

Systematic notes on Asian birds. 15.
**Nomenclatural issues concerning the common sand
martin *Riparia riparia* (Linnaeus, 1758) and the pale sand martin
R. diluta (Sharpe & Wyatt, 1893), with a new synonymy**

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A female of *Riparia diluta* in the ZISP collection and collected by Severtsov, which has sometimes been supposed to belong to the type series, is found to be this species but not the same subspecies and only a topotype. We designate a lectotype for *R. diluta* as Severtsov's material was composite. Names introduced by Zarudny (1916) are evaluated and the synonymy of these two species is corrected to take into account the findings of both Zarudny and later workers.

Introduction

The common sand martin *Riparia riparia* (Linnaeus, 1758) and the pale sand martin *R. diluta* (Sharpe & Wyatt, 1893) are very similar in general appearance and were regarded as conspecific for a long time. Both are widely distributed in the Palaearctic and show considerable geographic variation.

Both species are discussed in a paper on the types of Asian Hirundinidae (Dickinson et al., 2001) and in a preliminary review of the species and subspecies of Asian swallows and martins (Dickinson & Dekker, 2001). Problems associated with the types of *R. diluta* were discussed with the senior author (VML) and a specimen in St. Petersburg was crucial to the resolution of the problems. Of primary concern was whether the type material of *R. diluta* was in The Natural History Museum, Tring, as reported by Warren & Harrison (1971: 149) or whether perhaps the specimen in St. Petersburg might be a syntype, which could prove Warren & Harrison were wrong.

Once this was elucidated it became possible to look clearly at the work of Zarudny (1916) and to understand the application of the new names that he proposed. And it was also necessary to do so, because the St. Petersburg specimen played a role in shaping the nomenclature used by Gavrilov & Savchenko (1991) and Goroshko (1993) in their important work establishing the significant areas of overlap of these two species.

The types of *Cotile diluta* Sharpe & Wyatt, 1893

The original description of *diluta* (Sharpe & Wyatt, 1893) states: "Adult male. Simi-

lar to *C. riparia* but very much paler brown above and the throat-band also very light brown and overshadowed with ashy, so that the collar is not distinct. Adult female. Similar to the male".

There were two syntypes: a male and a female collected by N.A. Severtsov on the Badam River near Tchimkent (= Chimkent or Shymkent [Times Atlas, 1999], south-eastern Kazakhstan; 42°19'N, 69°38'E). The dimensions of the syntypes were given as:

Adult male: total length 121.9 mm; culmen 10.2 mm; wing 97.8 mm; tail 45.7 mm; tarsus 10.2 mm.

Adult female: total length 116.8 mm; culmen 10.2 mm; wing 102.9 mm; tail 49.5 mm; tarsus 10.2 mm.

It was stated that these two specimens were sent "to the Natural History Museum by Dr. Pleske". This misled one of us (ECD) into believing that the specimens in question, which could not be associated with Pleske, but had rather been purchased from Prof. Menzbier, could not be the types. However, we have now discovered that the original description was corrected in 1894 in part 20 of Sharpe & Wyatt (1894: LXVII), where it is said: "*Cotile diluta*, sp. n., Central Asia. A mistake has occurred in the account of this species. The type specimens were sent to the British Museum by Prof. Menzbier, not by Dr. Pleske, as stated."

Thus, the syntypes mentioned by Warren & Harrison (1971: 149) have been properly reported; but owners of copies of their work might like to note beside the entry about *diluta* that the original description erred in referring to Pleske. The specimens (BMNH 1890.3.8.134, male and BMNH 1890.3.8.133, female) are dated 2 May (as well as having 20 April on them, the date by the Old System¹). Their wing lengths show the male certainly, and the female probably, to be specimens taken from the shorter-winged local population of south-eastern Kazakhstan.

