

American Museum Novitates

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

NUMBER 1694

NOVEMBER 23, 1954

Systematic Notes on Palearctic Birds. No. 12 Muscicapinae, Hirundinidae, and Sturnidae

BY CHARLES VAURIE

The following notes were made during a study of the Muscicapinae, Hirundinidae, and Sturnidae for a proposed check list of the Palearctic region. I am indebted to Drs. H. Johansen, F. Salomonsen, and E. Stresemann for information and friendly suggestions.

MUSCICAPINAE

The genera of flycatchers of the tribe Muscicapini have been reviewed by Vaurie (1953, Bull. Amer. Mus. Nat. Hist., vol. 100, pp. 453-538) who recognizes three genera in the Palearctic region: *Ficedula*, *Muscicapa*, and *Niltava*. The first two are very well represented in the Palearctic region, but *Niltava* barely reaches into the eastern parts of this region with two races of the species *rubeculoides*. One of the species of *Ficedula* (*F. tricolor*) was reviewed in a separate paper in the present series (Vaurie, 1953, Amer. Mus. Novitates, no. 1641, pp. 1-8).

FICEDULA

Ficedula hypoleuca

The populations of this species breeding from western Europe (other than those of the Iberian Peninsula) across to western Siberia have been discussed extensively in recent years. Drost (1936, Vogelzug, vol. 7, pp. 179-186) has shown that a large proportion of the males breeding in middle Europe are more brown than black above. Dunajewski (1938, Acta Ornith. Mus. Zool. Polonici, vol. 2, pp. 413-429) has proposed that

the populations of Germany and Poland be separated as *muscipeta* Bechstein, 1794, type locality, Germany, on the basis of being paler, more grayish, or less black in males than nominate *hypoleuca*. Salomonsen (*in litt.*) writes me that *muscipeta* is a recognizable form which replaces nominate *hypoleuca* in southern Denmark in southern Jutland. If Salomonsen and the current consensus is correct, that the birds of the continent should be separated from the populations with blacker upper parts found in Scandinavia and the British Isles, the correct name for the continental populations must be nominate *hypoleuca* Pallas, 1764, type locality, Holland, rather than *muscipeta*, and the name *atricapilla* Linnaeus (1766, *Systema naturae*, ed. 12, p. 326, type locality "Europe"), restricted to Sweden by Hartert (1907, *Die Vögel der paläarktischen Fauna*, p. 480) must be revived for the populations of Scandinavia and the British Isles.

I am not convinced, however, that this is necessary. The number of breeding males that I have examined is limited, but it shows a great deal of individual variation and does not justify the nomenclatural recognition of a separate race on the continent. Thirteen males examined from western Russia (Pskov, two specimens), East Prussia (two specimens), Galicia (one specimen), and Germany (eight specimens) fall within the range of individual variation of a series of eight males from Norway and Sweden. One specimen from East Prussia and three from Germany are pure black, but half of the specimens from Norway and Sweden are blackish or brownish black but not pure black. I did not examine specimens collected farther east, but the characters indicated by Hans Johansen (1954, *Jour. Ornith.*, vol. 95, p. 67 and *in litt.*) for the populations of Russia and western Siberia show that a cline of decreasing saturation and a slight cline of increasing size runs from west to east in this species. According to Johansen the males from Russia are blackish but seldom fully black, and about one-third are gray. In western Siberia males are never fully black, one-third are blackish, and two-thirds are pure gray and paler than the gray specimens from farther west. Although not perfectly constant, a separate race may be recognized nomenclaturally for the populations at the eastern end of the cline, but it seems best not to recognize nomenclaturally the more inconstant populations of the continent which taken in series are intermediate to a varying degree between the populations of Scandinavia and the British Isles and those of western Siberia.

Hans Johansen calls this eastern race *tomensis* Hermann Johansen which was proposed as *Muscicapa atricapilla tomensis* in 1916 (*Messenger Ornith.*, p. 101) as a new name for *Muscicapa atricapilla* var. *sibirica*

Hachlow (1915, *Messenger Ornith.*, p. 315), type locality, Tomsk, which was preoccupied by *Muscicapa sibirica* Gmelin, 1788 (the sooty flycatcher), and *Muscicapa grisola sibirica* Neumann, 1900 (= *M. striata neumanni* Poche, 1904, new name for *sibirica* Neumann, the eastern race of the spotted flycatcher), but if the genus *Ficedula* (of which *hypoleuca*, the pied flycatcher, is the type) is recognized as proposed by Vaurie (1953), the name *sibirica* Hachlow is available.

The populations of central Spain and Portugal were separated as *iberiae* by Witherby on the basis of a few specimens that were more or less intermediate between nominate *hypoleuca* and *speculigera* from north Africa. These populations are said to show less white in the tail, as in *speculigera*, and to have the size of the white patch on the forehead and in the wing intermediate in size between that of nominate *hypoleuca* and that of *speculigera*. However, as von Jordans and Steinbacher (1942, *Ann. Naturhist. Mus. Wien*, vol. 52, p. 222) state, the populations of the Iberian Peninsula are very poorly differentiated, for their characters fall within the range of individual variation of the other two races. In large series it probably could be demonstrated that the populations of the Iberian Peninsula are intermediate, but they do not appear to be sufficiently constant to warrant separation. Because the specimens that I have examined from Spain fall within the range of individual variation of nominate *hypoleuca*, I follow von Jordans and Steinbacher in considering *iberiae* to be synonymous with it.

