in southeastern Siberia.

Aegolius funereus magnus Buturlin, 1907

Type locality, Kolyma River, with *jakutorum* Buturlin, 1908, type locality, Yakutia, as a synonym.

This race inhabits northeastern Siberia from the Kolyma Basin and perhaps farther west, from the basin of the Indigirka, eastward to Anadyrland (but not to the coast), Koryakland, and Kamchatka, wandering occasionally during the winter to the Commander Islands, Pribilofs, and Alaska (St. Paul Island). The only specimen that I have seen was collected on Bering Island on January 31, 1911, and is very pale, profusely spotted with large white spots, and broadly and sharply barred with white on the tail, whereas the tail is more or less sparingly and irregularly spotted with white in all the other races. It is a male with a wing length of 181, but other specimens are larger, as Dementiev (*loc. cit.*) states that the wing length of *magnus* measures 172–188 (180) in six males and 180–191.5 (187) in three females. I have followed Dementiev (1951) in synonymizing *jakutorum* with *magnus*. Peters (*loc.*

cit.) recognized *jakutorum*, following the earlier revisions of Dementiev (1933, 1934), but *jakutorum* represents only a form intermediate between *pallens* (i.e., "*sibiricus*") and *magnus*.

Aegolius funereus pallens Schalow, 1908

Type locality, Kashka Su, Alai Range, Tian Shan, Russian Turkestan, with *sibiricus* Buturlin, 1910, type locality, southern Ussuriland in winter, as a synonym.

This race, which is rather poorly differentiated from nominate *funereus*, is discussed in part above. It ranges from western and central Siberia eastward to the coast of the Sea of Okhotsk north to the region of Magadan, and south to the northern borders of the forested steppes, the Altai, Tarbagatai, Sayans, northern Mongolia, Transbaicalia, Amurland, Sakhalin, and northern Ussuriland, an isolated population inhabiting the Tian Shan from the Zarafshan and Kirghiz ranges in Russian Turkestan east to at least the Aqsu River in Sinkiang, from whence I have examined a specimen.

Dementiev (1951), who has seen six specimens from the Tian Shan, states that they are doubtfully separable from those of Siberia but maintains both *pallens* and *sibiricus* on the ground that the material he has seen is insufficient, but chiefly because these forms are isolated geographically from one another. He acknowledges, however, that this reason may not be valid in view of the fact that the isolated populations of the mountains of Europe do not differ taxonomically from those of Scandinavia and northern Europe. Dementiev was unable to give a satisfactory diagnosis for *pallens*, stating that it was more or less dark, a little less gray than *sibiricus*, but not so rufous as most individuals of nominate *funereus*.

The material that I have seen is scanty also but suggests that the birds of the Tian Shan and Siberia do not differ taxonomically and should therefore be called *pallens*, which was described two years earlier than *sibiricus*. My comparative material consists of the birds mentioned above from Krasnoyarsk and Sakalin, which are adults, the type of *pallens*, and three adults from the Tian Shan, one from Alma Ata, one from the Issyk Kul, and one from Aqsu. These specimens have a wing length of 170 in one male, and 166, 175 in two females and therefore do not appear to differ in size from the birds of Siberia, the measurements of which are given above. The type of *pallens* is not diagnostic, as it is not fully adult, being barred below rather than streaked, and, furthermore, is indistinguishable from specimens of nominate *funereus* in the same plumage from Europe. Two of the three adults from the

Tian Shan are paler than the specimen from Krasnoyarsk, but the difference is extremely slight, the third specimen being darker than the one from Krasnoyarsk but paler than the one from Sakhalin. In other words, these specimens and apparently also the ones seen by Dementiev, though not very numerous, fail to show that a distinct race inhabits the Tian Shan.

Aegolius funereus caucasicus Buturlin, 1910

Type locality, northern Caucasus, with the following synonyms, *beickianus* Stresemann, 1928, type locality, "northern Kansu" (equals northeastern Tsinghai), and *juniperi* Koelz, 1939, type locality, Kyelang, Lahul, northern Punjab.

