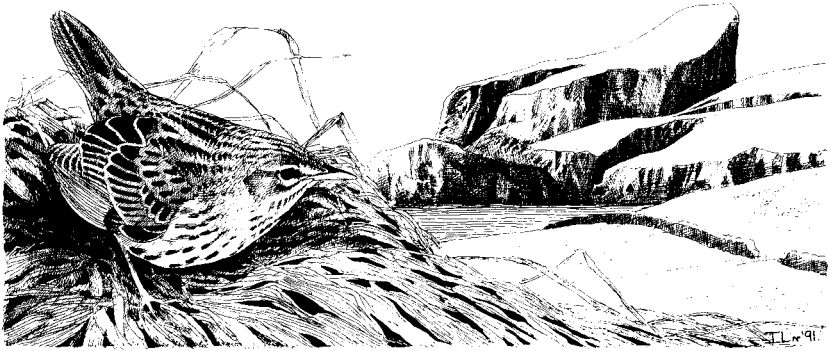


Identification of Lanceolated Warbler



Nick Riddiford and Paul V. Harvey

The warbler genus *Locustella* contains seven species, six of which have occurred in Europe. Lanceolated Warbler *L. lanceolata* is the smallest, usually the most heavily streaked, and shows clearly the characteristics of the genus: markedly rounded tail, long undertail-coverts, and secretive, skulking behaviour (and a reeling grasshopper-like song in summer). It most closely resembles Grasshopper Warbler *L. naevia*, and a further potential confusion species is Pallas's Grasshopper Warbler *L. certhiola*. It is unlikely to be confused with other *Locustella* species, unless views are particularly poor.

Generalised description and habits

A detailed description, drawn from notes on 13 Lanceolated Warblers studied closely in the field and/or in the hand on Fair Isle, Shetland, and many individuals studied by PVH in southeast Asia, is given below. Additional notes, taken from examination of skins at the British Museum (Natural History), Tring, are also incorporated. Particular attention has been paid to the individual feather patterns of certain plumage tracts; although this may seem to favour in-the-hand circumstances, Lanceolated Warblers are frequently tame enough to allow very close approach, and, furthermore, correct determination of those patterns is the major key to unequivocal identification. The description is inevitably generalised, as the species is variable in a number of plumage features.

Size and structure

The species is tiny to very small, in body bulk being similar to, or even smaller than, Chiffchaff *Phylloscopus collybita*, and with a relatively short tail. The bill is short and, because of its dark upper mandible and the bird's size, often looks rather fine. The legs are stouter than those of *Phylloscopus* warblers of similar size, but do not look so sturdy as those of other, larger, *Locustella* warblers.

Plumage and bare parts

UPPERPARTS

The majority of upperpart feathers are heavily and darkly streaked, producing a rather dark, drab upperpart appearance. The other major colour on the upperparts, comprising the fringes of individual feathers, varies from dull olive-grey to dull ginger-brown. Crown and mantle feathers always have very well defined blackish centres.

CROWN Individual crown feathers are small, and the dark crown-streaking often does not, therefore, appear so heavy as that of the mantle. Nevertheless, crown feathers are predominantly dark grey to grey-black, with dull olive-grey to ginger-brown fringes (and on some individuals are as heavily streaked as mantle feathers). Thus, crown is clearly and closely, if often narrowly, streaked.

NAPE The dark streaking of the nape feathers varies from little more than a mesial line to streaking as heavy as on crown. The former pattern is slightly commoner (only 30% of skins showed nape-streaking as heavy as on crown and mantle), and so nape often, but by no means always, appears rather plain, in contrast to crown and mantle.

MANTLE Although intensity of markings varies individually, mantle always appears streaked, frequently heavily. This is due to the size of the feathers and also, at least in some cases, to the streaks being darker compared with those on the crown (grey-black rather than dark grey) and occupying a larger proportion of the feather. Mantle-feather fringes are ginger-brown to dull grey-olive, and are relatively narrow (occupying 10-20% of feather at its widest point). The dark streaking usually reaches the tip of each feather, often broadly, and consequently fringing does not continue onto feather tip (fig.1).

BACK AND RUMP The amount of streaking, particularly on rump, is much more variable than on mantle. The proportion of fringing on back is greater than on mantle feathers, so this tract tends to appear less heavily marked than mantle. Rump often appears as heavily streaked as mantle (although the dark centres do not occupy so much of the feather), though on about 40% of skins it appeared less heavily streaked. Rarely, rump can appear almost unstreaked in the field.