While discussing the considerable similarity of plumage colouration of *C. diluta* to that of the brown-throated sand martin² Sharpe & Wyatt emphasized "...that the development of tarsal tuft proves that it is a form of *C. riparia* [group] and does not belong to the *C. chinensis* group." The comparison was, of course, with *Riparia paludicola chinensis* (Gray, 1830) and, as is well known, in *R. paludicola* (Vieillot, 1817) the tarsus is entirely devoid of feathers.

Sharpe & Wyatt did not discuss the degree of development of tarsal feathers in the syntypes of *C. diluta*, specifically whether there are feathers on the whole hind surface of the tarsus or only near its base. However, Zarudny (1916) did give details of the difference in tarsal feathering between *R. diluta* and *R. riparia*, which will be quoted below. The two syntypes, which are old and not very well made, were first examined for us by Michael Walters who was satisfied that in the male there were tiny feathers

¹ The "Old System" refers to the Julian Calendar. This was used in Russia until the Revolution. By contrast, the New System or Gregorian Calendar was adopted by Rome in 1582 and England in 1752. To equate Old System dates to the New System some days must be deducted. The number to deduct depends on how many years have elapsed since 1582 (but roughly 12 during the 19th century and 13 in the 20th).

² Also called the plain sand martin or even plain martin.

along the back of the tarsus or at least interrupted fragments of such feathering. In addition there is a tuft of feathers where the tarsus meets the fibula. Both were re-examined by Walters and ECD who agreed that both seem to have these fragmentary rows of tarsal feathers, albeit somewhat abraded (especially on the leg to which the label has been attached). In addition, as expected, both specimens meet the other criteria, mainly those of plumage colour, used for distinguishing the species *diluta*.

A third specimen from the Severtsov collection is kept in the Zoological Institute, Russian Academy of Sciences (ZISP). This specimen, ZISP No 115888, was received by ZISP with the collection of M.A. Menzbier. It is a female collected by Severtsov on 15 May on the Badam River near Shymkent and must be regarded as a topotype of *R. diluta*. It was never in front of Sharpe and Wyatt and therefore cannot be part of their type series.

This topotype has been re-examined by VML. Its dimensions are: total length 116.8 mm, culmen (from skull) 9.1 mm, wing 108.6 mm, tail 53.1 mm, tarsus 10.2 mm. In this female, the whole of the back of the tarsus from hind toe to fibula is covered with small feathers so that it is undoubtedly a representative of the species *R. diluta*. But its wing (108.6 mm) is noticeably longer than in the female syntype of *R. diluta* (102.9 mm)³. Its upperparts and chest-band are somewhat darker than in specimens of *R. diluta* from south-eastern Kazakhstan that are breeding birds⁴. The date of collection is consistent with a bird on passage to the northern part of the range of the species. In addition the specimen is entirely similar in the colouration of its plumage to summer-taken birds from the Vicinity of Krasnoyarsk (56°03'N, 92°50'E).

This bird was examined by Bianchi (1907) who concluded "that *C. diluta* does not deserve to be separated even as a subspecies."

Zarudny's material

Zarudny (1916) in his revision of the swallows of Russian Turkestan did not agree with Bianchi (1907). He presented data on 87 specimens of sand martin (*R. riparia*). He assigned 36 to the nominotypical subspecies *R. r. riparia* (L.), 17 to the pale sand martin, *R. r. diluta* (Sharpe & Wyatt), and 34 to a new subspecies *R. r. plumipes* Zarudny, 1916, which he described, and which he termed the *rough-legged* sand martin. Zarudny recorded the sex, date and place of collection, and five dimensions (culmen from the front edge of nares, wing, tail, depth of the tail notch, and tarsus) for all these specimens. He also described some features of the plumage colouration, and mentioned which bred in Turkestan and which occurred only on passage, and what he believed to be the distribution of each subspecies. Some extracts of Zarudny's description of each subspecies follow.

R. r. riparia. Zarudny noted that birds of this subspecies found in Turkestan do not differ in colouration from the birds of European Russia and are common on passage.

