Notes on the Great Grey Shrike (Laniidae: Lanius excubitor) complex in north-western India: Variation, identification, and status

Prasad Ganpule


Abstract

Results of a two-year study on the resident Great Grey Shrike Lanius excubitor lahtora are presented here. It is shown, based on field study of lahtora in Gujarat, and Rajasthan, that there is considerable variation in plumage, and head, and wing patterns, which has not been reported earlier. Separation of lahtora from pallidirostris is very difficult, and from aucheri, and homeyeri, not simple. A host of features are required to be studied to separate it. These preliminary observations of lahtora show that this taxon is highly variable, and that molecular study is needed to determine the divergence in the Great Grey Shrikes here.

Introduction

The Great Grey Shrike Lanius excubitor is a widespread resident in South Asia. It comprises four races of which, lahtora is mostly resident; pallidirostris is a rare winter migrant to the north-western regions; and homeyeri, and aucheri are best treated as vagrants (Rasmussen & Anderton 2012). Though lahtora is a widespread breeder in suitable habitats in northern, north-western, and western India, its plumage variations have not been well-described. I present here the results of a two-year study on lahtora, in north-western India, and attempt to describe how it could be separated, in the field, from its conspecifics.

Taxonomy

Global taxonomy of the Great Grey Shrike complex is not yet resolved. Different works on South Asian ornithology have treated these four races in various ways (Table 1). However, a recent study, based on the mitochondrial DNA of 18 taxa (Olsson et al. 2009), including all four regional forms, has challenged these traditional excubitor, and meridionalis classifications. The Clades in Olsson et al. (2009) are arranged so that Clade A1 contains lahtora, and pallidirostris; A2, aucheri, apart from the extralimital buryi; and A3, excubitor, homeyeri, and leucopterus1. They discuss three possible taxonomic treatments for this group, together with their respective merits, and demerits. Two of these suggest the lumping of all four regional taxa in Clade A under L. excubitor, while the third, treating each Clade as a separate species. The third classification, the most radical among the three, would mean three different species for the Indian Subcontinent: lahtora, including pallidirostris under one species, with aucheri, and excubitor (including homeyeri) as the other two species. Though Olsson et al. (2009) state that phylogenetic pattern is well supported in the study, more data in the future may shed light on new possibilities. This might be the reason for retaining all taxa under L. excubitor, using the most parsimonious interpretation of the molecular tree, as followed by Rasmussen & Anderton (2012), and Dickinson & Christidis (2014). However, it must be noted that the Dutch Committee for Avian Systematics (henceforth CSNA) has partially accepted this radical taxonomic change by splitting Clade A into two with Clade A1 + A2 taxa grouped as a single species under lahtora [‘Asian Grey Shrike’] (van den Berg 2015). The Ornithological Society of the Middle East (henceforth OSME) retains the existing treatment: meridionalis for Clade A1 + A2, while suggesting a likely taxonomic arrangement where each of the clades A1, A2, and A3 are treated as independent species (OSME 2015). In this fluid scenario I follow Dickinson & Christidis (2014), fully aware that this might itself be provisional.

Field identification of the different taxa is complex, and a full range of characters needs to be studied to arrive at any conclusion. The situation is further complicated by the occurrence of intergrades. The known criteria for the identification of typical individuals are given in Lefranc & Worfolk (1997), Harris & Franklin (2000), Ali & Ripley (2001), Yosef & ISWG (2008), and Rasmussen & Anderton (2012). Careful observation of general dorsal colour, head, and wing pattern, ventral colours, and the tail pattern is required to identify these birds.

