

On the nomenclature of the so-called Isabelline Shrike

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In a seminal paper published in 1930, Stegmann distinguished four races within what is now often still regarded in the European literature as a single species under the name Isabelline Shrike¹. Alternatively, a number of Russian authors who, unlike the European ornithologists, have been studying these birds within their breeding ranges for years, have long been inclined to consider this taxon as consisting of two independent species: the Isabelline Shrike *Lanius isabellinus* and Turkestan Shrike *L. phoenicuroides* (Korelov 1970, Panov & Kryukov 1973, Kryukov 1995, Panow 1996). This view was adopted in a new checklist of Russian bird species (Koblik *et al* 2006), which was compiled to improve on previous lists by Stepanyan (1978, 1990).

It is well known that two groups of forms are clearly distinguishable within the complex. These can be named the '*phoenicuroides* group' (*phoenicuroides* and *speculigerus*) with contrasting coloration of males (Plate 1) and rather pronounced sexual dichromatism, and the '*isabellinus* group' (*isabellinus* and *tsaidamensis*), in which individuals of both sexes have dull sandy-greyish coloration (Plate 2).



Plate 1. Typical males of the Turkestan Shrike *Lanius phoenicuroides* (left) and Dzungarian Shrike *L. isabellinus speculigerus* (right). © EN Panov

The pairs of forms constituting these groups differ from each other not only in colour pattern, but also wing formula, moult schedule, phenology of breeding and character of seasonal migration (Cramp & Perrins 1993). On the basis of all these differences, Neufeldt (1978) suggested that *phoenicuroides* and *speculigerus* should be regarded as subspecies of the polytypic species *L. phoenicuroides*. Although this author did not give any additional arguments in favour of the conspecificity of these forms, it is not inconceivable that subsequent studies (in particular, genetic ones) will support their close phylogenetic affinity. I am more inclined now, however, to consider *speculigerus* a subspecies of the Isabelline Shrike, along with two other (see Plate 2) forms: thus, nominate *isabellinus*, *tsaidamensis* and *speculigerus*. The view that *phoenicuroides* and *speculigerus* are not conspecific is supported by there being at least one call-type not found in *phoenicuroides* in the vocal repertoire of the latter (Panow 1996).

¹By holding to a polytypic concept of the 'large species', prevailing in those years, Stegmann considered all these forms as geographical races of the Red-backed Shrike *L. collurio*.

In this paper, I shall touch on two different themes. Firstly, I should like to argue in favour of the view that the monotypic *L. phoenicuroides* is an independent species, separate from the polytypic *L. isabellinus*. Secondly, I shall try to dispute a recent recommendation by Pearson (2000) to change a generally accepted nomenclature of the *L. isabellinus* races, well established since 1930.

SITUATION NEAR THE BORDER OF THE RANGES OF PHOENICUROIDES AND ISABELLINUS

In the Tien Shan, the breeding ranges of these forms are almost contiguous (Figure 1). According to Ludlow and Kinnear (1933: 467), *phoenicuroides* is common in the Tekes river valley, where the birds breed at altitudes of c1500–2000 m, while Isabelline Shrikes of the nominate race, *isabellinus*, occupy desert plains of nearby Kashgaria (Tarim basin). These two areas are separated, in fact, by two parallel ridges of the Tien-Shan mountain system, which have a maximum height from 4300 up to 7440 m asl. This natural barrier, that may, in principle, prevent direct contact between the *phoenicuroides* and *isabellinus* populations, is only c150 km wide. It is known that at least *phoenicuroides* is absent in these mountains (Ludlow & Kinnear 1933).

The fact that two closely related forms were living in such close proximity had led our research team to suppose earlier that a zone of their hybridization might exist there (Kryukov & Panov 1980). To test this assumption, fieldwork was carried out in the Tekes river valley area of Kazakhstan in the spring of 2008 (Figure 1). Three observers made daily excursions by car in the period between 1 and 25 May. All available characteristic shrike habitats in the valleys of the river Tekes and its tributaries (Maly Kokpak, Bol'shoy Kokpak, Bayankol) and some further north, in the Charyn river valley, were visited and investigated. The distance between the extreme northern and southern parts of the study area was about 100 km.

It is known that the spring arrival of *isabellinus* in Kashgaria and the beginning of its breeding season there typically occurs around the middle of March (Sharpe 1891, Ludlow & Kinnear 1933, Sudilovskaya 1936). On the other hand, in our study area in 2008, there were no signs of any shrikes being present until 9 May, when the first arriving bird (typical *phoenicuroides*) was observed. A complete absence of *isabellinus* individuals in April and early May in the area investigated showed that the region is not part of the breeding range of this form. The fact contradicts suggestions by Belyalov & Berezovikov (2004) that *isabellinus* was now beginning to colonize southern Kazakhstan (but see below).

