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Systematic Notes on Palearctic Birds. No. 14 Turdinae: the Genera *Erithacus, Luscinia, Tarsiger, Phoenicurus, Monticola, Erythropygia,* and *Oenanthe*

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The following notes were made during a study of some of the genera of the Turdinae for a contemplated check list of the Palearctic region. As in preceding publications in this series these notes consist of discussions of the validity of many forms and of remarks on distribution or geographical variation.

I would like to express my gratitude to my friends Dr. D. Amadon and Dr. E. Mayr for their helpful and generous advice. Dr. Amadon has also been most kind in reading and criticizing the manuscript. During a recent stay in London I had the opportunity to examine a few of the forms discussed in this paper, and I am grateful to the authorities of the British Museum for many courtesies.

THE GENERA *ERITHACUS, LUSCINIA,* AND *TARSIGER*

The genus *Luscinia* was first merged with *Erithacus* by Seebohm (1881, Catalogue of the birds in the . . . British Museum, vol. 5, p. 292), but this action was not followed. These two genera were merged again by Ripley (1952, Postilla, no. 13, pp. 1–48) in his recent review of the Turdinae in which he also enlarged *Erithacus* still further by the inclusion of *Tarsiger.* The action taken by Seebohm and Ripley can be defended on the grounds that all the species in these three genera have similar habits and that the morphological differences which separate them

are relatively slight, but I am not convinced that such a greatly expanded genus *Erithacus* is monophyletic, and I retain the three genera.

The five species that constitute the genus *Tarsiger* and that were formerly divided between *Tarsiger* and *Ianthia* are small and lightly built birds which appear to me somewhat flycatcher-like in appearance.[1] The bill is not so attenuated as in *Luscinia* or *Erithacus,* and the rictal bristles are slightly to much better developed. The plumage is much softer in texture, and the tail is not so rounded as in *Luscinia* and in some species is slightly forked. In others the distal end of the rectrices is pointed, not rounded. The feet and claws are proportionately smaller and weaker than in *Luscinia* or *Erithacus.*

It is a moot question whether or not *Erithacus rubecula* is sufficiently distinct to warrant restricting the genus *Erithacus* for this species alone. Lack (1954, Ibis, pp. 312–314) is of the opinion that this should be done pending further study, for he states that the call notes of this species separate it from the other *Luscinia*-like forms. If it is restricted to the typical "robins" (as I have done provisionally), I believe that it should be enlarged by the addition of the two Japanese robins, *akahige* and *komadori. Erithacus akahige* is apparently currently maintained in *Luscinia* on the sole reason that its calls, song, and song attitudes are similar to those of the nightingale, *L. megarhynchos,* but, for reasons given below, I do not think that this is necessarily conclusive. The males of *E. akahige* (which together with *E. komadori* forms a superspecies) and *E. rubecula* are virtually identical in color and pattern. The only differences are that in *E. akahige* the rufous pigments do not extend so far down onto the breast and are bordered with gray below, while the tail is chestnut instead of brown tinged with rufous. In the Iranian race (*hyrcanus*) of *E. rubecula,* however, the rump and upper tail are chestnut, and even in England occasional specimens are found with a breast pattern very similar to that of *E. akahige* (see also Harrison, 1946, Bull. Brit. Ornith. Club, vol. 66, p. 69). It is true that the two Japanese robins are sexually dimorphic, though *rubecula* is not, but in *akahige* which is intermediate, sexual dimorphism is slight, the females differing only by having the pigments of the throat more rusty brown or orange, less reddish, than in the males.

[1] These birds were formerly believed to be flycatchers. The four species (*chrysaeus, cyanurus, hyperythrus,* and *indicus*) known up to the time that *johnstoniae* was described in 1906 were placed at first by Sharpe in the flycatchers (1879, Catalogue of the birds in the . . . British Museum, vol. 4, p. 254) combined under the name *Tarsiger,* but he later divided them between *Tarsiger* and *Ianthia,* retaining *Tarsiger* (for *chrysaeus*) in the flycatchers (1901, Hand-list of genera and species of birds, vol. 3, p. 238) and removing the other three species, as *Ianthia,* to the thrushes (1903, Hand-list, vol. 4, p. 156).

Lack (1946, Bull. Brit. Ornith. Club, vol. 66, p. 55) has stated that the calls and song "are more convincing than plumage in denoting the systematic position of *akahige,*" but calls and song, as well as coloration, can be variable, and it is well known that, even within the same species, insular populations may have different notes and song. To limit ourselves to *rubecula* alone, Lack and Southern (1949, Ibis, pp. 621–622) have stated that the robin population of the central Canaries (race *superbus*) has different notes and song from the populations of this species of England and even of the western Canaries. They found that in some individuals the song was "very reminiscent of a Song Thrush, and occasionally of a Nightingale *Luscinia megarhyncha.*" So it would seem that there is no reason to assume that song and call notes are conclusive proof of systematic position in the genus *Luscinia.* In the species *L. sibilans,* which is most closely related to *L. megarhynchos* and *L. luscinia,* the song is not melodious according to Stegmann (1931, Jour. Ornith., vol. 79, p. 203), and the call notes are apparently very different. Because the genus *Luscinia* in its wide sense is a composite of several elements, some of which (such as the blue-throats) appear to be closer to the robins than to the nightingales, the most constructive solution of the problem may be to revert to the original treatment of Seebohm, contemplated by Lack in 1946 (*loc. cit.*) and followed by Ripley, namely, to merge *Luscinia* into *Erithacus.*

ERITHACUS

Erithacus rubecula

The geographical variation in *Erithacus rubecula* has been studied by Lack in great detail (1946, Bull. Brit. Ornith. Club, vol. 66, pp. 55–65; 1947, *ibid.,* vol. 67, pp. 51–54; 1951, Ibis, pp. 629–630). He was unable, however, to give an opinion as to *tataricus* Grote, 1928, type locality, Orenburg, for specimens of this form were apparently unavailable hitherto in collections outside Russia. I have examined a series of 10 specimens collected by Dr. Walter Koelz from November 2 to February 8 in northwestern and southwestern Iran which I believe to be winter visitors of *tataricus,* for they correspond exactly to the original description of this form and its diagnosis given again by Snigirewski (1931, Jour. Ornith., vol. 74, p. 65). These specimens show that *tataricus* is a valid race, about as well differentiated from topotypical nominate *rubecula* Linnaeus from Sweden as this latter is from *melophilus* Hartert of England.

Erithacus rubecula tataricus belongs to the nominate *rubecula-melophilus* group in which the lower rump is olive and the upper tail coverts

are olive brown slightly tinged with rufous, not to the *caucasicus-hyrcanus* group in which the lower rump is brown and the coverts are strongly rufous or chestnut. The 10 specimens from Iran are the palest of about 450 specimens of this species examined. They are in very fresh or little worn plumage and differ distinctly from specimens of nominate *rubecula* in similar plumage from Sweden by being paler and grayer above, especially on the upper tail coverts which are very pale, while below the orange of the breast is paler and the abdomen and flanks are somewhat more whitish. They differ at once from a series of about 50 specimens of *hyrcanus* taken during the same season at the same localities not only by being much paler above and below and by lacking the strongly rufous upper tail coverts, but also by having a distinctly shorter bill, similar in size to that of nominate *rubecula*. (See table 1 for the measurements of some of the specimens examined from the eastern end of the range of the species.)

The form *caucasicus* Buturlin, 1907, type locality, Caucasus and Transcaucasia, included in table 1 is intermediate between nominate *rubecula*

TABLE 1

MEASUREMENTS OF ADULT MALES IN SOME POPULATIONS OF *Erithacus rubecula*

Form, Region, or Locality	N	Wing	Bill
E. r. rubecula			
Sweden	9	72–76 (73.5)	13–15 (14.2)
"*E. r. caucasicus*"			
Wladikawkas	10	71–75 (72.5)	16–17.5 (16.6)
E. r. hyrcanus			
Iran	10	70–77 (75.5)	16–17.5 (16.8)
E. r. tataricus			
Iran[a]	9	72–76 (73.7)	14–16.5 (14.6)

[a] Winter visitors, see text.

and *hyrcanus*, but topotypes of *caucasicus* examined by me are very much closer in characters to *hyrcanus*, and I agree with Lack that *caucasicus* is best synonymized with *hyrcanus* Blanford, 1874, type locality, northern Iran. I also follow Lack in not recognizing *xanthothorax* Salvadori and Festa, 1913, type locality, Rhodes. I did not examine specimens from Rhodes, nor did Lack, but as *xanthothorax* is based on specimens with reddish upper tail coverts collected in February and March and the populations of the *caucasicus-hyrcanus* type are migratory, it is likely that these specimens were winter visitors from a region inhabited by a popu-

lation of that type. Until it is confirmed that the species breeds on Rhodes and breeding specimens are compared it seems best to treat *xanthothorax* as synonymous with *hyrcanus*.