UNDERPARTS

The major features of the underparts, and often assumed to be characteristic of the species, are a pectoral band or gorget of streaks across

UPPERTAIL-COVERTS Feathers greyish-brown or ginger-brown, with about equal number of individuals (25% each among skins) having either no dark centres, poorly defined dark centres, obvious dark centres, or bold dark centres (= streaks) as prominent as on mantle. There was no correlation between markings of mantle, rump and uppertail-coverts: i.e. individuals with heavily marked rumps often had poorly marked uppertail-coverts, etc.

UPPERWING The wing-coverts follow the same general pattern as mantle. The alula and primary coverts, however, are grey-centred, with no hint of black; lesser coverts are broadly fringed ginger-brown to pale greyish-brown, so that the grey-black centres can be obscured; and median coverts, too, are relatively broadly fringed. Greater coverts have dull black centres, darker than all other wing-feather tracts apart from tertials, and slightly narrower pale ginger-brown to greyish-brown fringes which are complete (uniting at feather tip). Primaries and secondaries are grey, matching primary coverts in colour. Outermost tertial is dark and the other two tertials darker still, appearing matt black with neat pale ginger-brown to greyish-brown fringes. These fringes contrast markedly with feather centres and also are well demarcated, heightening the contrast; at the feather tip, they can appear very narrow and whitish.

TAIL Tail feathers are grey-brown above, with very narrow pale grey-brown or ginger-brown fringes to outer webs.

SIDES OF HEAD There is usually a very indistinct off-white supercilium from above bill to just behind eye (often with slight, but distinct, rusty tone above lores), a very faint dark loreal stripe, and dull olive-grey or brown-grey ear-coverts poorly mottled darker; giving species a very 'plain-faced' appearance.

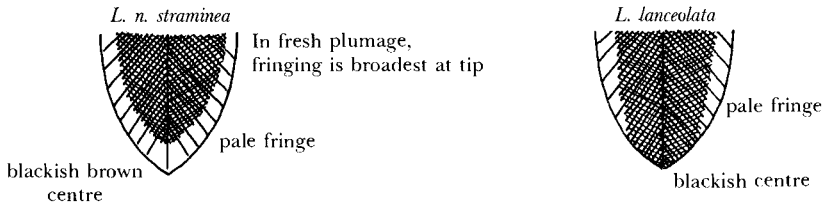


Fig. 1. Mantle feather patterns of Grasshopper Warbler *Locustella naevia* of eastern race *straminea* (left) and Lanceolated Warbler *L. lanceolata* (right)

the throat/upper breast and marked streaking on the flanks. Both features, however, are variable. The general ground colour is white with a dull buffish or even greyish wash. Rarely, individuals have a yellow wash to chin and throat (plate 21).

CHIN White, generally with slight dirty-buff wash; well-marked individuals often with a few very small brown-grey spots.

THROAT As chin, but (usually) with dark, relatively broad mesial lines to most feathers, giving a gorget of short grey streaks right across throat.

FLANKS Flank streaking is very variable (table 1). Fore flanks usually have short streaks formed by brown-grey centres to feathers, representing a continuation of the streaked pectoral band, but are sometimes unmarked. There are generally much broader brown-grey mesial streaks to rear-flank feathers (and on outermost undertail-coverts); thus, rear flanks are often strongly marked with broader streaks, this streaking continuing onto at least the border of undertail-coverts. Ground colour of flanks (i.e. the general feather tone) is buff-brown.

BREAST White with a dull buffish or greyish wash, upper and occasionally entire breast overlaid with dark brown to blackish streaking. This overlay of streaking often extends onto sides of breast. Some individuals, however, can apparently virtually lack streaking on breast (Alström 1989).

BELLY White with a dull buffish or greyish wash.

UNDERTAIL-COVERTS Undertail-coverts tend to look dark and mottled, as the majority are

a mixture of browns and greys, all with a strong buffy or gingery wash. The shortest ones have well-defined dark brown-grey to grey-black 'teardrop centres' (though one skin had no dark centres to any undertail-coverts). Longest ones often have no dark centres (65% of skins), and, even when present, dark centres do not extend to base of feather; the visible part of feather (i.e. that part not overlain by other coverts) can, however, under field conditions, show a dark centre (fig. 2). Longest undertail-coverts are invariably tipped white or off-white; this tipping can be as much as 5 mm long, but, although obvious in the hand, it is of doubtful value in the field (see Discussion).

UNDERWING Whitish, but with a strong rich ginger-buff wash. Some mid-grey to dark-grey spots are often present on under primary coverts.

BARE PARTS

BILL Upper mandible dark horn with pale cutting edge; lower mandible pale pink, darkening slightly towards tip, so that tip is pinkish-grey and can look dark.