Ficedula albicollis

Virtually all authors treat *semitorquata* Homeyer, 1885, as a race of *F. hypoleuca*, but I believe that Stresemann (1926, *Ornith. Monatsber.*, vol. 34, pp. 4-9) is probably correct in considering that it is conspecific with *F. albicollis* rather than *F. hypoleuca*. This is suggested by the female plumage. A large series of female *semitorquata* that I have examined shows that the tail pattern (as well as the gray, not brownish, coloration) is similar to that of female *F. albicollis*.

The population of Transcaspia was separated as *transcaspica* by Zarudny and Bilkevitch in 1918. I did not examine this form which, according to Hartert and Steinbacher (1934, *Die Vögel der paläarktischen Fauna*, suppl. vol., p. 232) is based on two specimens which were described as having more white on the sides of the neck than in *semitorquata*. Hartert and Steinbacher believe that this form is "certain" to prove to be a synonym of *semitorquata*. Pending confirmation it may be so considered, with the reservation that in many passerine families the populations of Transcaspia and neighboring Khorasan are usually distinct

from those of the southern Caspian and western Iran, and *transcaspica* may be found to be valid.

Ficedula narcissina

In *F. narcissina* the populations ranging from Yakushima in the north south through the Ryu Kyus have been divided into three races: *owstoni* Bangs, 1901, type locality, Ishigaki, southern Ryu Kyus; *jakuschima* Hartert, 1907, type locality, Yakushima; and *shonis* Kuroda, 1923, type locality, Amami O Shima, but I believe that it is sufficient to recognize nomenclaturally but one race (*owstoni*) which, in addition to being the oldest name, is also that of the population most distinct from nominate *narcissina*. The populations in the island chain from Yakushima south differ from nominate *narcissina* in that the males are olive green above rather than black and the yellow parts of the plumage are less orange. A cline of decreasing size and saturation runs from north to south, but geographical variation is not well marked. In the specimens examined more than half of the topotypes are identical in coloration, and the others differ but slightly. The steps in the cline of decreasing size are not well marked either and seem hardly sufficient as a basis for separation. In adult males measured by me the wing length is as follows: Yakushima, 75–77 (76) in seven specimens; 73, 74, 75 in Amami O Shima; and 68, 68, 71 in Ishigaki.

Ficedula parva

In *F. parva* I have examined a large number of winter visitors collected in India which suggest that a revision of the species based on breeding material from all parts of the range would be of interest. Among these winter visitors many are intermediate in characters between nominate *parva* and *albicilla*, while others are distinct from either of these forms. In these distinct specimens, examined also from winter visitors or migrants in Iran and Afghanistan, the coloration of the upper parts of adult males is of two tones, a cool pale gray on the crown back to the upper mantle, and a light brown back. The red of the breast is somewhat deeper than in nominate *parva* and *albicilla* and comes farther down onto the breast, passing abruptly into a whitish abdomen, and the sides of the throat are heavily bordered with cool gray. Females and first winter males are whitish below on the whole of the under parts, neither grayish brown as in *albicilla* nor yellowish buff as in nominate *parva*.

The race of *F. parva* which breeds in the northwestern Himalayas (*subrubra* Hartert and Steinbacher) and which migrates to Ceylon is considered by Whistler (1932, Jour. Bombay Nat. Hist. Soc., vol. 36,

p. 81) to be certain to be a separate species more closely allied to *F. strophciata* than to *F. parva*. As Whistler states, the wing formula of *subrubra* differs by showing the wing to be rounder than that of nominate *parva* or *albicilla*, the plumage sequence is different in that the first winter male of *subrubra* resembles the adult male rather than the female as in the other two forms, and in the adult male the red of the throat is narrowly bordered with black. However, although *F. parva* and *F. strophciata* are related species and Whistler may be correct in saying that *subrubra* is a third species, there is no doubt whatever that *subrubra* is very much closer to *F. parva*, of which it is the geographical representative, than to *F. strophciata*. In the latter the pattern is very different from that of *F. parva* and *subrubra* in which it is similar, and the less pointed wing of *subrubra* can probably be explained on the basis of much more restricted migratory movements.

Ficedula strophciata

In *F. strophciata*, Koelz (1939, Proc. Biol. Soc. Washington, vol. 52, p. 67) has separated as *euphonia* the population of northern Punjab from that of Darjeeling on the basis that the population of northern Punjab is "generally paler except for the throat" and is brighter on the edges of the primaries. This is correct, but, although a long series ranging from northern Punjab eastward to Sikkim confirms that a cline of increasing saturation runs from west to east, this cline is poorly defined, and I find that specimens from intervening Nepal (the type locality of nominate *strophciata*) cannot, or can but barely, be distinguished from the type and paratypes of *euphonia* or from specimens from Sikkim. Under the circumstances I do not believe that nomenclatural separation is advisable.