Erithacus akahige

In *Erithacus akahige* four races have been described, but only two are valid: nominate *akahige* Temminck, 1831, which breeds from the Kuriles south to Shikoku, and *tanensis* Nagamichi Kuroda, 1923 (March), described from Tanegashima where it may occur only as a winter visitor. The other two forms are *spectatoris* Momiyama, 1923 (December), described from the Seven Islands of Izu, and *kobayashii* Momiyama (1940, Dôbutsu Zasshi, vol. 52, p. 463, type locality, Yakushima). Nagamichi Kuroda (1932, Novitates Zool., vol. 37, p. 395) has already stated that *spectatoris* is a synonym of *tanensis*, and this last race is therefore the breeding form on the Seven Islands. Austin (*in* Austin and Nagahisa Kuroda, 1953, Bull. Mus. Comp. Zoöl., vol. 109, pp. 538–539) has shown, and my comparison of specimens of both sexes confirms his opinion, that the populations of the Seven Islands and Yakushima are not separable, and *kobayashii* thus becomes also a synonym of *tanensis*.

I find, however, that the differentiating characters of *tanensis* most emphasized by Nagamichi Kuroda and Austin are misleading. These authors state that *tanensis* differs from nominate *akahige* by lacking, or by having but an indistinct, blackish band between the orange of the throat and the grayish breast, and that the throat and breast are paler, but individual variation is so great in the material available to me that the two races do not appear to be separable on this basis. If anything, when specimens of the two races are compared in series, more specimens from Yakushima and the Seven Islands (*tanensis*) have a more distinct and more blackish band and their under parts are slightly darker. I do agree with Austin, however, that the upper parts are darker in *tanensis* in both males and females and that in female *tanensis* the orange of the throat is paler and duller, and I agree with Kuroda that the quills are distinctly darker in *tanensis*, a difference that does not seem to me to be associated with wear.

Nominate *akahige* is migratory. It has been examined by me from Shaweishan Island off the Yangtze (April), and Fukien (no date), as well as from Yakushima where it was collected in late November and early December. It is reported from Kyushu and as an occasional and rare migrant in northern Hopeh and as a straggler on Formosa. Nothing is known of the migratory movements, if any, of *tanensis* except that this race was described from a single specimen collected on March 22 on Tanegashima where the species is replaced as a breeding form by the closely allied *E. komadori*.

Erithacus komadori

Erithacus komadori is restricted to the Ryu Kyus and is divided by the "Hand-list of Japanese birds" (1942, p. 74) into three subspecies: nominate *komadori* Temminck, 1835, on the northern islands of Tanegashima, Amami Oshima, and Tokunoshima; *namiyei* Stejneger, 1887, on Okinawa in the central islands; and *subrufa* Kuroda, 1923, on the southernmost islands of Ishigaki, Iriomote, and Yonaguni. I did not examine this last form, which was described from a single male collected on Yonaguni, but it may be observed that all the characters of this specimen, as indicated by Kuroda in the description, seem to me to fall within the range of individual variation of nominate *komadori.*

Kuroda states that this specimen is paler above than nominate *komadori,* has the outer edges of the primary coverts and primaries and both webs of the "tertials" orange-rufous instead of brown, and that it has a broader band of black on the forehead, "measuring 6.5 mm. instead of 4–5.5 mm." A series of 13 topotypical males of nominate *komadori* examined by me shows a rather wide range of individual variation. The upper parts vary in depth of coloration, both webs of the inner secondaries vary from orange to brownish, all the specimens have the outer webs of the primary coverts and primaries orange-rufous, and in four specimens the width of the black band reaches 6 to 8 mm. The "Hand-list" states that *subrufa* is restricted to Yonaguni, Ishigaki, and Iriomote, but Kuroda, who had apparently but two specimens from Ishigaki and one from Iriomote, states that these three specimens "seem to be inseparable from the northern typical [nominate *komadori*] bird."

It seems to me that *subrufa* requires confirmation. It is possible that the Japanese ornithologists have examined additional material from the southern islands and properly assessed its range of individual variation, but I am not aware that the result of such a study has been published.

LUSCINIA

Luscinia megarhynchos

The western populations of *Luscinia megarhynchos* have been reviewed recently by Clancey and von Jordans (1950, Auk, pp. 361–363). These authors recognize four races, but, for reasons given below, I believe that three of these should be synonymized with nominate *megarhynchos* C. L. Brehm, 1831, type locality, Germany. These are *corsa* Parrot, 1910, type locality, Corsica; *luscinioides* von Jordans, 1923, type locality, Mallorca, Balearic Islands; and *caligiformis* described by Clancey and von Jordans in the same paper, with Suffolk, southeastern England, as the type locality.

Clancey and von Jordans separated *caligiformis* as being duller, less rufous, than nominate *megarhynchos,* and state that *luscinioides* is grayer

above and has the tail less rufous than in nominate *megarhynchos* and differs also from this last form by having a wing formula similar to that of *Luscinia luscinia* (that is, with the first primary shorter than the primary coverts, rather than equal to or longer than the primary coverts as in *L. megarhynchos*). In the material that I have examined I can see no difference between a series of 11 adults collected in southeastern England during the breeding season and two series in comparative plumage consisting of 19 specimens from Germany and 18 from continental western Europe. Likewise, I can see no difference between immature specimens from England, Germany, and France.

Only two specimens are available to me from the Balearic Islands, but they are paratypes of *luscinioides* collected in May and June on Mallorca. One is darker and identical with the specimens from Germany; the other is paler and grayer, but the difference is extremely slight. The relative length of the first primary varies individually in these two specimens to the same extent that it does in the series from Germany, and I fail to see that a constant difference is demonstrated in the diagrams of von Jordans (1928, Novitates Zool., vol. 34, p. 282) mentioned by Clancey and von Jordans.

It is possible that, with a long series, one could demonstrate a slight population difference in the Balearics or other Mediterranean islands such as Corsica, but I believe that it is misleading to recognize such very slight differences in the nomenclature. This is particularly so when other populations are very clearly differentiated, as in *L. megarhynchos* with its two eastern races, *hafizi* in western Siberia and Turkestan, and *africana* in the Near East and Iran.

I did not examine specimens from Corsica, but it seems wiser not to recognize *corsa* until an adequate series of breeding birds can be examined from this island. Clancey and von Jordans state that *corsa* was recognized by Hartert (1922, Die Vögel der paläarktischen Fauna, p. 2167), but Hartert states that he has not examined specimens from Corsica, and in 1935, he and Steinbacher (1935, *op. cit.*, suppl. vol., p. 325) state that this form is not separable on the basis of the material available so far. Mayaud (1953, Alauda, p. 46) in his corrections and supplement to the check list of the birds of France did not recognize *corsa*.

Luscinia calliope

Luscinia calliope shows some slight evidences of geographical variation, but it seems best to me not to recognize any subspecies. I could not examine a long series of breeding birds, but in about two dozen birds collected on the breeding grounds the only evidence of geographical variation that can be observed is a gentle cline of decreasing size running from

north to south with no sharp demarcation between the two extremes. A similar conclusion was reached by Austin (*in* Austin and Kuroda, 1953, Bull. Mus. Comp. Zoöl., vol. 109, p. 537). The populations of Kamchatka and the Kuriles apparently average larger than those of Siberia, the type locality of *L. calliope* Pallas, 1776, but the published measurements show too much overlap to support the nomenclatural separation of the populations of Kamchatka and the Kuriles as *camtschatkensis* Gmelin, 1789, type locality, Kamchatka. For instance, according to Portenko (1937, Mitt. Zool. Mus. Berlin, vol. 22, pp. 223–225) the wing length of 50 males from Siberia is 72.2–81.2 (76.4) and of 16 of *camtschatkensis,* 76.8–83.0 (80.4).

In the same paper this author separated the population of Sakhalin as *sachalinensis,* stating that it is darker than the population of Siberia, and added that *sachalinensis* winters in Japan. Specimens from Sakhalin are not available to me, but the validity of *sachalinensis* is open to question, for I can see no difference, other than very slight ones which are probably individual, in a series of almost 200 specimens collected in Japan and other parts of the winter range.

The populations breeding from northern Szechwan to Kansu seem to be much too slightly differentiated from those of Siberia to warrant the recognition of *beicki* described by Meise from Kansu (1937, Jour. Ornith., vol. 85, p. 562). Meise separated *beicki* on the basis of a more rounded wing and a longer tail, but the statements of Meise about the wing formula show that it is not constant in the populations of Szechwan and Kansu. Nor is it constant in four adult males and two adult females examined by me from northern Szechwan and Kansu which include three paratypes of *beicki.* In these specimens the wing tip averages somewhat more rounded than in specimens from the far north (northeastern Siberia, Kamchatka, and Commanders), but I find that this difference which is presumably correlated with migration is very slight and does not warrant nomenclatural separation. Meise states that the tail length measures 61–67 in 10 males from Szechwan and Kansu as against 56–61 in five from Siberia. Such a difference is not confirmed by my specimens. The four males of *"beicki"* mentioned above measure 56, 61, 62, 64, and males from the far north mentioned measure 56, 57, 58, 58, 59, 59, 61, 63, 64. Portenko (*loc. cit.*) who had examined 15 specimens from Kansu and Szechwan did not observe any of the differences cited by Meise.

