

Field-identification of Hippolais warblers

By D. I M. Wallace

INTRODUCTION

THE GENUS HIPPOLAIS is a small one of only six species. Two of these, the Icterine Warbler *H. icterina* and the Melodious Warbler *H. polyglotta*, are now proven annual vagrants to Great Britain and Ireland; another two, the Olivaceous Warbler *H. pallida* and the Booted Warbler *H. caligata*, occur here as rare stragglers; and the final pair, the Olive-tree Warbler *H. olivetorum* and Upcher's Warbler *H. languida*, might conceivably reach us in the future. All except the last breed in Europe, though the Booted Warbler does so no further west than Russia.

For many years the members of this genus have been labelled difficult to identify, in much the same way as other groups where plumage pattern alone is not always sufficient for certain diagnosis. Williamson (1960) included all the species and races in the first of his systematic guides to the warblers, but the detailed information he gave was primarily intended to aid ringers with birds in the hand and, although some general comments on the genus (at times dangerously misleading if applied to individual species) were made by Alexander (1955), no descriptive treatment so far published is adequate for accuracy in field identification.

I do not presume to be able to meet this need fully, but I have watched all six species on migration in Europe or the Near East (Jordan) and have more thoroughly studied three of them in both their European breeding-habitats and their African winter-quarters. In addition, I have discussed *Hippolais* identification with many field ornithologists and have investigated all the records published in this journal and several observatory reports over the last ten years. This paper is therefore intended to outline the nature of the difficulties and to simplify the whole problem as far as possible. However, it must be emphasised that, when faced with a *Hippolais*, even the experienced observer has got a most exacting task on his hands. Characters must be checked and re-checked at every obtainable angle. An accurate record of structure should form the basis of any specific identification, particularly of a solitary extra-limital migrant. To get such a record usually requires previous knowledge of habits and habitat preferences and, if possible, a *stationary observer*: stalking a *Hippolais* is usually a fruitless manoeuvre and the odds definitely favour the person who is sitting on his bottom with a mounted telescope to hand!

The sequence of treatment in this paper is unusual since character and

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structure are described before plumage, habits and voice. This is intentional: one cannot satisfactorily identify *Hippolais* in the field without careful and patient observation of the former. I have also found it shorter and simpler to use the scientific names throughout in place of the vernacular.

GENERAL CHARACTER OF THE GENUS

Just as the members of the genera *Sylvia* and *Phylloscopus* exhibit many 'common denominators' in character and actions, so do the species of *Hippolais*. With one exception, *caligata*, they are quite large, rather heavily built warblers possessing neither the grace of *Phylloscopus* nor the irascible alertness of *Sylvia* and borrowing only some of the actions of *Acrocephalus*. In all species the body often appears plump (sometimes even 'pear-shaped' with a belly-down appearance) and has a rather flat back and tail line extended by a prominent head and, excepting again *caligata*, a strong and often long bill. When perched they often appear to carry more bulk forward of the legs than aft, looking sometimes short-tailed in the field. Both completely upright and horizontal postures are adopted by moving and perched birds and there is often a hint of clumsiness or carelessness in their acrobatic progress through cover. In particular, they show scant regard for tamarisk foliage (a frequent migrant habitat), sometimes crashing through the green fronds in a way that I have seen no other kind of warbler do.

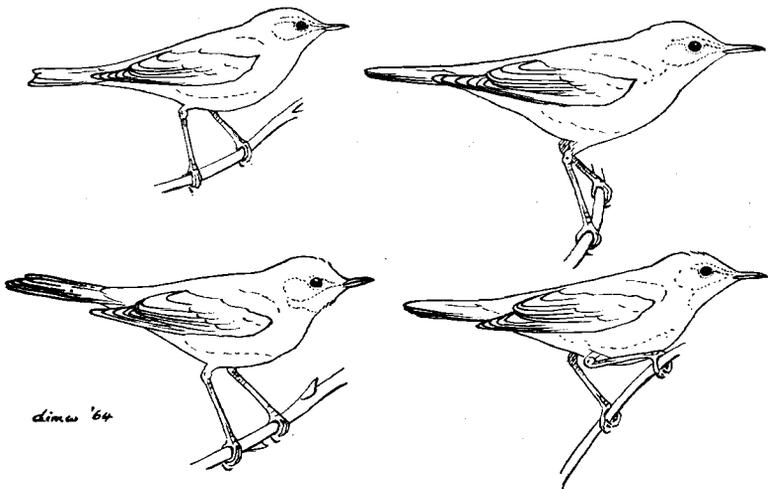


FIG. 1. General character and structure of four warbler genera typified by (top left) Willow Warbler *Phylloscopus trochilus*, (bottom left) Whitethroat *Sylvia communis*, (top right) Icterine Warbler *Hippolais icterina* and (bottom right) Reed Warbler *Acrocephalus scirpaceus*

Anatomically the genus is very closely related to *Acrocephalus*, of which the species most closely resembling a *Hippolais* in shape is the Marsh Warbler *A. palustris*. While no real confusion is likely under good conditions, mistakes are possible in even generic identifications in poor light and at longer ranges. Typically, however, the *Hippolais* possess generally greener or greyer plumage and, more important, relatively longer wings and tails, the latter being square-ended or just rounded at the corners. Another difference surprisingly obvious in the field is the short under tail-coverts, amounting almost to an apparent lack and contributing to the distinctive body shape mentioned above.

No general remarks apply on plumage: two species, *icterina* and *polyglotta*, are normally green above and yellow below (a *Hippolais* showing this basic pattern must be one or other of these species) and the other four have various tones of grey or brown above and of dull white below. In certain light conditions the most bewildering changes in colour suffusion occur in all the species that have reached Great Britain and Ireland: for example, compare the field and laboratory descriptions of the *pallida* caught at Portland Bill, Dorset, in August 1956 (*Brit. Birds*, 53: 312-313). All species have relatively unpatterned plumage apart from short supercilia, eye-rings and paler edges to the inner flight feathers. Even these characters vary in their distinctiveness with age and season.

The colours of soft parts within the genus and within individual species vary too, although a bluish tinge to the tarsus is common to several. The bills of all species have characteristically (when unstained) dark upper and light lower mandibles: their breadth is one of the basic systematic keys to the genus but it takes a deal of seeing in the field.