Ficedula superciliaris

In *F. superciliaris* also, a cline of increasing saturation runs from west to east, and the various populations are divided into two races: nominate *superciliaris* Jerdon, 1840, type locality, Ajunta, northern Ghats, described from a migrant, and *aestigma* Gray, 1846, type locality, Nepal. The breeding range of nominate *superciliaris* is in the western Himalayas from the Afghan border to about western Nepal and that of *aestigma* from central Nepal eastward. The western race is paler and in males has a more prominent white superciliary and a larger white area at the base of the tail. I have not examined specimens from Assam eastward which are said not to have any white in the tail, but if this is correct I find that apparently the population of Nepal is intermediate, for specimens examined from Nepal show a white area to a varying degree. In 13 adult breeding

males from central Nepal, eight have a variable amount of white, ranging from a slight trace to a very large patch equal in size to that of typical nominate *superciliaris* from the western Himalayas, and five show no white. The existence of such intermediates complicates the identification of winter visitors to peninsular India.

Ficedula (Cyanoptila) cyanomelana

This species has been divided into three forms: nominate *cyanomelana* in Japan and Korea, *cumatilis* from Amurland south through Ussuriland and Manchuria to Hopeh, and *intermedia* described from near Vladivostok in southern Ussuriland. Nominate *cyanomelana* differs from *cumatilis* by being more richly colored, the male having the mantle ultramarine instead of Prussian blue and the forehead and crown cobalt blue instead of azure, the females being darker and browner, more rufous; *intermedia* is intermediate in coloration between the other two forms. The validity of *intermedia* has been questioned, and many authors treat it as a synonym of *cumatilis*. Examination of a very fine series of 19 adult males taken at the type locality during the breeding season from April 25 to May 8 (Russian calendar corrected to May 9–22) shows that these authors are correct, for *intermedia* appears to be only a plumage stage of *cumatilis* and not a geographical form. In the 19 specimens, which all show exactly the same degree of wear, some are typical *cumatilis* and the others show all the characters ascribed to *intermedia*. Apparently both stages occur also in Hopeh, for I believe that it is only in this manner that the statement of Shaw (1936, Fan Mem. Inst. Biol., ser. B, vol. 15, pp. 770–772) that *cumatilis* and *intermedia* both breed in the same region can be interpreted. The changes in coloration which occur in this species at different stages of the plumage have already been emphasized by Hartert and Steinbacher (1934, Die Vögel der paläarktischen Fauna, suppl. vol., p. 236) who do not recognize *intermedia*.

Some authors report "*intermedia*" from many parts of the winter range in southeastern Asia and the Greater Sundas. In the migrants and winter visitors that I have examined from these regions I found that *cumatilis* and "*intermedia*" were always collected together. In some regions, as in Hainan and Java, only these two forms are represented in my material, but in series from other regions, such as eastern China, northern Borneo, and Sarawak, all three are represented.

MUSCICAPA

In the genus *Muscicapa* the following forms appear not to be valid, or, as in the case of *opaca*, require confirmation.

Muscicapa striata berliozii Dunajewski (1938, Bull. Brit. Ornith. Club, vol. 58, p. 148, type locality, El Kantara, southern Algeria) appears to be synonymous with *M. s. balearica* von Jordans, 1913, Balearic Islands. I did not examine *berliozii*, but I believe that it is probably based on migrant *balearica*. Dunajewski states that *berliozii* is a pale form similar in coloration to *balearica* but grayer above and more heavily streaked below, but these characters probably come within the range of individual variation of *balearica*. His specimens (see Dunajewski, 1939, Acta Ornith. Mus. Zool. Polonici, vol. 2, p. 547) were collected from April 29 to May 26 south of the Atlas, where the species does not breed and in a region where at these dates it is still passing through on spring migration.

In *Muscicapa sibirica* the geographical variation in the Siberian populations has been studied by Kozlova (1933, Ibis, p. 308) who states that the populations become grayer as they range farther east to become "somewhat darker" in Ussuriland. She calls these last populations *opaca* Shulpin, but the validity of this form is dubious according to Dementiev (1935, L'Oiseau, p. 102), who recognizes *opaca*, and Stegmann (1931, Jour. Ornith., vol. 79, p. 188), who does not recognize it. Yamashina (1939, Tori, vol. 10, p. 491) does not recognize *opaca*, stating that it is a plumage stage of nominate *sibirica*. Johansen (1954, Jour. Ornith., vol. 95, p. 66) considers *opaca* to be an intermediate between nominate *sibirica* and the *cacabata-rothschildi* group of this species, but the two groups are very widely separated geographically, for apparently the species does not breed in the enormous region separating Szechwan from Ussuriland. Until adequate breeding material confirms its validity, *opaca* is best considered to be synonymous with nominate *sibirica*.

Muscicapa poonensis Sykes, 1832, type locality, Deccan, recognized by some authors and *M. latirostris pallasi* Portenko (1950, Doklady Akad. Nauk, S.S.S.R., vol. 70, no. 2, p. 322, type locality, central Siberia) are both synonyms of *M. latirostris* Raffles, 1822, based on a migrant collected in Sumatra. Whistler and Kinnear (1932, Jour. Bombay Nat. Hist. Soc., vol. 36, p. 85) have already shown that *poonensis* is based on seasonal variations in the plumage. Portenko separated *pallasi* on the sole basis of larger size, but his measurements show a great deal of overlap, "wing length of *latirostris* 64-72 (67.4) as against 69-75.8 (73) in *pallasi*." I find that breeding populations measured by me from eastern Siberia and India are not smaller than the measurements given by Portenko for "*pallasi*." Fourteen specimens measured from Lake Baikal eastward to Japan have a wing length of 69-75 (72); and seven from the Vindhyan Hills of India, 69-75 (72.5). In the western Himalayas the local population measures 68-75.5 according to Whistler and Kinnear.