Methods & observations

Adult Great Grey Shrikes, henceforth referred to as lahtora, were

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Table 1. Great Grey Shrike: Taxonomic treatments

<table>
<thead>
<tr>
<th>Taxon</th>
<th>Ali &amp; Ripley (2001); Rasmussen &amp; Anderton (2012); Dickinson &amp; Christidis (2014)</th>
<th>Kazmierczak (2000); Yosef &amp; ISWG (2008); Panov (2011); Lefranc &amp; Worfolk (1997); Grimmett et al. (2011); Clement et al. (2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>homeyeri</td>
<td>Great Grey Shrike</td>
<td>Great Grey Shrike1</td>
</tr>
<tr>
<td>aucheri</td>
<td>Great Grey Shrike</td>
<td>Southern Grey Shrike1</td>
</tr>
<tr>
<td>lahtora</td>
<td>Great Grey Shrike</td>
<td>Southern Grey Shrike</td>
</tr>
<tr>
<td>pallidirostris</td>
<td>Great Grey Shrike</td>
<td>Southern Grey Shrike</td>
</tr>
</tbody>
</table>

1. Clement et al. (2015) gives Northern Shrike as the English name for homeyeri.
2. Grimmett et al. (2011) does not cover aucheri

Most taxonomies, including Dickinson & Christidis (2014), synonymise leucopterus with homeyeri
studied in Gujarat, and Rajasthan for two years, from February 2013 to February 2015. *Lahtora* occurs in good numbers in the following areas. Gujarat: The Little Rann of Kachchh (LRK), the Banni, and Naliya areas in the Greater Rann of Kachchh (GRK), parts of Saurashtra; Rajasthan: Desert National Park (DNP), and Tal Chappar. Adult *lahtora* were photographed, their wing pattern, while they were flying, noted, and dorsal, and ventral colour, and head pattern observed in detail. To study the wing, and tail patterns in detail, good photographs are essential, and it is difficult to photograph these birds in flight. Hence, photographs were collected from other birdwatchers from different areas, mainly from Rajasthan and from Maharashtra. Photographs posted on various Internet websites ([www.orientalbirdimages.org](http://www.orientalbirdimages.org); [www.indianaturewatch.net](http://www.indianaturewatch.net); [www.ibc.lynxeds.com](http://www.ibc.lynxeds.com)) were also studied in detail. Though a study of photographs cannot be compared to an actual field study, it is still essential for studying wing- and tail details, and to gain a general idea regarding individuals found in different areas. Some of the observations from the western part of LRK may be of the same individuals, as two–three different birds were seen in the same area, over a period of four months.

Only adult birds were considered for this study. Sexual dimorphism in adult *lahtora* is minimal (adult females have a finer facial mask on the forehead, and brownish upper parts), but I have not attempted to sex individuals. I have not studied museum skins, and the results presented here are based on personal field observations (Table 2), and photographs of more than 50 individuals, apart from studying a large number of photographs taken by other people. Descriptions of plumage variations are supplemented with relevant photographs, and illustrations.

### Table 2. Author’s observations of Great Grey Shrikes

<table>
<thead>
<tr>
<th>Locality</th>
<th>State*</th>
<th>No. of birds</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRK</td>
<td>GJ</td>
<td>05</td>
<td>February 2013</td>
</tr>
<tr>
<td>GRK</td>
<td>GJ</td>
<td>08</td>
<td>November 2014</td>
</tr>
<tr>
<td>GRK</td>
<td>GJ</td>
<td>04</td>
<td>December 2014</td>
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<tr>
<td>GRK</td>
<td>GJ</td>
<td>02</td>
<td>February 2015</td>
</tr>
<tr>
<td>LRK</td>
<td>GJ</td>
<td>03</td>
<td>March 2013</td>
</tr>
<tr>
<td>LRK</td>
<td>GJ</td>
<td>02</td>
<td>April 2013</td>
</tr>
<tr>
<td>LRK</td>
<td>GJ</td>
<td>01</td>
<td>October 2013</td>
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<tr>
<td>LRK</td>
<td>GJ</td>
<td>02</td>
<td>December 2013</td>
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<tr>
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<td>GJ</td>
<td>02</td>
<td>March 2014</td>
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<td>GJ</td>
<td>06</td>
<td>January 2015</td>
</tr>
<tr>
<td>LRK</td>
<td>GJ</td>
<td>01</td>
<td>February 2015</td>
</tr>
<tr>
<td>DNP</td>
<td>RJ</td>
<td>15</td>
<td>February 2014</td>
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<tr>
<td>Dwarka, Jamnagar</td>
<td>GJ</td>
<td>02</td>
<td>September 2014</td>
</tr>
<tr>
<td>Dwarka, Jamnagar</td>
<td>GJ</td>
<td>02</td>
<td>January 2015</td>
</tr>
<tr>
<td>Morbi area, Rajkot</td>
<td>GJ</td>
<td>01</td>
<td>September 2014</td>
</tr>
<tr>
<td>Morbi area, Rajkot</td>
<td>GJ</td>
<td>01</td>
<td>January 2015</td>
</tr>
</tbody>
</table>