LEGS Pale pink, with feet and soles pale yellowish-pink.

EYE Dark hazel-brown, but looks black in the field.

16, 17 & 18. Lanceolated Warbler *Locustella lanceolata*, Fair Isle, Shetland. Top, September 1987 (*Tim Loseby*); centre, 30th September 1990 (*David Tipling*); bottom, 16th/17th September 1989 (*Pete Ewer*). Note rusty tone to fore part of supercilium (centre and bottom); heavily streaked upperparts (including back and rump, especially visible on bottom portrait), with black extending to tips of feathers; and 'classic' tertial patterns; top and centre birds both comparatively poorly marked





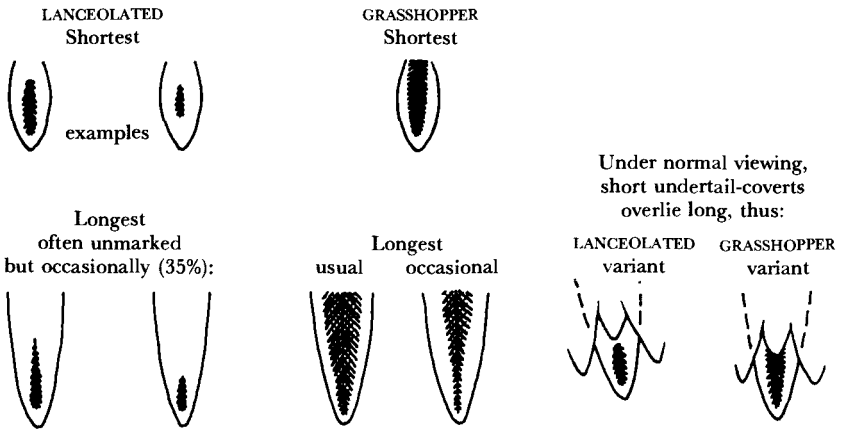


Fig. 2. Undertail-covert patterns of Lanceolated Warbler *Locustella lanceolata* and Grasshopper Warbler *L. naevia*

Voice

The call is normally described as ‘chirr-chirr’ (e.g. Dementiev & Gladkov 1954), but, judging from vagrants on Fair Isle, the species may be mainly silent on migration. At least some of the many Lanceolated Warblers wintering in Thailand, however, call frequently (Dr J. T. R. Sharrock *in litt.* and I. S. Robertson *in litt.*), noted as ‘a diagnostic, explosive “rink-tink-tink”’ by Lekagil & Round (1991).

The song is a long reel, ‘tinny, rhythmic and frail compared with Grasshopper Warbler’s; it has a hesitant character, whereas Grasshopper’s has an assertive, confident delivery’ (A. R. Dean *in litt.*). It has been captured on tape by Mild (1987). Song may not assist with identification of autumn vagrants, but it did lead to the discovery of at least one recent summer individual in Finland (Heikki Karhu *in litt.*).

Habitat and behaviour

Vagrant Lanceolated Warblers on Fair Isle have demonstrated that, on passage, this species can occur in any habitat. Damp places, particularly muddy ditches and boggy grassland, are favoured sites, but drier habitats such as gardens have also played host to it; the essential ingredient appears to be cover, whether it be an overgrown ditch, the engine of a disused road-roller or a cluster of milk pails. Various types of damp grassland and tussocky thickets are also favoured breeding (Dementiev & Gladkov 1954) and wintering (King *et al.* 1975) habitats.

All *Locustella* warblers have a reputation for skulking, but none more spectacularly than Lanceolated. Fair Isle vagrants habitually burrow, mouse-like, into tussocks of grass and other dense vegetation until lost to

19, 20 & 21. Lanceolated Warblers *Locustella lanceolata*, Fair Isle, Shetland. Top, 16th/17th September 1989 (*Pete Ewer*); centre, 23rd September 1990 (*Phil Palmer*); bottom, 30th September 1990 (*Alan Roberts*). Top and centre both show ‘classic’, well-marked individuals; bottom, comparatively poorly marked individual, especially in regard to streaking on upperparts and broad fringes to tertials, which, nevertheless, are still clear and exhibit considerable contrast with matt-black centres

The inclusion of plates 16-21 in colour has been subsidised by a donation from Carl Zeiss—Germany.

