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Systematic Notes on Palearctic Birds. No. 30 The Certhiidae

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The following notes were made during a study of the tree creepers for a contemplated check list of the birds of the Palearctic region. Five species are represented in this region: *familiaris, brachydactyla, himalayana, discolor,* and *nipalensis.* Only the first three are discussed in this paper, and their geographical variation is shown to be slight, or relatively slight, and very predominantly clinal in character. The clines are discussed, and a number of subspecies are synonymized. Others that are only slightly differentiated are recognized, but in this group of species it is often difficult to express the geographical variation satisfactorily in terms of subspecies, as so much of it is clinal. *Certhia nipalensis* is monotypic, and *discolor* is a semitropical species, only one race of which penetrates into the Himalayas to an altitude that brings it into a predominantly Paleartic fauna.

Certhia familiaris

The Tree Creeper varies geographically, and 13 subspecies can be recognized in the Old World. This relatively large number of races gives the impression, which is false, that the variability of the species is high and well marked. On the contrary, it is quite slight, consisting almost solely of various degrees of pigment saturation along several clines and usually, but not always, only the races at the extremes of the clines are well differentiated. At least three clines can be discerned, plus two slightly differentiated isolated races, *persica* and *tianschanica.*

A cline along which five subspecies can be recognized (nominate *familiaris, daurica, orientalis, japonica,* and *bianchii*) extends from Scandinavia across northern Eurasia to Sakhalin and Japan and thence southwest on the continent to Shensi and Kansu. In Scandinavia and western Russia, the birds are relatively pale above, brown on the head, rufous brown on the back with a brighter rufous rump, and the back is not too sharply streaked with white. These populations are typical nominate *familiaris.* From eastern Russia eastward across the Urals and western Siberia to about the Yenisei, the birds become a little paler, showing a gradual decrease in the amount of the rufous pigments, and from the Yenisei and the Altai eastward to Transbaicalia become still paler and more grayish on the back, the streaks showing a tendency to become more sharply defined. The cline is reversed in Amurland, the populations now becoming tinged with rufous again but a little less so than in nominate *familiaris.* In view of the clinal variation it is difficult to define with certainty the range of the subspecies, but the more grayish ones from the Yenisei to Transbaicalia are called *daurica* and those from Amurland eastward are called *orientalis.* The end of the cline is reached with *japonica* in Hondo or perhaps (see below) with *bianchii* in Shensi and Kansu. These two races are very similar again to nominate *familiaris* but are somewhat darker and more rufous above; *japonica* is a little smaller, while *bianchii* is less whitish below and has a slightly longer bill.

The range of *orientalis* seems to extend to northern Hopeh, and from there south no information exists about the distribution of the species until we meet again birds that breed in Shensi (Tsingling Range) and in neighboring Kansu westward to eastern Tsinghai which, if one can judge by the specimens I have examined, are very similar indeed to nominate *familiaris.* The birds of Kansu were described as *bianchii* by Hartert, who stated that they were much darker above than nominate *familiaris* and were creamy below, with rufous buff under tail coverts. I have not seen the specimens described by Hartert, which he apparently had borrowed from Russian collections, but three specimens collected by Beick between 1926 and 1930, and which are topotypes of *bianchii,* plus one other specimen from Shensi, are only very slightly darker above than nominate *familiaris.* They differ from it only in that they have a longer bill and are more buffy, less white, on the flanks and under tail coverts. If we assume that the range of the species is continuous from Hopeh to Shensi and Kansu, it seems that *bianchii* belongs in the same group as the other four races on the cline.

This is not certain, not only because of a possible gap in distribution,

but also because *bianchii* may represent the departure of another cline which continues on through Szechwan and Sikang to northern Yunnan and the Himalayas. Hartert's specimens were obviously darker than nominate *familiaris,* and Bangs and Peters (1928, Bull. Mus. Comp. Zoöl., vol. 68, p. 366) mentioned also that their four specimens of *bianchii* from southern Kansu were dark above and had a "rusty or fawn-colored abdomen and under tail coverts." As stated above, my specimens of *bianchii* are also buffy below, though apparently less so than those of Bangs and Peters, but they were collected considerably farther north than southern Kansu.