Luscinia svecica

Luscinia svecica is a difficult species because its geographical variation is complicated by seasonal changes in coloration and in pattern, by di-

morphism in the males, and by great individual variability. This variability has been analyzed by Kozlova in an important paper (1945, Zool. Jour., Moscow, vol. 24, pp. 298–308, in Russian with English summary and maps). Many races have been separated on differences in size and coloration which are very slight and not constant, so the number of races can be reduced considerably.

Two forms can be synonymized with nominate *svecica* Linnaeus, 1758, type locality, Sweden and Lapland. These are *robusta* Buturlin, 1907, type locality, Kolyma Delta, and *weigoldi* Kleinschmidt, 1924, type locality, Bago, southern Jehol. Gladkov (1941, Jour. Ornith., vol. 89, pp. 141–142), who quotes a similar opinion of Portenko, has shown that *"robusta"* cannot be separated on either size or coloration. This is also the opinion of Kozlova (1945, *loc. cit.*) and Friedmann (1946, Auk, p. 434) who found that birds from Alaska, where the species breeds locally, are identical with topotypical nominate *svecica*. According to Tugarinov [1929, Ann. Mus. Zool. Acad. Sci., U.R.S.S. (1928), vol. 29, pp. 1–14] the wing length in *"robusta"* is 72.2–77.7 as against 68.0–73.7 in nominate *svecica,* but in adult males measured by me the wing is 74–78 (75.5) in 10 from northern Sweden and Lapland and 74, 75, 78 in three males of *"robusta"* from the mouth of the Lena. Nor can I see any difference in the shape of the wing tip which is said to be more pointed in *"robusta."* Kleinschmidt separated *weigoldi* by stating that it is smaller than *"robusta"* and has a somewhat larger jugular spot than nominate *svecica*. A paratype of *"weigoldi"* examined by me fails to confirm these differences; its wing measures 75 mm., and there is no difference in the size of the spot.

In regard to other forms, the population that breeds along the Atlantic coast in France averages somewhat smaller than the more northern populations of *cyanecula* Meisner, 1804, type locality, northern France, but the difference is very slight and does not seem to me of taxonomic importance. According to Mayaud who separated the coastal population as *namnetum* in 1934, the wing length in males of *"namnetum"* is 67–72 as against 73–76 in males from Germany. I did not have specimens from coastal France, but in four males from Germany the wing length measures 71, 72, 75, 76, and in three from western Russia, at the northern end of the range of *cyanecula,* the wing length is only 72, 73, 74.

Meinertzhagen (1938, Ibis, p. 689), who has examined the forms described by Tugarinov and Sushkin in the Russian collections, states that *altaica* Sushkin, 1925, type locality, Russian Altai, and *tianschanica* Tugarinov, 1929, type locality, central Tian Shan, are not separable from *saturatior* Sushkin, 1925, type locality, Minusinsk; and that *kaschgarien-*

sis Tugarinov, 1929, type locality, Yarkand Darya, is not separable from *kobdensis* Tugarinov, 1929, type locality, Uliassutai, northwestern Mongolia.

A statement by Kinnear (1933, *in* Ludlow, Ibis, p. 460) requires comment. He stated that he could not find color differences between specimens from the ranges of *tianschanica* and *kaschgariensis*. Tugarinov, however, states that *tianschanica* is a dark form and *kaschgariensis* a very pale one, and this difference is confirmed by specimens that I have compared from the central Tian Shan and the Tarim River. It is true that both the dark and the pale forms occur in the same regions in Chinese Turkestan, but they apparently replace each other altitudinally and ecologically. The dark bird is a montane form breeding from about 5000 to 10,500 feet in well-watered valleys and mountains with abundant vegetation, and the pale form seems to be restricted to the oases of the desert or the much drier outer foothills of the Tian Shan.

The range of *abbotti* Richmond, 1896, type locality, Ladak, also requires comment. Hellmayr (1929, Field Mus. Nat. Hist., zool. ser., vol. 17, p. 115) stated that this race is apparently restricted to Ladak and that it does not seem to breed in Gilgit. I have, however, examined a breeding bird from Gilgit as well as series of breeding birds from Baltistan and Zaskar as well as from Ladak. Tugarinov reports that *abbotti* occurs in the Pamirs and in eastern Bukhara, for he states that three specimens collected in these regions by Zarudny are identical with the lone specimen of *abbotti* available to him from Ladak, but it must be remembered that *abbotti* is most variable individually and that his material was insufficient to prove that the range of this race extends to Russian Turkestan and the Pamirs.

Luscinia brunnea

The breeding range of *Luscinia brunnea* extends from Kashmir eastward through the Himalayas to Bhutan, and from Sikang and northern Yunnan to the border of Szechwan, with an isolated colony in the Chin Hills in Burma. I find that this last population is very clearly distinct from populations of the north and must be called *wickhami* Baker (1916, Novitates Zool., vol. 23, p. 298), type locality, Chin Hills, a name that is usually cited as a synonym of nominate *brunnea* Hodgson, 1837, type locality, Nepal.

Luscinia brunnea wickhami was based on a single specimen which was not sexed but is apparently an adult female which was "shot off the nest" in April. I find that this specimen and two other females collected in April and May on Mt. Victoria in the Chin Hills are pale slaty blue

above, including the tail, and very different from 13 females in all plumages examined from the Himalayas and northern Yunnan. These last specimens are olive brown above and show no trace whatever of bluish pigments. In the three females from the Chin Hills the edges of the body feathers are tinged with dull olive to a variable extent, more so in one of them which, as its primaries show, is not fully adult, but this tinge disappears or becomes greatly reduced with wear. The adult males that I have examined show also a difference in coloration but not nearly so conspicuously as do the females. Males from the Himalayas and Yunnan average slightly darker blue above, slightly darker below, with the rufous pigment of the under parts tending to extend farther down onto the lower abdomen than in males from the Chin Hills. In this last population the under tail coverts and vent are always pure white, whereas in about a third of the males examined from the Himalayas and Yunnan these parts are invaded with rufous to a variable extent.

Nominate *brunnea* and *wickhami* differ also in size, the latter being smaller. In adult specimens measured by me the wing length in topotypical nominate *brunnea* is 74–80 (77.5) in 11 males and 73–76 (74) in six females, as against 71–74 (72.5) in six males, 71 in the subadult female, and 72, 73 in the adult females of topotypical *wickhami*.

Luscinia obscura

Luscinia obscura Berezowsky and Bianchi is known, apparently, from but a very few specimens, and its plumage sequence and the female plumage seem to be unknown. Except for the material in Russian collections, which may be scanty, apparently only four adult males are known—all in the Rothschild Collection of the American Museum of Natural History. They were collected during the breeding season in the Tsingling Range in Shensi and are in worn plumage. Another specimen which apparently was not sexed but which appears to be a male of this species in first winter plumage was collected near Bhamo in January and is now probably in the collection of the British Museum. This specimen is described, together with comments by Mayr, by Garthwaite and Ticehurst (1937, Jour. Bombay Nat. Hist. Soc., vol. 39, p. 553).

This information is given here, for Koelz has recently described as a new species (*Luscinia daulias,* type locality, Garo Hills, Assam, 1954, Contrib. Inst. Regional Explor., Ann Arbor, Michigan, no. 1, p. 12) a specimen collected on January 18 which he has sexed as male and which he believes to belong to the same species as the specimen reported by Garthwaite and Ticehurst. This last specimen was said to be "dull pale ochraceous" below, and Dr. Koelz states that his specimen is "dull rusty

orange." Most other species of this genus are sexually dimorphic, and until the female plumage of *L. obscura* is known and the plumage sequence understood in both sexes, I believe that it is not certain, to say the least, that *L. daulias* represents a new species. It is possible that the specimen collected by Koelz is a plumage stage of another rare species, *L. pectardens,* rather than of *L. obscura,* but in view of the remarks made above it seems best to regard both of these specimens, which were migrants to Assam and Burma, as plumage stages of *L. obscura.*

The name *obscura* Berezowsky and Bianchi (1891, Aves expeditionis Potanini per . . . Gansu, p. 97, pl. 1, fig. 2) is preoccupied by *Cyanecula obscura* C. L. Brehm (1931, Handbuch der Naturgeschichte aller Vögel Deutschlands, p. 353), a synonym of *Luscinia svecica cyanecula* Meisner, 1804, and Ripley (1952, Postilla, no. 13, p. 24) has supplied *hachisukae* as a new name. The name *obscura* Berezowsky and Bianchi should be conserved, for it has been in unchallenged use since it was proposed 63 years ago and is used in all standard works. The name *obscura* C. L. Brehm has apparently been quoted only once, by Hartert (1910, Die Vögel der Paläarktischen Fauna, p. 748), who nevertheless retained *Luscinia obscura* Berezowsky and Bianchi. In order to avoid unnecessary disturbance in the nomenclature, an application has been made to the International Commission to use its plenary powers to place *obscura* Berezowsky and Bianchi on the Official List.