All the shrikes that were beginning to establish territories and start breeding in bushy habitats of the study area during mid to late May (in one case, the beginning of nest-



Plate 2. Phenotypes of the nominate race of the Isabelline Shrike *L. i. isabellinus* (males, top) and of the subspecies *tsaidamensis* (males, bottom). For explanation of arrow, see text. © Zoological Institute collections in St Petersburg

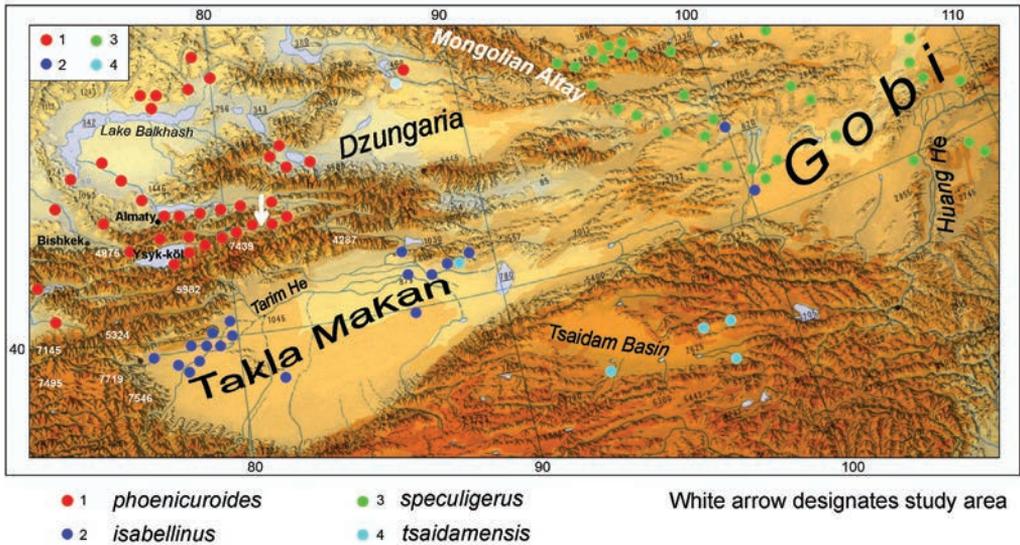


Figure 1. The Tien-Shan mountain system, to the north of the Takla Makan desert of the Tarim basin, and some other geographic features of central Asia. Location of breeding season specimen/sight records of the taxa *phoenicurooides*, *isabellinus*, *speculigerus* and *tsaidamensis* of the Isabelline Shrike complex are indicated (Ludlow & Kinnear 1933, Korelov 1970, Kryukov 1982, author's data) as is the location of the author's study area in 2008.

building was observed on 18 May and, on 24 May, the first egg was laid in this nest) had the appearance of typical *phoenicurooides*. Overall, 18 males (13 were photographed in the field, six captured and examined in the hand) and no fewer than nine females were found. To digress briefly from the main theme of the paper, we may particularly emphasize a very high constancy in the appearance of the local phenotypes. In this respect, the population studied differs dramatically from those inhabiting areas situated further north. In the latter, birds of the 'karelini' type are quite common, which phenotype I consider to be a result of lengthy introgression of *collurio* genes into *phoenicurooides* populations (Panow 1996). A complete absence of such birds in the study area thus seems easily explainable: it is situated at a considerable distance from the *phoenicurooides* and *collurio* contact zones. The same conclusion was made earlier by Shnitnikov (1949: 475).

At the same time, the constancy of the local *phoenicurooides* phenotypes clearly indicates an absence of any significant gene flow from the *isabellinus* populations distributed south of the study area. The question arises as to which factors may be responsible for the rather obvious reproductive isolation between these two forms. First, of course, is that mountain barriers seem to be preventing direct contact between them during the breeding season. At other times, however, birds appear to overcome these barriers without difficulty. Thus, just after finishing a breeding cycle, as early as late July or early August, vagrant Isabelline Shrikes (both adults and juveniles) appear in the extreme south of Kazakhstan and in Kyrgyzstan, *ie* in areas situated on the northern slopes of the Tien Shan (Shnitnikov 1949: 479; see also Belyalov & Berezovikov 2004, Berezovikov *et al* 2005). All of this lends support to the idea that, along with the spatial isolation of the two forms' populations, a sharp difference in the timing of the start of breeding (about two months) may be an important isolating factor.

The conclusion can therefore be made that the breeding range of the Turkestan Shrike is spatially isolated from those of any representatives of the Isabelline Shrike (both *L. i. isabellinus* distributed southward and *L. i. speculigerus* in the east). In view of this fact,

together with an apparent absence of regular gene flow between *phoenicuroides* and nominate *isabellinus* populations in the zone of allopatry/parapatry (data presented above), the former may be regarded formally as an independent species.