*GJ=Gujarat; RJ=Rajasthan

**Results**

**Plumage:** Dorsal colours vary from pale whitish-grey, to a dark smoky-grey. Plumage tones ranging between pale, and dark grey are more common. The rump is slightly paler than the mantle in all birds. Most adults show white scapulars. Underparts are pure white, but a few birds (n < 5), showed a faint greyish / buffish wash. Often, *lahtora* roosts / perches with its wing, and mantle feathers raised, thus obscuring the mantle colour and wings, making it difficult to judge plumage colours and patterns. [1–1A].

In general, birds (n=15) seen in DNP [2, 2A, 3] were very pale greyish, with a paler rump. In Gujarat, they (n>25) varied from pale grey to dark smoky-grey.

1 November 2014, Greater Rann of Kachchh, Gujarat. Note raised feathers obscuring the mantle and wings. Many times Indian Grey Shrikes have a habit of roosting/sitting like this, making it difficult to see the mantle colour and wing details.

1A November 2014, Greater Rann of Kachchh, Gujarat. Same bird as in 1. Now note how the mantle and wings are clearly seen, and mantle is darker greyish.

Face pattern, and bill: Facial masks vary. Two extreme face patterns are illustrated here. The palest birds, with pale, greyish-white heads (Fig 1), show a facial mask that passes over the lores, eyes, and behind the eyes, ending at the ear coverts. The black on the lores, and forehead is restricted. The darkest birds, with a dark smoky-grey head, and mantle (Fig. 2), could show a very prominent black facial mask, almost like that of a Lesser Grey Shrike *L. minor* [4], with a wider-than-normal facial mask on the forehead, lores, and through the eye, extending down towards the neck. Such dark, smoky-grey plumaged birds can be seen in Rajasthan [5], and also in Gujarat. Most birds show a facial pattern that is between these two extremes. Though posture, and how position of neck (whether stretched, or not) may affect the extent of black seen behind, and above the eye, it is apparent that this is variable, with some birds showing a wider facial mask. This feature can be judged by the width of the black band over the bill (forehead), and above the eyes, when good views are obtained. Though rare, this is especially noticeable in some individuals that sport a wider facial mask. There is a faint white supercilium present on many birds, which, even if present, is not noticeable unless closely observed. The bill is heavy and black in all adult birds.
Wings: The upper-wing pattern, when seen in flight, is considered important for identification, and special attention was paid to it, and whenever possible, it was photographed. Shrikes sometimes hold the inner wing semi-closed in flight, which makes it difficult to observe the pattern on the secondaries, and only a black patch is visible. But as far as possible, I tried to observe the fully stretched upper-wing in detail. I noted three types of wing patterns on *lahtora* (Figs. 3–5):

a) The most common pattern (type ‘a’; Fig. 3) is where wings are black, with a white patch on the primaries. The first (innermost) primary ‘p1’, mainly, is wholly white, but this is variable. The secondaries have white outer webs, with the first secondary (s1) extensively black, and showing a little bit of white, thus creating a ‘step’ between the white on the primaries and the secondaries. If the first primary (p1) is wholly white, then this ‘step’ looks more prominent. The other secondaries are whiter, with less black [6].