TARSIGER

Tarsiger cyanurus

The geographical variation in *Tarsiger cyanurus* is complicated by a very high degree of individual variation which may be more apparent than real, because the involved plumage sequence of this species is not well understood. Some of the problems presented by the various plumages have been discussed by Kozlova (1933, Ibis, pp. 321–322), Hartert and Steinbacher (1935, Die Vögel der Paläarktischen Fauna, suppl. vol. p. 319), and Mayr (1941, Ibis, pp. 224–225).

Six races have been described, but two of these were shown fairly recently to be invalid. Kozlova (*loc. cit.*) found that *ussuriensis* Stegmann, 1929, type locality, Ussuriland, is very inconstant and must be synonymized with nominate *cyanurus* Pallas, 1773, type locality, Yenisei. Mayr (*loc. cit.*) has shown that *practicus* Bangs and Phillips, 1914, type locality, southern Yunnan, cannot be upheld and should be synonymized with *rufilatus* Hodgson, 1845, type locality, Nepal. My own observations, based on a larger series from the Himalayas, confirm those of Mayr. I

find that the same range of individual variation prevails in two series, one of 60 specimens from the Himalayas and the other of 45 specimens from the breeding range of *"practicus"* in Yunnan and Shensi. All plumages seem to be represented in these two series which consist almost entirely of birds collected during the breeding season.

I believe that *albocoeruleus* Meise (1937, Jour. Ornith., vol. 85, p. 550, type locality, Tschau-tou, "northern Kansu" [=northeastern Tsinghai]), and *pallidior* Baker, 1924, type locality, Simla, should also be synonymized with *rufilatus*.

Meise based *"albocoeruleus"* on only two adult males, a number that seems very insufficient in such a difficult species. He states that these two specimens differ from *rufilatus* by having a white superciliary, and from *ussuriensis* [=nominate *cyanurus*] by having a longer tail and the white of the superciliary tinged with blue. As Mayr states, the superciliary streak is very variable individually in *rufilatus;* it may be white or blue (or, rather, as the base of the small feathers is white and the tip blue, the variation consists in the distribution of the pigment on the individual feathers). According to Meise the tail in his two adults measures 63 and 64 mm. In 10 males of *rufilatus* and in 10 males of nominate *cyanurus* measured by me the tail measures 60–65 (63) in *rufilatus* and 56–61 (59) in nominate *cyanurus*. I did not examine *albocoeruleus,* but the differentiating characters of this form seem much too slight to support a name, and it seems best to consider *albocoeruleus* as synonymous with *rufilatus*.

As for *pallidior,* examination of a good series collected recently in the Himalayas by Koelz shows that it is not separable from topotypical *rufilatus*. Baker separated *pallidior* as being paler in both sexes and with the females more olive, less rufous, but when B. Biswas examined the material collected by Koelz he found (MS) that specimens from Nepal and the western Himalayas, the two localities involved, were not distinguishable, and, as stated, I have reached the same conclusion. The series consists of 13 adults from Nepal and 27 collected in Garhwal and Tehri, and from northern Punjab westward to Kashmir.

Tarsiger chrysaeus

In *Tarsiger chrysaeus* three races have been separated which, ranging from west to east, are *whistleri* Ticehurst, 1922, type locality, Simla, northern Punjab; nominate *chrysaeus* Hodgson, 1845, type locality, Nepal; and *vitellinus* Stresemann, 1923, type locality, Wa Shan, Szechwan [on the border of Sikang and Szechwan]. These forms were separated on varying depths of coloration, but the validity of *vitellinus* has

been questioned, and I find that I can recognize only *whistleri* and nominate *chrysaeus*.

Because this species shows evidence of a clinal increase in saturation from west to east in the Himalayas, it is possible that this cline continues to China, but this is apparently not the case, according to the specimens that I have examined. Stresemann separated *vitellinus* on the basis that in males the yellow coloration in Szechwan birds is the color of egg yolk rather than [translated] "orange as in the nominate form," but in specimens collected recently in Nepal and Kumaon (the population of which is identical with that of Nepal) the yellow pigments are not orange but a bright golden yellow. As the yellow pigments darken with age in this species, I suspect that they had already darkened in the comparative material of nominate *chrysaeus* used by Stresemann. In two male paratypes of *vitellinus* collected in 1915, the yellow coloration is identical with that of much older skins from Sikkim. I can find no difference in the green of the upper parts between specimens collected recently in Nepal and paratypes of *vitellinus* and other skins from Yunnan, Shensi, and Sikkim. Apparently the green pigments are little if at all affected by the age of the skins, though, if a line of increasing saturation continued from the Himalayas to China, one would expect that it would affect the coloration of the upper parts also.

Recently collected specimens from the western Himalayas show that this population (*whistleri*) differs from nominate *chrysaeus* from Kumaon and Nepal by being paler green and paler yellow. The difference is better shown by the green parts of the plumage. In *whistleri* the males are more yellowish olive, less bronzy-green, and the females are grayer green, less olive green. Specimens examined from Garhwal are intermediate in coloration between *whistleri* and nominate *chrysaeus*.

PHOENICURUS

In the genus *Phoenicurus* the following species or some of their races are discussed below: *P. ochruros, P. phoenicurus, P. frontalis, P. auroreus, P. erythrogaster, P. leucocephalus,* and *P. fuliginosus*.

Phoenicurus ochruros

In *Phoenicurus ochruros* I believe that *aterrimus* von Jordans (1923, Falco, Sonderheft, p. 8, type locality, Bellas, Portugal) is best synonymized with *gibraltariensis* Gmelin, 1789, type locality, Gibraltar; and *alexandrovi* Zarudny (1918, Izwestia Zakaspiikago Muz., vol. 1, p. 13, type locality, Great Balkhan, western Transcaspia) is best synonymized with *phoenicuroides* Horsfield and Moore, 1854, type locality, Sind. *Phoeni-*

curus o. aterrimus is based on a very small series which von Jordans states differs from *gibraltariensis* by being blacker. The specimen selected as the type by von Jordans was depicted by Kleinschmidt (1907–1908, Berajah, pl. 1) and is apparently very dark, but *aterrimus* appears to be based on individual variants, because Kleinschmidt (1943, Katalog meiner ornithologischen Sammlung, Halle, Gebauer-Schwetschke, p. 72) states that the type and the cotype, which are in his collection are in *abnorme kleider*. Individual variation is very high throughout the range of the species, and, as very black males occur within the range of *gibraltariensis* in other regions besides Portugal, it is best to treat *aterrimus* as a synonym of *gibraltariensis*.

According to Molyneux (1930, A catalogue of birds, Eastbourne, England, E. S. Fowler, p. 173) Zarudny separated *alexandrovi* from *phoenicuroides* on the basis that it is smaller. Zarudny gave the wing length of males in *alexandrovi* as 74–79.4 and as 77–86 in males of *phoenicuroides* from Turkestan. I did not examine specimens from the Great Balkhan, but three breeding males measured by me from the Kopet Dagh and neighboring Khorasan have a wing length of 74, 78, 84. Because individuals in these populations, which are nearest geographically to the population of the Great Balkhan, cannot apparently be separated from either *alexandrovi* or *phoenicuroides* it is best not to recognize *alexandrovi*. This form has already been synonymized with *phoenicuroides* by Dementiev (1935, L'Oiseau, p. 441).

Phoenicurus phoenicurus

In *Phoenicurus phoenicurus* two forms seem to be too insufficiently well differentiated from nominate *phoenicurus* Linnaeus, 1758, type locality, Sweden, to warrant their nomenclatural separation. These are *algeriensis* Kleinschmidt, 1904, type locality, Algeria, and *caesitergum* Clancey (1947, Bull. Brit. Ornith. Club, vol. 67, p. 77, type locality, Lancashire, England).

Although the validity of *algeriensis* has been questioned on several occasions (see Hartert, 1922, Die Vögel der paläarktischen Fauna, p. 2166; Ticehurst and Whistler, 1938, Ibis, p. 741; and Meinertzhagen, 1940, Ibis, p. 216), it is still recognized by Hartert (1935, *in* Hartert and Steinbacher, Die Vögel der paläarktischen Fauna, suppl. vol., p. 321), and Meinertzhagen (1954, Birds of Arabia, Edinburgh and London, Oliver and Boyd, p. 264).