This seems the right point to mention the pitfall of a Garden Warbler *Sylvia borin* which gives only a poor or interrupted view of itself. This is the trick species where *Hippolais* identifications are concerned, particularly as it likewise shows considerable variation in plumage tone (young birds in autumn can even have a greenish wash on the upper-parts). Since body and tail shape and leg colour can be identical to those of some *Hippolais*, the elimination of the Garden Warbler possibility must be based on this species' lack of any well-defined supercilium and its combination of a short and comparatively deep bill with a characteristically chunky head (see Williamson 1964 for an excellent photograph illustrating this point).

THE APPROACH TO SPECIFIC IDENTIFICATION

Any experienced observer should be able to identify a *Hippolais* generically as such without much difficulty. His troubles begin when

he proceeds to determining the species and at this stage it is imperative to keep in mind the following points:

- (i) a detailed plumage description, though essential, can be insufficient on its own for certain diagnosis in many cases;
- (ii) careful observation of size, shape and structure (above all, of length and shape of wings and tail, both in flight and when perched) is crucial;
- (iii) careful observation of the soft parts is also extremely important; and
- (iv) notes on actions, particularly tail-flicking, and on any calls heard should be as detailed as possible.

The importance of obtaining every possible detail of a *Hippolais* cannot be over-stressed.

SPECIFIC STRUCTURE AND CHARACTER

As differences in build, wing length, wing-to-tail ratio and bill length are all important in distinguishing the species of *Hippolais*, this section contains full notes on these characters.

Bill

The *Hippolais* bill's characteristically broad base is not easily seen in the field, but its length and apparent size can nevertheless be of value in establishing the identity of some species. *Olivetorum* has the longest and deepest bill, but this is closely approached in length by those of *languida* and of the west European race of *pallida* (*opaca*). In *olivetorum* its size appears almost disproportionate, often prompting description as 'long and dagger-shaped' and allowing comparison with the bill of a Great Reed Warbler *Acrocephalus arundinaceus*; at times, however, particularly at angles of less than 90°, the length of the bill becomes obscured by the accompanying bulk of the head and body (once when I had one head-on at close range, the bill even took on a shrike-like appearance). In *pallida opaca* the already prominent length of the bill is further exaggerated by the species' normally flat forehead and crown to such an extent that the forepart of the head may almost be compared with that of a Starling *Sturnus vulgaris*. In *languida* the length of the bill is still obvious but because this species typically has a more rounded crown it does not look as long as that of *pallida* and it similarly lacks the remarkable proportions of *olivetorum*.

The observed ranges (by museum examination) of bill length in the remaining three species and in the eastern race of *pallida* (*elaieca*) are rather similar, but in general they show a diminishing length and slighter appearance from *icterina* and *pallida elaeica* (whose bills can still look quite long in the field) through *polyglotta* to *caligata*. The typical race of *caligata* has, for a *Hippolais*, an abnormally short bill which can be compared in length to those of some *Phylloscopus*. Con-

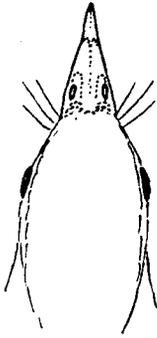


FIG. 2. Bill of Icterine Warbler *Hippolais icterina*, showing the characteristic broad base common to all other *Hippolais* (drawn life-size from a bird in the hand in September 1960)

versely, the breadth of the base of the bill is often more obvious in the field in *caligata* than it is in any of the other species.

Full details of bill lengths (both observed and theoretical ranges) have been given by Williamson (1960, table II).

Head shape

This character, relied on by some observers more than by others, suffers from individual exceptions to the specific rules. However, it has the published support of Hollom (1960) in the case of *icterina*, *polyglotta* and *pallida* and it can play a useful part in some comparisons and identifications. The species with the least angled forehead, and correspondingly the flattest crown, is *pallida*: the peak of its crown, if visible at all, appears well behind the eye. *Icterina* usually exhibits a head shape similar to *pallida*, though the crown peak is more marked and normally just behind the eye. *Polyglotta*, on the other hand, has a completely different head shape, the combination of a distinctly angled forehead and a comparatively high and evenly rounded crown; furthermore, the shorter bill of this species does not extend the head noticeably forward as in *pallida* and some *icterina*. At this point, however, I must note that I have seen the crown shape reversed in all three species so far described, particularly when individuals have been in song or displaying, and that there are published descriptions of 'permanent' exceptions (for example, see *Scot. Birds*, 1: 192 and *Brit. Birds*, 53: 311).

In the cases of *olivetorum*, *languida* and *caligata*, the lack of comparative observations prevents any definite conclusions about head shape. However, it is probably true that *olivetorum* normally exhibits a less angled forehead and a flatter crown (only slightly peaked behind the eye) than *languida* which has a fairly long but rather steep forehead and evenly domed crown, the latter sometimes as prominent as in *polyglotta*. In *caligata* the 'weight' of the head is not as obvious as in these species: its shape is quite rounded with the peak only just behind the eye. Again I have seen exceptions to these rules in the cases of

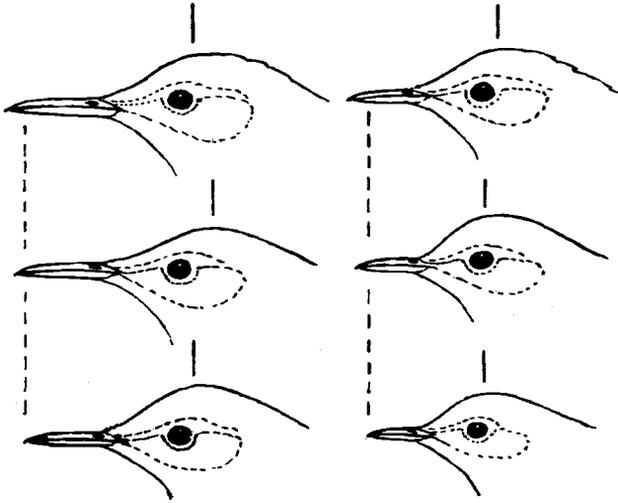


FIG. 3. Bill proportions and normal head shapes of *Hippolais* with pointer indicating the normal position of the crown peak in each case: (left in descending order) Olive-tree Warbler *H. olivetorum*, Olivaceous Warbler *H. pallida* and Upcher's Warbler *H. languida*; and (right in descending order) Icterine Warbler *H. icterina*, Melodious Warbler *H. polyglotta* and Booted Warbler *H. caligata*

olivetorum and *languida*. Conversely, the only change in head shape recorded from thirty-five *caligata* in Jordan in 1963 was an increase in the peak of the crown caused by feather raising.

