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Systematic Notes on Palearctic Birds. No. 10 Sylviinae: the Genera *Cettia*, *Hippolais*, and *Locustella*

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The following notes were made during a review of the genera *Cettia* (of which *Horeites* is considered to be a subgenus), *Hippolais*, and *Locustella*. Only the following species are discussed in this paper: *C. diphone*, *C. brunniifrons*, *C. cetti*; *H. icterina*; and *L. lanceolata*.

CETTIA

Cettia (*Horeites*) *diphone*

The "Hand-list of Japanese birds" (1942, ed. 3, pp. 57-59) recognizes 10 forms of *Cettia* (*Horeites*) *diphone*, divided under the species names *diphone* and *cantans*. However, as Delacour (1942, Ibis, pp. 518-519) has correctly stated, the *diphone* forms which are all restricted to small and remote islands differ from the *cantans* forms only by their longer bill, an adaptation common to many insular forms which does not warrant specific distinction. Because the oldest name is *diphone* Kittlitz, 1830 (Bonins) the 10 forms must bear this species name. With the exceptions of *cantans* Temminck and Schlegel, 1847, from Japan and perhaps *borealis* Campbell, 1892, from Korea, these forms are very scarce or lacking in European and American collections, and Delacour accepted them all provisionally. In this he states that he is merely following the "Hand-list" and Hartert and Steinbacher (1934, Die Vögel der paläarktischen Fauna, suppl. vol., pp. 254-255), although these last authors warn that the differences on which the Japanese authors separate these

forms are extremely tenuous ("meist überaus gering") and discernible only in large series.

I have been able to examine some of these forms. After comparing the account given of others by the Japanese authors in English, I have come to the conclusion that *ijimae* Kuroda, 1922 (Seven Islands of Izu), is too slightly differentiated from *cantans* to warrant nomenclatural separation, and that for the same reason *iwootoensis* Momiyama, 1927 (Volcano Islands), and *panafidinicus* Momiyama, 1930 (Torishima or Panafidin Island), should be regarded as synonyms of nominate *diphone*.

The description of *ijimae* appeared in a scarce publication (1922, Annot. Zool. Japonenses, vol. 10, p. 117) and it seems desirable to quote it in full, "Very similar to *H. cantans cantans* (Temminck and Schl.) from Japan proper, but the bill decidedly longer and stouter (the width of bill at nostril 5 mm. instead of 4-4.5 mm.) and the front and tail-feathers rather more tinged with rusty. It differs from *H. cantans diphone* (Kittl.) from the Bonin Islands by the bill being much stouter, by the wing longer, and by the front and crown of head not so markedly tinged with rusty." The material available to Kuroda from the Seven Islands consisted of three males. I have examined four males from the Seven Islands which, generally speaking, confirm this diagnosis, but, for reasons given below, I do not believe that *ijimae* should be accepted. In my four males the width of the bill at the nostril is only 3.5, 3.8, 4, and 4.5. These specimens are slightly rufous, but they are identical with about half of the specimens examined in a large series of *cantans* from Hokkaido and Hondo, and the difference between the more rufous and the more brownish specimens is scarcely appreciable. The width and height of the bills in the four specimens from the Seven Islands, as well as in a series of 29 specimens from Tanegashima, the population of which is stated in the "Hand-list" to be *ijimae* also, fall within the range of individual variation of *cantans* from Hokkaido and Hondo. The bill, however, is slightly longer (table 1) in the specimens from the Seven Islands and Tanegashima. I do not consider this difference to be sufficient basis for nomenclatural recognition, for if *ijimae* is to be accepted one would, for consistency, have to describe an additional race for the population of Tanegashima, because all the specimens examined from this island fail to show the rufous tinge noted above in the specimens from the Seven Islands and Hokkaido and Hondo and, on an average, are very slightly darker olive on the flanks. This would lead too far and, in my opinion, it is sufficient to recognize but one slightly geographically variable race, by name *cantans*.