22. Lanceolated Warbler *Locustella lanceolata*, Fair Isle, Shetland, September 1982 (Andrew Moon). Note typical pectoral gorget



view, only to emerge at some other point a few seconds, or even minutes, later. The species is secretive, but not shy. Most Lanceolated Warblers pay scant attention to human beings, prompting accounts of standard-lens photographs and individuals running over footwear (e.g. *Brit. Birds* 84: plate 269). This is apparently also the case in the species' winter quarters (Dr J. T. R. Sharrock *in litt.*). If one settles in a more open habitat, such as a recently cleared ditch, it can often be in view more or less continuously for long periods; locomotion in these circumstances is normally a fairly deliberate and slow stalking gait with frequent changes of direction, interspersed with short, rather rapid runs with horizontal carriage. Individuals foraging along walls or ditch banks occasionally cock their tail in a manner reminiscent more of some *Sylvia* warblers than of *Locustella*. Lanceolated Warblers will fly, but often not until they are virtually trodden on; their flight then, though fast, is low and appears weak, probably owing to their short, rounded wings and relatively short (for a *Locustella*) tail.

Discussion

'Lanceolated Warbler is a tiny, heavily streaked *Locustella* with a string of streaks across the throat and/or upper breast forming an obvious gorget.' This statement is true, but with qualifications. Lanceolated Warblers are extremely variable. No two Fair Isle individuals in the last ten years, for instance, have been identical in every aspect of plumage and/or size. There is a small overlap in size between Lanceolated and Grasshopper Warblers; Lanceolated tends to have a shorter primary projection, but, again, there is overlap. Considerable individual variation exists in the extent of the gorget of streaks, with an equally large variation in the extent of flank streaking. In addition, the ground colour of the upperparts is influenced by the colour of individual feather fringes.

A gorget of spots or streaks and heavy flank streaking are often quoted as major characters of the species. We assessed variations in the amount

and intensity of underpart streaking by examining the skin collection at the British Museum (Natural History), Tring (see tables 1 & 2). This suggested that throat streaking is indeed a character of the species, though its extent is extremely variable: from heavy and extensive streaking on entire chin, throat and breast to a single line of streaks across the throat or upper breast. Flank streaking was not universal, though only 7% of skins had completely unstreaked flanks. Some, however, were extensively marked, with heavy lanceolate streaks on the rear flanks extending onto the lower belly or vent area. Two were streaked 'like a pipit *Anthus*' on the entire underparts, except for a narrow central strip of belly. Gorget and flank streaking ranged in colour from mid-brown to brownish-black.

There was no correlation between the intensity of the gorget and the amount of streaking on the flanks. For instance, the individual with the most heavily marked and extensive gorget (on chin, throat and entire breast) had just three or four very poorly demarcated, light flank streaks, and two with heavily marked gorgets had no obvious flank streaks.

So, bearing this in mind, what are the potential confusion species?

Table 1. Intensity of flank streaking on 98 skins of Lanceolated Warbler *Locustella lanceolata* in British Museum (Natural History), Tring

Intensity	Fore flanks	Rear flanks
No streaking	15	5
A few streaks	54	34
Moderate streaking	24	44
Heavy streaking	5	15

Table 2. Amount and intensity of underpart streaking on 98 skins of Lanceolated Warbler *Locustella lanceolata* in British Museum (Natural History), Tring

Intensity	Gorget	Flanks
Heavy	24	31
Medium	49	36
Light	25	24
None	0	7

Unlikely candidate species and Pallas's Grasshopper Warbler

We are assuming a level of competence among *British Birds* readers above that of mistaking a small pipit or waterthrush *Seiurus* for Lanceolated Warbler, and make no further reference to those species other than to warn that such simplistic errors (at least in the case of skulking pipits) have been made. Similarly, Fan-tailed Warbler *Cisticola juncidis* should be relatively easily separated by, among other features, its unstreaked underparts, rufous rump, and short, white-tipped tail.

Among the *Locustella* warblers, size and absence or near absence of streaking quickly rule out Gray's Grasshopper *L. fasciolata*, Savi's *L. luscinioides* and River Warblers *L. fluviatilis*. Pallas's Grasshopper Warbler shares a number of characters with Lanceolated, including very heavy and dark upperpart streaking and a tendency (on Fair Isle, at least) to run along ditches and to go through, rather than around, clumps of