Wing length and shape

The length and formula of a wing are responsible for its shape in flight and *when folded*. Wing shape constitutes the most important field character of *Hippolais*, both in the hand and in the field.

Taking wing length as it is generally understood—as the distance from the carpal joint to the tip of the longest primary—the species with the longest wings is *olivetorum*. A few *icterina* have wings as long, but most are slightly shorter as are those of *languida*. In all these three species the tips of the folded primaries either fully reach or fall beyond the tips of the upper tail-coverts and the slim point formed by the extension of the bunched primaries beyond the secondaries represents *about a third* of the total visible wing length. It goes almost without saying that the most patient observation is needed to gauge this character accurately, particularly in the case of *languida*, for this species has a relatively long tail, the prominence of which makes its wings appear shorter than they are. After these long-winged species, the two races of *pallida* bridge the gap between them and the two really

short-winged species, *polyglotta* and *caligata*. In these three the tips of the folded primaries either fall short of or only just reach the tips of the upper tail-coverts and, more important, the slim point formed by the extension of the bunched primaries beyond the secondaries represents only *about a quarter* (in certain postures even less) of the total visible wing length. If the tertials can be clearly seen, then in *pallida*, *polyglotta* and *caligata* the extension of the primaries beyond the folded secondaries will appear much less than the visible length of the tertials, while in the three long-winged species the two feather groups are closely similar in length.

Full details of wing measurements (both observed and theoretical ranges) have been given by Williamson (1960, table I).

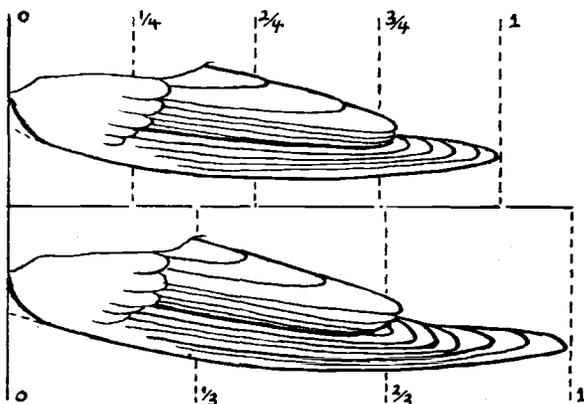


FIG. 4. Wing shape in short-winged and long-winged *Hippolais* typified by (upper) Melodious Warbler *H. polyglotta* and (lower) Icterine Warbler *H. icterina*: note particularly how the slim point formed by the bunched primaries represents only about a quarter of the length of the Melodious wing but almost a third of the other (drawn life-size from photographs and sketches)

Turning now to wing formula, a careful comparison of published measurements and skin examinations shows that in the genus *Hippolais* wing formula (and therefore shape) varies from pointed to rounded and that the variation is clearly linked with a decline in size, particularly wing length. Thus the most pointed wings are those of *olivetorum* and *icterina*, almost identical in formula and therefore in outline, and that of *languida*, slightly shorter in length and a little more rounded in primary grouping. All three species show a wing shape in flight that recalls the Spotted Flycatcher *Muscicapa striata* or the Wheatear *Oenanthe oenanthe*. Both *polyglotta* and *pallida* possess much rounder (and shorter) wings than *icterina* and in the smallest species, *caligata*, the end of the wing is almost fan-shaped with the longest four primaries having tips no

further than 2.5 mm. apart. In good conditions and at close ranges the more rounded wing shapes of these three species can be detected, particularly that of *caligata*. I have found that the best point at which to look for this character is when the bird is either just taking flight or about to pitch, because the wings are usually then fully extended and their shape relatively undistorted.

Full details of wing formulae have been given by Williamson (1960, pp. 41-49).

Finally, since it is possible to detect the wing formula of a bird by the precise observation of the spacing between the folded primary tips, it should be noted that in the exceptional circumstance of a *Hippolais* being practically stationary at close range, the species with long and pointed wings will show an increasingly wider space between the inner and outer tips whereas in those with short and rounder wings the spacing will be almost equal. The physical problem of actually seeing this spacing is very considerable but in *icterina* and *polyglotta* the primaries are finely margined with yellow, so that the tips are fairly distinct in fresh plumage. Photographs chosen for other reasons but in fact illustrating this have already been published in this journal (*Brit. Birds*, 47: plate 21; and 49: plate 18) and the point is further emphasised by the two pictures on plate 43.

Body shape and size

As with head shape, notes on this can be helpful but again there is the constant danger of individual exception to the specific rules. *Olive-tororum* is the largest *Hippolais*, its body often having a distinctive pear shape (see Nisbet and Smout 1957, p. 203): at all times it is a bulky warbler clearly exceeding *languida* in size and often recalling one of the larger *Acrocephalus*. *Languida* shows a rather different character: its long, frequently flicked tail and high crown tend to give it the appearance of a large *Sylvia* even though the shape of its body is in fact typical of the genus. It is probably the second largest *Hippolais*, but I have not been able to make any direct comparison in the field with the more evenly proportioned *icterina* and *pallida*. These two species can look remarkably similar in shape and size, particularly at longer ranges when the wing lengths are not apparent, but *pallida* usually shows greater depth to the body. *Icterina* is characteristically the slimmest *Hippolais*, its difference in size and shape from the slightly smaller and usually plumper *polyglotta* being obvious when the two species are seen together. *Caligata* possesses the typical body shape of the genus but looks and is much smaller than any of the other species in the field, distinctly so alongside *icterina* and *pallida*. In body bulk the *caligata* I saw in Jordan in 1963 were close to Lesser Whitethroats *Sylvia curruca* though of course shorter-tailed. With its less prominent head

this species is the most compact looking *Hippolais*, even recalling Chiffchaff *Phylloscopus collybita* when at rest.

Tail length and shape

The species with the longest tail is *olivetorum* and that with the second longest *languida*. In the field, however, *languida* looks to have a distinctly longer tail than any other *Hippolais*, an impression heightened by the fact that it flicks it frequently. Thus museum examination alone would not reveal the fact that the long tail of *olivetorum* is played down in the field by the general bulk of the rest of the bird. In the other four species the order of decreasing tail length is *pallida*, *icterina*, *caligata (rama)*, *polyglotta* and, finally, *caligata (caligata)*. In the field I have not been able to detect any differences in tail length between *pallida* and *icterina*, but I did note a slight disparity between *pallida* and *polyglotta* on the only occasion that I have had individuals of the two species at close range and within a few feet of each other. The *caligata* seen in Jordan in 1963 certainly looked shorter-tailed than accompanying *pallida* and *icterina*.