The range of this race extends also to neighboring Yakushima, for although the "Hand-list" calls this population *riukiensis* Kuroda, 1925,

type locality Iriomote, southern Ryu Kyus, I find that a series of 27 specimens from Yakushima is identical in coloration and measurements with *cantans* from Tanegashima. The northernmost specimen examined by me showing the characters of *riukiensis* (distinctly paler and grayer above than *cantans* and whiter below) is from Amami O Shima, and I

TABLE 1
MEASUREMENTS^a OF ADULT MALES IN SOME POPULATIONS OF
Cettia (Horeites) diphone

Form and Locality	N	Wing	Bill
<i>C. d. borealis</i>			
Southern Ussuriland and Korea	10	72-80 (76)	18-19 (18.5)
<i>C. d. canturians</i>			
Eastern China and Hainan	10	73-76 (74.5)	17.5-19.5 (18.6)
<i>C. d. cantans</i>			
Hondo and Hokkaido	10	64-69 (66.3)	15.5-17 (16.5)
Seven Islands of Izu	4	65-66 (65.7)	17-18 (17.6)
Tanegashima	10	64-69 (66.5)	16-18.5 (17.2)
Yakushima	10	64-69 (67.0)	16-18.5 (17.4)
<i>C. d. riukiensis</i>			
Okinawa	5	70-73 (72)	17-18 (17.4)
<i>C. d. diphone</i>			
Volcanos	1	60	19
Bonins	2	59, 60	18.5, 19

^a By the author of this study.

accordingly believe that the range of *riukiensis* should be restricted to the Ryu Kyus from Amami O Shima south to Iriomote. Color comparisons in the populations mentioned above have been made with specimens in similar plumage.

In the Seven Islands the range of *cantans* as understood above extends eastward to Hachijo. Farther east, from Torishima (= Ponafidin Island) to the Bonins the populations are more richly colored, more rufous, and have a distinctly shorter wing and a longer bill. These populations are divided in the "Hand-list" into three races, from west to east: *panafidicus* Momiyama, 1930 (Torishima), nominate *diphone*, 1830 (Bonins), and *iwootoensis* Momiyama, 1927 (Volcanos), but it is sufficient to recognize but one race. The two races described by Momiyama are based on extremely slight differences. According to this author, *iwootoensis* has a thicker and stouter bill than nominate *diphone* and a longer tail and tarsus, but his published measurements (1927, Bull. Brit. Ornith. Club,

vol. 47, p. 146) show scarcely any difference in the bill and a virtually complete overlap in the tail and tarsus. Momiyama did not compare *panafidinicus* with nominate *diphone*, but his published measurements (1930, Bull. Biogeogr. Soc. Japan, vol. 1, p. 175) show that there is hardly any difference between the populations of Torishima and the Bonins. Only the measurements of males from Torishima are given by Momiyama. These and the measurements of males of *iwootoensis* and nominate *diphone* given in 1927 by Momiyama are as follows:

	EXPOSED CULMEN	WIDTH OF BILL	HEIGHT OF BILL	TARSUS	TAIL
Torishima	13.8-14.7	—	4.5-5	—	—
Bonins	13.5-14	3.7-4.5	3-3.5	23-24	63-66
Volcanos	13.5-14	4.5-5	3.5-4	23-25	59.5, 63-66.5

I have not examined specimens from Torishima. A male examined from the Volcanos and two from the Bonins are identical or virtually so in every measurement.

No specimens of three other races recognized in the "Hand-list" are available. Of these, the validity of *sakhalinensis* Yamashina, 1927, is accepted by Dementiev (1935, Systema avium Rossicarum, p. 218); *restrictus* Kuroda, 1923, from the Borodinos is based on only two specimens, but its description is convincing. Judging by the very poor basis used by Momiyama in his separation of "*iwootoensis*" and "*panafidinicus*," I am inclined to doubt that *takahashii* Momiyama, 1927 (Quel-part), is sufficiently distinct from *cantans* to warrant recognition. The description of *takahashii* is in Japanese; Kuroda (1932, Novitates Zool., vol. 37, p. 393) states that *takahashii* is very similar to *cantans*, but that it is more strongly tinged with olive above.