At any rate, according to Bangs and Peters, we meet dark populations in southern Kansu, and others that are conspicuously darker above and on the flanks than nominate *familiaris* in northern Szechwan (Sungpan), western Szechwan (Kwanhsien), Sikang, and northern Yunnan. These dark birds are the well-differentiated *khamensis* which ranges westward to southwestern Sikang on the northern slopes of the Himalayas to the borders of southeastern Tibet. This race penetrates also to northern Burma as an extension of its range from northern Yunnan and is replaced on the southern slopes of the Himalayas by *mandellii,* which is just as dark above and below as *khamensis* but distinctly more rufous above. The range continues on to Kashmir, but from northern Punjab westward *mandellii* is replaced by the paler *hodgsoni* which is very similar to nominate *familiaris.* Much more study is necessary in China, and of course *khamensis* and *mandellii* cannot come in contact in the Himalayas, but the geographical variation appears to be clinal in China as it is along the southern slopes of the Himalayas.

A third cline can be discerned, this one in western Europe as nominate *familiaris* grades into *macrodactyla* in eastern Germany. Hartert states that the two races replace each other at about the Oder River, but the transition is not so abrupt as this statement implies because a large series that I have examined from Pomerania is intermediate, though closer on the whole to nominate *familiaris.* Populations of the *macrodactyla* type, which differs from nominate *familiaris* by having the ground color of the upper parts darker and by having a longer bill, occupy central and western Europe south to Bosnia and Serbia, northern and western Italy, Corsica, the mountains of France, including the Pyrenees, and the British Isles. In the British Isles they are slightly darker above and more rufous, especially on the rump, than on the continent, and are less pure white below and more darkly washed with buff and rufous on the flanks and under tail coverts. In Corsica, the

birds are larger, have a longer bill (a character common to many insular races, though not shown in the British Isles) and differ also through other slight characters, such as showing a tendency to have larger and brighter, more rufous, spots on the outer webs of the primaries. The population of the British Isles is *britannica,* and that of Corsica is named *corsa.*

The comparative measurements that I have taken of these three races and of nominate *familiaris* are as follows: Nominate *familiaris,* eight male topotypes, wing 62–68 (65.5), bill 14–18 (16.5); *macrodactyla,* 10 males from central and southern Germany, wing 63–67 (65), bill 17–20 (18.5); *britannica,* 10 males from southern England, wing 64–67 (65), bill 16–19 (18.0); *corsa,* eight adults, wing 64–71 (67), bill 19–21 (19.8). In *corsa* the three specimens that are sexed as being males and include the type measure, respectively, 67, 70 (type), 71, and 20, 21, 21 (type).

The two isolated races differ only slightly from nominate *familiaris.* In *persica* the ground color of the upper parts is darker and duller, less rufous, and its bill averages slightly longer, 16–20 (17.5) in 11 males. *Tianschanica* is the largest race, but it is obvious from the measurements given above that size differences are slight in this species, 11 adults from the Tian Shan measuring 63–72 (67.5) and 18–22 (19.8). In this series the four specimens that are sexed as males and include the type measure 68, 69 (type), 71, 72, and 19.5, 21 (type), 22, the bill being broken in the fourth. *Tianschanica* is a pale race above but is tinged with rufous as in nominate *familiaris* though slightly paler, but is less pure white below, slightly more creamy, and distinctly washed with grayish buff on the flanks and under tail coverts.

The range of the species extends to North America from Alaska, Canada, and Newfoundland south to northern Nicaragua, and within this range 10 subspecies are recognized. In the Old World, Hartert and Steinbacher (1933, Die Vögel der paläarktischen Fauna, suppl. vol., pp. 154–157) recognized 13 subspecies which are the same that I have recognized, my treatment differing from theirs only in a matter of details. These are listed below, with a brief discussion of the synonyms or some aspects of the distribution.