Full details of tail measurements (both observed and theoretical ranges) have been given by Williamson (1960, table I).

A square or only slightly rounded tail is found in *icterina*, *polyglotta* and *caligata*. In *languida* the corners are rather more rounded and in *pallida* and *olivetorum* they are fairly distinctly so. The difference in shape is caused by a reduction in the length of the outer pair or pairs of feathers, easily seen in skins but in my experience slightly visible in the field only in *pallida* and distinct only in *olivetorum*. In all species, however, the tail appears full and gently tapering when closed in contrast particularly to those of *Phylloscopus* and most *Sylvia* which usually broaden from the base and have a slight terminal fork. There is no field evidence that any *Hippolais* shows even the slightest suggestion of a fork or notch in the centre of its tail.

Legs and feet

The legs and feet are rather more prominent in *Hippolais* than in all other warblers except the large *Acrocephalus*, but in only one species, *olivetorum*, is the structure of legs and feet noticeably bulkier than those of the rest of the genus.

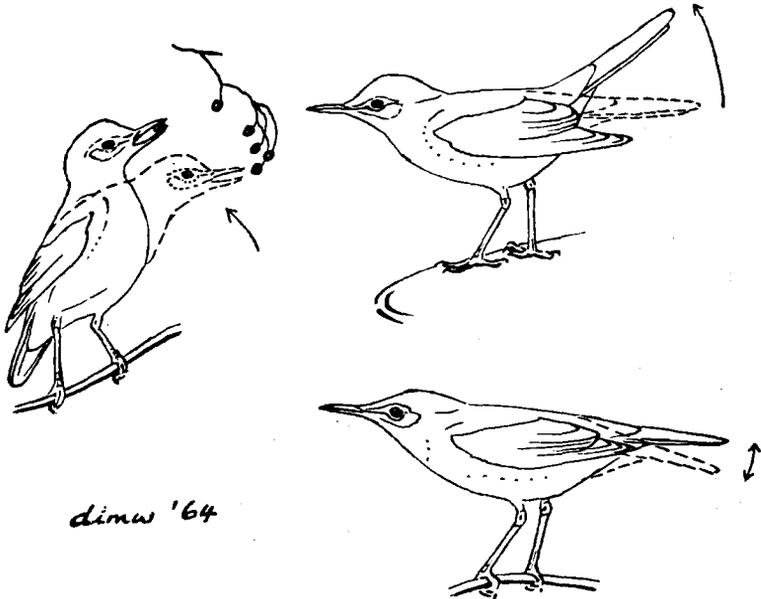
Full details of tarsus measurements have been given by Williamson (1960, table II).

SPECIFIC HABITS AND ACTIONS

I have already mentioned some of the characters which *Hippolais* possesses in contrast to *Phylloscopus* and *Sylvia*. It remains to point to other generic and specific differences in habit and action where these can help in identification.

Feeding action

All six species have a distinct, almost clumsy foraging action as they move through foliage; it is most diagnostic in a characteristic upwards stretch of the neck and tug of the head when picking off fruit berries. Even the smallest species, *caligata*, has this action and a *Hippolais* amongst other warblers may be picked out by it at considerable range.



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FIG. 5. Actions of *Hippolais*: (left) characteristically upright 'tug' of one feeding on berries; (top right) tail-cocking of Upcher's Warbler *H. languida*; and (bottom right) tail-flicking of Olivaceous Warbler *H. pallida*, a habit found in all species

Flight action

All *Hippolais* except *caligata* appear heavy in flight, much in the same way as Garden Warblers or Blackcaps *Sylvia atricapilla* do when seen with the smaller members of their genus. Furthermore, the action of the wings in flight can also assist identification, the specific differences being clearly linked to the respective length and formula of the remiges. *Olivetorum*, *languida* and *icterina* all fly confidently with a characteristically fluid wing beat. Conversely, both *pallida* and *polyglotta* can appear to labour and even flutter at times, particularly when taking off or in low level flight. The flight action of *caligata*, with the most rounded wings, recalls that of *polyglotta* though the periodic impression of difficulty is much less marked. Useful comments by E. M. Nicholson on the flight action of *icterina* and *polyglotta* were quoted in *The*

Handbook and, for the former alone, were repeated more fully by Bannerman (1954).

Tail movement

All six species flick their tails, though in *olivetorum*, *icterina*, *polyglotta* and *caligata* this movement is very shallow and by no means constant. *Pallida* also has only a shallow flick, but moves its tail fairly constantly when feeding. The species with the most prominent tail movement is *languida*. It not only flicks its tail up and down like the others but also slightly opens it at times and regularly cocks it. The latter chat-like action, also referred to by Smith (1959), was one of the characters that marked the two birds I saw in Jordan in 1963: both were constantly moving their tails, the cocking action being up to an angle of at least 45° between the wings.

VOICE

No attempt is made here to describe the songs of the six species, the content of this section being restricted to calls. Even so, the vocabulary of the genus is so poorly documented that I have found it impossible to do more than summarise the types of call and indicate which species are known to utter them. Three types are common to most species. Firstly, short sharp notes (variously described as *tit*, *tic*, *chick*, *click*, *tschick* and *trrk*) are given by at least four species, namely *languida*, *pallida*, *polyglotta* and *caligata*. Secondly, still short but fuller notes like the monosyllables of *Sylvia* (variously described as *teck*, *chek*, *chack* and *tchack*) are uttered by at least three species, namely *icterina*, *pallida* and *polyglotta*. Thirdly, low and often prolonged churring notes have been recorded for the five species other than *olivetorum*. Some differences in specific inflection are on record for these types of calls, but it may well be that they are in fact common to all *Hippolais*. Furthermore, since the vocabulary of other warbler genera includes similar calls, they are of little use in even generic identification.

However, some *Hippolais* do utter notes that can help in specific identifications. A chatter recalling that of the House Sparrow *Passer domesticus* (with individual notes variously described as *yilp*, *chek* and *chuk*) is common only to *pallida* and *polyglotta*, being uttered frequently by the latter. An almost disyllabic *hooet*, recalling that of the Chiffchaff *Phylloscopus collybita*, is said to be given rarely by *icterina* and *polyglotta*, but after nine years I have yet to hear this note.