³ Cramp (1988) suggested that both in *R. r. riparia* and in *diluta* (then thought to be conspecific) the ranges of wing lengths of males and females were nearly identical. In the light of the need to recognise the two as species and of the wide sympatry it is clear that new unequivocal data is required.

⁴ By analogy it therefore differs in the same way from the types of *R. diluta*.

He said they bred near the Aral Sea and also in the lower parts of "Syrdarya and Amudarya Rivers".

The remaining lighter coloured birds he divided in two groups:

R. r. diluta (Sharpe & Wyatt). Zarudny based his identification strictly on the short diagnosis of this form that he quoted from Bianchi (1907): "*C. similis C. ripariae* sed ubique dilutior et torquae praepectorali vix obvio". To this Zarudny assigned sand martins similar to *R. r. riparia* in which "feathers of the tarsus form only a small tuft above the base of the hind toe". Zarudny italicized this, considering this part of his diagnosis particularly important. From *R. r. riparia* these birds differed in their smaller size and also "in the greater paleness and greyer tone of colouration of the upperparts and the more greyish tint of the chest-band, which is not so very clear-cut in most birds." They form a "clear subspecies" and are abundant at breeding time in the region of the middle parts of Amudarya River ("Bukhara possessions") and Syrdarya River.

R. r. plumipes he named the rough-legged sand martin and described it as new. His 34 specimens had "abundant feathers of the hind and inner sides of the tarsus. These feathers extend from the upper part of the base of the hind toe to the ankle joint, where they merge with the feathers of the fibula, either extending continuously or leaving a small bare area usually in mid tarsus". In these birds, the colouration of the upperparts and chest-band was paler and still more greyish than in the preceding subspecies and the chest-band was less clear-cut. These birds were numerous in the eastern part of the Syrdar'inskaya Province and adjacent parts of the Fergana and Samarkand Provinces during passage, but Zarudny thought it quite possible that they bred in Fergana Province. At least 11 syntypes of *R. r. plumipes* (8 males, 2 females and one bird of unknown sex) collected by Zarudny near Tashkent are kept now in the collection of Tashkent State University (TASU) (Balan, 1966: 121).

Zarudny ends his text on sand martins on p. 36 with a very important note saying "Maybe after careful examination of the specimens used by Sharpe as types for the description of *R. r. diluta* they (Sharpe's specimens) will be found to be rough-legged ... then my *R. r. plumipes* should be placed as a synonym, and my *R. r. diluta* will not have a name. In such case it could be designated as *R. r. innominata*". At this date this was a perfectly valid way to propose a name (see Art. 11.5.1 of the International Code of Zoological Nomenclature; ICZN, 1999).

Since then the type-materials of *R. r. diluta* and *R. r. plumipes* have apparently not been compared⁵. Stegmann (1925) only mentioned the opinion of Zarudny (1916) that his *R. r. plumipes* may coincide with *R. r. diluta* of Sharpe. Hartert & Steinbacher (1935) were the first authors to place *R. r. plumipes* in the synonymy of *R. r. diluta*. This opinion has obtained general acceptance and is repeated in all the main checklists and reviews (Dementiev, 1937; Meklenburtsev, 1954; Peters, 1960; Stepanyan, 1990).

⁵ We cannot be certain of this as some of Zarudny's types (yet to be reviewed) may now be in New York, having first been in the Rothschild Museum. It is therefore conceivable that Hartert had the opportunity to make such a comparison which *may* be reflected in the view of Hartert & Steinbacher (1935).

Apparently the synonymization was based on the undoubted similarities of colour and pattern of plumage between *R. r. diluta* and *R. r. plumipes* which are the most important diagnostic traits in all forms of Palaearctic sand martins.