1. *Certhia familiaris familiaris* Linnaeus, 1758, type locality, Sweden, with *rossica* Domaniewski, 1922, type locality, Saratov, eastern Russia, as a synonym. *Rossica* represents the paler intermediate populations mentioned above which range from eastern Russia to the Yenisei, but these populations are much too poorly differentiated and not sufficiently constant to warrant the recognition of *rossica,* which has been synonymized with nominate *familiaris* by Hartert and Steinbacher as

well as by all the Russian authors. Johansen (1952, Jour. Ornith., vol. 92, p. 170) recognizes *rossica,* but the material he mentions to substantiate its validity does the opposite in my opinion. He states that in his series of 12 specimens from Tomsk, three are indistinguishable from specimens from Europe, while three others resemble *daurica* "perfectly," the other six being "intermediates."

2. *Certhia familiaris daurica* Domaniewski, 1922, type locality, Transbaicalia.

3. *Certhia familiaris orientalis* Domaniewski, 1922, type locality, southern Ussuriland. La Touche (1925, A handbook of the birds of eastern China, London, Taylor and Francis, vol. 1, p. 40), and Shaw (1936, Fan Mem. Inst. Biol., Zool. Sinica, ser. B, vol. 15, p. 651) identify the birds of northern Hopeh as being nominate *familiaris.* This is not surprising, because until fairly recent years all authors believed that the range of the nominate race did extend to the Pacific and northern China, and it must be emphasized that, as mentioned above, *orientalis* is very poorly differentiated from nominate *familiaris.* I have not seen specimens from Hopeh, but I believe this population is *orientalis.*

4. *Certhia familiaris japonica* Hartert, 1897, type locality, Hondo, with *shikokiana* Mishima (1955, Tori, vol. 13, no. 65, p. 22), type locality, Shikoku, as a synonym. As stated above, this race is a little smaller than nominate *familiaris.* Three adults (including the type, which is a male and the smallest specimen) have a wing length of 61, 62, 64 as against 62–68 (65.5) in eight male topotypes of nominate *familiaris,* and 62–68 (65.0) in nine adults of *orientalis.*

I believe *shikokiana* cannot be accepted, at least until additional material becomes available from Shikoku. The species has not been shown to breed in that island, and only two specimens have been collected. Apparently, the first one that was collected in 1913 is lost, according to Mishima, while he described the second one, collected on January 7, 1950, as *shikokiana.* This form is separated from *japonica* on some detail in coloration, chiefly that it is darker, but as emphasized above the geographical variation is slight in this species, and one specimen is insufficient.

5. *Certhia familiaris bianchii* Hartert, 1905, type locality, Kansu. The characters of this race are discussed above, but Hartert mentioned other subspecific characters, namely, that it has large spots of rufous on the outer webs of the primaries, that its tail is dark, and that it has a well-indicated dark spot on the under wing coverts at the base of the first primary. The first two do not seem to be of taxonomic importance, as they are not constant in the specimens I have examined. The last one

is misleading, as a dark spot occurs in unrelated forms of this species as well as in some forms of *C. brachydactyla.*

6. *Certhia familiaris khamensis* Bianchi, 1903, type locality, central Sikang, with the following synonyms: *kwanhsienensis* Kleinschmidt and Weigold, 1922, type locality, western Szechwan, and *waschanensis* Kleinschmidt and Weigold, 1922, type locality, Wa Shan, eastern Sikang. As Hartert and Steinbacher have shown, *kwanhsienensis* is a synonym of *khamensis,* but they seem to be incorrect in stating that *waschanensis* is probably a synonym of *nipalensis* Blyth [= *mandellii,* as shown by Kinnear, 1935, Ibis, p. 664]. They did so because they believe that *waschanensis* is not separable from the population of Yunnan which they state (though they add they are not certain) is *nipalensis* [i.e., *mandellii*] or closer to that race. However, the specimens that I have examined from Yunnan seem to belong without a doubt to *khamensis,* as they lack altogether the pronounced rufous tinge on the upper parts which is so characteristic of *mandellii,* and a paratype of *waschanensis* that I have examined is perfectly identical above with the specimens from Yunnan. This paratype, however, is very slightly more grayish, less rufous, on the flanks than the latter, and it is possible that an isolated form lives on the Wa Shan as Kleinschmidt and Weigold suggest, but if so, if one may judge by the paratype, it is much too slightly differentiated to warrant its separation from *khamensis.*

7. *Certhia familiaris mandellii* Brooks, 1873, type locality, Sikkim.

