



Identification of Kelp Gull

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The Kelp Gull *Larus dominicanus* has recently been recorded in the Western Palearctic for the first time (Pineau *et al.* 2001), while its regular occurrence elsewhere in the North Atlantic region is now clearly proven, *eg* in Senegal, the Gambia, Mexico and Louisiana & Texas, USA. There have also been sightings in Maryland and Indiana in the United States – at about the same latitude as Lisbon, Portugal – although the North American records are currently still being assessed by the ABA and AOU.

In 1980 and 1983, isolated breeding was recorded at Saloum delta, northern Senegal (Dupuy 1984, Erard *et al.* 1984). Also, immature gulls considered to be of this species were recorded from Ngor Island, off Senegal, on 14th October 1995 (three) and 6th October 1996 (Marr *et al.* 1998). Hybridisation with American Herring Gull *L. (argentatus) smithsonianus* occurs in Louisiana (Dittman & Cardiff 1998), while Pineau *et al.* (2001) reported attempted hybridisation with Yellow-legged Gull *L. michahellis*.

Kelp Gull breeds along the coasts of all southern continents. There have been few detailed studies on geographical variation within the species, but Higgins & Davies (1996) suggest that latitudinal and longitudinal analyses of measurements might reveal clines. Brooke & Cooper (1979) recognised the race *vetula* from South Africa (also known as Cape Gull) on the basis of larger size and dark iris of breeding adults, while Chu (1998) found *vetula* to be quite distinct from *dominicanus*. However, birds from South America, particularly in Chile, commonly show dark eyes, and birds from Antarctica are also particularly large.

Only the Antarctic populations are truly migratory. These birds leave their breeding grounds in winter and disperse to the north, although they can winter only as far north as the edge of the pack ice (Parmelee 1992). Ringed Antarctic birds have been recovered in South America, but only from the extreme south (all south of Rio Gallegos in Patagonia and Tierra del Fuego). Studies of subantarctic populations (on the Crozet archipelago and South Georgia)

suggest that they are resident, while birds in Australia and New Zealand undergo only short distance movements away from the breeding grounds in winter (at most 600km; Higgins & Davies 1996).

In Africa, the race *vetula* is a regular winter visitor to well north of the tropics on both the Atlantic and Indian Ocean coasts. Areas north of Namibia (where the birds are common breeders on the mainland and offshore islands), Angola, Gabon and the Gulf of Guinea are not regularly watched and the species could be easily overlooked there. IS has seen Kelp Gull in Angola both times he has been there, and as far north as Lobito. On the Indian Ocean coast, the species is regular at Maputo, Mozambique, fairly regular at Bazaruto Island, and has been recorded in Beira. The Kelp Gull recorded at Malindi, Kenya, in 1984 was almost certainly *L. d. vetula* (D.A. Turner pers. comm.). At least six Kelp Gulls thought to be of the Antarctic form *dominicanus* have been seen in South Africa (P. Ryan in lit.)

Vagrant Kelp Gulls in West Africa and the Western Palearctic could have their origins in southern Africa, but vagrants in North America more likely originate in South America. The Middle East is another potential area of vagrancy for Kelp Gull.

This article on the identification of Kelp Gull is based on extensive field studies throughout the species' range – on Crozet, Kerguelen, Heard, Marion and Prince Edward Islands, New Zealand, Antarctica, Falkland Islands and South Georgia, South America, southern Africa and Madagascar – as well as on the examination of specimens at the MNHN in Paris and Tring museum. Descriptions of differences between populations studied are given and offered as a starting point for determining patterns of geographic variation in greater detail.

The taxonomic treatment adopted in this paper aims to be taxon specific, except that, for more clarity in the following descriptions, both *L. d. dominicanus* and *L. d. vetula* (Cape Gull) have been maintained under the name Kelp

Gull. English and corresponding scientific names are used as follows: Baltic Gull *L. fuscus fuscus*, Lesser Black-backed Gull *L. fuscus graellsii / intermedius*, Caspian Gull *L. cachinnans*, Yellow-legged Gull *L. michahellis*, American Herring Gull *L. argentatus smithsonianus* and Great Black-backed Gull *L. marinus*.