This race inhabits the Caucasus, western Himalayas, and the mountains of western China and differs from the other Palearctic races by being darker, more chocolate-brown, and less spotted with white. It is virtually identical in coloration with *richardsoni*, including the color and extent of the streaks on the under parts, differing from it only by being somewhat less spotted with white above, the spots being more concealed by the brown part of the feathers, somewhat reduced in size and less abundant. It is smaller than the other races, the wing length of seven adults of both sexes measuring 151–149 (156.4) according to Dementiev (1951), and 158 in an unsexed specimen and 166 in one male that I have seen from the Caucasus, both being adult.

The type and another specimen of *juniperi* are identical in coloration with the two specimens from the Caucasus, with the only exception that they are irregularly barred with brown below rather than streaked; the type of *beickianus* differs from the other four specimens by being a little less spotted with white and by being quite extensively smudged with brown below. The ground color is identical in all the five specimens, and the differences mentioned are not subspecific characters, in my opinion, but signs of a certain degree of immaturity. Stresemann and Koelz believed their birds to be adult, which is doubtful, as I have examined specimens with a similar pattern in *richardsoni*, nominate *funereus*, and *pallens* which do not appear to be fully adult. The plumage sequence of this species does not seem to have been studied adequately, as these specimens suggest that the birds molt from the juvenal plumage, which is "uniformly" brown, not streaked or spotted, into a plumage similar to that of the adult but less sharply patterned. Such a plumage is not mentioned in standard works, and, in fact, very few molting birds of any kind seem to have been examined.

The wing length of the type of *beickianus*, a male, measures 166 mm.,

that of the type of *juniperi*, a female, 182, and that of the other specimen of *juniperi*, which was not sexed, measures 165 as far as I can determine as it could not be prepared properly. A wing length of 182 seems to be very long for *caucasicus*, but, as shown above, the wing length varies a great deal individually in this species, from 168 to 189 in males of *richardsoni*, and 154 to 175 in male nominate *funereus*.

The type of *beickianus* was collected on June 26, 1927, and Koelz (1939) states that the type of *juniperi* is a "breeding female" collected on "June 18, 1936," but the original label was dated "October" and does not say that the bird was breeding or in breeding condition. The other specimen of *juniperi*, which is identical with the type except in measurements, was "found dead at Kyelang" in 1951 and sent to Koelz. A third specimen of *juniperi*, a very young bird "taken at Jurnat, Lahul, on June 23, 1936," has been lost or misplaced, as it cannot be found in the Koelz collections. These birds are the only specimens of *beickianus* and *juniperi* that have been collected so far.

Kansu, Lahul, and the Caucasus are widely separated, and possibly future material will show that these populations are distinct, but the evidence furnished by other isolated populations shows that such distinction cannot be assumed. The isolated populations of Europe do not differ taxonomically and, as stated above, those of the Tian Shan do not appear to do so from those of Siberia. Furthermore, geographical isolation, even of long duration, has not favored much geographical variation in this species, if we judge by the race of North America (*richardsoni*) which differs slightly only from that of Europe (nominate *funereus*) or that of the Caucasus (*caucasicus*).

NINOX SCUTULATA

The Brown Hawk Owl breeds from Japan south through the Ryu Kyus to Formosa and the small islands between Formosa and Luzon, and from Ussuriland south through eastern China to India, Ceylon, the Andamans, and Nicobars, and from the Indo-Chinese countries south through the Malay Peninsula to the Greater Sundas and some outlying islands, north to the southern Philippines. The populations inhabiting the northern end of the range are migratory, wintering in the Philippines, Celebes and some neighboring islands, Greater and Lesser Sundas, and the Malay Peninsula.

The northern populations are generally divided into two subspecies: *ussuriensis* Buturlin, 1910, type locality, southern Ussuriland, and nominate *scutulata* Raffles, 1822, type locality, Sumatra, but the validity of

ussuriensis is uncertain and requires further study, and I consider that it is best to synonymize this name with nominate *scutulata*.