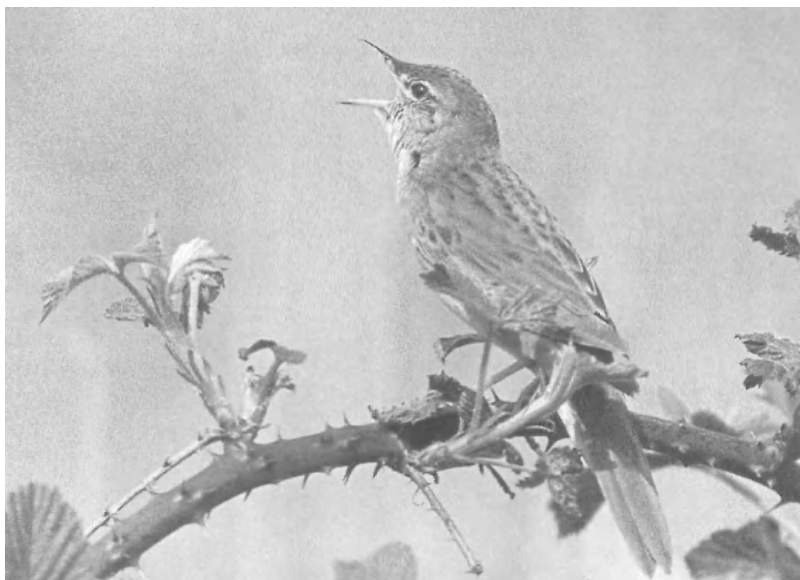


23. Grasshopper Warbler *Locustella naevia* singing, Netherlands, April 1973 (P. Munsterman).
Note tertials and shape of dark centres to feathers of upperparts

vegetation; young (the species apparently migrates in juvenile plumage: Alström 1989) can also show a marked gorget of throat spots and heavy flank streaking. Pallas's Grasshopper is, however, noticeably larger and, even when judgment of size is difficult, it appears markedly sturdy, particularly with respect to legs and bill. Its rusty rump and tail-tip pattern are diagnostic, but the latter can be difficult to see in the field. Most Pallas's Grasshoppers, however, show obvious pale, usually white, tips to the innermost tertials (Riddiford & Harvey in prep.), and this feature can be more readily seen than the tail-tip pattern. Tail-tip pattern is never shared with Lanceolated, nor does the latter ever show such markedly pale tips to the tertials. We believe that Pallas's Grasshopper Warbler could not be misidentified as Lanceolated or vice versa provided care is taken to observe the above features.

Grasshopper Warbler

The greatest confusion candidate is Grasshopper Warbler. Most Grasshopper Warblers are larger than most Lanceolated, but there is a small overlap in measurements sufficient even to make in-the-hand identification less straightforward in a few cases (of 22 Lanceolated Warblers trapped on Fair Isle, three overlapped in wing length by 0.2 mm with the smallest Grasshopper Warbler trapped there). In the field, the problem is compounded by the difficulty of judging size, particularly as *Locustella* warblers are rarely seen alongside other birds. On Fair Isle, unfamiliarity



24. Grasshopper Warbler *Locustella naevia* singing, Norfolk, May 1979 (Kevin Carlson). Note patterns on tertials and upperparts

with either species away from thick cover has also led to errors in size judgment. The tail of Lanceolated Warbler, in proportion to its body, appears shorter than that of Grasshopper; this is most noticeable in flight, but also on the ground when the larger Grasshopper Warbler tail often flaps up and down or gets caught in the wind.

Differences in plumage between Lanceolated and all races of Grasshopper Warbler include general tone of upperparts, feather patterns of upperparts and tertials, tail length, amount and position of flank streaking, shape of throat/upper-breast streaks, coloration of underwing, and undertail-coverts pattern.

Differences in upperpart-feather patterning are sufficient to separate even the most heavily marked Grasshopper Warbler from Lanceolated. There is, however, one caveat: a few Grasshopper skins (all autumn adults of the nominate race) had some upperpart feathers with the pale fringing virtually worn away, and completely so at the tips. All Grasshopper Warblers are likely to exhibit the winter moult regime of the nominate race (Williamson 1960), so individuals of the eastern race *straminea* (see below) may also have worn upperpart-feather tips in autumn and consequently appear more streaked than spotted. This is not so great a pitfall as may first seem. The inner two (and most visible) tertials are the darkest part of the upperparts on Lanceolated (even in fresh plumage Grasshopper's tertials look browner and no darker than upperpart spots). Grasshopper Warblers in worn plumage also have very faded tertials, appearing mid-brown to pale-brown, and contrastingly paler than the dark mantle pigments. Worn Lanceolated Warblers still show relatively dark



25. Grasshopper Warbler *Locustella naevia* singing, Cornwall, June 1972 (*J. B. & S. Bottomley*).
Note slight gorget, but also pattern on undertail-coverts

tertials, which remain as dark as or darker than the dark mantle pigments. In all plumage conditions, the tertial fringe of Grasshopper merges with its duller feather centre (fig. 3), thus giving the tertials a less neat and less contrasted appearance. We consider that the tertial pattern is one of the most consistent and reliable differences between the two species. Nevertheless, assessment of upperpart-feather patterns should always be accompanied by careful observation of plumage condition. Autumn vagrants in Europe will probably not be a problem in this respect: those we have seen on Fair Isle have all been in fresh plumage, and, so far, all 22 Lanceolated Warblers trapped on Fair Isle have been fresh-plumaged first-years.