TERPSIPHONE

In *T. paradisi* the population of Russian Turkestan has been separated as *turkestanica* by Zarudny and Härms, 1911, but the validity of this form as distinct from *leucogaster* Swainson, 1838, of the western Himalayas has been questioned. The color characters cited by Zarudny and Härms were not diagnostic, but their measurements of specimens from Turkestan were larger than those of *leucogaster*. They gave the wing length of nine males of *turkestanica* as 96–105 (100), whereas I find that seven males from northern Punjab, to which the type locality of *leucogaster* has been restricted, measure 89–98 (93.0). However, the measurements taken by other students have not quite confirmed the large measurements of Zarudny and Härms. Dr. Salomonsen has kindly given me the measurements of six adult males that he measured from Russian Turkestan as being 92–100 (97) and of 18 males measured by him from northwestern Himalayas as 92–100 (95.4). Dr. Johansen writes that Dementiev stated in 1941 in a paper not available to me that he considers *turkestanica* to be a synonym of *leucogaster* and that in Turkestan “27 males measure 94–99.4 and 35 females 96.2–97.” Although the population of Russian Turkestan averages apparently very slightly larger, the difference is much too slight to warrant nomenclatural recognition.

It should be noted that no specimens in the white phase have ever been reported from Russian Turkestan, whereas both the white and the red phases are about equal in numbers in Afghanistan and in the Himalayas. I have not examined specimens from Turkestan, but Dr. Salomonsen tells me that he can see no difference in coloration between specimens from this region and the red phase of *leucogaster*.

Individual measurements in the specimens cited above, other than those of Dementiev, are:

Russian Turkestan: Zarudny and Härms, 96, 98, 98.5, 98.5, 99, 99.5, 102.3, 103.2, 105; Salomonsen, 92, 96, 97, 98, 99, 100.

Northwestern Himalayas: Salomonsen, 92, 92, 93, 93, 93, 93, 94, 94, 94, 95, 96, 97, 97, 98, 98, 99, 100, 100; Vaurie, 89, 90, 92, 92, 94, 96, 98.

RHIPIDURA

In this genus, only one species, *R. hypoxantha*, penetrates into the Palearctic region. All authors have correctly considered it to be monotypic, but in the Himalayas a very poorly indicated cline of increasing pigmentation runs from west to east, and Koelz (1939, Proc. Biol. Soc. Washington, vol. 52, p. 68) has separated the population of northern Punjab as *noa* on the basis of being “somewhat paler,” with the white spots on the wing averaging larger than in specimens from Sikkim. I find,

however, that the clinal changes are appreciable only in large series and that the terminal populations are not sufficiently well differentiated and are too inconstant to warrant nomenclatural separation. In a third of the specimens those from the eastern part of the range are as pale as those from the western end, and in more than half of the specimens the white spots are as well indicated in the east as they are in the west. For a similar opinion concerning the geographical variation and lack of validity of *noa*. see Whistler (1943, Jour. Bombay Nat. Hist. Soc., vol. 43, p. 35).

HIRUNDINIDAE

In a study of the swallows of Asia (1951, Amer. Mus. Novitates, no. 1529, pp. 1-47) I gave reasons for not recognizing certain forms. They are not in my opinion sufficiently well differentiated. Some are intermediates, and some appear to have been based on individual variants or plumage stages. I have since reëxamined these forms in a study of the Palearctic swallows. I list them below, together with additional forms that were not included in the 1951 paper but that I believe also to be synonyms or to require confirmation. The additional forms are discussed, and a few remarks are given in the case of some of the others. I do not always follow the original generic or specific citations and I give bibliographical references only in the case of the more recently described forms which cannot be found in Hartert.

Riparia riparia kolymensis Buturlin, 1917, equals nominate *riparia* Linnaeus. This form, which appears to be an intermediate between nominate *riparia* and *ijimae*, is recognized by some Russian authors but is not accepted by Stegmann (see Hartert and Steinbacher, 1935, Die Vögel der paläarktischen Fauna, suppl. vol., p. 350) or Dementiev (1935, L'Oiseau, p. 460).

Riparia riparia stötzneriana Meise, 1934, equals *R. r. ijimae* Lönnberg, 1908 (see Vaurie, 1951).

Riparia riparia taczanowskii Stegmann, 1925, equals *R. r. diluta* Sharpe and Wyatt, 1893 (see Vaurie, 1951).

The correct status of these two forms and of the populations breeding from northern Hopeh, north to Manchuria, Korea, and Ussuriland is not very clear. It is confusing to find both a dark (*ijimae*) and a pale form (*diluta*) breeding in these regions, but the climatic conditions are known to vary rather widely in these regions, some parts of which are arid while others receive a relatively abundant rainfall. Further study of these populations is required, but they will probably be found to be intermediate to a varying degree between *ijimae* and *diluta*, some of the local intermediates having received the names *stötzneriana* and *taczanowskii*.

Riparia riparia tibetana Stegmann, 1925, equals *R. r. diluta* Sharpe and Wyatt, 1893 (see Vaurie, 1951).

Riparia riparia indica Ticehurst, 1916, equals *R. r. diluta* Sharpe and Wyatt, 1893 (see Vaurie, 1951).