b) The pattern (type ‘b’; Fig. 4) was noted mainly in the birds seen in the DNP, wherein the white primary patch is more extensive and wider, and the secondaries also show extensive white, thus creating a large, continuous white band. The primary patch reaches till the tips of ‘p1’, which is wholly white in many birds. This wing pattern is also seen on birds in other desert areas in Rajasthan. In such birds, ‘s1’ shows minimal black, as a result of which the ‘step’, shown in Fig 3, is much reduced, and other secondary feathers show more white. The overall effect is of extensive white in the wings.

c) In the rarer (n=3), third type of pattern (type ‘c’; Fig. 5), the white primary patch is smaller, and the secondaries are extensively black. The outer webs show very little white, but the distal ends are white. In this pattern, the wings look more blackish, with the secondaries being blackish at their base. The white on the secondaries is only seen when the wing is fully stretched.

2. Note that in all wing illustrations, the mantle, and scapulars are not illustrated; they may vary, with scapulars showing different amount of white, and mantle colour also may vary. Only the wings are illustrated, mainly to show the pattern on the primaries and the secondaries, which is a critical feature for identification.
The closed wings are black with a small white primary patch visible, which is present at the base of outer primaries. The secondaries show extensive white tips on closed wings in most birds, with a secondary patch sometimes visible. Birds moulting from juvenile into adult plumage show a mix of juvenile and adult feathers in the secondaries [7].

Tail: The spread tail is very difficult to observe when in flight but it was observed for a few individuals (n < 5). The outermost tail feather (t6) is wholly white except for a small black line/patch on the rachis. The next feather (t5) is also predominantly white, though the black on the rachis is slightly more extensive. However ‘t6’ and ‘t5’ usually show some amount of black on the rachis. The central tail feathers are wholly black.

Identification & status
Features of lahtora are described above. However, separation of lahtora from pallidirostris, homeyeri, and aucheri is difficult, and good views are required to separate them. While there has been much research on field identification of pallidirostris from the grey shrikes occurring in Europe, field identification with respect to lahtora is not very well understood. Hence, details for separating lahtora from pallidirostris, homeyeri, aucheri, and minor are given below. These are mainly based upon work by Lefranc & Worfolk (1997), Ali & Ripley (2001), Yosef & ISWG (2008), van Duivendijk (2011), and Rasmussen & Anderton (2012), and are supplemented by my observations of lahtora, and pallidirostris over the past few years. There are minor differences in the criteria for identification in the works mentioned above, but I have collated these below; all descriptions pertain to adult birds.

Lanius excubitor pallidirostris
In general, pale greyish / whitish (pallid). The bill is usually pale, and the black facial mask restricted till the eye. The lores are pale, or at most greyish, and not prominent, but can be narrowly black in some adults (males?). The primary patch is wide (reaching to the tips of inner primaries), and prominent in flight, while the primary projection is much longer than in lahtora (about 80% of tertials), with five–seven primaries extending beyond the tertials. The upper-wing pattern is also very similar to that of lahtora, but with much more black in the secondaries. This could be variable as a few individuals (in the UAE, and presumed to be pallidirostris) show quite obvious white edges on the secondaries, which can give the effect of extensive white across the whole inner wing when the bird is in flight [8]—but this is uncommon (Oscar Campbell, in litt., e-mail dated 01 December 2015). However, the inner edges of the secondaries are white, which is seen when the wings are fully stretched. Wing pattern of pallidirostris is illustrated in Fig. 6. The under parts, usually, have a pinkish wash. The two outer rectrices are usually white. Adult birds are usually pale-billed in autumn but may have black bills in spring / summer. Typical birds are fairly easy to identify if these features are present.

Identification of grey shrikes occurring in Europe, field identification with respect to lahtora is not very well understood. Hence, details for separating lahtora from pallidirostris, homeyeri, and aucheri is difficult, and good views are required to separate them. While there has been much research on field identification of pallidirostris from the grey shrikes occurring in Europe, field identification with respect to lahtora is not very well understood. Hence, details for separating lahtora from pallidirostris, homeyeri, and aucheri are given below. These are mainly based upon work by Lefranc & Worfolk (1997), Ali & Ripley (2001), Yosef & ISWG (2008), van Duivendijk (2011), and Rasmussen & Anderton (2012), and are supplemented by my observations of lahtora, and pallidirostris over the past few years. There are minor differences in the criteria for identification in the works mentioned above, but I have collated these below; all descriptions pertain to adult birds.