Nevertheless, what was said above does not exclude the possibility of occasional interbreeding between *phoenicuroides* and *isabellinus* (as documented for very many pairs of good species: see Panov 1989). O Belyalov (pers comm, Plate 3) documented one case of a *phoenicuroides* male and an *isabellinus* female in close proximity (apparently paired) in mid-May 2008 near the town of Zharkent not far from part of my study site. On a car route about 20 km long, this researcher counted 20 *phoenicuroides* individuals and that single *isabellinus* female. I should add that my long experience of working in museum collections shows that apparent hybrids *phoenicuroides* x *isabellinus* are quite rare (for details, see Panov 2008). They occur far more rarely than *collurio* x *phoenicuroides* hybrids, although in the latter case the parental forms are unanimously considered as not conspecific.

To conclude this section, I should emphasize that splitting the so-called Isabelline Shrike into two independent species would also be very useful for practical reasons. Lumping *L. isabellinus* and *L. phoenicuroides*, in contrast, leads to vagueness in the identification of migrating and wintering individuals by those observers who do not have a firm grasp of the complex systematics of the whole group. As a result, an observed individual is often simply described as *isabellinus* without an indication of its exact taxonomic status. The same is often true of specimens in museum collections (see eg Martens & Eck 1995: 370).

PEARSON'S (2000) PROPOSAL TO CHANGE EXISTING ISABELLINE SHRIKE NOMENCLATURE

When discussing a history of the attempts to ascertain interrelationships between different forms within the so-called *Lanius isabellinus* complex, Voous (1979) described its taxonomy as 'capricious'. Indeed, a discrepancy between European and Russian ornithologists with regard to the taxonomic status of *phoenicuroides* is not the only contradiction in this field. Dement'ev (1954) and Portenko (1960), for example, gave different descriptions of the nomenclature and distribution of the shrikes that later came to be considered unanimously under the name *isabellinus* (eg in Cramp & Perrins 1993, Lefranc & Worfolk 1997). Portenko, in contrast to Dement'ev, divided this taxon into two: *isabellinus* as such, inhabiting "semideserts and deserts of Soviet Central Asia south of the Syr-Darya and Aral Sea to Iran, and *arenarius* breeding in Kashgaria" (*op cit*: 205). We now know that this information about *isabellinus sensu* Portenko is erroneous, since he mistakenly regarded wintering and migrating birds as breeders. Many other discrepancies in the evaluation of the species' affinities and taxonomic positions of different forms are given in Panow (1996: 61, Table 3).

More recently, Pearson (2000: 24) emphasized that understanding the true situation is restrained by an absence of clarity in the naming of subspecies by different authors. In particular, he wrote that even such experts in systematics as Stresemann (1927) and Vaurie (1959) used the names *isabellinus* and *speculigerus* in respect of the same form.

It may seem all the more strange, therefore, that Pearson himself proposed to introduce additional difficulties in the nomenclature discussed by changing names that had become well established with time in the ornithological community, in regional handbooks (eg Lefranc 1993, Cramp & Perrins 1993, Shirihai 1996, Fry *et al* 2000) and review volumes on the genus *Lanius* (Panow 1996, Lefranc & Worfolk 1997).

It is Pearson's belief that the male type specimen, obtained in 1828 by Hemprich and Ehrenberg, belongs to the subspecies *speculigerus*, not to the nominate form, and he therefore suggested renaming *speculigerus* as *isabellinus*, and *isabellinus*, in turn, as *arenarius*. One



Plate 3. Mixed pair composed of Turkestan Shrike *Lanius phoenicuroides* male (in front on the left) and *L. i. isabellinus* female. On the right, female with food just presented to her by male. © OV Belyalov

may imagine how destructive such revision would be for future steps in the so-capricious taxonomic history of the Isabelline Shrike. It is not difficult to see that such a change would result in an avalanche of new mishmashes, especially in the identification of migrating and wintering individuals by ornithologists unacquainted with all the minutest details of the species' systematics. Moreover, all handbooks and fundamental classic works which include the Isabelline Shrike would be dismissed as useless or even erroneous.

Pearson's opinion is not incontestable. Below, I shall argue my profound doubts about assigning the type specimen to the subspecies *speculigerus*. First of all, as the bird was taken outside its breeding range (in the western part of the Arabian peninsula, on a migration route or in its winter quarters), there cannot be a direct confirmation of its subspecific affinity. We should thus analyse the phenotype of the individual in detail and compare it with a good series of *speculigerus* and *isabellinus* (which surprisingly was not done in the paper by Pearson, see below).