Riparia paludicola bilkewitschi Zarudny, 1910, equals *R. paludicola chinensis* Gray, 1830 (see Ivanov, 1940, Oiseaux du Tadjikistan, Moscow, p. 280).

Hirundo rupestris centralasica Stachanow, 1933, equals *H. rupestris* Scopoli, 1769.

Hirundo rupestris theresae Meinertzhagen (1939, Bull. Brit. Ornith. Club, vol. 59, p. 66, Tizi n' Test, Grand Atlas, 6300 feet, Morocco) equals *H. rupestris* Scopoli.

I consider *H. rupestris* to be monotypic; *centralasica* is generally accepted and was separated from the European populations as being paler and larger. I discussed this form in detail in 1951 and showed that neither Schäfer (1938, Proc. Acad. Nat. Sci. Philadelphia, vol. 90, p. 204) nor myself could confirm differences in coloration. It is correct that *centralasica* averages larger, but, as I have shown, the overlap in the measurements of the populations of Europe and central Asia is too great to warrant the recognition of *centralasica*, the type of which is in fact identical in measurements with topotypical *rupestris* Scopoli measured by me. Meinertzhagen separated *theresae* on the basis of three specimens which he states are darker than the populations of Europe and the rest of north Africa, but specimens that I have examined which were taken less than a week apart in the Tirol (the type locality of *rupestris* Scopoli) and the Grand Atlas are identical. The difference noted by Meinertzhagen was probably due to a stage of plumage, for his specimens which were collected in late October and in November are apparently in very fresh plumage, because the type of *theresae* had not yet completed the molt of its body plumage.

Hirundo obsoleta reichenowi Zedlitz, 1908, equals nominate *obsoleta* Cabanis, 1850 (see Vaurie, 1951).

Hirundo rustica loudoni Zarudny, 1923, equals nominate *rustica* Linnaeus (see Vaurie, 1951).

Hirundo rustica afghanica Koelz (1939, Proc. Biol. Soc. Washington, vol. 52, p. 75, Baghlan, Afghanistan) equals nominate *rustica* Linnaeus (see Vaurie, 1951).

Hirundo rustica ambigua Stresemann (1940, Ornith. Monatsber., vol. 48, p. 89, Gangtok, 1870 meters, Sikkim) equals nominate *rustica* Linnaeus (see Vaurie, 1951).

Hirundo rustica mandschurica Meise, 1934, equals *H. r. saturata*, Ridgway, 1883.

In *H. rustica* the status of the populations found in Siberia from about the Yenisei eastward to the coasts of the Sea of Okhotsk and Kamchatka south to Manchuria and northern Hopeh is not clear. Some of these populations have been discussed by Meise (1934, Abhandl. Ber. Mus. Dresden, vol. 18, no. 2, pp. 46-47) and Dementiev (1936, *Alauda*, vol. 8, pp. 49-53), and a third study by Johansen is in press.

Dementiev calls the far eastern populations ranging from Kamchatka and the coasts of the Sea of Okhotsk south through the lower Amur to Manchuria "frankly polymorphic," but it would be more correct to state that they are very variable. He believes that they probably should be referred to *erythrogaster* Boddaert, the North American race, and Johansen, in a letter to me, expresses also the opinion that the populations of eastern Siberia are of this type. My material from eastern Siberia is very limited but does not support these opinions. Four adult breeding birds of both sexes examined by me from Gizhiga on the northern coast of the Sea of Okhotsk are very dark below, deep red brown, and are not similar to *erythrogaster* at all, but rather seem to correspond to *tytleri* or to Dementiev's type A. They also have a longer wing and a much longer and more deeply forked tail than *erythrogaster*. Dementiev had only 13 specimens of *erythrogaster*. In about 300 specimens of *erythrogaster* examined by me, including birds from Alaska, I find only two that approach, but still fall short of, the intense saturation of the specimens from Gizhiga. The oldest available name for these far eastern populations is *saturata* Ridgway, June, 1883, described from Kamchatka. I follow Dementiev in synonymizing the intermediate form described as *mandschurica* by Meise from central Manchuria with the dark, far eastern race (*saturata*), for, because it was described as being "light ochraceous salmon" below, it seems closer to *saturata* than to *gutturialis* which is variable but usually whitish.

The specimens examined by Stresemann and by me from Sikkim have an unbroken pectoral band as in nominate *rustica* and differ from this form only by being smaller, falling at the lower end of the range of individual variation of nominate *rustica*. I do not consider this difference sufficient to warrant the recognition of *ambigua*. If, however, it is deemed desirable to have a name available for the population of Sikkim, which Stresemann believes may have been derived from *gutturialis* rather than nominate *rustica* and which Johansen (*in litt.*) considers is an intermediate between the two, *Hirundo rustica ambigua* Stresemann cannot be

used, for it is preoccupied by *Hirundo ambigua* Bocage, 1877 (Ornithologie d'Angola, pt. 1, p. 186, the race of *H. albigularis* which breeds in Angola; see Chapin, 1953, Bull. Amer. Mus. Nat. Hist., vol. 75A, p. 747).

Hirundo smithii bobrinskoi Stachanow, 1930, equals *H. smithii filifera* Stephens, 1825 (see Vaurie, 1951).

Hirundo daurica scullii Seebohm, 1883, equals *H. d. rufula* Temminck, 1835 (see Vaurie, 1951).

