

NOTES ON EUROPEAN MARSH-TITS WITH DESCRIPTION OF A
NEW SUBSPECIES FROM NORWAY.

BY LEONHARD STEJNEGER.

To satisfactorily settle the status of the various forms of the Marsh-tits occurring in Europe will require the bringing together of a vast material from all parts of that continent, and a very careful and intelligent study of it when collected. When wading through the extensive literature one is struck with the contradictions and the confusion which meet one on every hand, and in looking into the matter one will find that it is all due to the desire of those, who try to make any distinctions at all, to refer the specimens which they happen to possess to one of two names. It is a kind of religion with them that there must be no more than two forms, or "species" of Marsh-tits in Europe. The gentlemen who believe in the distinction of *Parus palustris* and *Parus borealis* are in the majority, and they are represented in nearly all the countries of Europe. In many of these countries two species of Marsh-tits occur together in the same locality, hence one must necessarily be *P. palustris* and the other *P. borealis*. In the former identification they are not likely to be mistaken, for it seems that *Parus palustris* is very uniform, both in size and coloration, all over Central and Northern Europe (exclusive of Great Britain, which has its own insular race, *P. palustris dresseri*), and their descriptions of this species agree pretty well; but when they come to point out the characters of the alleged *P. borealis* as compared with *P. palustris*, they fall into endless contradictions, because their so-called *P. borealis* are different birds in the different localities. To substantiate this assertion let us first take up Victor Fatio's account of the Marsh-tit in the Swiss Alps (as reproduced in Dresser's Birds of Europe, III, pp. 109-113), from which we gather that he considers *P. palustris* (the form which he describes as having the hood "deep, lustrous black, with blue reflections") to be smaller with a smaller and slenderer bill than *P. borealis** (and *P. alpestris*, both of which have the hood blackish-brown with reddish-brown reflections). If, again, we turn to Degland and Gerbe's "Ornithologie Européenne" (I, p. 566), the differences are stated as above: *P. borealis* (Degl. & Gerbe's *P. palustris*) being distinguished "par une aile plus longue," and "par un bec plus fort, plus élevé, plus large à la base." Robert Collett, on the other hand, in speaking of the Marsh-tits in Norway (Nyt Mag. Naturv.,

* *P. palustris*: length of wing, 61 to 63^{mm}; length of beak from gape, 10 to 11^{mm}; from frontal plumes, 7.5 to 8^{mm}; breadth of beak, 4.5^{mm}; height of beak, 4^{mm}. *P. borealis* (and *alpestris*): wing, 65 to 68^{mm}; beak, from gape, 11.5 to 14.5^{mm}; from frontal plumes, 9 to 11^{mm}; breadth, 5 to 6^{mm}; height, 4.5 to 5^{mm}.

XXIII, 1877, pp. 108-110), asserts that "as a rule *P. borealis* has a somewhat slenderer bill" than *P. palustris*, and from his tables of measurements (*tom. cit.*, p. 110) it is plain that in Norway the two forms are of essentially the same size, *P. palustris* being, if anything, the larger of the two. Nilsson, too (*Skand. Fauna, Fogl.*, 3 ed., I, p. 419), insists that both forms are of the same size, and he adds that the shape of the bill is also the same. If we now compare the measurements which I have taken myself (see tables below), it will be seen that they fully bear out the various statements of the gentlemen quoted above. It is then plain that the Scandinavian so-called *P. borealis* differs from the one of the Alps by being smaller, with a much slenderer bill. The latter form is *Parus montanus* (BALDENSTEIN, 1829)* in which name at present I am obliged to include Victor Fatio's *P. alpestris* and *P. borealis* (*nec* SELYS), as I have no means of verifying their status, though I believe them to be separable; nor do I know to which of the two forms Baldenstein's name *montanus* and Bailly's *alpestris* strictly belong.

But it is not only in size that the southern *P. montanus* differs from its northern representative, for the hood is not black at all in the former, being, as it is, of a dark sepia slightly mixed with reddish; in fact, my French specimens of *P. montanus* are quite as brown-headed as *P. lugubris*. This difference in the coloration of the hood of the southern and northern so-called *P. borealis* is also indirectly indicated in the comparisons instituted between these forms and *P. palustris* by the various authors. Thus Fatio (*loc. cit.*) strongly contrasts the "deep lustrous black with blue reflections" of the latter, against the "blackish brown with reddish brown reflections" of the former (*alpestris*: "dark blackish brown, with reddish brown reflections;" *borealis*: "blackish brown, a little more pronounced than in *P. alpestris*, and with reflections even still more brown"). Collett and Nilsson (*ll. ec.*), on the other hand, make no distinctions as to color, simply saying that the hood in *P. palustris* is more glossy.

The shape of the tail is the same in *P. montanus* and *P. borealis*, and on the whole they are nearer related to each other than is either of them to *P. palustris*. They are only subspecies of the same species, but whether they should be designated by trinominals is quite a different question, and depends solely upon whether they are "known now to intergrade" (A. O. U. Code, can. xi). So far as I can find out they are not known to intergrade; I consequently retain the binominal appellation.