The amount and position of breast/flank streaking is a useful supporting identification character. Both species can have quite strong streaking on the rear flanks. On many Lanceolated, the gorget of streaks is

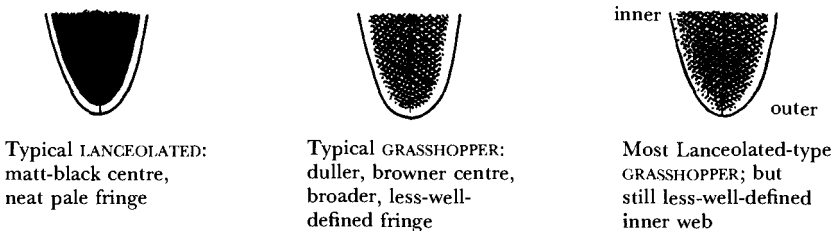


Fig. 3. Inner-tertial and middle-tertial patterns of Lanceolated Warbler *Locustella lanceolata* and Grasshopper Warbler *L. naevia*

complete to the sides of the breast; Grasshopper Warblers with 'gorget' spots usually have them confined to the central part of the throat/upper breast. Thus, there is a tendency for the breast-sides, and frequently also the fore flanks, to be streaked on Lanceolated but not on Grasshopper. This is not, however, an invariable character, and should be used only in conjunction with others. There is usually no problem, as the gorget streaks are markedly longer than they are wide on Lanceolated, whereas on Grasshopper any gorget markings are in the shape of round or slightly elongated spots. This character, however, needs to be checked very carefully, as individual feather spots on Grasshopper can merge to appear as one larger streak.

Underwing coloration—pale rusty-brown on Lanceolated and pale olivaceous-buff or pale buff on Grasshopper (Svensson 1984)—is of no use as a field character.

Heavy undertail-covert streaking, including on the longest coverts, has been suggested as a character of Grasshopper Warbler (Alström 1989). Some Lanceolated, however, including individuals trapped on Fair Isle, are also strongly streaked on all undertail-coverts, although the streaks do not extend to the base of the feather and are a different shape (fig. 2). In field conditions, however, the undertail-covert markings can look similar on the two species. A difference already well documented is Lanceolated's long whitish tips to the longest buffish-brown to rusty-brown undertail-coverts (Svensson 1984), a pattern not shown by any Grasshopper Warblers; the value of this feature in field identification, however, is not very high, at least in situations where the bird chooses to skulk at ground level. The predilection of Fair Isle Lanceolated Warblers for ditches and bogs adds another problem: the longest undertail-coverts frequently get wet and the tips then become matted and take on a dull grey or even grey-brown colour, hardly distinguishable from other undertail-covert colours (recognising the true colour of wet undertail-covert tips can be a problem even in the hand). Clearly unmarked longest undertail-coverts are, however, diagnostic of Lanceolated Warbler.

Observers should also be aware of the racial variations of Grasshopper Warblers. These include further differences from Lanceolated, which are outlined below.

NOMINATE RACE OF GRASSHOPPER WARBLER

Major differences between nominate Grasshopper Warbler and Lanceolated are that on the former the upperparts tend to be subtly rather than heavily marked, comprising a series of rounded spots merging into the background colour rather than the strongly contrasting blackish streaking of Lanceolated; and flank streaking is absent or very thin, not lanceolate, not obvious, and confined to the mid to rear flanks. Nevertheless, 23 of 75 skins (31%) of nominate Grasshopper in the British Museum (Natural History) collection had a gorget.

The upperparts of Lanceolated Warbler appear more heavily streaked because the dark centres are blacker, well demarcated and often broader



26 & 27. Lanceolated Warbler *Locustella lanceolata* (left) and Grasshopper Warbler *L. naevia* (right), Fair Isle, Shetland, September 1984 (Kevin Osborn). Note differences in shape and extent of dark centres to feathers of undertail-coverts (as discussed in text); these differences would be hard to see in the field

than on Grasshopper. On the latter, the feather centres are duller and tend to merge into the fringes, giving a less contrasted appearance; unlike those on most Lanceolated, the dark feather centres do not extend to the tip (apart from on a few, generally worn, individuals).