The populations (*"algeriensis"*) that breed from central Spain and Portugal to Morocco and Algeria are sedentary or their migratory movements are more restricted than in the populations of nominate *phoenicurus*

that breed in northern Europe, and, as might be expected, their wing tip is more blunt, but, as the authors cited above have shown, this difference is far from constant, and I do not believe that *"algeriensis"* can be upheld. When an adult male from northern Russia is compared with the breeding male that I have examined from north Africa that seems to have the most rounded wing tip, the wing formula is as follows: Russia, $1 < 2 < 3, 4 > 5$ by 2 mm. > 6 by 6 mm. > 7 by 5 mm., $2 > 6$ by 2 mm.; Africa, $1 < 2 < 3, 4, 5 > 6$ by 4 mm. > 7 by 3 mm., $2=6$. However, as shown by Ticehurst and Whistler (*loc. cit.*), in 17 males from England, five have a wing formula similar to that of nominate *phoenicurus,* seven have the wing formula of *algeriensis,* and five have a wing formula that is intermediate. This is true also of 12 specimens that I have examined from north Africa which appear to be breeding birds, and as the notations of Hartert on the labels show, it is impossible to be sure whether some of these specimens are nominate *phoenicurus* or *algeriensis.*

Clancey has separated as *caesitergum* the population of England from topotypical *phoenicurus* from Sweden on the basis that in England males in breeding plumage are bluer above, less ashy gray, have the forehead purer white and the wings and tail darker, and that females are darker and colder in tone above. I have compared 12 breeding adults from England with seven from Sweden. Five specimens from England are identical with the specimens from Sweden, while the others show the characters mentioned by Clancey or a tendency in that direction, but the differences are slight at best. My comparative material may be insufficient but suggests that *caesitergum* is not constant or does not seem sufficiently well differentiated to warrant nomenclatural recognition.

Phoenicurus frontalis

Phoenicurus frontalis appears to be monotypic. This conclusion, which is based on my comparison of a series of 45 specimens from the Himalayas in all plumages with very abundant material from China, has already been reached by Meise (1937, Jour. Ornith., vol. 85, p. 558) as well as by several previous authors, but Birckhead (1937, Amer. Mus. Novitates, no. 966, p. 4) upholds the validity of *sinae* Hartert, 1918, described from Kansu. This form was said by Hartert, supported by Birckhead, to be paler than the populations of the Himalayas, but a series of both sexes collected in 1947 and 1948 in the Himalayas, and therefore not available to Hartert or Birckhead, is identical with the material from China which includes the type and paratypes of *sinae.*

Phoenicurus auroreus

Phoenicurus auroreus requires further study based on adequate breeding material, but there seem to be at least two valid races which differ in

their degree of saturation: nominate *auroreus* Pallas, 1776, which breeds in Siberia and northern Mongolia eastward to Amurland, Manchuria, Ussuriland, Korea, and northern Hopeh, and *leucopterus* Blyth, 1843, the breeding range of which is scarcely known but which seems to be from the Ala Shan and Shensi westward and southward through Kansu and Sikang to southeastern Tibet and northern Yunnan. For a good description of the comparative characters of these two forms, see Birckhead (1937, Amer. Mus. Novitates, no. 966, p. 8).

The only breeding specimens I have examined that correspond to the description of *leucopterus* are an adult male in worn plumage collected on July 26 in the Tsingling Range in Shensi and another in similar plumage collected in July (no date) in the Likiang Range in northern Yunnan. I have examined also an immature specimen which was barely out of the nest collected on the same date and at the same locality as the adult in the Tsingling Range and another very young bird collected on July 22 in the Likiang Range. Riley (1931, Proc. U. S. Natl. Mus., vol. 80, art. 7, p. 56) reports several immature specimens from southern Sikang. The species breeds in northern Kansu, and a June specimen in worn breeding plumage that I have examined from neighboring Ala Shan is very much closer in coloration to *leucopterus* than it is to breeding specimens in similar plumage that I have examined from the breeding range of nominate *auroreus*. The species breeds in southeastern Tibet according to Ludlow (1944, Ibis, p. 183) who does not recognize any subspecies.

Dementiev (1935, L'Oiseau, p. 441) gives the breeding range of *leucopterus* as the Amur Basin and Ussuriland, and "probably Japan and Korea," but he appears to be mistaken. The species does not breed in Japan, while the population of Korea (see below) was correctly identified as nominate *auroreus* by Austin (1948, Bull. Mus. Comp. Zoöl., vol. 101, p. 210). Stegmann (1931, Jour. Ornith, vol. 79, p. 203) calls the population of Amurland nominate *auroreus,* and Meise (1934, Abhandl. Ber. Mus. Dresden, vol. 18, no. 2, p. 45) does likewise for the population of Manchuria. My breeding material of this race consists of a series of eight specimens from Korea, one each from northern Mongolia and southern Lake Baikal (a topotype), and four specimens from southern Ussuriland collected from April 4 to 22 which may or may not have been on their breeding grounds. All these specimens are identical.

Domaniewski (1933, Acta Ornith. Mus. Zool. Polonici, vol. 1, p. 81) has separated as *orientalis,* type locality, Sidemi, near Vladivostok, the populations of Korea and southern Ussuriland, stating that they are darker than nominate *auroreus*. His type, the only specimen mentioned, was collected on April 18 at the same locality as my specimens from southern Ussuriland which, together with the specimens from Korea, are

identical, as stated, with nominate *auroreus*. Dementiev (*loc. cit.*) synonymizes *orientalis* with *leucopterus,* but this name should be synonymized with nominate *auroreus* instead.

Phoenicurus erythrogaster

In *Phoenicurus erythrogaster,* an estern race, *maximus* Kleinschmidt, 1924, type locality, Sikang, is still recognized by some current authors, although several others, notably Kinnear (1944, *in* Ludlow, Ibis, p. 184) have emphasized that the eastern populations are not separable from *grandis* Gould, 1850, type locality, Afghanistan and Tibet.[1] The populations of the western Himalayas and Turkestan are identical in coloration with those found from Sikang to Kansu, but these latter are supposed to have a longer wing. Meise (1937, Jour. Ornith., vol. 85, pp. 556–557), who upholds the validity of *maximus,* states that the wing length "in the types of *maximus*" is 107 (juvenile), 110, and 110.5, and in four additional males from Kansu, 106.5, 107, 110, 111 (108.6). Kinnear has shown by a long series of measurements that *maximus* is not larger than *grandis,* and a series of eight adult males collected recently in Ladak confirms Kinnear. In these specimens and in three males from Kansu I find that the wing length measures 107, 108, 108, 109, 109, 109, 111, 112 (109) in Ladak, and 107, 107, 110 in Kansu.

Phoenicurus leucocephalus

Phoenicurus leucocephalus is placed by Hartert in the genus *Chaimarrornis* Hodgson, 1844, a genus that is now usually merged with *Phoenicurus* Forster, 1817. Hartert (1910, Die Vögel der paläarktischen Fauna, p. 715) gave as a differentiating character of *Chaimarrornis* the fact that its second primary falls between the sixth and the seventh. An examination of 130 specimens of *P. leucocephalus* shows, however, that this is not correct, for in this species the second primary falls between the seventh and eighth or is equal to, and sometimes slightly shorter than, the eighth. Zarudny and Moltchanow, misled by Hartert, have separated the population of *P. leucocephalus* from the Pamirs as *pamirensis* on the basis that in this population the wing formula is rounder than in the population of the Himalayas and have stated also that the wing length is shorter in *pamirensis.* Ivanov (1940, Oiseaux du Tadjikistan, Moscow, pp. 262–264) who agrees with me as to the correct wing formula refrained from recognizing *pamirensis* until further material might become available, for he believed that the size difference in the length of the wing is too slight

[1] Kinnear (*loc. cit.*) has shown also that if an eastern race is recognized, its correct name should be *vigorsi* Horsfield and Moore, 1854.

to warrant separation. He gave the wing length of birds from Tadzhikistan as 85–95 as against 89–101 of birds in the Himalayas. I did not examine specimens from the Pamirs, but I find that the wing in 20 adult males from Afghanistan and the western Himalayas measures 85–102 (94) and that in 12 of these it is 94 or less. I believe that the overlap between the measurements of these specimens and those of the Pamirs is too great and the average difference is probably too small to warrant the recognition of *pamirensis*.

I can see no evidence of clear-cut geographical variation between specimens in comparative plumage collected on the breeding grounds from Afghanistan and the Himalayas eastward to Tsinghai, Kansu, and Shensi, although in the last three populations,when they are compared in series with those of Afghanistan and Himalayas, the under parts average somewhat darker and richer chestnut. This difference is slight, however, and not sufficiently constant for subspecific recognition, and the species is best considered to be monotypic.

Phoenicurus fuliginosus

The geographical variation in *Phoenicurus fuliginosus* requires further study. Two races are generally recognized: nominate *fuliginosus* Vigors, 1831, on the continent where this race breeds from Afghanistan and Himalayas eastward to China, and *affinis* Ogilvie-Grant, 1906, in Formosa which differs by having the females less clearly squamated below and grayer above and on the flanks. In this species adult males show no evidence of geographical variation in coloration.

I have examined a rather large number of specimens from China (90) which suggest that an additional race may be recognizable in that region for which the name *tenuirostris* Stresemann, 1923, type locality, Kwangtung, may be used provisionally.