So far we have gained the following results: In Northern Europe the true *P. borealis* occurs; in Central Europe the large and more brown-headed *P. montanus*; their habitats are widely separated and isolated. On the other hand, *P. palustris* occurs all over Europe (except in Great Britain, where it is represented by *P. palustris dresseri*), breeding even in the same localities in which *P. borealis* and *P. montanus* breed. This,

* *Parus cinereus montanus* BALDENSTEIN, *Neue Alpina*, II, 1829 (p. 21) *nec* *Parus montanus* GAMBEL, *Proc. Phila. Acad.*, I, 1843, (p. 259), *qui* *Parus gambeli* RIDGW.

to my mind, is a fair proof that *P. palustris* is specifically distinct from the latter two. Mr. Seebohm, in his desire to make all the Marsh tits "varieties of one variable species" produced by the difference of climate of such an extensive range" (Brit. B. Eggs, I, pp. 478, 476), apparently overlooks this fact, for he restricts *P. borealis* to "Scandinavia and Northwest Russia," and makes no mention whatever of the so-called *P. borealis* of the Alps, while he gives the habitat of *P. palustris* as "Southwestern Europe, as far north and as far east as St. Petersburg" [60° N. L.], not mentioning with a single word its occurrence in Scandinavia, where it breeds at least as far north as 64° N. L. (Collett, Forh. Vidensk. Selsk. Christiania, 1872, p. 13.) This desire leads him to another sweeping statement, which has no better foundation. He says (*tom. cit.*, p. 478): "All these forms undoubtedly interbreed wherever their ranges meet." Now, if he had known the facts as they are in Scandinavia he would never have made such an assertion, for, as Robert Collett has already stated (*Nyt Mag. Naturv.*, XXIII, p. 24), the two forms are in Norway absolutely distinct *without intergrading*, though both are common breeding birds south of the Trondhjemsfjord. Nor is it known that *P. palustris* and *P. montanus* interbreed habitually.

A somewhat loose expression by Mr. Seebohm (*Ibis*, 1879, p. 32) has evidently misled Mr. A. R. Wallace into constructing his curious "Map shewing the Distribution of *Parus palustris*" (*Island Life*, Map opposite p. 62). Seebohm says: "English skins are the brownest. Skins of *P. palustris*, Linn., from Italy and Asia Minor are a shade paler, and can not be distinguished from Chinese skins." Now, the facts are, that skins of *P. palustris* from elsewhere in Europe, including Scandinavia, also are "a shade paler" than British specimens (*P. p. dresseri* STEJN.), and "can not be distinguished from Chinese specimens." But on Wallace's map two "dark patches show the areas occupied by two identical varieties," one covering the main-land of Italy, the entire Balkan peninsula, and the Turkish portion of Asia Minor, while the other comprises a part of North China between Peking and the Yellow River.

It is not only in the descriptions of the northern and southern so-called *P. borealis* that authors differ; for, if we turn to the Scandinavian ornithologists, we will find some discrepancies in the characters assigned to the birds inhabiting Sweden and Norway. Collett (*loc. cit.*) makes out quite a difference in the coloration of the back of *P. palustris* and his *P. borealis* from Norway. The former, he says, has the "back grayish brown;" the latter, on the other hand, "grayish ash-blue." Holmgren (*Skand. Fogl.*, II, p. 183), again, on comparing Swedish examples of the same species, does not observe any difference in the color of the back worth mentioning, but says that in the Swedish *P. borealis* "the secondaries have broad whitish-gray margins, which are always considerably lighter than the color of the back, this being easily seen even when the bird is flying, or when some distance off," while Collett only

remarks that the margins of the quills and tail-feathers are of the same color as, or somewhat lighter than, the back.

My specimens from Sweden and Norway show differences corresponding to the discrepancies observed in the descriptions of the above authors. The Swedish examples have the back more like true *P. palustris*, though somewhat paler, while those from Western Norway are equally dark, but more ashy; the Swedish ones have quite conspicuous whitish edgings to the secondaries, while in the Norwegian ones there is no difference between the color of the edges of the secondaries and the back. But these are not all the differences, for in the Norwegian birds the top of the head is deep black (though without gloss) against brownish black in those from Sweden, and the former have the under tail-coverts gray, like the color of the back, while in the latter these feathers are whitish, like the abdomen. In fact, these forms appear to be as distinct as any two in this group. I shall discuss the pertinency of the name *P. borealis* further on. Suffice it to say here, that I find no name applicable to the Norwegian bird, which, in honor of my friend, Prof. Robert Collett, I propose to call

Parus colletti, sp. nov.

Diagnosis.—Tail regularly and strongly rounded; top of head and nape pure black without gloss; color of back smoke-gray; outer margins of secondaries similar, scarcely lighter; under tail-coverts gray like the back. Longest tail-feathers 56^{mm}.

Habitat.—Norway (western portion only?).

Type.—U. S. Nat. Mus., No. 113225.