Calls apparently unique to a particular species are few, but *icterina* is on its own in having a trisyllabic phrase, usually described as *dideroid* or alternatively *ikteroo* (Dr. T. C. Smout *in litt.*) or *deeteroo* (personal observation), though I have never heard a migrant give this call. *Olivetorum* also has a distinct note, a disyllabic *tr-trik* (Nisbet and Smout

1957); this call is not duplicated by any other recorded note, but several other species often utter their monosyllables in twos with equal emphasis. Finally, *languida* has a unique monosyllable described as 'a loud *chuck*' (Smith 1959) and regarded as diagnostic. *Caligata* also has a *chuck* note in its vocabulary, but it is described as subdued and may well be more akin to the *Sylvia*-like calls already mentioned than to the loud monosyllable of *languida*.

PLUMAGE DESCRIPTIONS

In attempting to indicate clearly the plumage differences visible in the field, I have been faced with two main problems. Firstly, the colours exhibited by any *Hippolais* are difficult to describe: strong colours occur in only two species (and then not always) and remarkable changes in colour tone can show on any individual watched in different intensities of light and at different angles. Secondly, plumage does vary between individuals, even in the monotypic species. In order to minimise these difficulties, I decided that the basis of the species descriptions and particularly the choice of colour adjectives must be one of comparison. Therefore, the specific treatment that follows has been taken from a comparative analysis done only after all my own information on each species had been cross-checked against as many descriptions as I could find. My method was to note the number of mentions of particular colours or tones and weight the final descriptions according to the frequency of their occurrence. All the descriptions so analysed were of birds in the field or alive in the hand. In contrast to the earlier sections on structure, I have included information arising from an examination of skins only when field descriptions were wanting. No attempt has been made to cover fully the second part of the first problem (this would have involved much repetition), but I have indicated the most common variations. The additional hazard of pale variants in both *icterina* and *polyglotta*, the most likely example of the second problem to confront a British observer, is further discussed in a later section.

I have made no attempt to describe plumage changes due to excessive featherwear or moult, though a few asides on the subject have been inevitable. The following descriptions are, therefore, of *adults in April and May* and of *immatures in autumn*. Racial differences are in the main omitted (for a fuller treatment of races see Williamson 1960, pp. 41-49) and in contrast to the order of description followed previously (one of decreasing size) I have decided to deal first with the two 'greyish' species, *olivaceorum* and *languida*, next the two 'brownish' species, *pallida* and *caligata*, and finally the two 'green and yellow' species, *icterina* and *polyglotta*.

Olive-tree Warbler *H. olivetorum**Adult in spring*

Plumage: upper-parts generally brownish-grey, often with a rather dusty appearance on mantle; head not strongly patterned, but slightly darker than mantle with a fairly broad buffish-white supercilium (from bill to half-way along ear-coverts), a fairly distinct whitish eye-ring, and dusky lores and ear-coverts; wings darker grey, with greater coverts edged and tipped whitish (forming a slight but broken wing bar), tertials and inner secondaries with dark centres and noticeable buffish-white edges (rarely forming a continuous wing panel, but nevertheless very striking) and primaries dark grey; tail grey, not contrasting with rump but with greyish-white outer feathers (showing as faint pale edges to tail); under-parts generally dusty white, with a greyish wash on sides of neck, chest and flanks (occasionally right across chest, which can also be tinged yellow). Soft parts: upper mandible dark greyish horn, lower mandible yellowish or light horn; legs and feet variable, from greyish-ochre to dull slate (usually showing a blue tinge).

Immature in autumn

Plumage: upper-parts more olive than those of adult, and inner secondary and tertial edges unabraded and therefore more obvious than those of adult at same season.

Upcher's Warbler *H. languida**Adult in spring*

Plumage: upper-parts generally dusky-grey or olivaceous-grey, sometimes with a faint bluish tinge on head and mantle and rump and upper tail-coverts paler grey; head slightly darker than mantle, with a narrow pale greyish-white supercilium (from bill almost to end of ear-coverts) and a distinct whitish eye-ring, further defined by dark lores and ear-coverts; wings grey with greater coverts unmarked, tertials and inner secondaries with dark centres and noticeable whitish edges (forming a fairly conspicuous but dull wing panel) and primaries dark grey; tail dusky-grey and (unlike that of any other *Hippolais*) contrasting noticeably with paler rump, outer feathers whitish forming distinct pale edges to all but tip of tail; under-parts generally dull white with greyish wash on sides of chest and flanks. Soft parts: upper mandible dark greyish-horn, lower mandible yellowish or light horn; legs and feet grey or lead-coloured.

Immature in autumn

Plumage: upper-parts unabraded and therefore less brown than those of worn adult, wing panel more obvious and under-parts cleaner, less heavily suffused than those of adult at same season.

Olivaceous Warbler *H. pallida**Adult in spring*

Plumage: upper-parts generally olivaceous-grey or brown; head very slightly darker than mantle with a dull whitish supercilium (noticeable from bill to eye, but rarely distinct over ear-coverts) and a whitish eye-ring (further defined in some birds by shadowy lores and often more obvious than supercilium); wings mainly dark olivaceous-brown (greater coverts occasionally showing lighter tips), tertials and inner secondaries olive-grey with dark centres but lacking prominent whitish edges (though these show occasionally as a pale shade), primaries dark olive-brown; tail olive-brown (sometimes showing slight contrast with rump, especially when latter is washed with buff) with whitish outer feathers (showing in some lights, but only on very close inspection, as very indistinct pale edges to tail); under-parts generally

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dull-white, with pale buff wash on sides of chest, flanks, vent and under tail-coverts, chin and throat usually white (whole under-parts sometimes faintly suffused yellowish, this tone also extending to 'face' on a few birds). Soft parts: upper mandible dark brownish horn, lower mandible pale straw or light horn (occasionally pinkish); legs and feet variable from brownish-flesh through blue to lead-grey (showing the widest colour range of any species).

Immature in autumn

Plumage: very similar to that of adult, but rump usually showing a more distinct buff wash (and yellowish suffusion on under-parts, if present, less extensive); wing shade more obvious than that of adult in autumn, the individual feathers being unabraded.

For the effect of sunlight on the colour tone of the 'face' and under-parts on a *pallida* caught on Skokholm Island, Pembrokeshire, see *Brit. Birds*, 46: 191.