8. *Certhia familiaris hodgsoni* Brooks, 1872, type locality, Kashmir.

9. *Certhia familiaris macrodactyla* C. L. Brehm, 1831, type locality, central Germany. Some authors, such as Whistler and Harrison (1930, Ibis, p. 711) and Mayaud (1953, Alauda, p. 52), state that the population of the Pyrenees is nominate *familiaris,* but Hartert (1905, Die Vögel der paläarktischen Fauna, p. 319) and Hartert and Steinbacher (*loc. cit.*) state that it is *macrodactyla.* Examination of a good series of 21 specimens from the Pyrenees shows that Hartert and Steinbacher are correct, but pale birds occur in the Pyrenees that approach the coloration of nominate *familiaris* and could be confused with it. They are, however, in the minority and furthermore have the longer bill of *macrodactyla.* In the series of 21, only three are pale, the others are unmistakably dark and identical with *macrodactyla.* The males in this series, nine specimens, have a bill length of 18–20.5 (19.0).

10. *Certhia familiaris britannica* Ridgway, 1882, type locality, England, with *meinertzhageni* Clancey (1942, Bull. Brit. Ornith. Club, vol. 63, p. 42), type locality, southwestern Ireland, as a synonym. Clancey has separated the population of Ireland from populations of England

and Scotland under the name *meinertzhageni,* stating that it is "much richer rufous" above, has darker ear coverts, and has the flanks and belly more extensively washed with rufous. He also noted that the birds of Scotland show a tendency towards nominate *familiaris* and discussed this last point further in an additional paper (1943, Bull. Brit. Ornith. Club, vol. 64, p. 15). Meinertzhagen (1947, Bull. Brit. Ornith. Club, vol. 68, p. 26), commenting on the populations of the British Isles, states that *meinertzhageni* is valid but remarks that it is so chiefly because of "the greater extent of rusty colour on the flanks and abdomen." He adds that the upper parts are only slightly richer and darker in *meinertzhageni* and that some individuals are identical. He remarks also that birds from Scotland are "extremely" similar to those of southern England. The official "Check-list of the birds of Great Britain and Ireland" (1952, London, British Ornithologists' Union, p. 98) states, however, that *meinertzhageni* is a synonym of *britannica.*

My material shows that Clancey and Meinertzhagen are correct, as specimens from Ireland show a tendency to show the characters they have mentioned, but all the differences are slight and not constant and I believe the List Committee of the British Ornithologists' Union was justified in not recognizing *meinertzhageni.* In my opinion, it is sufficient to call attention to the relatively slight differences shown by this form, as Witherby had already done (1938, *in* Witherby *et al.,* The handbook of British birds, London, Witherby, vol. 1, p. 236) without burdening the nomenclature. I cannot see any evidence of geographical variation in a series from Scotland. The material examined by me consists of 16 specimens from Ireland, 17 from Scotland, and 51 from England.

11. *Certhia familiaris corsa* Hartert, 1905, type locality, Corsica.

12. *Certhia familiaris persica* Zarudny and Loudon, 1905, type locality, northern Iran. Hartert and Steinbacher state that they cannot see any difference between the birds of eastern Europe and those of the Caucasus, and refer this last population to nominate *familiaris.* However, the series of 15 specimens that I have examined from the Caucasus is quite separable from nominate *familiaris.* The ground color of the upper parts in this series is distinctly darker and duller, less rufous, and the white streaks are better defined, probably as the result of greater contrast with the ground color. Dementiev (1934, L'Oiseau, p. 621) considers also that the population of the Caucasus is *persica* but shows a more or less well-marked tendency to be intermediate between the latter and nominate *familiaris,* and he adds that the birds of the