According to my views, there occur, consequently, three forms of Marsh-tits in the Scandinavian peninsula, the most salient characters of which, apart from the shape of the tail, may be contrasted as follows:

<i>P. palustris.</i>	<i>P. borealis.</i>	<i>P. colletti.</i>
(1) Top of head and nape bluish black;	pure black;	brownish black.
(2) Back "wood-brown" gray;	pale buffy gray;	"smoke-gray."
(3) Secondaries with margins of the same color;	margins of secondaries whitish;	margins of secondaries like the back.
(4) Under tail-coverts whitish;	whitish;	smoke-gray.

P. colletti belongs undoubtedly as a subspecies to the *P. borealis* group, as distinguished from *P. palustris*, which I consider a distinct species. Time will show whether a trinomial appellation for Collett's Marsh-tit will be necessary. The distribution of the two forms on the Scandanavian peninsula can at present only be guessed at. All that can be said now is that *P. colletti* seems to be western and *P. borealis* eastern.

A glance at the tables of measurements below, which give the data concerning the specimens examined by me, will show that the specimens of *P. borealis*, as far as the time of their collecting is given, are winter birds, while those of *P. colletti* are shot in summer. However, No. 113225 of the latter is in new autumnal plumage, which according to

analogy with other Marsh-tits should be more "rufous," as it is termed in the translation of Fatio's memoir already alluded to, if there be any seasonal change in the plumage of *P. borealis*, which is denied by Dresser. The latter author, however, seems to believe in a special summer plumage of the female (*tom. cit.*, p. 108). Upon looking over the list of specimens examined by him, at the end of his article (p. 118), I think there are reasons for suspecting that the alleged summer females represent the Norwegian form, *P. colletti*. Holmgren (*loc. cit.*, p. 182) says that the winter plumage of *P. borealis* is purer gray than the summer plumage, but this statement is so contrary to the observations of others that it can not be accepted without confirmation.

I.—Measurements of *Parus colletti*.

U. S. Nat. Mus. No.	Collector.	Sex and age.	Locality.	Date.	Wing.	Tail-feathers.	Bill from nostrils.	Tarsus.	Middle toe with claw.	Remarks.
113226	Berg. Mus.	♂ ad.	Bergen, Norway ..	1887. June 18	mm. 65	mm. 55	mm. 8 0	mm. 17	mm. 14.5	
113225	do	♀ ad.	do	Aug. 22	61	57	7.5	17	14.0	Type

II.—Measurements of *Parus borealis*.

Museum and No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail-feathers.	Bill from nostrils.	Tarsus.	Middle toe with claw.
Am. Mus., N. Y., 223	Benzon	♂ ad.	Sweden	Dec. 2 1878	mm.	mm.	mm.	mm.	mm.
Am. Mus., N. Y., 224	do	♀ ad.	do	Feb. 7, 1878	63	58	8.0	16	14.0
U. S. Nat., 56536	Schlüter, 545	♂ ad.	do .....	.....	60	55	7.0	15	13.5
U. S. Nat., 34144	Sundevall, 7	♂ ad.	Stoc k h o l m, Sweden.	Dec. 14, 1851	62	55	7.5	.....	.....
U. S. Nat., 111405	.....	♂ ad.	K o l m ä r d e n, Sweden.	Feb. 23, 1876	60	55	8.0	16	.....
U. S. Nat., 111404	.....	♀ ad.	Östergötland, Sweden.	Dec. 8, 1875	63	58	7.5	17	14.0

III.—Measurements of *Parus montanus*.

U. S. Nat. Mus. No.	Collector.	Age.	Locality.	Date.	Wing.	Tail-feathers.	Bill from nostrils.	Tarsus.	Middle toe with claw.
18978	Dronet	ad.	France .....	.....	mm. 69	mm.	mm. 9	mm. 17.5	mm.
18977	do	ad.	do .....	.....	68	59	9	.....	.....

IV.—Measurements of *Parus palustris*.

U. S. Nat. Mus. No.	Collector and No.	Sex and age.	Locality.	Date.	Wing.	Tail-feathers.	Bill from nos- trils.	Tarsus.	Middle toe with claw.
34143	Sundevall, 19.....	♂ ad.	Stockholm, Sweden.	Oct. —, 1861	mm. 65	mm. 54	mm. 8.0	mm. 16.0	mm.
103567	Tschusi	♂ ad.	Hallein, Salzburg...	Nov. 6, 1883	62	52	8.0	16.0	.....
103566	do	♂ ad.	do	Oct. —, 1879	60	52	8.0	.....	.....
111497	do	♂ ad.	do	Sept. 18, 1876	65	55	8.0	17.0	14.5
17501	do	ad.	Hungary .....	.....	65	55	8.0	.....	.....
111406	do	♂ ad.	Scania, Sweden	Dec. 11, 1876	66	56	7.5	.....	.....
113223	Berg. Mus.....	♂ ad.	Bergen, Norway	Sept. 18, 1887	62	54	8.0	16.5	14.0
113224	do	♂ ad.	do	do	64	52	8.0	16.5	.....