Field identification of Arctic *Stercorarius parasiticus*, Pomarine *S. pomarinus* and Long-tailed Skuas *S. longicaudus* has long been considered difficult. Good reviews of the subject have been published (Cramp & Simmons 1983; Glutz & Bauer 1982; Harrison 1983), as have several skua identification notes in *British Birds* (e.g. Mather 1981; Jonsson 1984; Kemp et al. 1984; Olsen & Christensen 1984; Ullman 1984; Broome 1987), but there has been no main paper in English. Furthermore, the various field guides stress different identification characters. While there are still many unexplored aspects, the growing interest in seabird identification has encouraged the examination of new characters in this extremely variable
Field identification of the smaller skuas

group. This variability and the great care needed on discovering a skua in an unfamiliar plumage have been well documented with, for example, the case of the 'Buckinghamshire skua' (Jonsson 1984; Blincow 1985), a pale Pomarine showing some characteristics that had recently been linked to Arctic. The main problem lies in the often great overlap between specific plumage characters, especially those shown by juveniles.

This paper summarises several years' study. I have seen hundreds of skuas in South Scandinavian waters, as well as Pomarines in Venezuela in January 1987 and in Australia in September 1988; have examined skin collections in the zoological museums in Copenhagen, Łódź (Poland), Oslo and Stockholm; have looked through about 2,000 photographs; and have discussed skua identification with many birdwatchers.

Identification

Skuas are extremely variable. It is generally possible, however, to separate adults into two quite distinct colour phases: pale and dark, with only a few intermediate-morph Arctic (or even fewer Pomarine) Skuas occurring. Juveniles, however, may be of almost any shade, from very pale-headed to almost totally dark, and it is now clear that very dark juveniles may become pale-morph adults. About 30% of juvenile Long-tailed Skuas are of a dark type, whereas no dark-morph adult Long-tailed Skuas have been adequately documented (and those that have been described may in fact be immatures: Salomonsen 1951). With experience, jizz and flight actions are of the greatest importance to specific identification. It must be noted, however, that there is also overlap between the species in this respect and, for example, smaller individuals may behave atypically. The jizz and flight typical of the three species are covered below.

Size and structure

Pomarine Skua is the largest and heaviest of the three, approaching the size of Herring Gull Larus argentatus, and its head and bill resemble those of that species. Pomarine is often full-bodied, with its 'centre of gravity' between the breast and belly, often creating a characteristic impression of a 'hanging belly', particularly on heavier individuals. Its wings are broad, both basally and for the full length of the 'arm'; the 'hand', however, looks more slender, narrowing distinctly towards the tip.

An identification pitfall is provided by Great Skua S. skua, but, in comparison, Pomarine shows a smaller head and longer tail, and its body is never so barrel-shaped. The dark brown plumage and, especially, the very conspicuous white wing-patches of Great Skua may be visible at long range.

Arctic is the most frequent skua in British and Irish waters, and is the one with which birdwatchers are most commonly confronted. Arctic is about the size of Common Gull L. canus, and is smaller, more slender and more elegant than Pomarine; in particular, its head is smaller, and its bill is finer (but almost as long), creating a small-headed, or almost triangular-headed appearance by comparison; well-fed individuals often look curiously small-headed. The body is more slender than that of Pomarine,
with the centre of gravity being around the breast. The wings are narrower at the base than on Pomarine, but the hand tends to be fuller, making the wings appear more evenly broad over their full length. Relative to Pomarine, the tail is a little longer: excluding the elongated central feathers, it is about as long as the wingbase (it is shorter on Pomarine, but judgment of this is often difficult).

Long-tailed is the smallest of the three species, although there is some overlap between large Long-tailed and small Arctic individuals. Long-tailed is always slender, and is even more elegant than Arctic, often with a prominent breast and a flatter belly. The bill is shorter than, but as broad as that of Arctic, and often appears heavier (see table 1). The wings are more slender than those of Arctic, and the hand is more pointed, being the longest of any of the three species. The tail appears longer than that of Arctic.

Flight patterns
The flight patterns of the three species are normally of help when identifying distant skuas, and may be of four main types: migration, piratical, soaring, and tail-wind.

MIGRATION FLIGHT Pomarine Skua’s active migration flight appears steady and undisturbed, with rather slow wingbeats, recalling that of a large gull. The flight is broken by only brief intervals of short glides, and even in strong winds the active flight is performed with almost mechanical wingbeats; only in very strong winds are periods of shearwater-like flight performed.

The active flight of Arctic Skua is less laboured than that of Pomarine, with frequent changes between active, almost falcon-like wingbeats and glides up and down waves, even during rather light winds; in strong winds, there is much shearwater-like gliding. Only larger individuals regularly perform long periods of active flight.

The active flight of Long-tailed is even more tern-like and elegant than that of Arctic Skua, the body often moving vertically with each wingbeat. In strong winds, there are even longer periods of shearwater-like flight than shown by Arctic Skua.

PIRATIONAL FLIGHT This type of flight, in which a skua pursues a seabird in order to steal its prey, is virtually unique to skuas, and, whereas gulls (especially Common Gull) sometimes show it, the behaviour is much more dramatic and acrobatic when performed by skuas. Piratical flight by Pomarine Skua is common as short bouts, but, because of this species’ heavy weight, it is not very successful. Pomarine does, however, attack more directly than the two smaller species, and such chasing often includes direct assaults on the seabird victim. Pomarines have been reported killing prey up to the size of Black-headed Gull *L. ridibundus* (Blincow 1985) and Kittiwake *Rissa tridactyla* (J. Dunn in litt.).

Arctic Skua is probably the best adapted of the three to this special
flight. Its attacks are very acrobatic, with unexpected turns, and can last up to about 30 seconds. Arctic’s piratical flight is normally followed by a period of rest.

Long-tailed Skua performs its piratical flight in much the same way as does Arctic. Furthermore, it has been observed surface-diving, hovering and catching ants and other insects in a manner recalling Black-headed Gull. On migration, this species (especially juveniles) has sometimes been observed feeding on invertebrates in freshly ploughed fields, a trait not recorded for Arctic Skua.