Most specimens from China are larger (see below) in both sexes than the population of the western Himalayas to which the type locality of nominate *fuliginosus* has been restricted, and the bill is not quite so thick, the characters indicated for *tenuirostris* by Stresemann. These differences are slight and in my opinion do not warrant the nomenclatural recognition of a Chinese race. However, in fresh or slightly worn fall and winter plumage the great majority of adult females from China and of first winter males (the plumage of which is similar in coloration to that of the adult female) are distinctly more brownish above, less grayish, particularly on the lower back and rump than specimens in comparative plumage from the Himalayas. Such brownish females and young males have been examined from the Tsingling Range in Shensi, and from Hupeh,

eastern Szechwan, Fukien, and Kwangtung, but at Wanhsien in eastern Szechwan of five specimens collected from September 21 to December 19, two are grayish and not separable from specimens from the Himalayas and two specimens collected on October 15 at Wenchwan in western Szechwan are gray also. A study should be based on material collected on the breeding grounds, for the species is semi-migratory, but judging by a breeding female collected in the Likiang Range in northern Yunnan and another from the Tsingling Range the plumage is too badly worn at this season to be diagnostic.

The measurements are as follows: India and Afghanistan, wing length, 10 males, 74–80 (77), seven females, or first winter males, 68–72 (70); tail length, 10 males, 48–54 (50.5); bill length, 10 males, 14–15 (14.5). China: Shensi, wing length, 10 males, 78–85 (80.5), 12 females or first winter males, 70–76 (74); tail length, 10 males, 50–55 (54); bill length, 10 males, 15–15.5. In the following populations, only the wing lengths of adult males are given: Northern Yunnan (breeding), eight specimens, 75–80 (77); eastern Sikang, 77+, 78; Kiangsu, 76, 78; Chekiang, 76; Hupeh, 77, 79; Fukien, six specimens, 75–79 (76.5); Fukien (breeding), 83; Kiangsi, 78; Kwangtung, 74, 83; Szechwan, seven specimens, 77–83 (79.5). Stresemann (1923, Jour. Ornith., vol. 71, p. 364) gives the wing length of specimens collected in Kwangtung in December as 76–82 in eight males and 70–76 in five females. A breeding male from eastern Sikang has a wing length of 84, according to Schäfer (1939, Proc. Acad. Nat. Sci. Philadelphia, vol. 90, p. 223) but according to Meise (1937, Jour. Ornith., vol. 85, p. 552) the wing length of four males from Kansu is 75–77+.

If a separate race is recognized in China the population of the Likiang Range in northern Yunnan may or may not be referred to it. I did not examine adult females or first winter males in fresh plumage from this region, but five immature specimens from the Likiang Range are very slightly darker than five immature specimens from the western Himalayas and Afghanistan. Whistler (1944, Jour. Bombay Nat. Hist. Soc., vol. 45, p. 66) states that there is no evidence that the species occurs in Afghanistan, but Koelz collected a series in June in the Safed Koh.

MONTICOLA

The genus *Monticola* is usually placed near *Turdus* in the true thrushes, but several authors have shown recently that this is open to question, and I have placed it near the redstarts and chats. Lack (1954, Ibis, pp. 312–314) suggests that *M. saxatilis* should be placed near the redstarts (*Phoenicurus*), and the "Handbook of British birds" states that

the behavior of this species "suggests chat almost more than thrush." Some authors have noted that the habits of *M. solitarius* also are similar to those of chats. A few individuals of this species observed by me in southern Spain behaved exactly like chats, not like *Turdus*.

Monticola saxatilis

In *Monticola saxatilis* some Russian authors such as Kozlova (1933, Ibis, p. 318) and Dementiev (1935, L'Oiseau, p. 431) recognize an eastern race, *turkestanicus* Zarudny, 1918, type locality, Tian Shan, but comparison of material from both extremes of the breeding range shows that it is best to consider this species monotypic. Specimens of both sexes from Russian Turkestan (including topotypes of *turkestanicus*) and Mongolia are often paler than specimens in comparative plumage from Europe, and males in worn plumage from the east usually show a larger white area on the back, but these differences are not constant, as already noted by Hartert and Steinbacher (1935, Die Vögel der paläarktischen Fauna, suppl. vol., p. 306). Specimens from the east average smaller (see below) and show also a tendency towards a more attenuated bill and to have a very slightly longer second primary which is usually equal to the third rather than slightly shorter, but these differences are very slight and again are not constant. Too many specimens from the east and west are identical in these, as well as in the color characters to warrant the recognition of *turkestanicus*.

Wing length of adult males: Europe and north Africa, 121, 122, 124, 125, 126, 127, 128, 128, 128, 129, 130 (126). Asia: Russian Turkestan and Tian Shan, seven specimens; Dzungaria, one specimen; northern Mongolia, seven specimens, 117, 118, 118, 119, 119, 120, 121, 121, 122, 122, 122, 122, 123, 124, 126 (121).

Monticola solitarius

In *Monticola solitarius* I believe that it is best to synonymize *magna* La Touche, 1920, type locality, Shaweishan Island, with *philippensis* Müller, 1776, type locality, Philippines; and *behnkei* Niethammer (1943, Anz. Akad. Wiss. Wien, no. 3, p. 9, type locality, Crete) with nominate *solitarius* Linnaeus, 1758, type locality, Italy; and that *scorteccii* Moltoni (1934, Atti Soc. Italiana Sci. Nat., vol. 73, p. 366, type locality, Gat, southwestern Libya) is a synonym of nominate *solitarius*.

The first two forms, *magna* and *behnkei*, were separated on size differences, *magna* as being larger than *philippensis* and *behnkei* as smaller than nominate *solitarius*. In the populations that breed in eastern Asia from Manchuria and southern Ussuriland to northern China, Japan, and Ryu

Kyus to Formosa, a cline of decreasing size runs from north to south, and the validity of *magna* has been accepted by many authors. This form was based by La Touche on long-winged migrants collected on Shaweishan Island which were compared to short-winged specimens from the Philippines where the species occurs only as a winter visitor. In the literature, the populations of Ussuriland, Korea, and Japan are usually referred to *magna,* those from China and Formosa to *philippensis,* and those from the Ryu Kyus either to *magna* or to *philippensis.* The measurements given below show that this division is more or less arbitrary. Specimens with a short wing occur in the northern part of the range, while long-winged specimens occur in the south, and many specimens are intermediate and cannot possibly be identified as either *magna* or *philippensis.* Hence it seems best not to recognize *magna.*

Individual wing lengths of adult males measured by me (or in the case of Manchuria taken from Meise, 1934, Abhandl. Ber. Mus. Dresden, vol. 18, no. 2, p. 43, who does not recognize *magna*), with the specimens listed from north to south, are: Manchuria, 116.5, 119, 119, 119.5, 125 (119.8); Southern Ussuriland, 125, 128; Japan, 121, 122, 123, 123, 124, 124, 124, 125, 126, 126, 128 (124.2); Shantung (breeding), 123, 125, 127; Ryu Kyus, Okinawa (breeding), 119, 120, 120, 120, 120, 121, 121, 121, 122, 122, 124, 125, 125 (121.5); Formosa (winter and April), 116, 116, 117, 118, 118, 119, 120, 120, 120, 121, 122, 123, 124, 125 (120); Philippines, 118, 118, 119, 120, 120, 121, 122, 123, 124, 125 (121).

According to Niethammer, *behnkei* is the breeding form in Crete, Karpathos, and Rhodes. He gives the wing lengths of adults as 116, 116 in males and 114, 119 in females from Crete, 122, 122 in males and 114 in a female from Rhodes, and from Karpathos from where he had no adults, 115 in one immature specimen. His comparative material of nominate *solitarius* measures 123–129 in males and 119–121 in females. Adults measured by me from Italy, France, and Spain have a wing length of 121–127 (123) in 15 males and 116–124 (120) in nine females, 116 in one male from Dalmatia, and 120+ in one breeding female from Crete. I consider that the material measured by Niethammer from Crete and Rhodes is insufficient and does not show a size difference sufficient to warrant nomenclatural separation.

Moltoni based *scorteccii* on a single specimen collected on February 26 in the Tassili on the border of southwestern Libya and southern Algeria. This specimen, according to its description and as depicted in the colored plate, is apparently darker on the back and breast than is normal in nominate *solitarius,* but I have examined specimens from the breeding range of the latter which are fully as dark as the specimens depicted by Moltoni.

There are apparently no records in the literature to suggest that nominate *solitarius* is other than a migrant or winter visitor in southern Libya. Until breeding birds are available from this region and are shown to be distinct, *scorteccii* must be considered, I believe, a synonym of nominate *solitarius*.

Monticola rufiventris

In *Monticola rufiventris*, A. C. Meinertzhagen (1927, Bull. Brit. Ornith. Club, vol. 47, p. 148) has separated the populations of China as *sinensis*, type locality, Fukien, from those of the Himalayas on the basis that females from Fukien and Yunnan are darker and more slaty and have the markings on the rump and upper tail coverts ashy gray instead of buffy. In one female examined from Kwangtung, two from Yunnan, and two from northeastern Burma there is a tendency towards the characters indicated by Mrs. Meinertzhagen, but the difference is very slight and not constant. *Monticola r. sinensis* does not appear to be a valid race, and Greenway (1933, Bull. Mus. Comp. Zoöl., vol. 74, p. 127) has already stated that he found Chinese and Himalayan specimens identical.