Hirundo daurica tibetana Schäfer, 1937, equals *H. d. gephyra* Meise, 1934 (see Vaurie, 1951).

Delichon urbica meridionalis Hartert, 1910, equals nominate *urbica* Linnaeus (see Vaurie, 1951).

Delichon urbica alexandrovi Zarudny, 1916, equals nominate *urbica* Linnaeus (see Vaurie, 1951).

Delichon nipalensis bartletti Koelz (1952, Jour. Zool. Soc. India, vol. 4, p. 43, Lushai Hills) equals nominate *nipalensis* Horsfield and Moore, 1854.

Hirundo cuttingi ernstmayri Wolters [1953, Bonner Zool. Beitr., vol. 3 (1952), p. 280], new name for *Delichon nipalensis* (see below).

Koelz separated as *bartletti* the population of the Lushai Hills in eastern Assam from nominate *nipalensis* of the Himalayas on the basis that it was white-throated except at the point of the chin, rather than black-throated as in nominate *nipalensis*, but two male topotypes of *bartletti* collected in the spring that I have examined are perfectly identical with other spring males with a white throat examined from the Himalayas. The plumages of this species require to be studied, for I have examined specimens collected in the same regions in the Himalayas in which the throat was either black or white. These specimens, which were unquestionably adult, had been sexed as males and in the white-throated specimens had a small patch of black, restricted to the chin.

Wolters merged *Delichon* with *Hirundo* and proposed *ernstmayri* to replace *D. nipalensis* Horsfield and Moore, 1854, which becomes preoccupied by *Hirundo nipalensis* Hodgson, 1837, which equals *Hirundo daurica nipalensis*. I believe, however, that *Delichon* can be maintained, although it is a rather weak genus, but if the action of Wolters is followed, *bartletti* Koelz is available as being older than *ernstmayri*.

Delichon urbica and *Delichon dasyptus*

In 1951 I came to the conclusion that these two forms were conspecific, but information kindly supplied by Dr. Johansen shows that the question of the relationships is not settled.

As stated in 1951 I could find no evidence that the forms of the *dasy-*

pus group (*dasyopus*, *nigrimentalis*, and *cashmeriensis*) overlap geographically nominate *urbica* or *lagopoda*, the eastern Siberian representative of nominate *urbica*, but Dr. Johansen informs me that he has examined a breeding series of *dasyopus* from Ussuriland in the collection of the Museum of the Academy of Sciences of Leningrad. This series must have been unknown to Dementiev (1935, L'Oiseau, p. 460), for he gives the breeding range of *lagopoda* in the Far East as Ussuriland and Manchuria and that of *dasyopus* on the mainland as Korea (where it breeds only on the eastern coast, according to Austin, 1948, Bull. Mus. Comp. Zool., vol. 101, p. 176).

It is possible, however, that the two groups do not actually overlap in Ussuriland and that their distribution in this region is similar to the situation which appears to prevail at the other end of the range where both *cashmeriensis* and nominate *urbica* breed in the northwestern Himalayas but replace each other geographically, nominate *urbica* breeding north of *cashmeriensis*. It must be admitted, however, that the distribution in Gilgit and northern Punjab is still not clear, and if it can be shown that colonies of the two forms breed side by side in the Himalayas or in Ussuriland the two forms must be treated as separate species. Ticehurst (1927, Jour. Bombay Nat. Hist. Soc., vol. 32, p. 348; 1938, Ibis, p. 621) believes that they are separate species, but I am somewhat reluctant to follow this opinion, for the two groups differ, very slightly, only in pigmentation, and the proportions of *lagopoda* are similar to those of the forms of the *dasyopus* group while the depth of its fork is perfectly intermediate between that of the *dasyopus* forms and nominate *urbica*.

STURNIDAE

Sturnus vulgaris

The very valuable paper by Pateff, edited by Stresemann (1947, Ibis, pp. 494-507) has done much to simplify the hitherto rather complex and confused problem of geographical variation in *S. vulgaris*. This paper does not deal with the insular offshoots of nominate *vulgaris* nor with the two races of India (*humii* and *minor*), but these present no problem.

I have reexamined the large collection in the American Museum of Natural History and have made the following observations, which do not differ materially from the findings of Pateff, the only significant exception being that I believe that an additional form (*purpurascens* Gould) should probably be recognized in Transcaucasia and Armenia.

Concerning nominate *vulgaris* I believe that the following should be synonymized with it: *granti* Hartert, 1903, Azores; *graecus* Tschusi,

1905, Greece; *balcanicus* Buturlin and Härms, 1909, Romania; *ferdinandi* Boetticher, 1936, Bulgaria; and *britannicus* Bullough, 1942, England, this last form being based on physiological differences. In the case of *granti*, Murphy and Chapin (1929, Amer. Mus. Novitates, no. 384, p. 19) have already stated that the only difference they could confirm is that in the birds of the Azores the outermost primary is somewhat shorter, "7.8–12.5 as against 10.5–13" in nominate *vulgaris*. This difference is not of subspecific importance when examination of a very large series from the Azores shows that other differences, whether of coloration, wing length, or bill characters, are lacking.