The two forms appear to differ only in average size, *ussuriensis* averaging larger. According to Buturlin (1910), eight specimens from Ussuriland and Korea have a wing length of 230–245, as against 203–228 in an unspecified number of birds from Japan, but some specimens from Japan are larger than those measured by Buturlin, as Ripley (1953) states that the birds of Japan have a wing length of "212–238." Dementiev (1933, p. 508) mentioned that the specimens he had seen from Ussuriland had a wing length of 222, 225 in two females and 230.5–237.5 in an unspecified number of males, but he subsequently (1951, p. 391) stated that four females from Ussuriland measure 222.1–240 (230.5) and five males 229–245 (235.4). In the specimens I have measured, one female from Ussuriland measures 225, the only bird that I have seen from that country, two males from Japan measure 220, 224, and three females 218, 225, 225. It is not certain, however, that the specimens from Japan were local birds, as one was collected in September, two were taken in December, and the other two are not dated. The measurements mentioned above are the only ones that I have been able to gather and do not permit analysis, but it is clear, nevertheless, that the measurements of *ussuriensis* overlap those of nominate *scutulata* to a considerable extent and that it would be impossible to identify many specimens away from their breeding range.

The birds that breed in the Ryu Kyus, Formosa, and Botel Tobago represent a distinct race which the "Hand-list of the Japanese birds," published by the Ornithological Society of Japan (1958, p. 114) calls *totogo* Momiyama, 1931, type locality, Botel Tobago, synonymizing *yamashinae* Ripley, 1953, type locality, Amami Oshima, with it. This race, which appears to be non-migratory, is smaller than nominate *scutulata* and averages darker above, more sooty brown, less chocolate brown, and in some individuals that I have seen from the Ryu Kyus the head is darker than the back, whereas these parts are virtually concolorous in the birds of Japan. The wing length in the specimens that I have examined that were collected during the breeding season in the Ryu Kyus (on Okinawa and Ishigaki) measures 210, 214 in males, 206, 207, 212, 212 in females. Specimens measured by Ripley (1953) from the Ryu Kyus have a wing length of 210–213 in six males and 204–209 in eight females. I have seen no birds from Botel Tobago and no breeding bird from Formosa.

Deignan (1951), commenting very briefly on the birds of Korea and China, states that they differ from those of Japan and should probably

be called *florensis* Wallace, 1864, type locality, Flores. It seems to me, however, that this question requires further investigation, and I continue to refer the birds of Korea and China to nominate *scutulata*, as all authors prior to Deignan have done. Eleven specimens that I have seen, collected between March 15 and May 16 in eastern China from Fukien north to Shantung, are nominate *scutulata* but may represent migrants.

Nomenclature

The nomenclature of this species, which had been stable since the revision of Hartert (1913, pp. 992–995) who was the first reviser, became badly confused when Delacour and Mayr (1946), Delacour (1947), and Dementiev (1951), introduced several very ill-advised changes in it. Delacour and Mayr, and Delacour substituted *japonica* Temminck and Schlegel, 1847, type locality, Japan, for *scutulata* Raffles, and allocated the latter to the resident race of the southern Malay Peninsula and Sumatra which had been called *malaccensis* Eyton, 1845, type locality, Malacca. They were, unfortunately, followed by Deignan (*loc. cit.*) and by the "Hand-list of the Japanese birds" (*loc. cit.*), the latter citing Delacour and Mayr, and Delacour, as its authorities for this change. Dementiev substituted *macroptera* Blasius, 1888, type locality, Great Sangihe Island, north of Celebes, for *ussuriensis* Buturlin and was followed by the "Hand-list," Dementiev confusing matters further by inadvertently renaming *malaccensis*, calling it *moluccensis*. This last change was an error and need not be considered, but all the other changes are equally invalid, as they are not supported by documentation, or any reason whatever, and ignored the first reviser principle.

The description given by Raffles for his *scutulata* is not diagnostic, as it applies equally well to the birds that visit Sumatra or the residents on that island, but the nomenclatural question was settled by Hartert (*loc. cit.*) who was the first reviser to allocate *scutulata* Raffles to the race which breeds in Japan and visits Sumatra in the winter, synonymizing *japonica* Temminck and Schlegel with *scutulata* Raffles, and maintaining *malaccensis* Eyton for the birds of the southern Malay Peninsula [and Sumatra]. Hartert had been followed universally prior to Delacour and Mayr (1946) and Delacour (1947), including the foremost authors on the birds of Malaysia such as Kloss (1931) and Chasen (1935).