Pomarine Skua has been observed landing in the middle of gatherings of resting gulls without provoking aggressive behaviour. Arctic, however, is normally chased away from such roosts, and is normally seen resting on the edge of them (K. Pedersen in litt.).

SOARING AND TAIL-WIND FLIGHTS In these flights, all three species depress the hand, with Pomarine’s being held at the lowest level, often well below the centre of the belly. Soaring Long-tailed often looks quite long-tailed, recalling a soaring falcon (K. Pedersen in litt.).

Age determination and moult

Although adult breeding and juvenile plumages are now rather well known, there is still much to be discovered of other immature and winter plumages. Most of the following information on moult is from Cramp & Simmons (1983), but some has been gained from an examination of skins, photographs and correspondence.

Age determination

Juveniles of all three species have pale fringes to all feathers on the mantle, scapulars, wing-coverts and tertials; on some, however, these feather groups, as well as the rest of the plumage, are dark, with only the bases of the primaries and the bare parts being paler. The axillaries, underwing-coverts and tail-coverts are barred, and the primaries have pale tips or fringes (see ‘Field identification of juveniles’, below). The outermost primary is often a little shorter than the second outermost, into September. The central pair of tail feathers is never so pointed as on subsequent plumages, and often has pale areas. The bill is pale, with a dark tip, and the legs are pale with contrasting black feet.

The following age descriptions relate to pale individuals; apart from bare-parts coloration, it is impossible to classify dark individuals into ages. Individuals with a very dark body and, for example, traces of barring on the underwing-coverts are frequent. Immature summer plumages alone are dealt with owing to a lack of information on skuas in their winter quarters.

FIRST-SUMMER As juvenile, except for uniform mantle, back, scapulars, wing-coverts and tertials. After some time in this plumage, dark feathers with white fringes may occur on the hindneck (as they appear rather fresh on skins, they may be second-winter feathers). The head and body start to show ‘clean’, pale areas, and the hindneck is paler (from about new year

Field identification of the smaller skuas


94. Pomarine Skua *S. pomarinus*, moulting to first-summer plumage, Ivory Coast, February or March 1983 (E. J. Mackrill). Note pale hindneck

on Pomarines); and the general impression is of a rather greyish-brown plumage, never showing the rusty colour of juvenile Arctic and Pomarine. The central pair of tail feathers is longer than on juveniles (see table 1), being rounded on Pomarine and pointed on Arctic and Long-tailed. The dark on the bill is more extensive, especially along the cutting edges; pale areas are more greyish or yellowish than on juvenile. Black starts to appear on the legs, especially on the tibia, and as dark spots on the tarsus.
Field identification of the smaller skuas

95. Adult winter Pomarine Skua *Stercorarius pomarinus*, Gulf of Mexico, January 1962 (E. L. Marchant)

96. Juvenile Pomarine Skua *Stercorarius pomarinus*, Netherlands, November 1985 (Arnoud B. van den Berg)
Field identification of the smaller skuas

Table 1. Projection of central tail feathers (in mm) of Arctic Stercorarius parasiticus, Pomarine S. pomarinus and Long-tailed Skuas S. longicaudus (after Cramp & Simmons 1983)

Note: Pomarine non-breeding adult 32-57 mm. A sample of juveniles from Glutz von Blotzheim & Bauer (1982), Malling Olsen (1983) and de Korte (1985) gives: Arctic 8-25 mm, Pomarine 5-22 mm and Long-tailed 14.5-34 mm.

<table>
<thead>
<tr>
<th>Age</th>
<th>Arctic</th>
<th>Pomarine</th>
<th>Long-tailed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juvenile</td>
<td>12-22</td>
<td>7-22</td>
<td>18-32</td>
</tr>
<tr>
<td>First-summer</td>
<td>30-46</td>
<td>25-70</td>
<td>36-82</td>
</tr>
<tr>
<td>Second-summer</td>
<td>35-63</td>
<td>36-72</td>
<td>60-134</td>
</tr>
<tr>
<td>Third/fourth-summer</td>
<td>40-80</td>
<td>53-98</td>
<td>65-213</td>
</tr>
<tr>
<td>From fifth-summer (non-breeding)</td>
<td>60-105</td>
<td>65-111</td>
<td>135-265</td>
</tr>
</tbody>
</table>

The loss of rusty coloration, the paler hindneck, and the greater amount of pale on the underside make first-summer Arctics sometimes look rather similar to juvenile Long-tailed. Bill length, jizz, and shape of the central pair of tail feathers are, however, typical of Arctic.

SECOND-SUMMER Dark hood (crown, forehead and lores), dark-spotted breastband, barred flanks and barred undertail-coverts contrast with the rest of the pale underparts, although the chin is spotted and the underparts are generally more spotted than on adults. Upperparts are as first-summer, including dark/pale barred tail-coverts. Axillaries and underwing-coverts are still barred, but some more greyish feathers may appear. The general impression until late in the year is of a rather adult body and juvenile underwing. For tail elongation, see table 1. The bill is generally darker than on younger skuas, but the base of the upper mandible is somewhat paler. The foot is pale with dark spotting, or darker grey.

At this age, all three species show a variable, darker, spotted breastband. As the bill may still look rather bicoloured, some Arctics of this age class may appear similar to Pomarines.

THIRD-SUMMER The dark hood and breastband are even more similar to those of adult than in second-summer plumage. Axillaries and underwing-coverts are mostly dark, as on adult, but with a few barred feathers, especially on median and greater coverts. The tail-coverts are uniform, or dark/pale barred, especially the undertail-coverts. The upperparts are as on adults. For tail elongation, see table 1. The bill is normally dark (but note that third-summer and adult Pomarines have a bicoloured bill). Legs are dark, with pale traces.

FOURTH-SUMMER Probably not generally separable from adult summer, but a few barred underwing-covert feathers may remain (Cramp & Simmons 1983).