Crimea are identical with those of the Caucasus. I cannot comment on this question, as I have no specimens from the Crimea and no adults from northern Iran, but the populations of the Crimea, Caucasus, and Iran are isolated by a wide gap in distribution from the other populations of the species, and it seems to me that the first two are best referred to *persica.*

The specimens that I have from Iran are four young birds in juvenal plumage and are definitely darker, showing virtually no trace of rufous, than comparative specimens of either nominate *familiaris* or *macrodactyla.* When I first discussed these four birds (1950, Amer. Mus. Novitates, no. 1472, p. 35) I failed to mention this difference, as I had then no immature specimens of nominate *familiaris.* Stresemann (1928, Jour. Ornith., vol. 76, p. 364) states that *persica* is extremely similar to nominate *familiaris* in coloration but differs from it by having a much longer bill. In the young of *persica* that I have seen, the bill is about 2 mm. longer, but in the adults from the Caucasus the bill averages only a little longer than in nominate *familiaris,* measuring 16–20 (17.5) in 11 males.

13. *Certhia familiaris tianschanica* Hartert, 1905, type locality, southern Tian Shan in Sinkiang.

Certhia brachydactyla

The Short-toed Tree Creeper breeds from Germany and neighboring Poland, southward through France and the Iberian Peninsula to the Atlas in North Africa, Italy, and Sicily, the Balkans, Crete, Cyprus, and Asia Minor eastward to the Caucasus. Its range is thus rather restricted when compared to that of *C. familiaris,* and its geographical variation is slight. In *familiaris,* some populations are well differentiated, such as those of western China and the Himalayas, but in *brachydactyla* the range of variation is much narrower, though this species has been divided into even more subspecies than *familiaris.* In fact, it is perhaps of all Palearctic bird species the one that has been most abused by excessive splitting.

All the subspecies are based on trival or slight differences in coloration (whether or not the populations are more rufous, darker, or more sharply and conspicuously streaked) or measurements, but the latter vary, as in the case of the coloration, within a very narrow range and show a virtually complete overlap. There is no agreement in the literature concerning its taxonomic treatment, as most of the original descriptions and accompanying or subsequent discussions conflict. This is to be expected, however, as long as authors attempt to reflect in the

nomenclature all evidences of geographical variation, no matter how slight and inconstant, and overlook the fact that the variation is clinal in many regions and irregular in others and that through parallelism some widely separated populations resemble one another.

In view of these complicating factors and the discrete nature of the variation, it might be best not to recognize any subspecies, but nevertheless I have recognized five which are listed below. One of these (nominate *brachydactyla*) groups all the more slightly differentiated forms, but I wish to emphasize that even the subspecies I have recognized are not much better differentiated.

To judge by the literature and the specimens I have examined, the trends of the geographical variation are as follows: Throughout most of Germany, except in the west from Westphalia westward, the populations are rather dull dark brown above, with a slight tinge of rufous, except on the rump which is brighter rufous. They are moderately streaked, and their flanks are rather weakly washed with grayish or pale rufous buff. These populations are typical nominate *brachydactyla*. As the populations range from southwestern Germany to Switzerland and Italy, they become very slightly paler and a little more rufous above, and the streaks become a little more accentuated, particularly on the crown. All the differences are extremely slight, however, and none are very constant, especially as regards the streaking. The populations show also a slight reduction in average size. In Sicily, they apparently become slightly grayer above, and they are very slightly darker in Crete, with a reduction in the width of the streaks, and I can in fact match perfectly four specimens from Crete with birds from Germany.

The situation is more confused in Spain (probably because Jouard and von Jordans have stressed, as always, any minute differences that may exist), but at least it is clear that in the eastern Pyrenees and in the eastern and central part of the Peninsula we meet again populations that are very similar to nominate *brachydactyla* from Germany but that are slightly darker, less rufous, and show some minute local differences in the width or color of the streaks. Apparently no two populations from these regions are precisely identical, if we are to believe the literature, but it is not constructive to stress such small differences by the description of subspecies. No agreement is possible as long as it is decided to reflect in the nomenclature any evidence of geographical variation, no matter how small. See also Witherby (1931, Ibis, pp. 357–359) who considers that the birds of central and eastern Spain and of the eastern Pyrenees are nominate *brachydactyla*. He has ex-

amined, among other material, the one on which *parisi* was based and states that the differences described by Jouard are "so very slight and doubtfully constant" that he cannot agree that this form is separable from nominate *brachydactyla.*

My material from eastern and central Spain is old and insufficient, but for what it is worth I may mention that one specimen collected near Barcelona and two each from Madrid and Aranjuez are not separable from nominate *brachydactyla.* These specimens are extremely similar to *mauritanica* also, differing from it only by being a very little less buffy on the flanks.