Three races are said to reach Formosa in winter: *borealis* which breeds in southern Ussuriland, Manchuria, and Korea, *cantans* from Japan, and *canturians* from eastern China, but this is open to question (see Hachisuka, 1951, Jour. Taiwan Mus., vol. 4, pp. 43-44). There is no doubt, at any rate, that *canturians* winters in Formosa, and all the specimens that I have examined from this island and Luzon belong to this race. It is possible that *borealis* reaches Formosa and perhaps the Philippines, for, according to La Touche (1926, A handbook of the birds of eastern China, p. 263), it "probably" winters in southeastern China south to Fukien, and it has been taken on Shawsishan Island from where a very long-winged and very pale specimen that I have examined appears to be *borealis*. I doubt very much, however, that *cantans* reaches Formosa. It is not recorded from the Ryu Kyus, and, according to Hachisuka, the only record of this race for Formosa is apparently based on a single specimen without

data in the Taihoku Museum in Formosa. Furthermore, according to Jahn (1942, Jour. Ornith., vol. 90, pp. 149–150), *cantans* is not truly migratory, though the population of Hokkaido probably moves south to Hondo in the winter while the other populations merely move down to lower altitudes.

Cettia (Horeites) brunnifrons

The species *Cettia (Horeites) brunnifrons* has been divided into three races, which are generally accepted although it has apparently never been reviewed. These races are *whistleri* Ticehurst, 1923 (type locality, northern Punjab), which is said to range in the western Himalayas as far east as Kumaon; nominate *brunnifrons* Hodgson, 1845 (type locality, Nepal), which is said to range from Nepal to eastern Assam; and *umbraticus* Baker, 1924 (type locality, Shweli-Salwin Divide, Yunnan), which is presumed by Baker to range from Yunnan to Northern Shan States. The first is said to be paler and less rufous above than nominate *brunnifrons*, and *umbraticus* is said by Baker to be "very much darker" than nominate *brunnifrons* and "decidedly larger" than *whistleri*. Examination of an adequate series scarcely confirms these differences, and it seems best to recognize nomenclaturally but one form.

The brown plumage of this species foxes rather badly, but if freshly collected skins or skins that do not appear to be badly foxed are compared, and if one allows for the foxing in old skins, one can make the following observations. Specimens in comparative plumage examined (16 adults) from northern Punjab to Kumaon taken from 1931 (two skins) to 1946–1948 (14 skins) are not separable from, or are barely so by being paler above and below than, 10 adults taken in east central Nepal in the region of Katmandu in 1947. The majority of specimens are identical in each series, and the difference between the darker and paler individuals is scarcely discernible. A series of six adults taken by Forrest in Yunnan is not constant. This series which is in comparative plumage with the specimens from northern Punjab to Nepal was taken in 1918 to 1922. It already shows definite evidence of foxing, but three of the six skins are still distinctly paler and do not, or scarcely, differ from the more recently collected specimens from northern Punjab to Nepal. The three darker skins match a well-foxed series composed of nine specimens, two from eastern Nepal taken in 1912 on the border of Nepal and Sikkim and seven taken from 1880 to 1905 in Sikkim and upper Assam. Finally, it may be mentioned that in four juvenal specimens examined, two from Yunnan and two from Tehri in the western Himalayas, one specimen from Yunnan is paler above and below and matches the two from Tehri, while the other is darker.

It is probable that a large series of freshly collected material would confirm a cline of increasing saturation running from west to east from northern Punjab to Assam, and two races might be deemed to deserve nomenclatural recognition, a paler one (*whistleri*) in the west and a darker one (nominate *brunnifrons*) in the east. However, judging by the specimens examined, the difference would not be very well marked. Because the terminal populations are apparently not constant and contain specimens that are identical with nominate *brunnifrons*, while others are virtually identical with specimens from northern Punjab, it seems wiser not to recognize any subspecies.

Baker described "*umbraticus*" as being much larger than *whistleri*, but he gives no comparative measurements nor does he state how many specimens he has measured from Yunnan or what their sex was. These measurements from Yunnan are "wing 47 to 49 mm.; tail 34 to 40 mm.; tarsus about 19 mm.; culmen from feathers about 9 to 10 mm." (1924, Bull. Brit. Ornith. Club, vol. 44, p. 63). The six specimens from Yunnan (which include paratypes of "*umbraticus*") measure, I find, for the wing and tail: wing, one male, 47; four females, 46, 47, 47, 48; one unsexed, 48; tail, male, 37; females, 40, 41, 42, 43; unsexed, 44. Five males from northern Punjab measure: wing, 45, 46, 47, 47, 47; tail, 39, 42, 42, 45, 48; four females, wing, 44, 45, 46, 46; tail, 38, 39, 42, 45. In the four females from Yunnan the bill from the skull measures 11, 11, 11, 11.5 and in those from the Punjab 11, 11.5, 11.5, 12. A difference in size cannot be confirmed.