Moult

Juvenile plumage is retained during the autumn migration, and the moult into first-summer plumage starts from December or January (innermost primaries, head and body first), and is normally completed by April, but
Field identification of the smaller skuas

97. Pale juvenile Arctic Skua *Stercorarius parasiticus*, Denmark, September 1985 (Knud Pedersen)

98. Very dark juvenile Arctic Skua *Stercorarius parasiticus*, Denmark, October 1985 (Knud Pedersen)
some individuals are in moult much later: for example, Pomarines moulting outermost primaries in July, and Arctics just starting primary moult in September. Furthermore, some individuals, probably weakened or injured, do not moult in their first summer, making them appear extremely faded in their second summer. Grant (1986) reported similar cases for gulls, and noted that a moult may be delayed where the end of migration is the trigger for moult to commence.

The subsequent mouls are more like adult moult cycles. Adults moult their body feathers twice a year, flight feathers annually, and central tail feathers (mostly?) twice a year. The post-breeding moult starts with only minor feather groups, and normally takes place after arrival in the winter quarters. According to Cramp & Simmons (1983), the sequence of moult is hood, neck, back, throat, flanks, tail-coverts, rest of head, belly, lower belly and rest of back. It seems that most of the moult takes place within a rather short period, from November to December.

Moult of remiges and rectrices takes place from October, and is completed in March or April. Primary moult of Pomarines, studied from photographs and in the field, had reached the innermost three in December, and many showed a growing outermost in April. At this time of year, many have missing central tail feathers, indicating that the growth in winter of these feathers may be missed in some years.

Greater coverts are normally moulted after the primaries, but they may all be moulted at once, creating a pale area similar to that of moulting Great Black-backed Gull L. marinus. The wing-coverts and most of the back are moulted once a year; parts of the mantle and scapulars are moulted twice annually.

From late winter, usually in March or April, breeding plumage is attained by a moult involving the head, body and central pair of tail feathers. Parts of the winter plumage (especially the undertail-coverts and uppertail-coverts) may be retained.

99. Dark juvenile Arctic Skua Stercorarius parasiticus, Denmark, September 1985 (Knud Pedersen)
Field identification of the smaller skuas

100. Pale juvenile Arctic Skua Stercorarius parasiticus, Denmark, September 1985 (Knud Pedersen)

101. Intermediate juvenile Arctic Skua Stercorarius parasiticus, Denmark, September 1985 (Knud Pedersen)

102. Pale juvenile Arctic Skua Stercorarius parasiticus, Norfolk, autumn 1979 (R. J. Chandler)
Field identification of juveniles

Identification of juvenile skuas is made difficult by their enormous variability, and all types, from almost wholly dark to very pale-headed birds, may be found. It must be stressed, however, that Pomarine is far less variable than the other two; about 90% are of a rather dark/medium type, whereas very pale-headed or very dark individuals are less common. Arctic and Long-tailed Skuas are both very variable, and pale and dark individuals are frequent.

Apart from jizz and flight actions, the main features to look for are bill colour and pattern, presence and colour of pale hindneck, shape and elongation of central pair of tail feathers, extent of pale tips to primaries, amount of pale ‘double patch’ on underwing, and general coloration; unlike Arctic in particular, Long-tailed never shows any rusty tinge to its plumage, and it also generally has more contrast between the dark hood and breastband and the pale hindneck and fore breast, often making juveniles look older.

Probably no single feature is completely foolproof. The safest features are, unfortunately, the most difficult to see on flying skuas: shape of spots/streaks on hindneck and chin, shape of central tail feathers, and extent of pale tips to primaries. For all other features, there is so much overlap that none of them can be considered more than 75% safe. It is, therefore, necessary to note as many of the following points as possible.

Bill shape and coloration

Pomarine Skua has the heaviest, most hooked bill. While its bill is always heavy at the base, it frequently tapers towards the tip. The gonydeal angle is generally pronounced, but may appear flatter (for bill measurements, see table 2). The bill of Arctic Skua is much more slender, although it is almost as long as that of Pomarine. Its gonydeal angle is often pronounced, and the gonys is shorter than that of Pomarine. Long-tailed has the shortest bill, but it appears to be heavier than that of Arctic, owing to its depth. The gonys is generally longer than that of Arctic, and its angle is never marked, appearing rather flat (see table 3).

<table>
<thead>
<tr>
<th>Table 2. Measurements (in mm) of skuas Stercorarius</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sources of data: wing and bill, Cramp &amp; Simmons (1982); bill, gonys length and bill depth, KMO; tarsus, Hario (1986)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Species</th>
<th>Wing</th>
<th>Bill</th>
<th>Gonys</th>
<th>Tarsus</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>adult juvenile</td>
<td>adult juvenile</td>
<td>adult juvenile</td>
<td>adult juvenile</td>
</tr>
<tr>
<td>Pomarine</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. pomerinus</td>
<td>♀ 354-374</td>
<td>♀ 334-356</td>
<td>38-44</td>
<td>36-41</td>
</tr>
<tr>
<td></td>
<td>♂ 363-382</td>
<td>♂ 349-363</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10.5-12.5</td>
<td>48-56</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arctic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. parasiticus</td>
<td>♀ 306-336</td>
<td>♀ 293-320</td>
<td>29-34</td>
<td>29-34</td>
</tr>
<tr>
<td></td>
<td>♂ 310-347</td>
<td>♂ 302-323</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.5-9.0</td>
<td>40.6-50.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Long-tailed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. longicaudus</td>
<td>♀ 292-318</td>
<td>♀ 280-306</td>
<td>27-30</td>
<td>26-31</td>
</tr>
<tr>
<td></td>
<td>♂ 294-323</td>
<td>♂ 285-308</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.5-10.0</td>
<td>37.7-47.8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Field identification of the smaller skuas

On juvenile skuas, the bill tip is dark, contrasting with the pale basal parts. The dark tip of Arctic and Pomarine covers about one third of the length, but that of Long-tailed covers about 40-60%; and the dark extends farther along the cutting edges on Long-tailed than on the other species. On all three species, the paler base is greyish, with a bluish to (mostly on Pomarine) brownish tinge. A pinkish or even greenish tinge has also been reported, but this is much rarer.