The populations (*balcanicus*) found from southern Ukraine from about the Bug River south through eastern Bessarabia, Romania (Dobruja and eastern Wallachia), eastern and southern Bulgaria to Thrace have been discussed in detail by Pateff who finds that they are intermediate or "hybrid" to a varying degree between the green-backed nominate *vulgaris* and the purplish-backed *tauricus*. This is confirmed by the specimens examined, which, however, are much closer, taken in series, to nominate *vulgaris* with which I believe *balcanicus* should be synonymized. Pateff found intermediate specimens in Thrace and in Macedonia, in this last region most of the specimens being identical with those of western Bulgaria which are true nominate *vulgaris*. The specimens that I have examined from Macedonia and Thessaly are not separable from true nominate *vulgaris* or fall within its normal range of individual variation. Thus *graecus* is synonymous with nominate *vulgaris*, as is *ferdinandi* from Bulgaria, according to Pateff who was examined the type material.

Pateff, in his summary, treats *purpurascens* Gould, 1868, as a hybrid of *tauricus* Buturlin, 1904, and *caucasicus* Lorenz, 1887. I have examined no specimens that I could be sure to be breeding *purpurascens*, but I am not convinced that this treatment is correct, and I believe that this form should be recognized. *Sturnus v. purpurascens* has a well-defined and extensive range in western Transcaucasia and throughout Armenia, and, according to Stegmann (1935, Ornith. Monatsber., vol. 43, pp. 29–30), is a constant form. The differences stated by Stegmann are that *tauricus* has a green head and neck, is purplish on the back to the rump, and has a bronze gloss on the flanks and below, while toptotypical *purpurascens* (Erzurum) is somewhat more greenish on the mantle and is bluish green on the lower back and rump, and its head and throat are copper-red. The coloration of the back may be intermediate between that of *tauricus* and that of *caucasicus*, but if Stegmann is correct as to the color of the head *purpurascens* does not seem to be a hybrid between *tauricus* and *caucasicus*, for these two have green heads. It would be embarrassing nomenclature.

turally to synonymize *purpurascens* with either, for they are both younger names.

Two populations from Iran have been separated from *caucasicus*: *heinrici* Stresemann, 1928, southern Caspian districts; and *persepolis* Ticehurst, 1928, the region of Shiraz and Niriz in Fars. The first is too slightly differentiated in my opinion to warrant recognition. The second name is not acceptable, for it was applied to a series of specimens of uncertain origin, the characters of which do not correspond to those of the population breeding in Fars. In the case of *heinrici*, Stresemann states that the population of Mazenderan is similar in coloration to *caucasicus* but has a relatively more slender bill and a shorter wing—wing of five males, 121, 122, 124, 125, 128 (124). In males that I have measured the wing length in the Caucasus is 128–133 (131) in seven specimens and 127–135 (130.5) in five males from Talych. I did not examine specimens from the southern Caspian, but the difference in the shape of the bill is said to be only relative. *Sturnus v. persepolis* is a puzzle. It is described (1928, Bull. Brit. Ornith. Club, vol. 48, p. 117) as being very distinct from either *caucasicus* or *porphyronotus* (Russian and Chinese Turkestan) and is based on 10 specimens which were probably visitors from some unknown region. The date at which these specimens were collected is not given, only that of the type (October 7). It is evident that Ticehurst thought that his specimens were not local birds, for he says that he sent them to Sushkin for comparison with Russian material. Sushkin informed him that there were no specimens like them in Russia, and there are no specimens in the collection of the American Museum of Natural History which correspond to the description (*q.v.*) of *persepolis*. A long series of breeding birds that I have examined from Fars, west to Luristan, east to Kirman, is identical in every respect of coloration and size with *caucasicus* from northern Caucasus. These specimens measure 128–134 (130) in 14 males.

Some authors have maintained that the populations of eastern Russia are separable from nominate *vulgaris* as being intermediate in the color of the gloss on the wing between this form and *poltaratskyi* from Siberia. These intermediate populations are usually called *jirkowi* Buturlin, 1904, type locality, Promzino in the former Gouvernement of Simbirsk, now Ulyanovsk, but according to Grote (1935, *Falco*, vol. 31, p. 16) an older name for this form is *ruthenus* Menzbier, 1891, type locality, European Russia, restricted to Ufa by Grote. According to Johansen (*in litt.*) this intermediate form occupies a considerable range in eastern Russia, which is stated by Dementiev (1933, *L'Oiseau*, p. 745) to be the basins of the Volga and the Ural rivers. Apparently these characters tend to be better

indicated and to be present in more specimens as the populations range eastward in Russia, but they are not shown or scarcely indicated in four specimens examined by me from east of the Volga, and I follow Sushkin (1933, *Ibis*, p. 55) and Pateff in not recognizing *jirkowi* (= *ruthenus*), the characters of which they found were not sufficiently constant.

Stresemann (*in* Pateff) states that the type locality of *poltaratskyi*, 1878 (Marka Kul in Eastern Kazakhstan), is in a zone of "hybridization" or intergradation between the green-headed *porphyronotus* of Turkestan and the purple-headed form breeding in Siberia, which he calls *menzbieri* Sharpe, 1888, and that "this accounts for certain slight deviations of its description [type of *poltaratskyi*] from the characters which are shown by the starlings breeding in western Siberia. I therefore consider *poltaratskyi* a hybrid between the races of western Siberia and Turkestan. This would leave the former without a valid name, were it not that Hartert had fixed Krasnoyarsk as the type locality of *S. v. menzbieri* Sharpe." This is correct, but there again *poltaratskyi* is the older name, and there is no need to replace it by *menzbieri*, for virtual topotypes of *poltaratskyi* taken during the breeding season at Katon Karagai, about 80 kilometers north of Marka Kul, examined by me show all the characters of the populations of western Siberia and approach in no way the characters of toponotypical *porphyronotus* from Yarkand.