There is a very important difference in tertial pattern (fig. 3). On Lanceolated, the centres are broader and darker, and the tertial tips are often the palest part of the upperparts. On nominate Grasshopper, the tertial centres are duller and the fringes broader and less well defined (i.e.



28. First-winter Grasshopper Warbler *Locustella naevia*, Fair Isle, Shetland, September 1984 (Kevin Osborn). Note upperparts less heavily marked than those of Lanceolated Warbler *L. lanceolata*, with dark feather centres not extending to tips of feathers

seeming to merge with the darker centres); even the 'best-marked' Grasshopper shows only a poorly defined fringe on the inner web. With regard to tertial appearance, therefore, nominate Grasshopper Warbler does not offer the impression of neatness and contrast shown by Lanceolated.

Rarely, nominate Grasshopper can show fairly extensive breast markings, though these always appear to be spots (each measures 2 mm or less in length and tends to be as broad as it is long), rather than streaks as on Lanceolated. Furthermore, the markings are often heaviest in the centre of the breast, rarely form a pectoral band, and rarely extend down the flanks.

Grasshopper Warblers show dark triangular centres to all undertail-coverts and these extend to the base of the feather. This, however, is very difficult to ascertain under field conditions. The shape of the centre of the longest undertail-coverts is diagnostic, but can be rendered useless as a character owing to overlying shorter undertail-coverts (fig. 2). Grasshopper generally has a less warm wash to the undertail-coverts, but some individuals can show a buff wash.

Other differences include the rump, which on Grasshopper generally shows very poorly defined dark feather centres; and the uppertail-coverts, whose dark centres (on those Grasshoppers showing any at all) are generally poorly defined.

EASTERN RACE OF GRASSHOPPER WARBLER

Most Grasshopper Warblers occurring in Britain are unlikely to be confused with Lanceolated: they are much more subtly marked and lack the heavy and obvious streaking of even the least-marked Lanceolated. Unfortunately, in plumage as in size, there is an area of overlap, and the majority of individuals of the eastern race *straminea* of Grasshopper are more heavily marked and, superficially, closely resemble Lanceolated. We are not aware of any British occurrences of *straminea*, but, as this race breeds from eastern Russia to the western foothills of the Altai and probably winters west of Lanceolated in Asia (Dementiev & Gladkov



29. Grasshopper Warbler *Locustella naevia* singing, Netherlands, April 1989 (Hans Gebuis).
Note pattern on undertail-coverts

1954), we consider it a potential vagrant to Britain. It would certainly be a pitfall for the unwary in any areas where the two species overlap.

Published descriptions of *straminea* are few and brief (e.g. Dementiev & Gladkov 1954; Williamson 1960) and do not specify any significant plumage differences from Lanceolated. We have, therefore, evolved our own, based on skins at the British Museum (Natural History), Tring; this collection contains 141 Grasshopper Warblers (60 of the race *straminea*, 75 of the nominate race and six of the race *mongolica*). No *mongolica* skins showed any throat/breast spotting, and that race is probably not a confusion risk. Of the *straminea* skins, however, 14 (23%) had upper-breast spots forming a marked gorget, 14 (23%) had a moderate number of upper-breast spots, and 21 (35%) had a few upper-breast spots; only 11 (18%) had no spots. Thus, over 80% of *straminea* had at least some dark brown spots on the upper breast, and on three spotting extended to the throat. Four had a few lanceolate, dark-brown flank streaks, but on the rear flanks only. Four (including the only one with both a gorget of spots and rear-flank streaks) had a strong ochre-yellow wash to the underparts; the remainder were whitish-buff below, with some fulvous-brown wash, particularly on the flanks. Grasshopper Warbler of the race *straminea* is larger than Lanceolated (four skins were markedly so), but is clearly a major potential source of confusion.

Although some Grasshopper Warblers have gorgets of spots, and in the case of *straminea* more heavily marked upperparts, there were consistent differences from Lanceolated. On *straminea*, the upperparts, although

strongly marked, did not appear so heavily streaked; and the tertials were not so dark-centred (thus less prominent than on Lanceolated) and had marginally broader pale edgings. In addition, the tertial fringes merged into the duller centres and were not so clear and contrasting as on Lanceolated, though slightly better defined than on nominate Grasshopper Warbler. On *straminea*, the dark centres to all upperpart feathers were more rounded in shape, owing to the broad pale fringes which ran broadly around onto the tip; on Lanceolated, each feather of the crown and mantle had a broad blackish stripe continuing broadly to the tip, while the generally narrower pale fringes were in most cases interrupted by the streak and so did not run onto the tip (and on other feathers continued only as a very narrow line). On *straminea*, the fringing was in fact broadest at the tip (fig. 1); this is the key upperpart difference that determines the more subtle dark markings and scalloped or scaly appearance of Grasshopper (of all races) and the more heavily streaked appearance of Lanceolated.