The paleness of the bill is an important feature; Pomarine has the largest pale area, and the dark tip often contrasts, as on first-winter Glaucous Gull *L. hyperboreus*. The contrast is clearly visible even at a range of up to 500 m in good light, with a 20× telescope. While the contrast on Arctic is similar, the fineness of the bill makes the pale base more difficult to observe, and bill contrast is visible only to about 100-150 m.

Long-tailed has the most extensive dark tip to the bill, making any contrast hard to see, even at close range.

Head pattern

The head pattern is very variable. Most Pomas, however, have a rather uniform brown head, often with dark areas near the base of the bill (contrasting with the paler bill base). If the hindneck is pale, the head is also rather pale. The chin and hindneck are rather uniform, or with indistinct darker spotting.

Arctic Skua often has a dark hood, contrasting with the paler hindneck, which is tinged rusty, or even orange in the most striking cases. Dark, often quite distinct streaks appear on the hindneck and chin. At the base of the upper mandible, there is often a pale, diffuse area (principally the same as on adults, but less common and contrasting on juveniles), giving a pale-fronted appearance to the head (Boesman 1985). The head colour is orange-buff to rusty, or even foxy-red, generally warmer than on Pomarine, but some show greyer-brown head markings. A pale, rusty-tinged hindneck, contrasting with the hood, is an important field mark of Arctic, and is rarely (or never?) shown by Pomarine; and the colour is different from that of Long-tailed.

Long-tailed generally shows the same pattern as Arctic, but differs in having shorter streaks (and even spots) on the pale hindneck and dark feathers at the base of the upper mandible (but these also appear dark on many Arctics). The general colour is, however, always cold (grey to yellowish-tinged on paler birds, dark brown on darker individuals), and Long-tailed never appears rusty. This cold grey hindneck, contrasting with the dark hood, is one of the most important features of juvenile Long-tailed. A white-headed juvenile, considered to be albinistic (Norman 1985), was probably a very pale-headed juvenile, as such individuals have been reported (J. Dunn *in litt.*; K. Pedersen *in litt.*).

Body

Pomarine and Arctic have brown to greyish-brown or rusty-brown underparts, with darker barring. A dark-barred breastband is often present, contrasting slightly with the paler belly.
### Table 3. Characters of juvenile skuas *Stercorarius*

<table>
<thead>
<tr>
<th>Feature</th>
<th>Pomarine <em>S. pomarinus</em></th>
<th>Arctic <em>S. parasiticus</em></th>
<th>Long-tailed <em>S. longicaudus</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coloration</strong></td>
<td>Greyish-brown to blackish-brown. In the palest, creamy with slight rusty tinge.</td>
<td>Generally warmer and more rusty-tinged than Pomarine. Pale individuals warm orange-tinged.</td>
<td>Ash-grey to blackish-brown, never rusty-tinged, and always cold-tinged. Pale individuals may appear almost white-headed.</td>
</tr>
<tr>
<td><strong>Head pattern</strong></td>
<td>Often large-headed and full-necked. Rather uniform and mostly quite darkish grey-brown, with darker area around bill. Neck never contrasting markedly with rest of head: uniform or with darker spotting. Throat generally dark with indistinct spots.</td>
<td>Often small-headed. Contrasting pale rusty hindneck common. Head often dark-streaked, especially hindneck and chin. Often slightly paler base to upper mandible. Throat generally paler than on Pomarine, often finely streaked.</td>
<td>Head often quite contrasting, with pale grey to yellowish-grey hindneck. Head streaks shorter than on Arctic; may even be spots.</td>
</tr>
<tr>
<td><strong>Bill</strong></td>
<td>Quite strong (recalling that of large gull), with raptor-like hook. Tip dark, contrasting with paler (bluish-grey to brownish-grey) basal two-thirds, similar to that on first-winter Glaucous Gull <em>Larus hyperboreus</em>. Gonydeal angle marked or flatter.</td>
<td>Almost as long as on Pomarine, but more slender. Colour pattern as on Pomarine, but more difficult to observe owing to its fineness. Gonydeal angle generally more pronounced and gonyts shorter than on Pomarine.</td>
<td>Shorter than that of Arctic, with dark tip and basal half pale, patterned as on others. Dark extends more to cutting edges than on others. Gonys long and flat, never with distinct angle of Arctic.</td>
</tr>
<tr>
<td><strong>Upperparts</strong></td>
<td>Dark, with pale rusty/sandy fringes. Carpal joint mostly dark, contrasting with breast on standing birds. Greater coverts normally with only pale tips, but pale markings on outer webs.</td>
<td>As on Pomarine, but with generally broader and warmer rusty/whitish fringes. Lesser coverts often with broad rusty fringes, creating pale leading edge to inner wing. Greater coverts normally with both tips and outer webs pale.</td>
<td>On most, contrast between paler brownish coverts and blackish flight feathers. Generally paler and broader-fringed than others, creating saddle on many. Even dark individuals may have whitish fringes to scapulars and back.</td>
</tr>
<tr>
<td><strong>Uppertail-coverts</strong></td>
<td>Dark/pale to brown, forming pale patch on all but the darkest individuals.</td>
<td>Generally more wavy pattern than on Pomarine, and more often uniform or not contrasting. Pale patch only in combination with pale hindneck.</td>
<td>Dark/pale barring on all but the darkest individuals. Sometimes only slight contrast owing to general pattern of upperparts, but generally rather conspicuous.</td>
</tr>
<tr>
<td><strong>Primaries</strong></td>
<td>Dark, with pale shafts to outermost three to eight, forming paler semicircular flash, especially visible on spread wing. Tips dark or with slightly paler fringes, normally visible only at close range.</td>
<td>As on Pomarine, but some show pale base to outer web of outermost, similar to pattern on Great Skua <em>S. skua</em>. Pale tips more conspicuous than on Pomarine, and visible at moderate range on all but darkest individuals.</td>
<td>Pale shafts to only two (or three) outermost. Tips as on Pomarine, but more show white fringes.</td>
</tr>
</tbody>
</table>
### Field identification of the smaller skuas