Booted Warbler *H. caligata*

Adult in spring

Plumage: upper-parts variable, usually brownish-olive (some greyer with a faint greenish wash); head very slightly darker than mantle with a narrow indistinct whitish supercilium (from bill to just behind eye) and a whitish eye-ring contrasting with brownish-olive lores and ear-coverts; wings brownish-olive (not as dark in relation to body plumage as in other species), tertials and inner secondaries as rest and lacking prominent whitish edges (though these show occasionally as a pale shade), primaries olive-brown; tail brownish-olive with whitish outer feathers (showing in some lights but only at close range as thin, faint, pale edges to tail); under-parts generally dull white with light olive-grey or buff wash on sides of chest and flanks.

None of the birds in Jordan in April 1963, showed the pale tips to the tail feathers regarded as 'a useful, but undependable, feature for distinguishing *H. caligata* from other brown [or grey] species of *Hippolais*' by Alexander (1955). Soft parts: upper mandible darkish horn, lower mandible pale yellowish; legs and feet greyish-ochre or brownish-grey.

Immature in autumn

Plumage: upper-parts either greyer (*caligata caligata*) or browner (*caligata rama*) than those of adult at same season, under-parts more heavily washed with dark suffusion.

Icterine Warbler *H. icterina*

Adult in spring

Plumage: upper-parts usually greenish-olive, often brightened by a yellowish wash, but in some brownish-olive or greyish-olive (these colours associated with paler under-parts); head marked by a distinct yellow supercilium (from bill to end of ear-coverts) and a yellowish eye-ring contrasting with greenish-olive lores and ear-coverts; wings greenish-brown (with greater coverts tipped yellowish), tertials and inner secondaries with dark centres and noticeable broad and usually bright yellow edges (forming a conspicuous and continuous wing panel), primaries dark olive-brown (with thin yellowish margins and tips sometimes visible); tail olive-brown (contrasting slightly with paler greener rump and upper tail-coverts), outer feathers with yellowish outer webs (showing as indistinct pale edges to tail); under-parts generally lemon-yellow (but often paler, with white on belly, vent and under tail-coverts, particularly on individuals with brownish or greyish upper-parts) with sides of chest and flanks suffused with olive-grey or buff. Soft parts: upper mandible dark brownish horn, lower mandible yellowish flesh or orange-pink; legs and feet always bluish and usually a rather bright blue-grey (even bluish-black).

Immature in autumn

Plumage: upper-parts less olive, browner or greyer than those of normal adult, some showing a greenish and others a yellowish wash overall; edges of tertials yellowish white (wing panel thus less distinct and more restricted than that of adult in spring but sometimes more so than that of worn adult in autumn); under-parts paler than those of normal adult, usually yellowish-white and rarely showing stronger colour.

Melodious Warbler *H. polyglotta**Adult in spring*

Plumage: upper-parts usually greenish-brown often with a bright olive wash, but in some the suffusion is yellowish or, rarely, greyish (these paler overtones associated with paler under-parts); head marked by a fairly distinct yellow supercilium (from bill to halfway along ear-coverts) and an indistinct yellowish eye-ring contrasting slightly with olive lores and ear-coverts; wings olive-brown (with coverts more greenish, the greater unmarked), tertials and inner secondaries with dark centres but in most individuals lacking prominent yellow edges (and only rarely forming distinct wing panel), primaries dark olive-brown (with light margins and tips sometimes visible); tail dark olive-brown contrasting slightly with rump and upper tail-coverts, outer feathers with whitish outer-webs (showing as indistinct pale edges to tail); under-parts generally rich yellow (but often paler, creamy or whitish on belly, vent and under tail-coverts) with sides of chest and flanks suffused olive or buff. Soft parts: upper mandible dark brownish horn, lower mandible yellowish flesh or orange-pink; legs and feet variable, usually brownish but occasionally even blue-grey (colour range overlapping that of *icterina*).

Immature in autumn

Plumage: upper-parts darker, usually browner (particularly on rump) than those of adult at same season, often with a greenish or grey wash (but in some the suffusion is yellowish or olive); edges of tertials pale yellowish brown (forming faint wing shade only); under-parts generally paler than those of adult, often yellowish-white or creamy overall with only faint touches of yellow on chin and throat.

PLUMAGE VARIATIONS IN INDIVIDUAL SPECIES

It will have been noted from the preceding descriptions that all the species can show some degree of variation, particularly in colour tone. This is true not only for different individuals of the same species and same age but also of adult and immature plumages. Since specific differences in plumage are also very slight, the need for extreme caution in using plumage colours alone for diagnosis cannot be overstressed.

Furthermore, there is a known additional hazard in the case of the two normally 'green and yellow' species, *icterina* and *polyglotta*. The note by Smout (1960) on troublesome pale *icterina* in Denmark in late summer no doubt struck a chord in many field ornithologists' memories at the time and it has stood as a warning to others confronted by a pale *Hippolais*. Dr. Smout has made further observations on *icterina* in Denmark since his original record and I am grateful to him for the following comments taken from a letter written in September 1962. Discussing the plumage variation of *icterina* seen in five consecutive late summer periods (late July to mid-September 1958-62), he wrote: 'Approximately one in seven or eight of the Icterine Warblers watched

at this time of year have no visible yellow tint to their plumage in the field and very few indeed are as brightly coloured as the illustration in the *Field Guide*: the yellowest warblers about in the woods always turn out to be juvenile Willow Warblers *Phylloscopus trochilus*. This dull plumage (with no visible yellow) can occur in both adults and juveniles and would not therefore appear to be a result of abrasion in late summer. Furthermore, I have seen a family in which both parents were dull but the young were more or less yellow.' Pale, dull *icterina* have also been recorded in Britain: of the last three immature birds that I have seen myself, two were more 'grey and white' than 'green and yellow'. Furthermore, all the migrant *icterina* seen by I. J. Ferguson-Lees and myself in Jordan in April 1963 were pale birds having only a faint green wash on their upper-parts and whitish (not golden-yellow) wing panels. Clearly the hazard of a pale variant *icterina* is likely to occur at any season and anywhere within its range.