A cline of decreasing saturation, coupled with an increase of the rufous pigment of the upper parts, runs westward from western Germany (Westphalia) to Brittany, as Jouard (1930, Alauda, pp. 5–49) has correctly emphasized. The difference remains slight, but, being discernible and constant, it probably warrants the recognition of *megarhyncha,* if any subspecies are to be recognized. No specimens from the western extreme of the cline are available to me, but according to Jouard this population is the palest and most rufous. It is unfortunate that *megarhyncha* was described from the opposite end of the cline, but in my opinion the general variation of the species is much too slight to warrant the recognition of two subspecies on this cline, and I believe that *bureaui* should be synonymized with *megarhyncha.*

Rufous birds, similar to *megarhyncha,* range through western France south to northwestern Spain and Portugal (see Witherby) but in southern Portugal (Monchique) and extreme southern Spain grade into the darker and less rufous nominate *brachydactyla,* according to Witherby and also Ticehurst and Whistler (1933, Ibis, p. 104). In the Pyrenees, Witherby stated that *megarhyncha* seemed to range as far east as Cauterets but that the population from this locality was intermediate though closer to *megarhyncha.* I have examined the same material from Cauterets and agree with Witherby. My only specimens from northwestern Spain are three rufous birds from the region of Santander that match perfectly specimens from Holland. No specimens were examined by me from Portugal or southern Spain.

In north Africa, the birds (*mauritanica*) are extremely similar to nominate *brachydactyla* but generally speaking are slightly darker. They are "blacker" brown above, with only a faint tinge of rufous, and the streaks, particularly on the crown, average narrower and, being also slightly more buffy, less whitish, are a little less conspicuous. All the differences are very slight, however, and the best subspecific character seems to be the difference in the color of the under parts, the

breast averaging less whitish in *mauritanica* and the flanks being, as a rule, more darkly and extensively washed with buff.

I have examined a very long series collected in regions ranging from Tunisia to Morocco which includes the type and paratypes of *mauritanica* and topotypes of *raisulii,* and I agree with Meinertzhagen (1940, Ibis, p. 199) that the latter is not valid. I do not, however, consider that *raisulii* is a synonym of *ultramontana,* as he does, as I consider that *ultramontana* should be synonymized with nominate *brachydactyla. Raisulii* is a synonym of *mauritanica.* It was described by Bannerman as being much grayer and less rufous than *mauritanica* (discussed above) and larger, and he added that it could be distinguished "at a glance" from *ultramontana* by its longer bill and "considerably larger size." Bannerman gave no comparative measurements whatever, but those given below show that the birds of Morocco are not separable from *mauritanica* and that the measurements of all the populations of the species overlap a great deal. My material shows that a slight cline runs from Tunisia to Morocco, the birds from this last region averaging a little less rufous than those from Tunisia and hence are quite similar to nominate *brachydactyla.*[1]

In Cyprus, the population (*dorotheae*) is slightly grayer above, particularly on the rump, and is a little purer white below, very slightly paler, more grayish, on the flanks than any other population. All the differences are again very slight, and *dorotheae* is only a poorly differentiated race, but if subspecies are recognized, it is about as well differentiated as is *megarhyncha.*

The populations of Asia Minor have been discussed by Sick (1939, Ornith. Monatsber., vol. 47, pp. 82–83) who shows that only one race can be recognized in Turkey but, judging by the lone specimen that I have examined, even that race does not seem to be well differentiated, and I am uncertain about its characters. This specimen, the type of *harterti,* is exceedingly similar to *megarhyncha,* being rufous, but it is slightly brighter throughout. As it was collected in 1868, it is probable, however, that some, if not most, of this rufous coloration is due to foxing, because it seems from the account given by Sick that all the birds of Turkey are not, or are less, rufous. When Kummerlöwe and Niethammer described *stresemanni,* which Sick states is not valid, they did not mention the rufous coloration, stating that their three specimens were very similar in coloration to nominate *brachydactyla* but more

[1] I have since examined the material on which *raisulii* was based and other material from northwestern Africa in the British Museum. This material confirms the existence of the cline mentioned.