Note that primaries are named from innermost (P1) to outermost (P10); P11 is minuscule and largely hidden by the primary coverts.

Structure and general appearance

When trying to establish differences in size and structure between gull species, one should always keep in mind that there is considerable variation due to age, individual variation and sexual dimorphism (Gruber 1999).

Kelp Gull body size is highly variable, with the largest birds occurring in Antarctica and South Africa, and the smallest in the southern Indian Ocean. Small Kelp Gulls are close in size to Lesser Black-backed Gull, but the largest birds can be bigger than Yellow-legged Gulls, and can easily recall Great Black-backed Gull. The sexes are similar in plumage, but the male is larger and bulkier, with a more powerful bill.

The Kelp Gull is a black-backed gull with a thick-set, deep-chested appearance, large head with sloping forehead, small eye, and broad, rounded wings extending a little beyond the tail-tip at rest; the tail-tip aligns close to P7. The bill is thick and heavy, with a prominent gonydeal angle. Geographical variation exists in bill size and shape (and can be obvious), but the bill is always large at the gonys. The bill is deep at the base so, while there is a gonydeal angle, the bill is not necessarily much deeper at the angle than at the base, and thus the species sometimes lacks a 'blob-ended' bill. The combination of these features creates a distinctive silhouette.

Populations from the Antarctic Peninsula and nearby islands are large, but relatively short-billed compared to South American birds.

Four primary tips (P6-P9) are generally visible beyond the tertials on the folded wing, with P10 concealed by the same-length or longer P9. In some birds, especially in Antarctica, P5 can be seen just emerging from the tertial crescent. Thus the wing is moderately short and rounded (P10 concealed by P9); it is also broad, such that the secondaries overshoot the upperwing greater coverts on the folded wing (with the white secondary tips visible).

In Lesser Black-backed and Baltic Gulls, P9 and P10 are nearly of equal length and appear to fall together, but P10 is generally slightly longer than P9. Furthermore, in these taxa, P5 often extends beyond the tertials on the folded wing, so that five or up to six primary tips are visible beyond the tertials in the folded wing, and the wings generally extend well beyond the tail-tip at rest, with the tail-tip ending between P6 and P7, but often close to P6. Overall, Lesser Black-backed Gull and particularly the long-distance migrating Baltic Gull appear slimmer and longer due, in part, to their longer wing projection. Kelp Gulls from all populations can easily be distinguished from Baltic Gull in all age groups by their much shorter wings. Another obvious difference is the size of the legs: Kelp Gull has thick and fleshy tarsi whereas Baltic Gull has longer, thinner 'match-stick-like' tarsi.

The leg structure and size differences between Kelp Gull and Baltic Gull are obvious where the wintering ranges of the taxa overlap. Kelp is larger and more thick-set, with a more angled and 'fierce' appearance to the head. Note, however, that Kelp Gulls in summer with worn and faded plumage can look slim and long-legged.

Plate 1. Adult Kelp Gull *Larus dominicanus*, Maryland, USA, 4th March 1999 (Jim Bangma).

Kelp Gulls have already reached the eastern USA and the southernmost Western Palearctic – so Europe next?



Moult

A few general comments on the moult that involve some speculation away from what is generally understood on gulls (*ie* Dwight 1925 and Grant 1986) is included here. Pre-breeding (Pre-alternate) moults appear to be lacking in first-year gulls (Howell *et al.* 1999), so a juvenile moults into a first-winter plumage (partial moult) and then to a second-winter plumage (complete moult). There is no first-summer plumage that is obtained by a partial moult in the spring. Note, however, the odd moult timing shown by Baltic Gull (see end of this section). Howell *et al.* (1999) suggest that moult in immature large gulls is a nearly continuous process, making the classification of moults and plumages troublesome.