There was a consistent difference, too, in underpart markings. On *straminea*, these were rounded or 'teardrop' spots about 2 mm long \times 1 mm wide. Lanceolated had streaks rather than spots: these varied enormously in strength and number, but individual streaks were always at least three times as long as they were broad, broadening slightly towards the tip and thus appearing as straight or lanceolate marks; their visual strength depended on colour (ranging from light brown to blackish) and breadth, broader streaks tending to be the darkest in colour.

Table 3. Main characters differentiating Lanceolated Warbler *Locustella lanceolata* and Grasshopper Warbler *L. naevia*

Feature	Lanceolated	Grasshopper
Crown, nape & mantle	Darker, broader, clearly defined centres, often reaching tip of feather	Duller, browner centres, merging into less well-defined fringes; centres rarely reach tip of feather
Rump	Often shows obvious dark centres to feathers	Generally poorly defined feather centres
Tertials	Black centres, with well-defined narrow pale fringes occasionally becoming whitish at tips	Duller, browner, less clearly defined centres merging into broader pale fringes
Breast	Usually with gorget of streaks, these extending to fore flanks	Often shows a few spots in centre of breast, these rarely forming a gorget
Flanks	Streaks often extending along flanks	Rarely shows flank streaking
Undertail-coverts	Washed ginger; longest often unmarked, or with dark lanceolate centres extending only one-third towards base	Rarely washed ginger; all feathers with dark triangular-shaped centres extending to base

Summary

Careful observation of a series of characters, in particular upperpart plumage tone, feather patterns of upperparts and tertials, tail length, amount and position of flank streaking, and shape of throat/upper-breast streaks should determine whether an individual is a Lanceolated Warbler or a heavily marked (and probably eastern) Grasshopper Warbler. Of these, the upperparts pattern is the most important, with the tertial pattern probably the most reliable of all features. Table 3 summarises the differences between the two species.

Concluding remarks

The Lanceolated Warbler is still a very rare bird in Britain, but it is remarkably regular on Fair Isle, where one to three have occurred almost annually in the last 20 years. The uncanny ability of a Fair Isle Lanceolated to disappear behind, or even into, the smallest tuft of grass gives a clear indication of why the species goes almost unrecorded elsewhere, and the paucity of mainland records is undoubtedly due more to its covert behaviour than to any lack of ability on the part of observers to identify it. There are, however, potential confusion species, so identification requires attention to plumage details—and, away from Fair Isle, it may also require more than a modicum of good luck.

Acknowledgments

We are extremely grateful to the British Museum (Natural History), Tring, and its staff, particularly Peter Colston, for access to skins; to J. B. & S. Bottomley, Dr Kevin Carlson, Pete Ewer, Hans Gebuis, Tim Loseby, Andrew Moon, P. Munsterman, Kevin Osborn, Phil Palmer, Alan Roberts and David Tipling for provision of photographic material; to the members of the Identification Notes Panel for their helpful comments; and to Robin Prytherch for redrawing figs. 1-3.

References

- ALSTRÖM, P. 1989. Bestämning av träsksångare *Locustella lanceolata*. *Vår Fågelvärld* 48: 335-346 (with English summary).
- DEMENTIEV, G. P., & GLADKOV, N. A. (eds.) 1954. *Birds of the Soviet Union*. vol. 6. Israel Program for Scientific Translation, Jerusalem.
- FLINT, V. E., BOEHME, R. L., KOSTIN, Y. V., & KUZNETSOV, A. A. 1968 (1984). *A Field Guide to the Birds of the USSR*. Princeton, New Jersey.
- KING, B., WOODCOCK, M., & DICKINSON, E. C. 1975. *A Field Guide to the Birds of South-East Asia*. London.
- LEKAGUL, B., & ROUND, P. D. 1991. *A Guide to the Birds of Thailand*. Bangkok.
- MILD, K. 1987. *Soviet Bird Songs*. Stockholm.
- SVENSSON, L. 1984. *Identification Guide to European Passerines*. Third edn. Stockholm & Tring.
- WILLIAMSON, K. 1960. *Identification for Ringers, I. The Genera Cettia, Locustella, Acrocephalus and Hippolais*. BTO Guide no. 7. Oxford.

*Nick Riddiford and Paul V. Harvey, Fair Isle Bird Observatory, Fair Isle,
Shetland ZE2 9JU*