Cettia cetti

In *Cettia cetti* a number of races have been separated, but only three are currently and generally recognized: nominate *cetti* Temminck, 1820, type locality, Sardinia, in southern Europe and north Africa; *orientalis* Tristram, 1867, type locality, Palestine, from Asia Minor and the Near East eastward to Iran; and *albiventris* Severtzow, 1872, type locality, Kara Tau, Russian Turkestan, from Iran eastward to Turkestan. The given statements of range in Iran are unsatisfactory, for sufficient material showing where *orientalis* and *albiventris* replace each other has hitherto been lacking.

Examination of a large series shows that in this species a cline of decreasing pigmentation and increasing size runs from west to east and that only the populations at both extremes are clearly distinct. However, as the intermediate populations occupy a wide range and are neither dark enough for nominate *cetti* nor pale enough for *albiventris*, it may be convenient to separate them nomenclaturally as *orientalis*.

The range of this form is stated by Hartert and Steinbacher (1934, Die Vögel der paläarktischen Fauna, suppl. vol., p. 257) to extend to

western Iran, and they state that *interposita* Zarudny and Bilkevitch, 1916, from the southern Caspian districts of northern Iran, is synonymous with *orientalis*. Dementiev (1935, *Systema avium Rossicarum*, p. 219) gives the range of *orientalis* as "Palestine, Mesopotamia, western and northern Persia and neighboring parts of the Transcaspian region, [and] Transcaucasia." Examination of about 100 specimens from Iran shows, however, that *orientalis* barely reaches the borders of south-western Iran (at Qasr i Shirin in the southern foothills of the Zagros in Kurdistan). Specimens from farther east in the Zagros, from Luristan eastward, belong very definitely to the pale eastern *albiventris*. I did not examine specimens from Transcaucasia, northwestern Iran, nor adults from the southern Caspian, but as Zarudny (1911, *Jour. Ornith.*, vol. 59, p. 223) lists the dark nominate *cetti* as possibly breeding in northwestern Iran and as the diagnosis of *interposita* is that of a form intermediate in coloration between nominate *cetti* and *albiventris* it is logical to assume that the range of *orientalis* extends in the north from Asia Minor eastward through Transcaucasia and Azerbaijan to the southern Caspian. In the south, as stated, this form barely reaches the political border of Iran. Elsewhere in Iran, *albiventris* breeds in the Zagros eastward to Kirman but apparently not in Seistan, where Zarudny records the species only as a winter visitor, although the extensive reed beds and swamps of this region would seem to present a very suitable habitat. *Cettia c. albiventris* breeds also in Khorasan and in southern Transcaspia eastward to the borders of Chinese Turkestan, but in Afghanistan breeds apparently only north of the Hindu Kush, in Afghan Turkestan, and Badakhshan. It reaches India only as a winter visitor.

Among the synonyms of nominate *cetti* the following may be cited: *reiseri* Parrot, 1910, Hercegovina and Greece; *salvatoris* von Jordans, 1914, Mallorca; *mülleri* Stresemann, 1919, Macedonia; *schiebeli* Rokitsansky, 1934 (*Falco*, vol. 30, p. 6, Sicily); and *whitakeri* Orlando, 1937 (*Riv. Italiana Ornit.*, vol. 7, p. 213, Sardinia). The first three forms have already been synonymized by Hartert but are cited here, for apparently there are still some doubts as to their validity. I have examined topotypes of all three, and I agree entirely with Hartert. Some specimens from Macedonia (see below) are rather larger than in nominate *cetti*, but there is much overlap in measurements, the average difference is very slight, and I can see no color differences. The last two forms were described after the publication of the work of Hartert and Steinbacher. Of these, *whitakeri* is a pure synonym of nominate *cetti*, and Whistler (1935, *Ibis*, p. 1934) has already shown that topotypical nominate *cetti* and *schiebeli* are identical.