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the UAE, and it is not known if they also occur there in winter. However, not all spring *pallidirostris* show dark lores, but there are some that do (please see images on the website https://www.smugmug.com/gallery/n-xTxNK/ for such birds from the UAE). Most individuals seen in India, in winter, are pale-billed, but some may show dark lores [10]. These types of dark-billed, and dark-lored individuals are not illustrated either in Grimmett et al. (2011), or in Rasmussen & Anderton (2012). Photos of such birds from Bahrain, and Mongolia are given here [9, 11, 12], and are also posted on many birding websites, especially those originating from Kazakhstan. Thus it is quite possible that such birds may occur in north-western India as migrants. In such cases, separation from *lahtora* is tough, and based mostly on the longer primary projection, the larger white primary patch, and the pinkish wash to the under parts (if present). Care has to be taken in separating such individuals from *lahtora*, and some birds may not be safely separable in the field without detailed views of their primary projection, and wing pattern. As seen from Fig. 6, even its wing pattern is somewhat similar to wing pattern of *lahtora* (compare with Fig. 3), and it would be truly difficult to separate such individuals with certainty. This aspect of identification of *pallidirostris* from *lahtora* has been largely ignored in the reference texts with respect to India and needs further study.

**Status:** *Pallidirostris* ranges from Central Asia from NW Caspian Sea (extreme S Russia) and South Kazakhstan east to Mongolia and north China and, in west, south to NE Iran, Afghanistan, north Pakistan and western foothills of Tien Shan Mountains; some populations are migratory and they winter in northern Africa and in small numbers in Arabia (Yosef & ISWG 2008). It is said to straggle to India (Lefranc & Worfolk 1997), while Harris & Franklin (2000) note that it rarely migrates to NW India. Rasmussen & Anderton (2012) state it is seen ‘more widely in the north-west in winter’.

There is an isolated record from eastern Rajasthan (Grimmett et al. 2011). It has been recorded in GRK, and in LRK in Gujarat. I have observed at least five individuals during the winters of 2013, and 2014 in LRK [13]. In GRK it is rare, but is regularly seen, and photographed (http://orientalbirdimages.org; Jugal Tiwari, verbally). It could be a regular winter migrant to north-western India, and further surveys are needed to know its status here. Birds with dark lores, and dark bills could easily be overlooked among *lahtora* seen here, and special attention should be given when identifying *lahtora* / *pallidirostris* in the arid-, and desert areas of north-western India in winter.
January 2015. Little Rann of Kachchh, Gujarat. Note the pale bill and lores, with a hint of pale supercilium behind eye. The underparts are distinctly washed with pink, which is noticeable in the field also. Long primary projection. Pale grey upperparts. This bird is typical of pallidirostris seen here.

Lanius excubitor homeyeri

Has pale grey upper parts, and white under parts. Usually, a narrow white supercilium is present. Mask is narrow. Rump is pale / white. The upper-wing pattern is different, and shows much white in wing. The basal half of secondaries is white and connected to the primary patch, creating a white wing panel on the entire upper-wing. Though the size of this patch may vary, the white bases to the secondaries are distinctive, and the white wing panel is diagnostic and important for identification (Fig. 7). The tail also shows much white, with two outer tail feathers being completely white, and the central tail feathers having a white base.

Though it is unlikely to be confused with lahtora, some pale lahtora may be similar to homeyeri. In such cases, the different face-, and wing- patterns separate the two. The main confusion here is its similarity to pallidirostris. So the different wing pattern, supercilium above the black facial mask, etc., are useful in separating the two.