In the Austral spring, October–November, a Kelp Gull that is less than one year old begins to moult its primaries; this is certainly a complete (post-breeding/pre-basic) moult. Looking at these birds starting their primary moult in the Southern Hemisphere spring, they have already moulted many of their scapulars and mantle feathers, so this moult actually begins earlier than October–November, probably in September.

Knowing that the bird just went through its first 'post-breeding' (first pre-basic) moult (to first-winter plumage) roughly in April–May or later, it would have had to begin a new moult immediately in order to fit in another body moult between then and September. There does not appear to be enough time to fit in all of these separate moult cycles, given the start of the second post-breeding (pre-basic) moult, so the moult schedules suggested by Dwight (1925) and Grant (1986) do need to be revised. Also, looking at the timing, it is clear that the changes in the appearance of the body in the spring and summer are due to this complete moult which begins in September and is the second post-breeding moult. This second post-breeding moult is long. It begins with the head, back and scapulars, and then the primaries, followed by the coverts, with the median coverts changing before the lessers or greater. Birds can be still changing their lesser coverts and rear scapulars many months after this moult has begun so, in essence, a bird can be undergoing one moult from September to March.

One outcome that makes sense from this

understanding of moult timing is that it eliminates the hypothesis that there are two partial moults before the first complete moult, and this matches the moult pattern shown by waders and terns. In essence, it brings the gulls into line with the other Charadriiforms.

The beginning of the primary moult in the third post-breeding (pre-basic) moult is later than in the second post-breeding moult, and there may be a pre-breeding moult involved, but it may also be just a protracted complete moult.

Full adult plumage is acquired in the fourth year. As in other large white-headed gull species, the winter plumage (except the first one) is acquired by a complete post-breeding (pre-basic) moult, while the adult summer plumage results from a partial pre-breeding moult that involves generally only the head and body feathers.

As Kelp Gull breeds in the Southern Hemisphere during the austral summer (main laying period Nov–Dec), it has a six-month (or slightly less) time lag in moult compared to Northern Hemisphere species. Partial moult from juvenile to first-winter plumage (the first post-breeding moult) begins as early as March or April, but juvenile scapulars can be retained late into the southern winter. Exceptionally, some birds retain their juvenile plumage throughout their first winter (at least in the southern Indian Ocean) and still display complete first-generation plumage in September. The first complete moult (from first-winter to second-winter plumage (*ie* the second post-breeding moult)) occurs from Sept–Dec to Feb–Apr. The third post-breeding moult (to third-winter plumage) begins in Oct–Dec and ends in Apr–June, while adult complete post-breeding moult begins in Dec–Feb and ends in June–Aug.

There appears to be some geographical variation in moult timing in Kelp Gull. For example, Antarctic birds appear to be several weeks ahead of South American populations in moult (A. Jaramillo pers. obs.). There may also be a cline in moult timing within Chile, with northernmost populations moulting slightly later than southern populations. Adults collected on Madagascar (and preserved at the MNHN in Paris) had growing P4–5 by the end of February / beginning of March. Four months are necessary to replace all primaries.

The ageing of immatures can sometimes be

difficult because the appearance of some advanced second-years and some retarded third-years can overlap, as can that of some advanced third-years and adults. The date moult start in adults depends on the past breeding status (earlier in adults that did not breed or failed in their breeding attempt).

To summarise, a Kelp Gull should be in active primary moult in at least Dec-Feb for immatures and Feb-June for adults; this could be of great help for picking out a Kelp Gull in Europe. A caution should be noted, however: a Kelp Gull that has been in the Northern Hemisphere for some time might have switched its breeding and non-breeding seasons. If such birds still display a complete moult after breeding, the primaries should be moulted between September and January. Most (presumed) Kelp Gulls from the United States and Mexico have been on a Northern Hemisphere moult cycle, although a third-year bird observed in Texas in 1996 was moulting its inner primaries by the beginning of February, so fitting the moult schedule of southern populations.