The same problem is found in *polyglotta*. The first *polyglotta* that I had trouble with was a fully fledged juvenile in southern France in 1955. In sunlight it was basically 'greenish-grey' above and 'greyish-cream' below, all its plumage looked 'very washed out' and in no part of my description does any tone of yellow figure. On the day I was unable to identify this bird and only my notes on leg colour and *voice* enabled me to do so later. This event can be compared to Dr. Smout's original experience with young *icterina*. Again, in May 1960, I went to north-eastern Spain, relieved to think that all the 'green and yellow' *Hippolais* there would be *polyglotta* and so it proved. However, puzzlement over the variability of adult plumage in that species was soon to replace the sense of security created by having the nearest breeding *icterina* well beyond the Pyrenees. *Polyglotta* was common on the Costa Brava and I have notes of five pairs of adults in their breeding territory. Of these ten birds, three had 'washed out' plumage: in two the virtual absence of yellow on the under-parts was paralleled by the lack of any greenish or yellowish wash on the brown upper-parts and on the third, by behaviour a hen, no yellow was visible in the field at all. Like the young bird of 1955, it was 'greenish-brown (looking grey) above and off-white below'. In May 1961 I was again in daily contact with *polyglotta* in southern Spain. Detailed notes were not made of the twenty or so birds seen at close range, but pale variants were seen at three localities. Thus around one in five adult *polyglotta* that I studied closely in Spain in two consecutive Mays possessed virtually no visible tint of yellow on their under-parts and were correspondingly paler or duller above. Of the five migrant *polyglotta* that I have seen in Britain (all in autumn), one was like the young bird of 1955 and another was a 'brown and white' variant, closer in colour to a companion *pallida* than to its second companion, a fairly intensely coloured *icterina*. An almost 'blue grey' *polyglotta* occurred in Ireland

in 1953 (see *Brit. Birds*, 47: 314).

In short, both *icterina* and *polyglotta* can appear to lack any visible yellow in both adult and immature plumages and the green tone in their upper-parts is also frequently suppressed to a point where it is practically invisible in the field. With regard to the other four species, the general dullness of their plumage colours restricts the range of possible variation. Even so, differences in tone and suffusion are apparent, not only between races but also within birds of a single population. The variations that I am aware of have been indicated in the specific treatments.

WING PANELS

In recent years much emphasis has been placed on the 'light patch in the closed wing' or 'mid-wing panel' (here called wing panel) of *icterina* in spring and summer as a useful character to distinguish that species from *polyglotta*. Illustrative photographs were first published in 1954 (see *Brit. Birds*, 47: plates 21 and 25) and the better of the two was reproduced by Williamson (1960). The comments accompanying the later reference arose from a preliminary discussion by the same author (Williamson 1956) and were punctuated by his later conclusion (1960) that 'this pale panel provides the best character for separation in the field' from *polyglotta*. Mental riders may have occurred to many observers in respect of the breakdown of the panel by early abrasion, but no detailed caution has appeared on the more important point that in spring *polyglotta* can show a similar panel towards the top of the folded wing. This character is created by the same plumage process in both species—the overlapping or close proximity of the pale fringes of the inner secondaries and tertials—and, to my eyes, it was detectable to a varying degree on all the *polyglotta* (including the pale ones) that I saw in northern and southern Spain in May 1960 and 1961. However, the wing panel of *polyglotta* is not normally as continuous as that of *icterina*: I. J. Ferguson-Lees (*Brit. Birds*, 49: 233) closely examined some forty *polyglotta* on the Coto Donana, Spain, in May 1956 and found that, although the pale feather edges were clearly visible in some birds when looked for, they were distinctly separated and did not show as 'a continuous light area'. This accords closely with my experience in 1960 and 1961, except for one of the birds that I studied in detail on the Costa Brava. This individual had as striking and continuous a wing panel as any *icterina* that I have seen. The only other *polyglotta* showing a continuous wing panel that has come to my attention was one caught in Norfolk in June 1957. A photograph of this bird, taken by P. D. Kirby and reproduced here as plate 43a, shows clearly that at least six of the tertial and inner secondary fringes overlapped to form a prominent and continuous wing panel. Considering the fairly advanced wear likely in an adult in June, this bird must have shown a brilliant

band of yellow during the months immediately following moult. Thus Williamson's comment that the wing panel in *polyglotta* 'has disappeared from spring adults by the time they reach Europe' is in my view a definite overstatement. Furthermore, a few *icterina* show poorly marked or discontinuous wing panels in spring. Thus there is clearly a slight overlap here between *icterina* and *polyglotta*.

In short, the presence of a wing panel does not allow an observer to plump automatically for *icterina* and it should never be used as the single or 'best' factor in distinguishing between the two species in spring and early summer.

In autumn the wing panel of adult *icterina* is very much subdued and there is no evidence that it persists to any visible degree in *polyglotta* of the same age (see, particularly, Williamson 1956), the partial or total loss being due to abrasion. In the case of immature birds in autumn, *icterina* shows no continuous wing panel, but the separate and 'parallel' whitish edges of the tertials and innermost secondaries are broad enough to attract attention at considerable range. With immature *polyglotta* even the closest examination fails to reveal any marked character in this region. In all probability the presence in autumn of distinctly pale edges to the tertials and inner secondaries is a safer indication than the wing panel of adults in comparatively fresh spring plumage that a 'green and yellow' *Hippolais*, whether adult or immature, is *icterina*.

No other species of *Hippolais*, whether adult or young in spring or in autumn, shows the normally continuous wing panel of *icterina* and a few *polyglotta*. However, since both these species have a relatively high incidence of pale variants with plumage colours approaching those of the other four species, it should be remembered that *olivetorum* does have well-marked wings with prominent whitish edges obvious on the tertials, which when closely grouped give a panel effect, and that *languida* can also show distinctly pale margins in this area.

CONCLUSION

Throughout this paper, my main intention has been to simplify the problems of field identification in this troublesome group of warblers. Particularly in the sections on plumage and plumage variation it may seem that I have done the opposite. For this I make no apology because the expansive treatment given to several confusion factors only serves to show more clearly the crux of *Hippolais* identification. The challenge that all the species without exception present to the field ornithologist has to be answered quite differently from that of the vast majority of species groups or genera. Plumage characters are patently unreliable, only one action is unique to a particular species and most recorded calls are common to more than two. I make these

points again in order to re-emphasise how different the approach to specific identification must be in this group.

Finally, in order to summarise the contents of this paper, I have drawn up a simplified identification key for the genus *Hippolais* and this follows. It is not comprehensive and should be used as a guide to the main text rather than a ready eliminator.