<table>
<thead>
<tr>
<th>Feature</th>
<th>Pomarine <em>S. pomarinus</em></th>
<th>Arctic <em>S. parasiticus</em></th>
<th>Long-tailed <em>S. longicaudus</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>Brown to blackish-brown, generally rather greyish-brown with variable amount of barring. Barred, darker breast-band may be present.</td>
<td>Generally more rusty than on Pomarine. Belly often paler.</td>
<td>Generally greyish-brown, but variable from whitish to blackish-brown. Breastband more uniform grey. Centre of upper belly often distinctly paler, forming pale patch.</td>
</tr>
<tr>
<td>Undertail-coverts</td>
<td>Barred dark, brown to pale. Uniform on only very dark individuals.</td>
<td>As on Pomarine, but often rather indistinct barring, following general body colour; barring often appears wavy.</td>
<td>Distinctly barred dark and whitish, even on rather dark individuals. Uniform on only extremely dark individuals.</td>
</tr>
<tr>
<td>Underwing</td>
<td>Basal half of primaries pale. Axillaries and underwing-coverts barred dark/pale. Bases of greater under primary coverts pale, tips dark, forming distinct pale double patch on most. Patch sometimes obscured by dark bases to greater under primary coverts. Dark individuals with dark axillaries and coverts occur rarely.</td>
<td>As on Pomarine, but pale on axillaries and underwing-coverts generally warmer brown, following general coloration of body. Pale double patch always less conspicuous than on Pomarine, but present on many pale and intermediate individuals. Dark axillaries and underwing-coverts occur on dark phase and a few intermediates.</td>
<td>Less than half basal section pale. Axillaries including greater under primary coverts barred. Rarely, pale double patch occurs, but never so conspicuous as on Pomarine.</td>
</tr>
<tr>
<td>Tail</td>
<td>Blackish, with paler base. Projection of central feathers 5-22 mm, and broadly rounded. Elongated feathers may have small pale areas.</td>
<td>As on Pomarine; base may be paler on pale individuals, tail distinctly bicoloured when spread. Tail projection up to 34 mm, slightly rounded, and normally pale-fringed.</td>
<td>As on Pomarine; elongation up to 34 mm, slightly rounded, and normally pale-fringed.</td>
</tr>
<tr>
<td>Legs</td>
<td>Tarsus pale (bluish to whitish), feet black. Legs appear heavier than those of Arctic and Long-tailed.</td>
<td>As on Pomarine, but appearing weaker.</td>
<td>As on Arctic.</td>
</tr>
</tbody>
</table>

Long-tailed has colder, greyish-tinged upperparts, and its dark grey breastband looks more uniform, with only very narrow paler bars. This often contrasts with the centre of breast to lower belly, which is whitish to pale grey and rather unmarked. This creates a quite clear contrast between breastband and pale breast, more conspicuous than on other juvenile skuas, thus making such individuals look rather older. The breastband of well-marked individuals may contrast almost as markedly as that of a female Ring Ouzel *Turdus torquatus*. Very dark, uniform-coloured individuals are, however, frequent in all three species.

**Undertail-coverts**

The undertail-coverts are barred dark-and-pale, often with a brown tinge on Pomarine and Arctic. This barring tends to be wavier on Arctic, and...
Field identification of the smaller skuas

more Arctic individuals show uniform undertail-coverts (dark on dark individuals, pale with a few darker spots on pale birds). The barring is, therefore, more conspicuous on Pomarine than on Arctic, but there is some overlap.

Long-tailed shows distinct dark/whitish barring on all but extremely dark individuals; even on rather uniform dark-plumaged birds, this undertail-coverts barring is conspicuous, creating an effect never found on Arctic, and only rarely on Pomarine.

Underwing

All three species have barred axillaries and underwing-coverts. On Pomarine and Long-tailed, the pale barring may be conspicuous even on darker individuals, contrasting clearly with the dark body. On Arctic, the pale barring follows the general body colour, being rather warm and rusty-tinged on most individuals and, therefore, creating less contrast with the body. All three species may show reduced pale barring, making the underwing-coverts appear rather uniform at a distance, particularly on dark and intermediate individuals. Uniform dark (adult-like) underwing-coverts and axillaries are present on only very dark Pomarine and Long-tailed Skuas, but are more usual on Arctic; even quite normal, intermediate Arctics may show uniform dark underwing-coverts.

On all three species, the bases of the primaries are pale, this pale extending up to 50% of the primary length on Arctic and Pomarine, less so on Long-tailed. The bases of the greater under primary coverts are pale on most Pomarines, contrasting with their dark tips and, together with the pale primary bases, creating a rather distinct pale double patch on the underwing, mentioned as the single best feature of Pomarine (Ullman
Third-summer pale-morph Arctic Skua *Stercorarius parasiticus*, Denmark, September 1979 (Knud Pedersen)

1984), this often being visible from over 500 m. At this distance, it is often the only plumage feature that can be judged. It must be stressed, however, that a number of pale and intermediate juvenile Arctic Skuas may show a similar patch, although never so clear-cut as that of Pomarine. Furthermore, this patch may be less conspicuous on some Pomarine Skuas, especially darker individuals.

Long-tailed Skuas show barred greater under primary coverts, which do not create a pale double patch. A very few individuals show a tendency

Adult summer pale-morph Arctic Skua *Stercorarius parasiticus*, Norway, June 1985 (Gordon Langsbury)
towards paler grey barring near the bases of these coverts, and one individual (out of about 200 examined) showed a pale double patch. The marks of this rather dark-plumaged individual did not, however, contrast so much as those of Pomarine, being more as on the Arctics that show the feature.

Upperparts

Pomarine Skuas have dark brown upperparts, with narrow, pale, sandy to rusty-brown fringes to the coverts; those of the lesser coverts are particularly narrow, and the folded wing often looks quite dark, in contrast to the paler breast. The greater coverts have only pale tips, but a few pale individuals may even show a buff line on the edge of the outer web, as on most Arctics (cf. Blincow 1985; Broome 1987). Arctic generally shows broader, pale orange to rusty covert fringes (a few may even be whitish), especially on the lesser coverts, thus creating the effect in flight of a slightly paler, rusty-tinged leading edge. On the folded wing, the coverts contrast less with the body. Very dark individuals, with pale-fringed lesser coverts, show a pale leading edge to the wings, in marked contrast to their dark underparts.