Baltic Gull has a peculiar moult timing that could cause confusion with Kelp Gull, as its primaries are predominantly replaced in the winter quarters, even in first-winter birds (for full details see Jonsson 1998; see also Gruber 1999, Rauste 1999). For example, some first-winter birds begin their first primary moult at the end of January of their second-calendar year, and have replaced all their primaries by the end of June; however, others moult only few inner primaries in winter (Jonsson 1998). The two taxa can be separated by structure alone in all plumages.

Juvenile and first-winter

Very like stocky first-year Lesser Black-backed Gull, but different structure and tail pattern, plainer wings, darker body plumage (in some localities) and brownish legs. In all immature stages, the legs of Baltic Gull are fleshy pink or very pale fleshy-white (sometimes greyish-white). Immature Kelp Gulls have dark legs, mostly brown or olive brown, but more pinkish-brown after the first year.

Tail and rump One of the best features to consider when identifying a first-winter Kelp Gull is the tail pattern, which recalls first-winter American Herring Gull (Dubois 1997). The tail appears all-dark, although close scrutiny

reveals white notches along the outer web of the outermost tail-feathers, and often restricted white bases to the two or three outer tail-feathers. Individual variations, however, include an almost all dark tail, or a white-based, black-banded tail with obvious white but dark-barred bases to the outer feathers. The rump and uppertail-coverts are white, heavily barred dark brown – thus also recalling American Herring or Lesser Black-backed Gull. There is some evidence that South American and Antarctic birds are slightly paler-tailed than African birds, but not to the level of Lesser Black-backed Gull. Having some white at the base of the outer tail feathers is not rare in Chile and is the rule in Antarctica.

Upperparts and upperwing The mantle is generally very dark and uniform. The juvenile scapulars are dark with narrow, pale fringes hardly scalloped. First-winters often show two generations of scapulars: the rear ones plain dark brown with very restricted narrow pale fringes (worn retained juvenile scapulars); the fore ones paler and less patterned, shading from dark centres to greyer edges (new second-generation scapulars). The second-generation mantle feathers match the scapulars of the same age. A complete row of juvenile scapular and mantle feathers is rarely retained very late in the southern winter, although some birds show a juvenile saddle until Aug-Sept.

The lesser coverts are plain dark brown, forming a dark wing-bar on the leading edge of the wing. The median coverts are dark brown with narrow pale fringes, plus even white notches on innermosts. The greater coverts are dark-based and this creates a dark band on the upperwing, visible on the spread or closed wing. There is generally one white notch on the outer webs (rarely two). The tertials are very dark, with white restricted to the tip and sometimes one subterminal notch. The palest birds can have notched tertials and a dark wing band restricted to the inner greater coverts (about 10 innermost greater coverts uniform dark brown), like the palest of American Herring Gulls of the same age (J.R. King pers. com.). The upperwing pattern is otherwise similar to that of Lesser Black-backed Gull, with largely dark inner primaries and plain primary coverts. In typical Kelp Gull, the inner primaries show slightly paler inner webs, as in Lesser Black-backed Gull, while extreme individual variations



Plate 2. Juvenile Kelp Gull *Larus dominicanus*, Kerguelen Islands, South Indian Ocean, April 1996 (Frédéric Jiguet). Note the very dark body plumage of this individual, and the dark closed wing. The legs and feet are all dark and the stout bill is all-black.



Plate 3. Juvenile Kelp Gull *Larus dominicanus*, Concon, Chile, March 1998 (Alvaro Jaramillo). A slightly paler individual, both above and below, but still heavily blotched brown on the face and underparts. Note the very large droop-tipped bill.