Hartert (*loc. cit.*) was not certain whether to use *ussuriensis* or *macroptera* for the birds of Ussuriland but decided in favor of *ussuriensis* which, though described later than *macroptera*, has the merit of being

unequivocal, whereas it is impossible to decide whether the birds named by Blasius were visitors from Ussuriland or Japan. Blasius did not select a type, and his four specimens, in view of the fact that they had a wing length of 223, 226, 227, and 240, could have come from either Ussuriland or Japan (see above). At any rate, Hartert was followed universally prior to Dementiev (1951), and this question becomes academic if, as I believe, the birds of Ussuriland do not differ taxonomically from those of Japan.

To summarize the nomenclature of the valid races discussed, it seems to me that it should stand as follows:

Ninox scutulata scutulata Raffles, 1822, Sumatra on migration, with the following synonyms: *japonica* Temminck and Schlegel, 1847, Japan; *macroptera* Blasius, 1888, Great Sangihe Island on migration[1]; and *ussuriensis* Buturlin, 1910, southern Ussuriland.

Ninox scutulata totogo Momiyama, 1931, Botel Tobago [=Koto Sho Island, off southeastern Formosa], with *yamashinae* Ripley, 1953, Amami Oshima, as a synonym.

Ninox scutulata malaccensis Eyton, 1845, Malacca, with *moluccensis* Dementiev, 1951, *lapsus calami* for *malaccensis* Eyton, as a synonym.

TYTO ALBA

The Barn Owl is virtually cosmopolitan and has been divided into many subspecies. Peters (1940, pp. 77–82) recognizes 34 subspecies, nine of which are Palearctic or represented in the Palearctic region. They are: *detorta* (Cape Verde Islands), *gracilirostris* (eastern Canaries), *schmitzi* (Madeira), nominate *alba* (North Africa and Europe south of *guttata*), *guttata* (northern and central Europe), *ernesti* (Corsica and

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[1] I follow Hartert (1913, p. 993) in accepting Great Sangihe as the correct type locality and in considering that *macroptera* was first described by Blasius in 1888 ([October], in Ornis, vol. 4, pp. 545–555). However, on page 545 of this paper, Blasius gives two bibliographical references to his *macroptera* which suggest that he may have described it earlier, namely, "Braunschweig. Anzeigen V. II. Jan. 1888, Nr. 9, p. 86;—Idem Russ' Isis 1888, p. 86 ('Manganitu, Gross-Sanghir')," and Peters (1940, p. 141) has given precedence to the "Braunschweig. Anzeigen" in citing *macroptera* which he supplies with the type locality "Mindoro." The two publications cited by Blasius are not available to me, but I note that Blasius did not mention "Mindoro" in these bibliographical references but "Gross-Sanghir" only, and I note further that "Mindoro" is not mentioned anywhere in his long account of *macroptera* in volume 4 of the Ornis, where he states very clearly that his specimens were from Great Sangihe only. It seems to me, therefore, that the latter, rather than "Mindoro," is probably the correct type locality of *macroptera*, although Blasius may have mentioned "Mindoro" in error in the "Braunschweig. Anzeigen" which, apparently, was published in January rather than October, 1888.

Sardinia), *erlangeri* (Cyprus, Near East, and Arabia to Iraq and southern Iran), *stertens* (India, west to Baluchistan, south to Ceylon, and east to Indochina), and *affinis* (Africa, ranging north to the southern Sahara and southern Egypt). Two additional but invalid subspecies were described by Koelz (1939, p. 80; 1950, p. 3). These are *crypta* from India, which was proposed in 1939 but too late to be considered by Peters, and which has been synonymized with *stertens* Hartert, 1929, by Whistler (1942, p. 38); and *microsticta,* proposed in 1950, which, I find, is a synonym of *erlangeri* Sclater, 1921.