Status: It breeds in Southeast Europe (East Balkans, Bulgaria, South Romania, from Ukraine, East to foothills of Southern Urals), and Southwest Siberia (East to North foothills of Altai, including Naryn region); non-breeding to Southwest & Central Asia (Yosef & ISWG 2008). Birds of the race homeyeri are said to go as far south as northern Iran and up to the Pamir foothills in winter (Lefranc & Worfolk 1997).

Homeyeri is a vagrant to India, with a record from Kashmir (Ali & Ripley 2001). Rasmussen & Anderton (2012) report it as a very rare straggler. Ali & Ripley (2001) discuss specimens from Quetta, and Gilgit (Pakistan), and Avantipur near Srinagar (India), with the comment that the birds from Gilgit were ‘possibly quite correctly’ identified as homeyeri despite it being treated as leucopterus (a synonym of homeyeri) by Charles Vaurie. Srinagar birds’ identification is not discussed but it is attributed to Frank Ludlow. It is possible that homeyeri is overlooked, and detailed scrutiny of all grey shrikes is required to learn more about its status here; it could occur as a vagrant in areas in extreme northern India.

Lanius excubitor aucheri

Has uniform grey upper parts that do not get paler on the rump. Facial mask narrower, but head pattern similar to lahtora. Under parts have a distinct greyish wash. The upper-wing has a white primary patch, and almost no white on the secondaries; some birds have dark brownish secondaries. The wing pattern is said to be variable (Ali & Ripley 2001). It generally has much less white in wings and tail than do lahtora, homeyeri, or pallidirostris (Fig. 8). I have shown the inner edges of the secondaries white, but these may be fainter, or even black. Ali & Ripley (2001) state ‘inner edge of inner web of secondaries usually white, rest brown but this is rather variable’. But generally there is almost no white on the secondaries, with the secondaries either black, or dark brownish. The outermost rectrice (t6) is mostly white with black on base / rachis, while the next feather (t5) is mainly black with a white tip, which differs from the other taxa discussed here.

It is similar to lahtora and care is needed to separate it. Lefranc & Worfolk (1997) note that aucheri may intergrade with lahtora in western Pakistan. It is possible that such birds may occur in India, and good views / photographs are needed to identify it to sub-specific level. However, the greyish wash to the under parts is usually obvious on all adults, and the different wing pattern would separate it from lahtora. The wings, and tail, if seen well, would show much less white than lahtora, and along with the greyish under parts would be the best features for identification.

Status: It ranges from Central-eastern Sudan (south from Port Sudan), Eritrea, North Ethiopia, North-western Somalia, Iraq, Southern Iran, Syria, Southeastern Israel, Southeastern Sinai Peninsula, West Arabian Peninsula and Oman (Yosef & ISWG 2008).

Aucheri is a vagrant to the Indian Subcontinent, with a
specimen collected from Bhawalpur, Punjab, in Pakistan (Abdulali 1977). It has not been recorded in India but careful observations of grey shrikes in north-western India may get results. A probable aucheri, or an intergrade, has been photographed in the Desert National Park, Rajasthan [14], and a specimen is discussed by Abdulali (1977), which is similar to lahtora, except for a greyish wash to the underparts. Hence intergrades may occur here and more observations are required.

Lanius minor

Distinctive. Mainly males have extensive black on the forehead. Under parts are pink, or washed with pink, in males, and are less pink in females. Wing pattern is also different, with white primary patch, and all-black secondaries with white tips. Primary projection is long, and is diagnostic for identification. The tail is short and square. Females are similar, but with a fainter wash on under parts, and with brown mixed on forehead.

Adult L. minor is distinctive, different from lahtora, and is fairly easy to identify in the field—unlikely to be confused with pallidirostris, homeyeri, or aucheri. The long primary projection, rather short tail, and the different shape in flight contribute to its distinctiveness.

Status: It breeds from Europe to Central Asia, and winters in sub-Saharan Africa (Rasmussen & Anderton 2012). It is a vagrant to India, with two records from Ladakh (Delany et al. 2014) being the first for the country.