Monticola gularis and *Monticola cinclorhynchus*

Monticola gularis Swinhoe, 1863, is treated by several current authors as a polytypic species, but as far as I have been able to find in the literature the only form considered conspecific with *M. gularis* Swinhoe is *M. cinclorhynchus* Vigors, 1832, which appears to me to be a separate species and is the older of the two names, contrary to the current usage of several authors in the literature.

Meise (1934, Abhandl. Ber. Mus. Dresden, vol. 18, no. 2, p. 43), who correctly used the name *cinclorhynchus* for this "polytypic species," appears to have been the first author to propose that the two forms are conspecific. He states in support of this opinion that the two are geographical representatives, similar in size, and that males are similar, although they differ in the coloration of the throat, and that females are "very similar."

The "similarity" in pattern and coloration between the two forms has been greatly oversimplified by Meise. As a matter of fact they differ most sharply. Male *cinclorhynchus* has a solid blue throat, while male *gularis* has a brick-red throat with a median white streak; female *cinclorhynchus* is uniform on the back, whereas female *gularis* is very conspicuously barred. If one assumes that the pattern of the female plumage is the more conservative, the difference in the throat pattern of the males is probably significant also. It may be added that differences in the pattern of both

sexes are far more sharply indicated between *M. gularis* and *M. cinclorhynchus,* the breeding ranges of which are separated by a gap of nearly 2500 kilometers, than they are between *M. rufiventris* and *M. cinclorhynchus* which have a similar pattern although they are sympatric in the Himalayas. *Monticola cinclorhynchus* is restricted to Afghanistan and the Himalayas, *M. gularis* to the area from the Amur Basin southward to northern Hopeh. The only similarity in coloration or pattern between *M. gularis* and *M. cinclorhynchus* is in the coloration of the breast in males, but while it is orange in *cinclorhynchus* it is maroon in *gularis.* The fact that two forms are of the same general size is not necessarily proof that they are conspecific.

SAXICOLA

Saxicola rubetra

In *Saxicola rubetra* several populations have been separated nomenclaturally from nominate *rubetra* Linnaeus, type locality, Sweden, but the validity of all the described forms has been questioned, and the species is currently considered monotypic by almost all authors. Stresemann (1920, Avifauna Macedonica, Munich, p. 168) and Hartert and Steinbacher (1935, Die Vögel der paläarktischen Fauna, suppl. vol., p. 315) believe that all the forms were based on individual variants and that the species shows no geographical variation. The race *margaretae* Herm. Johansen, 1903, type locality, Tomsk, was recognized by Dementiev (1935, L'Oiseau, p. 437) for the populations from the Urals eastward, but he states that its validity is dubious. Clancey (1949, Limosa, vol. 22, p. 370) has recently described as *hesperophila* the population of Great Britain, but this name is considered to be a synonym of nominate *rubetra* by the official "Check-list of the birds of Great Britain and Ireland" (1952, London, British Ornithological Union, p. 98).

It seems best not to recognize any subspecies. A long series of about 400 specimens that I have examined, breeding birds as well as migrants, suggests, however, that it is misleading to consider that this species shows no evidence of geographical variation. In this material several trends can be observed, but the variation seems too slight to warrant nomenclatural separation.

Specimens examined from Great Britain, Scandinavia, western Russia, and western and central Europe are slightly darker and somewhat more richly colored above, more brownish and rufous, less grayish, than specimens from Dalmatia and specimens that appear to be breeding birds from Algeria and Cyrenaica. I did not examine specimens from the Balkan

Peninsula, but the slightly paler and grayer populations probably range southeastward from Dalmatia. A series of 14 specimens examined from the Zagros in southwestern Iran is very similar to the grayer birds but averages somewhat more heavily streaked above and very slightly darker on the breast and has a slightly longer wing. The wing length in the specimens measured is as follows: Scandinavia, Great Britain, and western Europe, 20 males, 73–78 (75.5), 10 females, 72–77 (74); Dalmatia and Africa, four males, 75, 75, 76, 76, seven females, 74–76 (75); Iran, 10 males, 78–82 (79), four females, 74, 75, 76, 78.

The coloration of the specimens from Iran corresponds more or less to the description of *margaretae* quoted by Hartert (1910, Die Vögel der paläarktischen Fauna, p. 704), but, as this author observes, *margaretae* must be very similar to *noskae* Tschusi, 1902, type locality, northern Caucasus. I did not examine specimens from Siberia and the Caucasus. Dementiev (*loc. cit.*) considers *noskae* to be a synonym of nominate *rubetra,* and, as stated, Hartert and Steinbacher do not recognize either *margaretae* or *noskae.*

Clancey separated the population of Great Britain as *hesperophila* on the basis of being darker than the population of Sweden and the continent. Out of more than 50 specimens examined by me from Great Britain in all plumages, about half are darker, but the others are identical with specimens from Scandinavia and western Europe. The characters of the population of Great Britain do not seem to be constant, but it is possible that most of the paler specimens were not local birds. I believe that Clancey is probably correct and that the population of Great Britain probably represents the end of a cline of increasing saturation running from east to west. However, even if the paler specimens are eliminated, the difference is very slight and does not appear to me of sufficient taxonomic importance to warrant the nomenclatural recognition of *hesperophila.*

In the discussion above it has been assumed that the species breeds in northwestern Africa and southwestern Iran, but there are no breeding records from these regions. In Africa, Heim de Balzac (1926, Mém. Soc. Hist. Nat. Afrique du Nord, no. 1, pp. 76–77) states that on May 10 and 12 he observed birds "which were obviously paired" in sites suitable for nesting near Messad and Djelfa in southern Algeria and that on April 28 at Tilremt he was brought eggs which he is certain were those of *S. rubetra.* The specimens mentioned from the Zagros in Iran were collected at the same dates as the specimens from Algeria, and some of them were apparently in breeding condition, for in a male collected on April 20 the testes measured 5 by 4 mm.

About half of the specimens examined are migrants. All those from the Near East and Egypt are grayish. In tropical west Africa, most of the specimens are small and slightly darker or more rufous and are probably visitors from the western end of the range of the species. In tropical east Africa some specimens are small and dark, but others are larger and grayer, and the latter are probably visitors from the eastern end of the range.

Saxicola ferrea

In *Saxicola ferrea* the validity of the eastern race, *haringtoni* Hartert, 1910, type locality, Lieng Kiang near Foochow, Fukien, has been questioned by several authors, among them Kinnear (1934, Jour. Bombay Nat. Hist. Soc., vol. 37, p. 357), Stresemann (1940, Mitt. Zool. Mus. Berlin, vol. 24, p. 225), and Mayr (1941, Ibis, p. 220). *Saxicola f. haringtoni* was separated from nominate *ferrea* Gray, 1846, type locality, Nepal, on the basis of having a "distinctly shorter tail," but the authors mentioned could not confirm such a difference. As shown below, the populations of China differ by being slightly smaller, but I agree that a separation on the basis of size cannot be maintained. However, the specimens examined (178 specimens) show, I believe, that *haringtoni* is a distinct form, separable on the basis of differences in coloration.

A cline of increasing saturation runs from west to east. When specimens in similar state of plumage are compared from both extremes of the range the differences are as follows: In males in fresh plumage, specimens from Yunnan eastward are darker on the breast and flanks than specimens collected in the Himalayas from central Nepal westward, not so pure gray above, and have the ferruginous fringes of the feathers darker and better indicated than in the Himalayan specimens in which they are often lacking or poorly shown; in worn plumage the Himalayan specimens are very whitish below, more so than the Chinese ones. In females in fresh and worn plumage, the Chinese specimens are distinctly darker throughout, darker and more rufous brown above, much darker buff and more brown on the breast and thighs, more ferruginous on the flanks, and cinnamon or pale rust on the under tail coverts, not creamy. The brown plumage of the females foxes with age, but the differences noted, particularly on the under parts, are not caused by foxing. Specimens from Sikkim and various regions of Assam and Burma are intermediate in coloration to a varying degree between the populations mentioned but are closer in color to *haringtoni*.

The differences in measurements may be briefly stated, as few individual measurements are given in the literature. Limited to breeding birds

and to topotypes of nominate *ferrea* and to topotypes of *haringtoni* or specimens from southeastern China, the wing and tail length in adult males are as follows, wing listed first:

Nepal: 67/60, 67/62, 67/65, 68/62, 69/61, 69/62, 69/62; range and average wing length, 67–69 (68); tail, 60–65 (62); the length of the tail is 91 per cent of the length of the wing.

Southeastern China (including the measurements of five breeding birds given by Stresemann): 65/57 (type of *haringtoni*), 65/57, 66/57, 66/58, 67/59, 67/60, 68/62, 68/63, 69/62, 70/60; wing, 65–70 (67); tail, 57–63 (59.5); wing/tail index, 89.