Field key to the genus *Hippolais*

- A. *Long-winged*: wings when folded with longest primary tips either fully reaching or falling beyond the end of the upper tail-coverts and the slim point of the bunched primaries forming about a third of the total visible wing-length.
1. Bill very prominent, long and deep (recalling that of large *Acrocephalus*); body large; tertials and inner secondaries prominently edged whitish; broad supercilium *olivetorum*
 2. Bill long; body quite large; tail dark with distinct whitish edges, often cocked *languida*
 3. Bill fairly long; body medium-sized; upper-parts greenish olive; tertials and inner secondaries prominently edged yellow, forming conspicuous wing panel *icterina* (normal adult)
 4. Bill and body size as 3; upper-parts greyish; tertials and inner secondaries edged whitish, not forming conspicuous wing panel *icterina* (variant adult, immature)
- B. *Short-winged*: wings when folded with longest primary tips either falling short of or only just reaching the end of the upper tail-coverts and the slim point of the bunched primaries forming about a quarter of the total visible wing length.
1. Bill prominent, length further exaggerated by flat crown; body medium-sized; eye-ring often noticeable, whitish *pallida*
 2. Bill strong, but length diminished by rounded head; body medium-sized; upper-parts greenish-brown; pale edges of tertials and inner secondaries not forming conspicuous wing panel; under-parts rich yellow *polyglotta* (normal adult)
 3. Bill, head shape and size as 2; upper-parts brownish; wings unmarked *polyglotta* (variant adult, immature)
 4. Bill short (side view recalling that of *Phylloscopus*); rounded head; body small; no obvious plumage characters *caligata*

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NOTES

My biggest debt, however, is to Kenneth Williamson whose work in simplifying the identification of trapped warblers, now happily complete, has provided the essential background of new and authoritative reference material. Although I am not a ringer, his three guides are among my most thumbed books.

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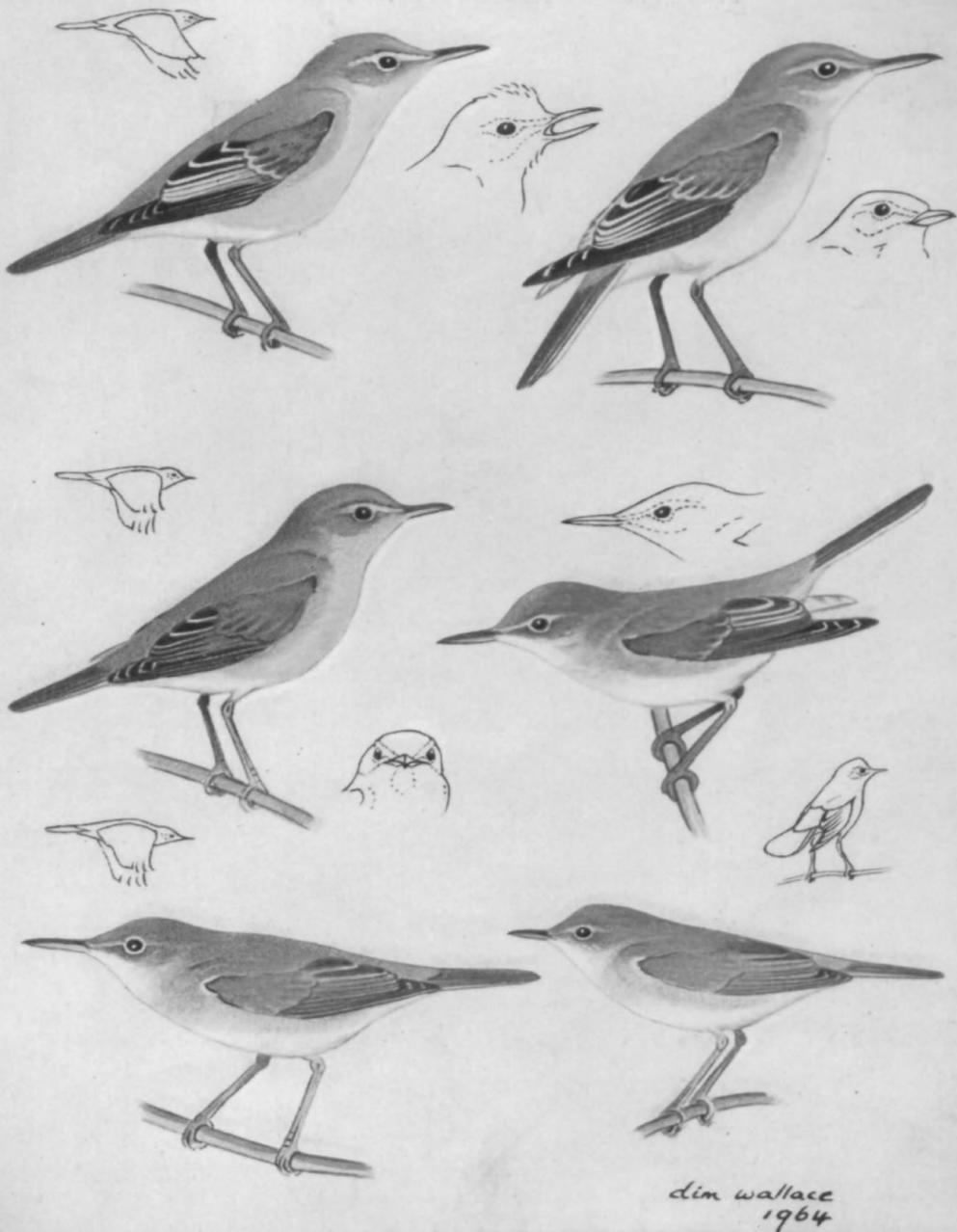


PLATE 42. Breeding plumages of *Hippolais*. Left, Icterine Warbler *H. icterina*, Melodious Warbler *H. polyglotta* and Olivaceous Warbler *H. pallida*; compare also flight silhouettes and note inset singing Icterine and head-on Melodious. Right, Olive-tree Warbler *H. olivetorum*, Upcher's Warbler *H. languida* and Booted Warbler *H. caligata*; note also inset angled head of Olive-tree, and Upcher's with crown feathers depressed and chat-like stance (pages 282-301) (sketches: D. I. M. Wallace)



PLATE 43. Melodious Warbler *Hippolais polyglotta* and, below, Icterine Warbler *H. icterina* to show relative positions of wing tips and different spacing of folded primaries (pages 287-289). This Melodious has an unusually clear wing panel, while the Icterine's is much subdued (pages 298-299) (photos: P. D. Kirby and Eric Hosking)