In the various published discussions on *C. cetti*, much diagnostic im-

portance is attached to differences in measurements but although these do show a clinical increase from west to east, differences at both extremes are not sharp, as shown in table 2, some individuals from the west and east being identical.

TABLE 2
MEASUREMENTS OF ADULT MALES IN SOME POPULATIONS OF *Cettia cetti*

Form and Region	N	Wing Length
Nominate <i>cetti</i>		
Sardinia	5	60-66 (63)
Macedonia ^a	32	62-68 (64.8)
<i>C. c. orientalis</i>		
Asia Minor and Near East	4	63-66 (64)
Kurdistan	6	63-69 (67)
<i>C. c. albiventris</i>		
Luristan	19	64-72 (68)
Fars and Kirman	7	65-71 (67)
Khorasan	4	66-70 (68.5)
Afghanistan	3	66-69 (67.3)
Afghanistan and India ^b	4	68.5-73 (—)

^a Stresemann, 1920, Avifauna Macedonica, p. 130.

^b Ticehurst, 1922, Jour. Bombay Nat. Hist. Soc., vol. 28, p. 274.

HIPPOLAIS

Hippolais icterina

In *Hippolais icterina* Stresemann, 1928, separated as *alaris* the population of the southern Caspian districts of northern Iran from nominate *icterina* Vieillot, 1817, from Europe on the basis of having a somewhat rounder wing tip, a somewhat shorter wing, and of being darker above, especially on the crown, but his material was very scanty for it consisted of only two specimens, both males, in which the wing length measured 75 and 78 and the second primary was 1-2 mm. shorter than the fifth. The breeding material that I have examined from this region is equally scanty, but as it does not confirm the characters cited by Stresemann it seems best to synonymize *alaris* with nominate *icterina* until larger series become available.

The specimens that I have examined were collected by Koelz on July 24-26 in Mazenderan and consist of one unsexed adult, one adult female, and two juvenal specimens. I can see no color differences whatever between these specimens and others in comparative plumage from Europe.

In the two adults, the second primary is equal to the fifth in one specimen and in the other it is 3 mm. longer. In one juvenal specimen the second primary is 1 mm. shorter but in the other it is 2.5 mm. longer. In my two adults, in which the tip of the primaries are worn to an uncertain extent, the wing length is 76 in both, and in 10 adult males measured by me from Europe 76-81 (77.5).

This species may be monotypic, although it is very widely distributed and a subspecies has been recently described from Bulgaria as *borisi* by von Jordans (1940, Mitt. K. Naturwiss. Inst. Sofia, vol. 13, p. 103) on color differences. *Hippolais i. borisi* has not been confirmed, and it remains to be seen whether the characters of the population of Bulgaria, which I have not examined, do not fall within the range of individual variation in the other European populations.

LOCUSTELLA

Locustella lanceolata

This species had always been considered to be monotypic until Johansen recently described as *gigantea* four winter migrants collected by La Touche and Styan on Shaweishan Island, off the coast of eastern China. According to Johansen (1954, Jour. Ornith., vol. 95, p. 92) the new form is larger than *L. lanceolata* Temminck, "wing 57-62 as against 52-57," and is paler, more foxy-red above, more ochre below, and less streaked.

The difference in size cited by Johansen is not sufficiently well marked, in my opinion, to warrant nomenclatural recognition, and I would not consider it to be so even between two breeding populations. An adult male collected by La Touche on Shaweishan Island measured by me has a wing of 56 and three other migrants from eastern China measure: male, 55, female, 57, unsexed, 54. La Touche (1926, A handbook of the birds of eastern China, p. 225) gives the wing length in 10 migrants from eastern China as 52-62 and mentions no color differences. My specimen from Shaweishan Island, the three others from eastern China, and a series of 12 winter visitors collected on Hainan, Malay Peninsula, and Greater Sundas show no color differences. These last specimens measure in both sexes 52-60 (56).

Until clear-cut differences can be demonstrated in adequate series taken on the breeding grounds, I believe that it is better to follow the generally held view and recognize no subspecies.