But the suggestion of Zarudny (1916) that if *R. r. plumipes* were to be synonymized with *R. r. diluta* of Sharpe, then *R. r. diluta* of Zarudny should be given a new name *R. r. innominata* Zarudny has not been considered by subsequent taxonomists. Only Peters (1960) mentioned *R. r. innominata* Zarudny, 1916, and he placed it as a synonym of *R. r. diluta* although it is clear that *plumipes* and *innominata* cannot both be synonyms of *diluta*. It is now clear from our examinations of the specimens in Tring and St. Petersburg that *plumipes* is indeed a synonym as Zarudny suspected. Equally the diagnosis of "*diluta*" Zarudny [nec Sharpe & Wyatt] = *R. r. innominata*, given above, which features the colouration of the upperparts and the chest-band, and the nature of the tarsal feathering, shows that *R. r. innominata* belongs to *R. riparia* and not to *R. diluta*.

Recent studies demonstrating sympatry

In their revision of the sand martins of Kazakhstan and Siberia Gavrillov & Savchenko (1991) have validated the specific status of *R. diluta* (Sharpe & Wyatt). When discussing the strikingly different opinions of Sharpe & Wyatt (1893) and Bianchi (1907) about the taxonomic status of *R. diluta*, Gavrillov & Savchenko suggested correctly that these authors were examining different birds. In other words the bird in the ZISP collection, and examined by Bianchi, was different from syntypes of *Cotile diluta* Sharpe & Wyatt. But they erroneously considered that the ZISP specimen belonged to *R. r. riparia* not to *R. diluta*.

In the same article, Gavrillov & Savchenko described a new subspecies *R. riparia dolgushini* from south-eastern Kazakhstan. The diagnosis of this subspecies, which included dimensions, details of the plumage colouration and distribution, leaves no doubt that the birds described represent the same taxon as that for which Zarudny (1916) in his description of *R. r. diluta* tentatively proposed the name *R. r. innominata*. It is therefore necessary to establish the synonymy: *R. r. innominata* Zarudny, 1916 = *R. r. dolgushini* Gavrillov & Savchenko, 1991, syn. nov.

Gavrillov & Savchenko (1991) also recorded that *R. diluta* was also rather common in southern and south-eastern Kazakhstan; the birds completely corresponded to the diagnosis of *R. r. plumipes* Zarudny and the authors concluded correctly that the birds belong to the nominotypical subspecies *R. d. diluta* (Sharpe & Wyatt) of which, as stated, *plumipes* is a synonym.

Gavrillov & Savchenko noted also that specimens of *R. diluta*, where it inhabits the foothills of the western Altai and further east as far as the middle parts of Lena River and Cisbaykalia, are somewhat larger, have darker upperparts and a browner and wider chest-band. These authors suggested that there are at least two subspecies of *R. diluta*: a southern form (*R. d. diluta*) and a northern subspecies which, does not belong to the form *taczanowskii* Stegmann, 1925, and has been named *R. d. gavrillovi* in a separate paper (Loskot, 2001).

Since their work Goroshko (1993) in a detailed revision of eastern forms of *R. riparia* and *R. diluta* has shown that the form named *taczanowskii* belongs to *R. riparia* and not to *R. diluta*.

Goroshko (1993) examined the topotype of *R. diluta* in the collection of ZISP and suggested correctly that this female belonged to the northern subspecies (sensu Gavrilov & Savchenko) and that when collected near Shymkent was still on migration. But he made the understandable mistake of considering it a part of the type series of *R. diluta*. He also erroneously assigned the syntype male of nominotypical *diluta* to passing northern birds believing the wing length to be 103 mm, while in fact the male wing length was only 97.8 mm. On this basis Goroshko misallocated the name of *R. diluta diluta* and this must be corrected. We therefore restate that the types of nominate *diluta* are typical of the race breeding near Shymkent and we designate the male (BMNH 1890.3.8.134) as the lectotype; the longer winged female (BMNH 1890.3.8.133) becomes the paralectotype.

It should be emphasized that the evident wide zone of overlap in the breeding ranges of *R. riparia* and *R. diluta* and the lack of data on introgressive hybridization (Gavrilov & Savchenko, 1991; Goroshko, 1993) indicate that they are well-established species, and may be regarded as sibling species.

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