Discussion

The distribution range of lahtora extends from Pakistan eastwards till Bihar, and from the Himalayan foothills in the north till about southern Karnataka. This is a large area with varied habitat, and hence some variation in lahtora, due to geographical factors, is to be expected. Yet a majority of the birds seen here are lighter than those illustrated in Lefranc & Worfolk (1997), Grimmett et al. (2011), and Rasmussen & Anderton (2012)—all showing lahtora with darker smoky grey plumage. These authorities do not describe any variation for lahtora.

Abdulali (1977) stated, 'There is some variation in the shades of grey on the upperparts but this appears to be individual', and described a specimen from Jalandhar [=Jullunder], Punjab as the palest. Also, some birds look darker during the monsoon (their breeding season). This could be due to their fresh plumage. In winter, though some individuals retain this dark plumage, most birds do not look dark, but pale grey. Whether this is age-related, or due to some other factors, is not known, but plumage is variable. The palest birds were observed in DNP, Rajasthan, and sometimes in LRK, Gujarat [15], while the dark birds were seen in many areas in Saurashtra, Gujarat. This occurrence is random as many times birds with variable plumage / face pattern could be seen in the same area, e.g., in GRK, it is possible to see, in a single day, birds with pale, as well as dark plumages. Certainly lahtora is not always dark smoky-grey as illustrated; most birds are pale grey, or even whitish grey.

The difference in wing pattern has not been described in the reference texts. They give unsatisfactory descriptions: Ali & Ripley (2001) state, 'wings black with pure white patch or "mirror" which flashes conspicuously in flight'; Rasmussen & Anderton (2012), 'black wing with large white carpal patch and edges on secondaries'; Lefranc & Worfolk (1997) 'outer web of secondaries with much white, inner webs wholly white'. Grimmett et al. (1998) describe the wings in some detail, ‘has extensive white patch at base of primaries and, with inner webs of secondaries and tips of outer webs also largely white, shows much white in wing at rest and in flight’, but do not describe any variation.

For tail pattern, though outer pair of rectrices are extensively white, there is some black present on the rachis, which is more noticeable on the second feather (t5). This is contra Lefranc & Worfolk (1997), who state that the outer pair of rectrices is wholly white in lahtora. Panov (2011: Fig. 1.7a) illustrates a museum specimen of lahtora, similar to [16].

In addition to other identification characteristics, the upperwing pattern in the grey shrike complex is considered to be critical for identification; especially for separating similar looking pallidirostris and homeyeri, and lahtora and aucheri. Hence this variation in wing pattern observed in lahtora needs to be studied further, possibly with a wide-array of museum skins.

Birds seen in the DNP, Rajasthan have consistently paler plumage, narrower facial mask, more white in the wings, and longer primary projection than birds seen elsewhere. These characteristics are far too consistent to be attributed to individual
variations. This may be due to environmental factors. However, this variation does not seem cinal as birds with pale, as well as dark, plumage, and with variable facial masks were observed in Gujarat. But it is apparent that the birds seen in the DNP area are consistently different from lahtora seen elsewhere, and may represent a gradual cline, with paler birds occurring in the extreme west. Individual variation alone cannot explain the different wing patterns observed in the birds. It is possible that after further study, this variation might be formally recognised, as it is diagnostically different. The birds seen in the DNP area in Rajasthan certainly deserve further morphological, and molecular study.

There is still a lot to understand about the grey shrike complex in the Indian Subcontinent. For example, birds occurring in the area where the ranges of aucheri, pallidirostris, and lahtora overlap are populations in which intergrades occur (Fig. 3; Panov & Bannikova 2010). The areas where the potential overlap of these subspecies occurs is close to the Indian Subcontinent, and hence intergrades from these areas could occur as winter migrants in north-western India, especially in Rajasthan. It is further possible that lahtora is a local migrant, dispersing short distances in winter, towards western Pakistan, and further west, to south-eastern Iran (OSME 2014).