"uniformly" paler, and Kozlova (1936, Ornith. Monatsber., vol. 44, pp. 24–25) states that her two specimens from the Caucasus differ only slightly from nominate *brachydactyla*. It is possible, despite the belief of Sick, that two forms occur in Turkey, a grayer one in the north ranging from Paphlagonia eastward to the Caucasus, and a more rufous one ranging from western Turkey south through the Taurus, but, if so, both would seem to be poorly differentiated. The populations of Asia Minor are not sufficiently known, and until more material is collected it is wiser to accept only one race, with the reservation that its validity requires confirmation.

MEASUREMENTS: I have measured all the series containing 10 or more males from any one region. The wing and bill lengths in 10 males of these populations are as follows: Nominate *brachydactyla,* Thuringia and Hessen, wing 64–67 (65.2), bill 19–23 (20.5); *"ultramontana,"* Tuscany, 60–65 (62.6), 17–21 (19.1); *mauritanica,* Tunisia, and Algeria, 60–68 (64.2), 17–22 (20.1); *"raisulii,"* Morocco, 62–70 (65.5), 17.5–21 (19.4); *dorotheae,* Cyprus, 61–65 (63.0), 18–21.5 (19.7).

SUBSPECIES

1. *Certhia brachydactyla brachydactyla* C. L. Brehm, 1820, type locality, Thuringia, with the following synonyms: *ultramontana* Hartert, 1905, type locality, Tuscany; *spatzi* Stresemann, 1926, type locality, Crete; *parisi* Jouard, 1929, type locality, eastern Pyrenees; *nigricans* von Jordans, 1931, type locality, eastern Spain; *obscura* von Jordans (1933, Alauda, p. 522), type locality, western Spain; and *siciliae* Schiebel (1934, Ornith. Monatsber., vol. 42, p. 86), type locality, Sicily.

2. *Certhia brachydactyla megarhyncha* C. L. Brehm, 1831, type locality, Westphalia, with, the following synonyms: *lusitanica* Reichenow, 1917, type locality, Portugal; and *bureaui* Jouard, 1929, type locality, Brittany.

3. *Certhia brachydactyla mauritanica* Witherby, 1905, type locality, Tunisia, with the following synonym: *raisulii* Bannerman, 1926, type locality, Morocco.

4. *Certhia brachydactyla dorotheae* Hartert, 1904, type locality, Cyprus.

5. *Certhia brachydactyla harterti* Hellmayr, 1901, type locality, "Asia Minor," the type examined is from "Alum Dagh," which Sick (*loc. cit.*) states is Alem Dagh in western Bithynia, northwestern Turkey, with the following synonym: *stresemanni* Kummerlöwe and Niethammer (1934, Jour. Ornith., vol. 82, p. 546), type locality, Kastamonu, western Paphlagonia, northwestern Turkey.

Certhia himalayana

In an earlier paper (1950, Amer. Mus. Novitates, no. 1472, pp. 36–38) I discussed the clinal variation in the western populations of the Himalayan Tree Creeper. The populations (*taeniura*) from Russian Turkestan and northern Afghanistan are distinctly paler and have a longer bill than those of the western Himalayas which become progressively darker as they range farther east, the most eastern material examined by me being a series from Kumaon. A few months before my paper was published, Ripley (1950, Proc. Biol. Soc. Washington, vol. 63, p. 106) named the population from Tikapur in the Kailali District of extreme western Nepal *infima,* stating that it was darker than nominate *himalayana.* I was unable to comment on this form, as its description did not reach me until my paper was published.