Plate 4. Juvenile Kelp Gull *Larus dominicanus*, Kerguelen Islands, South Indian Ocean, March 1996 (Frédéric Jiguet). Note the largely all-dark tail and barred uppertail-coverts. South American birds tend to show more pale at the bases of the tail feathers.

Plate 6. Juvenile Kelp Gull *Larus dominicanus vetula*, Cape Town, South Africa, February 2000 (Ian Sinclair). This individual is heavily abraded and quite bleached. The legs are pale, but note the very large dark bill.



Plate 5. First-winter Kelp Gull *Larus dominicanus*, Kerguelen Islands, South Indian Ocean, August 1996 (Frédéric Jiguet). This bird has begun to moult (note the new, second-generation upper scapulars). The legs (and body) are still largely dark.

Plate 7. First-winter Kelp Gull *Larus dominicanus vetula*, Cape Town, South Africa, April 2000 (Ian Sinclair). Note the structure of this 'Cape Gull', as well as the dark primaries and virtually all-dark tail.





Plate 8. First-summer Kelp Gull *Larus dominicanus*, Reñaca, Chile, December 1996 (Alvaro Jaramillo). The wing coverts are a mixture of first- and second-generation feathers, and grey is appearing on the upperparts. The bill has become pink at the base.



Plate 9. First-summer Kelp Gulls *Larus dominicanus*, Hannah Point, Livingston Island, Antarctica, January 1999 (Alvaro Jaramillo). As in all large gulls, moult, abrasion and (here) severe bleaching create much individual variation.



Plate 10. Kelp Gull *Larus dominicanus* moulting to second-winter plumage, Paulet Island, Antarctica, January 1999 (Alvaro Jaramillo). This individual is in active wing moult, and rather advanced. The bill is extensively pale, and the legs appear pinkish-yellow from behind.

Plate 12. Kelp Gull *Larus dominicanus* *vetula* moulting to second-winter plumage, Cape Town, South Africa, February 2000 (Ian Sinclair). 'Cape Gulls' are said to show a flatter forehead (as this bird) than other populations.



Plate 11. Kelp Gull *Larus dominicanus* *vetula* moulting to second-winter plumage, Cape Town, South Africa, February 2000 (Ian Sinclair). Many of the scapulars and wing coverts are plain grey, but the legs remain quite dark on this 'Cape Gull'.

Plate 13. Kelp Gull *Larus dominicanus* moulting to second-winter plumage, Concon, Chile, March 1998 (Alvaro Jaramillo). Compare the rounded head shape and bill profile with the 'Cape Gull' in Plate 12.



include more obviously pale inner webs to the inner primaries, as in Yellow-legged Gull, or uniformly dark inner and outer primaries, as in Baltic Gull (Gruber 1999).

Head and underparts At fledging, the underparts are more or less uniform, dark chocolate brown – darker than on Lesser Black-backed Gull. The body moult from juvenile to first-winter (first-basic) plumage creates first a paler facial collar, then also a paler, heavily streaked brown-and-white neck and nape, with a retained dark mask around the eyes and a plain brown rear neck. On some dark individuals, the body is almost entirely chocolate brown by midwinter, while others have a more streaked body and show only a plain brown rear-neck and facial mask. The undertail-coverts are coarsely barred dark brown, in a pattern recalling juvenile Pomarine Skua. The lesser and median underwing coverts are uniform sooty brown – the underwing appearing dark brown at long range, although these coverts do contrast with the uniform greyish-brown flight feathers and greater coverts. Variation due to wear and bleaching can greatly affect the colouration of the head and body, which can be mostly whitish in the austral summer. Birds from South America and Antarctica become paler headed and bodied much more quickly than those of the Indian Ocean. By late winter and early spring, first-winters are largely white-headed, with dark streaking on the face and nape, and display largely white underparts and neck. No first-years seen in South America and Antarctica in the southern spring approach the darkness of the head and underparts of birds from the southern Indian Ocean.