The two palest races in the Palearctic region are *ernesti,* which is white and very weakly spotted below, the spots being obsolete, and *erlangeri* which resembles *ernesti* below but is a little more spotted, darker and more broadly barred with brown on the wings and tail, but paler above. In *erlangeri,* the upper parts are more golden than in *ernesti,* less mottled with gray, and, on an average, have smaller and narrower white and brown shaft streaks. The range of *erlangeri* is quite extensive, as stated above, and includes Iraq and Cyprus, although the birds of these regions have erroneously been referred to nominate *alba* by Ticehurst (1922, p. 419; 1926, p. 107) and by D. and W. Bannerman (1958, p. 188). These last-named authors state that a single bird from Cyprus was examined for them by Meinertzhagen "who declares it to be an undoubted specimen of *Tyto alba alba,*" but I find that three specimens from Cyprus cannot be separated from three from southern Arabia, the type locality of *erlangeri.* I have not seen birds from Iraq, but I believe Ticehurst was probably mistaken in calling the birds of that country nominate *alba,* as he stated (1922) that his specimens "are pale yellowish, not at all grey on the back, and have very few spots underneath," and, in 1926, that six additional specimens are all white below, and that three of these are not spotted. This diagnosis corresponds to *erlangeri,* not at all to nominate *alba,* and it seems to me that Allouse (1953, p. 74) is correct in stating that Ticehurst's birds should be referred to *erlangeri.*

The Barn Owl was unknown from Iran prior to the record of Koelz (1950) from the Zagros and that of Dementiev (1951, p. 429), who mentioned that an individual was collected on October 4, 1942, at Gasan Kuli at the mouth of the Atrek River on the border of Transcaspia and northeastern Iran. It was not unexpected to find the Barn Owl in the Zagros in view of the fact that it is said to be "fairly common" across the border in Iraq, but the record of Dementiev is outstanding as it constitutes a relatively great extension of range. Dementiev's bird was pale, and hence he identified it as nominate *alba,* probably because the

latter is paler than the race (*guttata*) found in Russia, but a record of nominate *alba* so far east would be extraordinary, as nominate *alba* is sedentary and Gasan Kuli is very far removed from Egypt or Macedonia, the nearest populations of nominate *alba*. Dementiev did not mention *erlangeri*, but it is probable that his specimen represents the latter or a form similar to it. Koelz collected five specimens in Luristan and Fars in 1940 and 1941 which were named *microsticta* and diagnosed as being much paler than nominate *alba*, with fewer and smaller spots below, but no mention was made of *erlangeri* to which they should have been compared. Four of these five specimens were kindly lent to me by the Chicago Natural History Museum and are, I find, indistinguishable from the specimens of *erlangeri* that I have seen which are from southern Arabia, Cyprus, and Palestine.[1]

LITERATURE CITED

ALLOUSE, BASHIR E.
1953. The avifauna of Iraq. Publ. Iraq Nat. Hist. Mus., no. 3, pp. 1–161.
BAKER, E. C. STUART
1934. The nidification of birds of the Indian Empire. London, Taylor and Francis, vol. 3.
BANNERMAN, DAVID A., AND W. MARY BANNERMAN
1958. Birds of Cyprus. Edinburgh and London, Oliver and Boyd.
BUTURLIN, S. A.
1910. Ussuriskaya iglonogaya sovka. Messager Ornith., vol. 1, p. 187.
CHASEN, FREDERICK NUTTER
1935. A handlist of Malaysian birds. Bull. Raffles Mus., no. 11, 409 pp.
CHEESMAN, R. E.
1922. *In* Ticehurst, C. B., P. A. Buxton, and R. E. Cheesman, The birds of Mesopotamia, pt. 2. Jour. Bombay Nat. Hist. Soc., vol. 28, pp. 381–427.
DEIGNAN, H. G.
1951. A new race of the Hawk Owl, *Ninox scutulata*, from the Philippines. Proc. Biol. Soc. Washington, vol. 64, pp. 41–42.
DELACOUR, JEAN
1947. Birds of Malaysia. New York, the Macmillan Co.
DELACOUR, JEAN, AND ERNST MAYR
1946. Birds of the Philippines. New York, the Macmillan Co.
DEMENTIEV, GEORGES P.
1933. Systema avium Rossicarum. L'Oiseau, new ser., vol. 3 [Strigidae], pp. 501–518.
1934. Die Rauhfusskäuze (*Aegolius funereus* Linnaeus, Aves) der östlichen Paläarktis. Trudy Zool. Inst. Akad. Nauk S.S.S.R., vol. 2, pp. 41–49.
1951. *In* Dementiev, G. P., and N. A. Gladkov (eds.), Ptitsy Sovietskogo