Ripley does not mention the type locality of nominate *himalayana* which was described by Vigors in 1832 as merely from the "Himalayas," but Meinertzhagen (1922, Bull. Brit. Ornith. Club, vol. 42, p. 140) states that the type "was undoubtedly collected in either Garhwal or Kumaon." As this is apparently the first mention in the literature of a distinct locality, this statement should be accepted, I believe, as the correct restricted type locality, rather than the subsequent and arbitrary (see Mayr, 1947, Jour. Bombay Nat. Hist. Soc., vol. 47, p. 125) restriction by Ticehurst and Whistler (1924, Ibis, p. 471) of all the birds described by Vigors in the Proceedings of the Zoological Society of London for 1830 and 1831 to the Simla-Almora district. The matter of the type locality is mentioned, because the cline is not sufficiently steep to warrant in my opinion the nomenclatural separation of the population from western Nepal from that of neighboring Kumaon or Garhwal. I consider *infima* a synonym of nominate *himalayana.*

In view of this clinal variation, I believe now that it is more constructive to synonymize *limes* also with nominate *himalayana.* I recognized it in 1950, but *limes,* described from Gilgit, represents merely a stage on the cline and is considerably closer in every way to nominate *himalayana* than it is to *taeniura.* The form (*cedricola*) described by Koelz (1939, Proc. Biol. Soc. Washington, vol. 52, p. 65) from Jalalabad in eastern Afghanistan is not valid. A few paratypes of *cedricola* are a little paler than specimens from the northwestern Himalayas, including some from Gilgit, but they are badly worn, and no difference is shown by the specimens that are in better plumage. I did not recognize *cedricola* in 1950 but spoke of this form as representing possibly a stage on the cline. However, all the specimens on which it is based were collected

south of the Hindu Kush in the region of Jalalabad, or to the south in the Safed Koh and therefore throw no light as to whether or not the cline continues on through northeastern Afghanistan to Turkestan, though it presumably does.

Ripley states that *himalayana* is a western Himalayan species, but actually it breeds from northern Yunnan eastward through Sikang to northern Szechwan and southern Kansu and also on Mt. Victoria in the Chin Hills. These populations differ only in a matter of degree from those of the western Himalayas, *yunnanensis* being merely more saturated (as well as larger) and thus continues the cline, while *ripponi* from the Chin Hills is slightly browner and slightly smaller than *yunnanensis*. The fact that the characters follow a gradient suggests that *yunnanensis* is perhaps not separated from nominate *himalayana* by a wide gap in distribution, as is generally believed, though records between Nepal and Yunnan or Sikang are open to question. Kinnear (1937, Ibis, p. 251) states that the collection of the British Museum contained a specimen, which he adds he cannot trace, which was said to have been collected in Assam, and I have examined two old skins in the Rothschild collection that are said to be from Sikkim and were collected by Marshall.

The cline of increasing pigment saturation is reversed somewhat at the eastern end of the range in eastern Sikang and northern Szechwan, as three specimens from Paohing in Sikang and Sungpan in Szechwan are a little paler than two from northern Yunnan and have a shorter wing and bill (69, 71, 71 and 20, 20, 21, as against 77, 78 and 22.5, 25). A clinal decrease in coloration is often shown towards the eastern end of the range of many species the range of which extends eastward from the Himalayas to the mountains of western and central China.

The valid subspecies of *himalayana* are the following in my opinion:

1. *Certhia himalayana taeniura* Severtzov, 1872, type locality, Russian Turkestan.

2. *Certhia himalayana himalayana* Vigors, 1832, type locality, Garhwal or Kumaon, with the following synonyms: *limes* Meinertzhagen, 1922, type locality, Gilgit; *cedricola* Koelz, 1939, type locality, eastern Afghanistan; and *infima* Ripley, 1950, type locality, western Nepal.

3. *Certhia himalayana yunnanensis* Sharpe, 1902, type locality, northern Yunnan.

4. *Certhia himalayana ripponi* Kinnear, 1929, type locality, Chin Hills.