108. Pale juvenile Long-tailed Skua *Stercorarius longicaudus*, Sweden, August 1978 (Stellan Hedgren)

109. Intermediate juvenile Long-tailed Skua *Stercorarius longicaudus*, Sweden, August 1978 (Stellan Hedgren)
Field identification of the smaller skuas

Pale and intermediate Long-tailed Skuas show contrast between their brownish-grey wing-coverts and dark flight feathers. The tips of both the wing-coverts and scapulars are pale (whitish to yellowish-grey) and broader than those of Pomarine and Arctic, giving a paler saddle effect on many standing birds. Even dark individuals normally show clear, but narrower, pale fringes to the back and scapulars, in some contrast to the rest of the dark upperparts. This feature is probably never found on Arctic and Pomarine Skuas.

Uppertail-coverts
Most Pomarine Skuas have rather distinct brown/dark barring on the uppettail-coverts, and generally darker upperparts (normally including the rather dark, uniform-looking head). Barring is present on the uppettail-coverts of most pale and intermediate Arctic Skuas, but is often more wavy. On many dark and intermediate individuals, however, they are uniform, or almost uniform. If these coverts are pale, it is always in combination with a pale head or hindneck. Paler barred patches are, therefore, not found on dark-headed Arctic individuals, unlike on Pomarine Skua.

Long-tailed Skuas have distinct pale/dark barring on the uppettail-coverts, but this may appear less obvious on darker individuals, owing to the more general barring on the scapulars and back; individuals showing a pale hindneck and only indistinct barring are frequent. Extremely dark individuals of all three species show all-dark uppettail-coverts.

Primaries
Primaries are blackish on all three species. Arctic and Pomarine Skuas have between three and eight pale shafts to their outer primaries, creating a diffuse semicircular pattern on the spread wing. While this may be difficult to observe on birds engaged in active migration flight (see above),

110. Dark juvenile Long-tailed Skua Stercorarius longicaudus, Netherlands, October 1981 (Rene Pop)
it is easily seen when they are hunting. Long-tailed generally shows only one or two pale shafts, creating a pale leading edge to the hand. It should be noted, however, that a few Long-tailed Skuas show up to four pale shafts, and a few Pomarines and Arctics only two pale shafts.

The outer webs of the primaries are dark on Pomarine, Long-tailed and most Arctics, whereas the inner webs are pale (see underwing, below). This is seen on the spread wing, and Long-tailed may, therefore, show more pale in the wing when hunting. On some pale and intermediate juvenile Arctics only, a pale area up to 1.5 cm long is visible near the base of the outer web, together with pale on the shafts and inner webs, forming a small but distinct whitish flash, recalling that of Great Skua. Primary tips on all but the darkest Arctic individuals are pale; even quite dark individuals may show rusty-brown tips to primaries, which often appear as pale round spots, sometimes visible in flight.

Primary tips on Pomarine are normally dark or only very slightly, almost invisibly, fringed paler. A few especially pale individuals show more distinct pale tips, but these tips only very rarely resemble the distinct spots of most Arctics. On typical Pomarines, the combination of dark primaries and greater coverts results in rather dark, unicoloured wings on standing birds. Atypical individuals, such as the 'Buckinghamshire skua', can show a pattern rather similar to that of Arctic Skua.

Long-tailed Skuas have uniform or very narrow pale-fringed primary tips, as on Pomarine Skuas. Again, a few show clearer pale fringes, but never as those of most Arctics.

111. Dark juvenile Long-tailed Skua Stercorarius longicaudus, Sweden, August 1987 (Stellan Hedgren)
112. Pale juvenile Long-tailed Skua *Stercorarius longicaudus*, Denmark, September 1985 (*Knud Pedersen*)

113. Pale juvenile Long-tailed Skua *Stercorarius longicaudus*, almost lacking breastband, Denmark, September 1982 (*Knud Pedersen*)

114. Extremely dark juvenile Long-tailed Skua *Stercorarius longicaudus*, Denmark, September 1985 (*Erik Christophersen*)
115. Dark juvenile Long-tailed Skua *Stercorarius longicaudus*, Denmark, September 1985 (Knud Pedersen)

116. Pale-headed juvenile Long-tailed Skua *Stercorarius longicaudus*, Denmark, September 1985 (Knud Pedersen)
Fig. 1. Juvenile Pomarine Stercorarius pomarinus, Arctic S. parasiticus and Long-tailed Skuas S. longicaudus (Lars Jonsson)

[The inclusion of figs. 1-3 in colour has been subsidised by a donation from ZEISS West Germany]
Fig. 2. Immature (first- and second-calendar-year) Pomarine Stercorarius pomarinus, Arctic S. parasiticus and Long-tailed Skuas S. longicaudus (Lars Jonsson)
Fig. 3. Adult and sub-adult (> 3 years) Great *Stercorarius skua*, Pomarine *S. pomarinus*, Arctic *S. parasiticus* and Long-tailed Skuas *S. longicaudus* (Lars Jonsson)
Tail
The tail feathers are dark, with variable amounts of pale near their bases, especially on pale Arctic Skuas, which may show an almost bicoloured tail, recalling that of juvenile Golden Eagle *Aquila chrysaetos*.

The central pair of tail feathers is elongated; and the shape and, to a lesser degree, the length of this extension are very important field marks. Pomarine shows broadly rounded tips, which extend 5-22 mm beyond the rest of the tail and are often hard to see in the field. This difficulty in observing this projection may result in the impression of a rather square-ended tail. Arctic shows slightly pointed central tail feathers (but not so much as on adults), which are elongated 8-25 mm, their shape often making them visible in the field.

Long-tailed Skua has the longest tail in this plumage, too. The tips of the protruding tail feathers are slightly rounded, and mostly pale-fringed; some pale edging may occur on Arctic and Pomarine tails, but it is never so distinct as on many Long-tailed. Central-tail-feather projection is 14.5-34 mm, making it look rather conspicuous in the field (although on the folded tail these feathers result in a longer, slightly rounded-looking tail). A bill:tail-elongation ratio of 1:1 is common on Long-tailed Skua; only exceptionally short-billed and long-tailed Arctics have similar proportions.