Plate 4. Type specimen of the Isabelline Shrike *L. i. isabellinus*. © Zoological Museum collections in Berlin

Lars Svensson kindly presented me with a good photograph of the specimen (Plate 4), so that I could examine it as closely as a picture permits. At least two features seem to me uncharacteristic of the typical *speculigerus* colour pattern.

The first of these is the size of the light wing-patch in the specimen. As Pearson states, it is 4 mm in width (the only measurement given in the entire article). Such narrow wing-patches are extremely rare in breeding male *speculigerus*. Kryukov (1982) measured the width of this patch in 49 males from the *speculigerus* populations of Transbaikalia (the

subspecies' *terra typica*) and the Gobi. In one of them, the wing-patch was completely concealed by the coverts. A narrow wing-patch (1–4 mm in width) was present in only one male, while 17 of them had patches wider than 4 mm (up to 6 mm) and in 31 individuals the measurements were 7–10 mm. On the basis of these figures, it can be said that, in respect of this character, the probability of the type specimen's affinity to *speculigerus* is 2/49, ie 0.04 only.

The second character that seems suspicious is the width of the lore, which appears to be too broad for typical *speculigerus*. Its black colour extends on to the forehead, where the left and right markings nearly merge with each other, being divided only by the proximal end of the bill ridge, not by the entire base of the upper surface of the maxilla as in typical *speculigerus* (Plate 5).

In support of the doubt I have expressed, it is appropriate to mention here that in the course of examining in the Zoological Institute in St Petersburg a large *speculigerus* series from different parts of its breeding range, I discovered some males with rather a lot of black on the forehead. The distribution of the black colour varies in such individuals from a noticeable widening of the lores to their being joined at the base of maxilla, where in this case a narrow black band is formed (Plate 6). It appears that such birds are distributed unevenly within the subspecies' breeding range. They are most common in the local zone of hybridization between *L. i. speculigerus* and *L. collurio* in the Chuya steppe, not far from the Russian/Mongolian border (Panov 1996: 101–102). The proportion of such males decreases with distance from this locality, and in Transbaikalia (c1200 km further east, in the *terra typica* range of the subspecies) they are completely absent (Table 1). Because of the dispersion of individuals of hybridogenous origin from the hybrid zone, birds with even a rather broad frontal band can be found in different parts of Mongolia (a photograph of one such male was kindly sent to me by Lars Svensson).

An analysis of the whole array of quite variable phenotypes obtained in two sectors of the hybrid zone (Panov & Kryukov 1973, Neufeldt 1986) leads to the conclusion that the presence of excessive black on the forehead in such specimens is a result of the influence of *collurio* genes. It may therefore be supposed that the wide lores in the type specimen discussed are due to this genetic factor as well.

In any case, the validity of the type specimen as a *speculigerus* male is in no way an established fact. Indeed, a small wing-patch is more characteristic of nominate *isabellinus* (13 out of 35 males taken in the breeding



Plate 5. Head coloration in typical *L. isabellinus speculigerus* male. © EN Panov



Plate 6. Variation in head coloration among *L. isabellinus speculigerus* males. Arrows show excess of black in the forehead region. © Zoological Institute collections in St Petersburg

Table 1. Number and percentage of '*speculigerus*' phenotype with much black on the forehead.

Region	N males	Proportion of aberrant phenotypes
Chuya steppe	10	6 (60.0)
Mongolia, Dzungaria	13	6 (46.2)
Gobi Altay, Gobi desert	9	2 (22.2)
Tuva	3	1 (33.3)
Transbaikalia	10	0 (0.0)
Sum total	45	15 (33.3)

season in Kashgaria, according to Kryukov 1982). Some males of this form are similar to *speculigerus* individuals in having rather broad black lores (Plate 2, shown by arrow). Unfortunately, in the article by Pearson, no data are given on wing-length, which is a very important diagnostic character for distinguishing *speculigerus* from nominate *isabellinus*, nor indeed any other measurements indicating the overall size of the specimen.

At the same time, the absence of such measurements is not surprising, when it becomes clear that the author of the article did not even examine the skin in the hand, but based his proposal on comments by G Nikolaus, who had examined it, and photographs sent to him from the Berlin collections. Rather, 'indecent' haste, not careful appraisal, seems to have prevailed in the attempted solution of such a complex taxonomic question. Disregard of the standard and necessary procedures for working with collection material seems to have passed unnoticed by Lefranc (2007), who pushed on with changes to the Isabelline Shrike nomenclature for birdwatchers.

Fortunately, CS Roselaar in Cramp & Perrins (1993), editor responsible for the sections on shrike taxonomy, only mentioned Pearson's suggestion, a personal communication, cursorily, retaining the entire Isabelline Shrike nomenclature unchanged. While I am in favour of treating *L. phoenicuroides* as an independent species, I too support the retention of the old nomenclature for the polytypic *L. isabellinus*, and therefore hope that ornithologists will follow this opinion in the future.

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