The measurements of three other series of adult males are given for comparison:

Northern Punjab, 24 specimens: wing, 66–72 (69.8); tail, 60–67 (64)
Northern Yunnan, 18 specimens: wing, 67–70 (67.2); tail, 55–64 (59.2)
Northeastern Burma, 8 specimens: wing, 64–70 (67.5); tail, 56–62 (59.4)

ERYTHROPYGIA

The affinities of this Ethiopian genus and of the species *galactotes* are disputed. A monotypic genus (*Agrobates*) is sometimes recognized for this species which is distributed in both the Ethiopian and Palearctic regions, but most modern authors consider that this species is a northern offshoot of *Erythropygia* and do not recognize *Agrobates*. Meinertzhagen (1949, Bull. Brit. Ornith. Club, vol. 69, p. 110) states that *Agrobates* should be merged with *Erythropygia* and believes that this genus is better placed "on the whole" with the Sylviinae. However, Chapin (1953, Bull. Amer. Mus. Nat. Hist. no. 75A, p. 495) and several other modern authors believe that *Erythropygia* is more correctly assigned to the Turdinae, and I follow this opinion.

Erythropygia galactotes

In this species five races are recognized. They can be divided into two groups: (1) *syriacus* and *familiaris* which are gray above and range from southeastern Europe to southwestern Asia; (2) nominate *galactotes, minor,* and *hamertoni* which are rufous above and range from Spain and southern Syria southward to the dry region which stretches south of the Sahara from Senegal to Somaliland.

No specimens of *hamertoni,* which is restricted to the interior of eastern Somaliland and is a rare form in collections, are available to me. The material of the other races, some 200 specimens, shows that within these races the populations vary geographically in depths of saturation and that this variation is correlated with prevailing aridity. These variations which do not seem to be of taxonomic importance are as follows.

In specimens of nominate *galactotes* in comparative plumage collected during the breeding season, which appears to begin about the middle of April, those from Spain are slightly darker above than those from northwestern Africa collected north of the Sahara. In turn, specimens collected farther south, in the Algerian Sahara (at Biskra, in the region south of Biskra, and in the region of Ghardaïa), are distinctly paler and more sandy than the specimens collected north of the Sahara.

In *minor* which is sedentary and differs from nominate *galactotes* by being smaller (table 2) a series from the central and southern Sahara is identical in coloration with the series of nominate *galactotes* mentioned from the northern Sahara and, taken as a series, is distinctly paler, especially in the coloration of the tail, than a series of six specimens from the eastern end of the range of *minor* collected in Eritrea, Abyssinia, and Kordofan, and two specimens from Nigeria. The pale series of *minor* consist of one specimen collected at Tazeruk in the Ahaggar on April 18 and 12 specimens collected in the Aïr and in the regions of Damergou and Zinder. Hartert (1924, Novitates Zool., vol. 31, p. 32) identified the specimen from the Ahaggar as nominate *galactotes* but remarked that the date at which it was collected was late for a migrant. I believe this specimen to be *minor,* for its bill measures 18.5 mm., a measurement (table 2)

TABLE 2

MEASUREMENTS OF ADULT MALES IN SOME POPULATIONS OF *Erythropygia galactotes*

Race and Population	N	Wing Length	Bill Length
E. g. galactotes			
Southern Spain	7	85–91 (87.8)	21–23 (21.4)
Algerian Sahara	5	86–90 (88.1)	20.5–22 (21.2)
E. g. minor			
Eritrea, etc.[a]	5	78–83 (80.8)	19–20 (19.6)
Aïr	6	75–82 (79.6)	18–19.5 (18.8)
E. g. syriacus			
Greece, Asia Minor	10	86–90 (87.5)	19–21.5 (20.3)
E. g. familiaris			
Iran	10	84–91 (87.2)	19–21 (19.8)

[a] Eritrea, Abyssinia, Kordofan, and northern Nigeria.

that falls within the range of variation of *minor* but is too short for nominate *galactotes.* It is sexed as a female, and its wing measures 82 mm. which is the upper end of variation in male *minor.* There is no certainty that the specimen was correctly sexed, and in 10 adults of nominate

galactotes sexed as females measured by me the length of the bill varies from 20 to 22, averaging 20.8 mm.; and in nine specimens of *minor,* sexed as females, not including the specimen from the Ahaggar, from 17.5 to 19.5 (18.5).

In *syriacus* and *familiaris* the material examined suggests that a cline of decreasing saturation runs from west to east, from Greece to Transcaspia. The material available from Asia Minor is insufficient, and I lack topotypes of *familiaris* (eastern Transcaucasia), but a long series of migrants and winter visitors from Arabia and northeastern Africa south to Uganda and Kenya can be arranged in a perfect gradation running from specimens which are darkest and brownest and identical with specimens examined from Greece to specimens which are very pale and gray and identical with specimens from Transcaspia. In southwestern and southern Iran a cline of decreasing saturation runs from west to east in the Zagros from Luristan through Fars to Persian Baluchistan, and specimens from northeastern Iran (Khorasan) and neighboring Transcaspia are paler and more grayish than the specimens from southwestern and southern Iran (i.e., Khuzistan, Luristan, and Fars). All these differences are slight and are appreciable only in series.

Two populations have been separated nomenclaturally from *familiaris: deserticola* Buturlin (1908, Nacha Okhota, p. 8, type locality, Transcaspia), renamed *transcaspica* by Buturlin (1909, *ibid.,* p. 58), and *persica* Zarudny and Härms (1911, Jour. Ornith., vol. 59, p. 238, type locality, "Mesopotamia, Zagros, and [Persian] Baluchistan"). These forms have not been recognized, although Snigirewski (1928, Jour. Ornith., vol. 76, p. 598) believes that *deserticola,* which he calls *transcaspica,* is a well-differentiated race. In my opinion, however, the geographical variation mentioned above is too slight to warrant the recognition of either *deserticola* or *persica.* This last was inadvertently renamed *iranica* by Ticehurst (1922, Ibis, p. 548).

OENANTHE

Oenanthe leucura

In *Oenanthe leucura,* Hartert in 1909 separated as *riggenbachi* the population of Rio de Oro from *syenitica* Heuglin, 1869, from Algeria, but *riggenbachi* does not appear to be valid. *Oenanthe l. riggenbachi* is supposed to have broader black tips on the outer rectrices and a broader black band on the central rectrices which measure, according to Hartert, "16–20" for the tips and "45–46 as against 35–42" for the band in *syenitica,* but as Hartert stated later (1910, Die Vögel der Paläarktischen Fauna, p. 699) the material from Rio de Oro is inadequate. It consists of

only four specimens, and in 1910 Hartert stated that only one, the type, which is a male, is adult. He added that one of the others, although sexed as a female, might not be properly sexed, as it is very dark. In all characters this specimen appears to me to be a male and fully adult, but the other two are immature as stated by Hartert. I find that in the two adult males from Rio de Oro the tips measure 14 and 18 and the band 42 and 44 and that in 10 adult males from Algeria these measurements are, respectively, 12–18 (14.5) and 36–46 (42).

Meinertzhagen (1940, Ibis, p. 214) called his specimens from southwestern Morocco *syenitica.* He questioned the validity of *riggenbachi* but added, "I suspect that *riggenbachi* in fresh plumage will prove to be slightly darker than *syenitica;* a few of our birds are a very little darker than Algerian birds." I find, however, that the adults and immature from Rio de Oro are identical in coloration with specimens in comparative plumage from Algeria. Unless additional material shows the population from Rio de Oro to be truly distinct, it is best to synonymize *riggenbachi* with *syenitica.*

Oenanthe moesta

In *Oenanthe moesta,* Meinertzhagen (1939, Bull. Brit. Ornith. Club, vol. 59, p. 66) has separated as *theresae* the population of the Tiznit Plain in southwestern Morocco from nominate *moesta* Lichtenstein, 1823, from Algeria, but I consider *theresae* invalid. Meinertzhagen states that in *theresae* in "specimens in fresh autumn plumage the males are darker and purer dead black on the mantle, crown darker smoke, and under tail-coverts a darker russet. The females are darker and browner above, not so russet or so red on the crown. Throat smoky." I have examined seven adult males, one juvenal male, and three adult females from the Tiznit Plain, and the range of individual variation in this series proves to be identical with the range of individual variation in a long series of nominate *moesta* in comparative plumage from Algeria. Most of my specimens from the Tiznit Plain are in worn plumage, but three are in very fresh plumage, and I cannot separate them from skins in comparative plumage from Algeria and Tunisia. It is possible that a larger series in fresh plumage from Morocco might show that the population of this region is darker, but it is to be questioned whether a name should be based on a difference that is apparent only during a very brief period following the molt.

For a study of polymorphism in the genus *Oenanthe,* see Mayr and Stresemann (1950, Evolution, vol. 4, pp. 291–300) and for systematic notes on the forms that occur in western Asia, see Vaurie (1949, Amer. Mus. Novitates, no. 1425, pp. 1–47).