Bare parts The already large bill (it continues to grow slightly at least until the bird is three-years old; Kinsky 1963) begins to show a yellow tip from June onwards (and rarely also a yellow or pink base). It is still very dark overall in first-summer, with restricted or no yellow at the base and clear, small yellowish-cream tips to both mandibles – and is thus reminiscent of first-summer Lesser Black-backed Gull. Birds from South America have the bill becoming paler from the base, showing noticeable pink or yellowish-pink at the bill-base by the southern spring and, at most, just a tiny off-white bill-tip. The legs are normally pink, smudged with dark grey or brown, but are sometimes entirely greyish-brown. The iris is dark brown.

Second-winter and second-summer

At this age, Kelp Gull is quite variable in its plumage and bare part colouration. Second-years are best separated from first-years by their new generation scapulars, mantle feathers and wing coverts, and also by their bill pattern. Third-years are generally clearly different, with an almost complete slate-black saddle and upperwing.

Tail and rump The tail is still very dark, but white now shows along the entire outer web of the outermost feathers (with a few dark notches), and often the outer tail feathers are clearly white-based. The tail pattern varies from mostly black to white with a black subterminal band. The rump is white, and the uppertail-coverts are heavily barred dark brown, but sometimes entirely white in second-summer.

Upperparts and upperwing The upperparts are variable, ranging from mottled to almost uniform dark grey. The new second-year scapulars and mantle feathers are grey, with slate-black or dark grey centres and paler brown tips. The more uniform are the mantle feathers, the darker slate-black they are. The upperwing coverts are generally very plain brown or greyish-brown – especially the greater coverts (which are uniform or slightly vermiculated on the outer web), with more patterned median and lesser coverts (more or less pale tipped or fringed), or even all coverts uniform brown (no pale fringing), when the open wing appears all dark brown with blacker flight feathers. The tertials are very dark and plain, with white restricted to the extreme tips or even subterminal vermiculations, and generally a white subterminal 'window' creating a white tertial crescent.

A white trailing edge to the wings is present and confined to the inner secondaries or, occasionally, broader and extending to the primaries. In the southern summer, the bird shows a complete slate-black saddle and mostly slate-black upperwing coverts. Rarely, second-years already show a small white mirror on the outermost primary (in populations of the southern Indian Ocean and possibly also in New Zealand, *ie* in populations where the adults have or can have two white mirrors on the outer primaries). Second-winters of the African *vetula* race appear to show more moulted slate grey wing coverts and more uniform upperparts.

Head and underparts The body can be very dark in winter, with bold brown streaks on the neck and a dark area around the eyes, but an off-white facial collar. The undertail-coverts are very like that of first-year. Some birds can be extremely pale, with a mainly white head and underparts, but distinct streaks on the hind-neck, while a rare variant plumage seen in the southern Indian Ocean (but not seen in the Antarctic or South American populations) is very dark brown and uniform, with a paler facial collar as in first-winter. The darkness of immature plumages shows geographical variation, as only the pale variant mentioned above occurs in South America and the Antarctic. The lesser and median underwing coverts are mottled brown and white, darker than the primaries, while the greater underwing coverts are white.

Bare parts Some second-years are best aged by their bill and eye colouration. Second-winters have the bill black with a yellowish-cream tip and a pale yellow base beginning to show or extensively present, especially during the following summer. Typical New World individuals show a yellow bill with a dark tip or dark terminal smudge. The bill pattern is variable at this age, however; some second-summers can show an adult-like (but duller) bill pattern. The iris is paler than in first-year (except for South African and South American populations): generally brown to pale brown, although it tends to appear dark from a distance. The legs vary from brown to greyish-green to pinkish (invariably greyish-green in Chile).

Third-winter and third-summer

Third-years are very similar to adults, with a plain slate-black saddle and upperwing, but darker head and body and generally some black in the tail. Advanced birds are very adult-like, but generally they retain some immature characteristics (such as grey streaks on head, dark iris, a brown wash to the upperparts, worn brown-toned primaries in spring and summer or dark on the bill).