Legs
The legs of all three species are pale blue-grey, with the feet black. On Long-tailed, only 62-78% of the foot is black, with the basal part coloured as the legs (de Korte 1985); the extent of black on Arctic appears similar to that on Long-tailed, but most Pomarines have wholly black feet. Pomarines also have the ‘heaviest’ legs.

Field identification of adults
If seen well, adult skuas should cause no major identification problems. They are much less variable than immatures, and their colour morphs are quite distinct. In the case of Arctic Skua, the dark morph predominates among southern populations, but the pale morph is more common in the north and northeast, with up to 90-95% pale (Cramp & Simmons 1982). Pomarine Skuas are normally pale, with only 5-10% of adults being of the dark morph. Among Long-tailed, the pale morph is the rule, and dark-morph adults have still to be fully documented, most claimed examples relating to immatures (e.g. Salomonsen 1951). Both Arctic and Pomarine Skuas occur in intermediate morphs.

Again, flight and jizz are important features. In breeding plumage, the shape and elongation of the central tail feathers are the most important features to look for; other important field characters are the extent and colour of the breastband, colour of underparts, shape and dark colour of the hood, and upperparts contrast.

Bill
Pomarine shows a bicoloured bill, dark at the tip, and brownish on the
basal two-thirds. While the contrast is never so clear-cut as on juveniles, it is visible at quite long range because of the weight of the bill and the dark colour of the feathers at its base.

Arctic and Long-tailed Skuas show rather uniformly dark bills, but, in bright sunlight, the base of the upper mandible may look slightly paler and olive-tinged.

**Head**

**PALE MORPH** All three species have a dark hood, contrasting clearly with the pale hindneck and chin. Pomarine shows the most extensive dark, and its hood often appears ‘square’ towards the ear-coverts. Arctic and Long-tailed both have a smaller hood, extending only to the bases of the cutting edges, whereas on Pomarine the hood often extends down to the base of the lower mandible. Pale, and also many intermediate and dark, Arctics have a pale wash to the feathers at the base of the upper mandible, extending somewhat towards the front. This character is quite distinct, and is only rarely shown by Long-tailed (one among 500 examined); it has never been reported for Pomarine. All pale skuas have a pale or yellowish chin and hindneck, warmest yellow on Pomarine, coldest greyish-yellow on Long-tailed.

**INTERMEDIATE MORPH** These are recognised by their pale chin and hind-collar, generally warmer brown-tinged and darker than on pale morphs. Furthermore, the pale chin and collar contrast with the generally dark brownish underparts.

**DARK MORPH** These have a dark chin and hindneck, only slightly paler yellowish-brown and never clearly contrasting with the dark hood and underparts. The darkest individuals have uniformly dark head and underparts, darkest (almost blackish, with a slight purple tinge) on Pomarines.

**Body**

**PALE MORPH** Pomarine has a variable, dark grey to brown breastband, which has brown spotting. On the palest, the breast is pale, with the breastband reduced to dark markings near the leading edge of the wing. Individuals lacking a breastband have all proved to be adult males (Jens-Kjeld Jensen *in litt.*), and, furthermore, such birds showed ‘cleaner’, unbanded flanks and, on average, a longer tail projection than those of other adult males. Pomarine often has barred flanks and sometimes a dark patch extending from the undertail-coverts towards the belly.

Arctic Skua may also have a breastband, but, on summer adults, it is clean grey without (or with just very faint) spotting, and its presence has not been linked to sex. In comparison with Pomarine, Arctic’s breastband and flanks are generally paler, and there is less dark extending towards the belly. The general impression is of a cleaner, paler body than on Pomarine.

Adult summer Long-tailed Skua never has a breastband; the breast is
Table 4. Characters of pale-morph adult skuas _Stercorarius_ in breeding plumage

<table>
<thead>
<tr>
<th>Feature</th>
<th>Pomarine <em>S. pomarinus</em></th>
<th>Arctic <em>S. parasiticus</em></th>
<th>Long-tailed <em>S. longicaudus</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Head pattern</td>
<td>Hood extending to base of lower mandible and farther down to ear-coverts than on others. Chin and hindneck often warm yellow, throat white.</td>
<td>Hood extending to base of cutting edges. Chin and hindneck generally paler yellow than on Pomarine. Pale patch at base of upper mandible on all pale and many intermediate and dark individuals.</td>
<td>Hood as on Arctic, chin and hindneck generally colder yellow.</td>
</tr>
<tr>
<td>Bill</td>
<td>Tip dark, basal two-thirds paler brownish.</td>
<td>Dark, with slight olive tinge to base of upper mandible visible in good light.</td>
<td>As on Arctic, but shorter.</td>
</tr>
<tr>
<td>Upperparts</td>
<td>Dark brown coverts and back, not (or only slightly) contrasting with flight feathers. Shafts of outermost three to eight pale.</td>
<td>As on Pomarine, but sometimes more greyish-brown.</td>
<td>Always contrast between grey coverts and back, and dark flight feathers. Only two (three) pale primaries.</td>
</tr>
<tr>
<td>Underwing</td>
<td>Up to basal half of primaries pale, otherwise normally uniform dark, but paler base to greater under primary coverts.</td>
<td>As on Pomarine.</td>
<td>Primaries normally all dark, apart from visible pale shaft of outermost. Sometimes, very little pale visible near base of outermost primaries. Underwing-coverts all dark.</td>
</tr>
<tr>
<td>Tail</td>
<td>Central feathers elongated up to 11 cm, broadly twisted and rounded.</td>
<td>Central feathers project up to 10.5 cm, pointed.</td>
<td>Central feathers project up to about 25 cm, and generally longer than distance from tip of rest of tail to trailing edge of wing.</td>
</tr>
<tr>
<td>Legs</td>
<td>Dark</td>
<td>Dark</td>
<td>Pale, with dark spots and dark knee. Feet dark.</td>
</tr>
</tbody>
</table>

DARK AND INTERMEDIATE MORPHS On Pomarine and Arctic Skuas, the breast to belly area appears greyish-brown to blackish-brown, generally more greyish-tinged on Arctic. There may be traces of a darker
breastband. Intermediate individuals are similar to dark morphs, but generally paler, and some intermediate Pomarines show darker barring on the paler background (Kim Fischer in litt.).