It is possible that in the extreme eastern, and southern part of its range, lahtora may show some variation from what is described here. I have seen images of lahtora from Kamataka, Maharashtra, and northern India carefully, but I could not find any major differences in them. But this is difficult to ascertain from photographs. A study of individuals in the field, and museum skins from these areas, are required for a comprehensive analysis. I have not studied if the vocalisations of different lahtora populations vary. This aspect has probably not been studied earlier, and a detailed study of calls and songs of birds from different areas will be helpful in understanding if there are any differences.

It is not known if adult pallidirostris with dark lores, and black bill occur regularly in north-western India; birdwatchers should look out for them. If sightings of aucheri and homeyeri are documented in the future, then their status in India will have to be revisited.

Molecular studies on the grey shrike complex, though done in Europe, have not been carried out on a large scale in India. DNA analysis done on specimens from different areas / regions in India will be helpful in understanding if there is any divergence in the populations here. A special study should be carried out on the population of lahtora in DNP area in Rajasthan, with an emphasis on breeding pairs to study their morphology, vocalizations, and DNA, as these birds are different from lahtora found in other areas.

Finally a note of caution: though lahtora is still regularly seen in some places in Gujarat and Rajasthan, e.g., GRK and DNP, it seems that its population is decreasing. Ali (1955) noted it as ‘common’ in Gujarat. However during my study, it was not at all commonly seen in the Saurashtra region, even in areas of suitable habitat. In areas where it is resident in Gujarat, only three to four individuals could be seen in a whole day. This decrease in population has been reported earlier (Khacher 1996). It is not persecuted, but its habitat may be shrinking due to human pressures, making an impact on food availability, and it is possible that it may be declining further. A population estimation of Great Grey Shrike is needed so that an idea regarding its current status can be obtained, and a plan for its conservation can be worked out if a marked population decrease is seen.

Conclusion
The Great Grey Shrike complex in India represents a challenge in identification and taxonomy that requires detailed morphological and molecular study. From this preliminary study, it is evident that there is considerable variation in its general plumage, face pattern, and wing colouration of the resident Great Grey Shrike of the north-western India. This needs to be taken into account while identifying this bird vis-à-vis the three other migrant / vagrant races. Systematic genetic sampling across the range of lahtora might throw up interesting results that may explain some of these observed plumage patterns.

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References
Early Indian bird collectors: Jean Macé, collector during 1798–1803

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While researching the exploits of the Baudin Expedition (1800–1804), captained by Nicolas Baudin, to Australia, Timor, Mauritius, Tenerife, and South Africa (1800–1804), and the history of the Muséum national d’Histoire naturelle, Paris, France (hereafter MNHN), I noticed the name of Jean Macé (Jansen 2014, 2015), who donated a number of birds from ‘Bengale’ [=Bengal] to the expedition. He had, earlier, also donated another batch of specimens to the MNHN. I here present my notes on the specimens, and a literature research, on Macé, and his collections.

Macé was elected as a member of the Society of the Histoire Naturelle in Paris, in 1790, and was asked to collected specimens, in foreign countries, by its board. Educated as doctor, Dr Jean Macé MD departed from The Netherlands, on board a vessel to Cape Town (South Africa) in 1789, and remained there up to 1792 (Anon. 1848: 81–83). He visited inland locations, including the Hottentots, made notes, and collected items of natural history. He then proceeded to Mauritius where he remained until 1798 (Millin et al. 1795). By 03 December 1793 he had accumulated a collection of 22 bird-species, including species of flamingo Phoenicopterus, tropicbird Phaeton, and others (La Bibliothèque centrale du Muséum national d’Histoire naturelle, Paris, France, letter 03 December 1793, dossier 52). His plans to visit Sri Lanka did not materialise, due to war, and it is unknown whether he visited Madagascar as initially planned (Millin et al. 1795). In 1798 he was at Tranquebar (Tharangambadi; 11.03ºN, 79.85ºE; Nagapattinam District, Tamil Nadu, India), Serampore (Sreerampur; 11.03ºN, 79.85ºE; Hooghly District, West Bengal, India; erstwhile Serampore) and Saharanpur (29.96°N, 77.55°E, Saharanpur District, Uttar Pradesh, India) in January 1800.