Tail and rump The tail is mainly white, with a variable amount of black in a broken tail band. The latter can be very conspicuous or even totally lacking, some birds showing all-white tail. The rump is white.

Upperparts and upperwing The mantle and upperwing are almost plain slate-black as in adult, but often with a slight brownish cast due to wear on some feathers. The upperwing is adult-like, with a broad white trailing edge to the secondaries, and usually one small white mirror on P10 for sub-Antarctic populations of the Indian Ocean (rarely there is a second smaller white mirror on P9), while birds from South America, Antarctica and South Africa usually lack any white mirror. The median primaries show a typical white tongue (comma mark) on their inner webs, separating the slate-black base from the black tip of the feather. This does not hold true for African and Malagasy birds, however; these usually have no obvious pale tongues on the primaries, like Lesser Black-backed and Baltic Gulls. Up to eight primaries are black-tipped, and white tongues (if present) are visible on two or three of P4, P5, P6 (often only P4-5), sometimes also on P3 or P7. The white primary tips are generally smaller than in adult, and usually completely abraded in third-summer plumage, at a time when the old tertials and wing coverts develop a typical brown tinge, which contrasts with the new slate-black saddle.

Head and underparts The head and breast (and rarely the undertail-coverts) are still mottled with greyish-brown streaks/spots (a difference from adult winter plumage) – often heavily streaked in southern Indian Ocean populations (fresh birds showing a complete dark-streaked hood), but only moderately streaked and most densely on the back of the neck in South American birds. Some birds are white-headed, with just a few grey streaks on the hind-neck and head, while others show a very dark head, neck and breast. The rest of the underparts are white. The underwing coverts are mainly white, with a few showing pale brown tips that fade rapidly.

Bare parts The bill pattern is variable, from adult-like to yellow with a black subterminal band / mark and a yellowish-white tip. The iris can be still dark, pale grey or yellow more or less flecked with brown, so can approach that of adult (similar to that of adult South African birds and dark-eyed South American birds). The legs are bluish-grey or greenish-grey.



Plate 14. Second-winter Kelp Gull *Larus dominicanus*, Kerguelen Islands, South Indian Ocean, April 1996 (Frédéric Jiguet). A very dark, uniform brown bird, which has freshly moulted. Individual plumage variation is considerable in Kelp Gull, but note the typical structural characters.



Plate 15. Second-winter Kelp Gull *Larus dominicanus*, Kerguelen Islands, South Indian Ocean, June 1996 (Frédéric Jiguet). On those birds that show blacker scapulars, these feathers are also more plainly patterned. The bill still shows extensive dark markings.



Plate 16. Second-winter Kelp Gull *Larus dominicanus*, Kerguelen Islands, South Indian Ocean, August 1996 (Frédéric Jiguet). Note the largely dark tail and dark outer wing in flight. Although the iris is olive-grey, it may still look dark in the field.



Plate 17. Second-summer Kelp Gull *Larus dominicanus*, Ushuaia, Argentina, November 1996 (Jim Bangma). By their second-summer, the bill and legs of Kelp Gull show adult-like colours. Subantarctic and especially Antarctic Kelp Gulls appear rather short-billed.

Plate 18. Second-summer Kelp Gull *Larus dominicanus*, Crozet Islands, South Indian Ocean, December 1995 (Frédéric Jiguet). A typical second-summer shows a blackish 'saddle' contrasting with browner wings.



Plate 19. Second-summer Kelp Gull *Larus dominicanus*, Crozet Islands, South Indian Ocean, December 1995 (Frédéric Jiguet). Note the active moult in the remiges and the new, pale, third-generation tail feather.





Plate 20. Second-summer Kelp Gull *Larus dominicanus*, Reñaca, Chile, December 1996 (Alvaro Jaramillo). The contrasting black saddle and brown wings is a pattern reminiscent of Lesser Black-backed Gull in Western Europe – only in the northern summer.