[1] The type of *microsticta* was examined by me after the above was written and compared to the other four specimens from Iran which it matches.

Soiuza. Moscow, Sovietskaya Nauka, vol. 1 [Strigidae], pp. 342–429.

HARTERT, ERNST

1913. Die Vögel der paläarktischen Fauna. Berlin, Friedländer und Sohn, pp. 973–999.

1924. Ornithological results of Captain Buchanan's second Sahara expedition. Novitates Zool., vol. 31, pp. 1–48.

JOHANSEN, HANS

1956. Die Vogelfauna Westsibiriens. Jour. für Ornith., vol. 97, pp. 206–219.

KLOSS, C. BODEN

1931. An account of the Sumatran birds in the zoological museum, Buitenzorg, with descriptions of nine new races. Treubia, vol. 13, pp. 299–370.

KOELZ, WALTER

1939. New birds from Asia, chiefly from India. Proc. Biol. Soc. Washington, vol. 52, pp. 61–82.

1950. New subspecies of birds from southwestern Asia. Amer. Mus. Novitates, no. 1452, pp. 1–10.

MACKWORTH-PRAED, C. W., AND C. H. B. GRANT

1938. Systematic notes on east African birds, pt. 20. Ibis, pp. 764–767.

MEINERTZHAGEN, R.

1948. On the *Otus scops* (Linnaeus) group, and allied groups, with special reference to *Otus brucei* (Hume). Bull. Brit. Ornith. Club, vol. 69, pp. "162–165" [=8–11].

1954. Birds of Arabia. Edinburgh and London, Oliver and Boyd.

MUKHERJEE, AJIT KUMAR

1958. A new race of the Striated Scops Owl, *Otus brucei* (Hume), from west Asia. Rec. Indian Mus., vol. 53 (1955), pp. 301–302.

ORNITHOLOGICAL SOCIETY OF JAPAN

1958. A hand-list of the Japanese birds. Fourth edition. Tokyo.

PETERS, JAMES LEE

1940. Check-list of birds of the world. Cambridge, Harvard University Press, vol. 4, pp. 77–174.

RIPLEY, S. DILLON

1953. A new race and new records for the Riukiu Islands. Tori, vol. 13, pp. 49–50.

STEINBACHER, FRIEDRICH

1936. *In* Hartert, Ernst, and Friedrich Steinbacher, Die Vögel der paläarktischen Fauna, Ergänzungsband. Berlin, Friedländer und Sohn, pp. 385–395.

TICEHURST, CLAUD B.

1922. *In* Ticehurst, Claud B., P. A. Buxton, and R. E. Cheesman, The birds of Mesopotamia, pt. 2. Jour. Bombay Nat. Hist. Soc., vol. 28, pp. 381–427.

1926. *In* Ticehurst, Claud B., P. Cox, and R. E. Cheesman. Additional notes on the avifauna of Iraq. *Ibid.*, vol. 31, pp. 91–119.

VAURIE, CHARLES

1960a. Systematic notes on Palearctic birds. No. 41. Strigidae: The genus *Bubo*. Amer. Mus. Novitates, no. 2000, 31 pp.

1960b. Systematic notes on Palearctic birds. No. 42. Strigidae: The genus *Athene*. *Ibid.*, no. 2015, 21 pp.

WHISTLER, HUGH

1942. [Notes on Koelz, 1939], "New birds from Asia, chiefly from India." Jour. Bombay Nat. Hist. Soc., vol. 43, pp. 33–38.