Farther south than Marka Kul, however, in the region from Lake Zaisan and the Kara Irtysh south to the Urungu Basin and the region at the eastern end of Lake Balkhash, the hybrid character of the population is better indicated, and the Russian authors have separated the populations of this region under the name *dzungaricus* Buturlin, 1904, type locality, Urungu. I did not examine this intermediate form, but from the various statements in the literature it seems to be too highly variable individually to warrant recognition, and is, I believe, better treated as a synonym of *poltaratskyi* to which it seems to be closer in characters than to *porphyronotus*.

Sturnus unicolor

This form and *S. vulgaris* replace each other geographically and are often treated as conspecific, but *unicolor* is strikingly distinct in plumage and coloration and seems best kept as a separate species. Unlike *S. vulgaris* it is uniform in coloration, and the adult lacks completely the conspicuous spots of *S. vulgaris* in fall and winter plumage. These spots are present in first winter *S. unicolor* but are obsolete or much smaller and much less abundant. *Sturnus unicolor* is the color of graphite, with very faint glosses of purplish and greenish, lacking the well-developed bluish,

purple, green, and other pigments of *S. vulgaris*, and its secondaries and inner primaries are tipped with velvety black spots reminiscent of the terminal spots found on the coverts and secondaries of some species of the African glossy starlings (*Lamprotornis*). The body feathers throughout, but especially those of the head, throat, and mantle, are much more elongated than in *S. vulgaris*, reaching a length of about 60 mm. on the throat, and are similar in their development to those found in some oriental forms, such as *S. pagodarum* and *Aplonis grandis*, the hackling, if anything, being even more extreme. The bill is similar to that of *S. vulgaris* but less broadened at the base and is shorter—about 21 per cent of the length of the wing as against about 25 per cent in *S. vulgaris*. According to Ticehurst and Whistler (1928, *Ibis*, p. 667) the colors of the bill, legs, and feet are different in life in *S. unicolor* and in the female the eye is brown, whereas in female *S. vulgaris* the outer rim of the iris is whitish or yellow.

The two species seem to be closely related, however, as suggested by their distribution which is mutually exclusive. They seem to repel each other, for an unoccupied zone separates them in Italy and in southern France, where neither has been able to establish itself, although, in southern France at any rate, this zone is occasionally invaded but without success by *S. unicolor*. The reverse apparently takes place in northern Corsica.

Sturnus pagodarum

This species was studied by Marien (1950, *Jour. Bombay Nat. Hist. Soc.*, vol. 49, pp. 477–479) who states that the populations of southern India are constantly separable from the more northern populations by having a browner, less grayish back. He separates the northern populations as *afghanorum* Koelz (1939, *Proc. Biol. Soc. Washington*, vol. 52, p. 73, type locality, Tagan, eastern Afghanistan). This form I find is based on worn and bleached specimens collected during the breeding season which were compared by Koelz to winter-taken specimens in much fresher plumage. In the same paper Koelz added that he found that specimens from Lucknow in United Provinces and Londa in southern Bombay were darker, "dark grey," than any other specimens that he had examined from India and that "for these birds Hodgson's *sylvestris* of Nepal is probably applicable." But, as stated by Marien, Hodgson's *sylvestris* (*Maina sylvestris*, 1837, *Jour. Asiatic Soc. Bengal*, vol. 5, p. 771) is a *nomen nudum*, and Koelz in thus supplying it with a diagnosis becomes the author of *sylvestris*. However, *sylvestris* Koelz is not a valid form in my opinion (Marien considers it to be synonymous with *af-*

ghanorum) and is preoccupied by *Sturnus sylvestris* C. L. Brehm, 1831.

The findings of Marien and Koelz are contrary to those of all authors on Indian ornithology who have stated that they could find no evidence of geographical variation in this very common species. The reëxamination of the material studied by Koelz and Marien shows that the older view that no races should be recognized is correct. The coloration of the back depends on the degree of wear and bleaching, specimens in fresh or fresher plumage are always grayer and darker, and in older skins the plumage turns brownish rapidly through foxing. There is also a high degree of individual variation in skins in comparative plumage, and the geographical variation is highly irregular. For instance, in specimens collected at the same dates and localities in Central Provinces, Bihar, and at Nilambur in western Madras some specimens are dark and gray, while others are pale and/or brownish. In specimens in fresh plumage from United Provinces, those examined from Lucknow are dark, but the palest of all the specimens examined by me from India is from Benares. In specimens showing only a slight degree of wear examined from southern India from the Bangalore and Salem districts, some are gray and others are brownish. As noted, dark birds occur in both the south (Londa) and the north (Lucknow). A series of 10 immature specimens examined from Punjab, Bihar, Central Provinces, southern Madras, and Ceylon shows no evidence of geographical variation. I cannot confirm constant differences in the other characters cited by Koelz, such as broader pale edgings on the hackles or size of the white area at the tips of the rectrices, for the range of individual variation is the same in all the populations. The southern birds are, on an average, very slightly smaller but (I agree with Marien) not sufficiently so to be separable on this basis alone.