**Underwing**

All three species generally have uniform dark axillaries and underwing-coverts; the bases of the greater under primary coverts may, however, be paler and contrast slightly (this character is probably best developed on Pomarine Skua). On Pomarine and Arctic, up to the basal 50% of the primaries are pale, creating a distinct pale patch on the underwing. This is never so on Long-tailed, which usually has uniform dark bases to the primaries, but sometimes a small pale area near the base of the outermost. This quite uniform dark underwing of Long-tailed makes the pale shaft of the outermost primary stand out. During moult, pale bases to the coverts may be visible.

**Upperparts**

Pomarine and Arctic Skuas have dark upperparts, not or only slightly contrasting with the blackish flight feathers. The general colour is darkest on Pomarine, and appears more greyish-brown on Arctic, but never so much as on Long-tailed. Long-tailed shows distinct paler greyish upperparts in contrast to the flight feathers.

As on juveniles, the shafts of the outermost three to eight primaries are pale on Pomarine and Arctic, creating a pale, semicircular flash on the spread hand. In general, the darkest individuals show the fewest pale primary shafts, but normally three or four are visible; a very few Pomarines and Arctics have just two pale primary shafts as on Long-tailed (see juveniles, above). Adult Arctics and Pomarines having atypically few pale shafts, as well as Long-taileds showing unusually many pale shafts, should present no identification problems, since Long-tailed’s upperparts are distinctive.
Field identification of the smaller skuas

118. First-summer or second-winter Long-tailed Skua *Stercorarius longicaudus*, Denmark. September 1986 (Knud Pedersen)

**Tail**

The shape and elongation of the central tail feathers are of importance. Pomarine has a broad, roundly twisted tail projection of up to 11 cm, and, while it is not normally possible to see the twisting, it usually has a ‘rounding’ effect, creating an S-shaped outline to the body. Individuals

119. Adult summer Long-tailed Skua *Stercorarius longicaudus*, Norway, June 1980 (R. Ingleston)
which have lost parts of the tail may still show a broad tail elongation.

Arctic has a pointed tail projection, as long as that of Pomarine, but
never so conspicuous because the feathers are narrower.

Long-tailed shows the longest central tail feathers, and, on some, the
length of the elongation is greater than the distance from the tip of the rest
of the tail to the trailing edge of the wing (Ullman 1985). These long
feathers often move in the wind. Individuals which have lost their central
tail feathers, or which have one such feather longer than the other, are
common.

Legs
The legs of Arctic and Pomarine are dark. Those of Long-tailed are pale
with dark spots, but generally darker on older individuals (de Korte 1985).
All three species have black feet.

Winter plumage
Winter plumage is normally attained after arrival in the winter quarters,
but some Pomarines may show winter plumage from September. As our
knowledge, owing to lack of information, is limited (there are very few
skins, photographs and other information available), it is safest to deal
only briefly with this plumage at present. I should be most grateful to
anyone who could supply further information.

I have, however, observed a good number of Pomarines in Venezuela in
January 1987, as well as good series of photographs from West Africa,
Australia and Florida, USA.

Adult winter plumage of Pomarine varies from being similar to juvenile
plumage to being close to breeding plumage, showing the uniform dark
axillaries and underwing-coverts of adults. The most frequent type has,
compared with breeding plumage, the hood contrasting less with the neck
and chin and appearing slightly pale-spotted. The chin and hindneck look
paler, showing at most only traces of yellow. The underparts are whitish,
with a dark-spotted breastband, dark barring on the flanks and, to a lesser
degree, the belly and undertail-coverts.

The upperparts of Pomarine are as in breeding plumage, but with a
variable amount of white-fringed feathers on the hindneck. Individuals
moultling their coverts have a pale band on the wing, recalling that of
moultling Great Black-backed Gull. The uppertail-coverts are barred
whitish and dark. The tail projection is variable, and the winter tail is
about half the total length of the breeding tail, but is less twisted, and
normally just rounded. It is remarkable, however, that some series of skins
all lack the central tail feathers in winter plumage, whereas birds in other
series have all acquired the winter tail. It may be that the central pair of
tail feathers is acquired in years of good food supply, but not otherwise.

A few Long-tailed Skuas in winter plumage have a dark breastband, and
some show a slightly rounded tail projection, similar to that of juveniles.

Albinism
Partially albinistic Arctic Skuas have occurred; Clegg (1972) noted skuas
with white flight feathers, pale leading edges to the wings, and pale areas
around the eyes. A relatively common variety of Arctic Skua shows a pale fore edge to the wing, as on adult female Marsh Harrier *Circus aeruginosus*. On dark morphs, this is often linked with a contrasting whitish area at the centre of the belly; and this pale area has been recorded both on immatures and on adults. Furthermore, there are several reported skuas with white primaries (Knud Pedersen *in litt.*). A wholly albinistic juvenile Arctic Skua, even showing pale bare parts, is in the Copenhagen collection.

**Concluding remarks**

This paper deals with the identification of juvenile and adult breeding skuas. References are also made to immature and adult winter plumages. It is not possible to sort out skua identification in a few pages. I have therefore dealt mainly with juveniles and summer adults, as material on immature and adult winter plumages is rather scarce. It is hoped, however, that new information concerning these groups of skuas may arise. I should greatly appreciate any information on these aspects, for eventual publication.

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**Summary**

The field identification of Pomarine *Stercorarius pomarinus*, Arctic *S. parasiticus* and Long-tailed Skuas *S. longicaudus* is discussed. Detailed notes on identification of juvenile and adult summer plumages are given; immature and adult winter plumages are treated more briefly. The main problem in skua identification lies in their often great variability, especially that of juveniles. It is, therefore, necessary to note as many plumage features as possible, together with jizz and flight pattern, in order to make positive identifications.

**References**


Field identification of the smaller skuas


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