Plate 21. Second-winter Kelp Gull *Larus dominicanus vetula*, Cape Town, South Africa, April 2000 (Ian Sinclair). This presumed 'Cape Gull' is in advanced moult and shows many new black median coverts. Note the colours of the still immature bare parts.



Plate 22. Second-summer Kelp Gull *Larus dominicanus*, Concon, Chile, March 1998 (Alvaro Jaramillo). At the end of the Austral summer, this bird shows extremely bleached wings.



Plate 23. Second-summer Kelp Gull *Larus dominicanus vetula* moulting to third-winter plumage, Ushuaia, Argentina, January 1997 (Philippe Dubois). An individual in very advanced moult, having replaced nearly all its wing coverts, and with the bare parts adult-like.

Plate 24. Third-winter Kelp Gull *Larus dominicanus*, Kerguelen Islands, South Indian Ocean, May 1996 (Frédéric Jiguet). The upperparts and wings are adult-like, but note the dark tail and dark markings on the bill.

Plate 25. Third-winter Kelp Gull *Larus dominicanus*, Kerguelen Islands, South Indian Ocean, May 1996 (Frédéric Jiguet). The wings and tail are almost adult.



Adult

Adults are very similar to Lesser Black-backed Gull, but have a different structure, a wider white trailing edge to the wing, wider white tertial and scapular crescents and a large white mirror on the outermost primary (for populations of the southern Indian Ocean and New Zealand), as well as white tongues on the inner webs of P5-P7 (except for some South African and Malagasy birds). These features are diagnostic, and actually more reminiscent of Great Black-backed Gull. Adult Lesser Black-backed Gull is slender, with a longer wing, smaller bill, obvious yellow legs when breeding, and narrower white trailing edge to the wing in flight. Adult Kelp Gull has larger white primary tips, averages duller in the leg colour, may be dark-eyed as an adult, and keeps a white, unstreaked, head in winter plumage. Kelp Gulls have thicker legs than Lesser Black-backed Gulls.

Wing and primary patterns Adults are best characterised by their structure and wing pattern: an obvious white leading edge, broad white trailing edge to the secondaries and inner primaries, large white tips to the outer primaries, a white mirror on the outermost primary (sometimes with a second smaller mirror on P9 in some populations), and white tongues (subterminal comma marks) on the inner webs of some median primaries (at least two of P5-P7). Birds from African and Malagasy populations have attenuated white tongues on the median primaries, often restricted to an obvious one on P5 and an almost indistinct one on P6. The secondaries and tertials are always extensively white-tipped. At rest, the former also overshoot the greater coverts in the folded wing, thus bordering the blackish wing with a white lower margin which merges into the broad white tertial crescent (there is also a large white scapular crescent).

In flight, the wing shows a white leading edge and a broad translucent white trailing edge (3-4cm wide) lengthened by obvious white tips and mirror(s) on the outer primaries. The underwing shows dark under-primaries, while the secondaries do not look paler because of their broad white tips and the white greater underwing coverts that cover their bases. Thus the dark panel created by the dark flight feathers disappears around the middle of the arm.

Five or six primaries are black-tipped, and these tips are very difficult to tell apart in tone from the slate-black bases, except on some of the median primaries (generally P5-6, P5-6-7 or P6-7), when a white tongue separates both on the inner web, in a pattern which recalls Great Black-backed Gull, but discriminates Kelp from typical Lesser Black-backed and Baltic Gulls. The latter two also show a white tongue on P5 in adult plumage, and on P4 on third-years, in a pattern approaching that of African Kelp Gull. The tip of the outermost primary varies from all white in birds showing two mirrors (as on Caspian Gull - Garner & Quinn 1997) to a large white tip and a large or medium-sized white mirror separated by a complete black band. A second mirror on P9 is not always present; if present, it is small and restricted to the inner web, or larger and across the whole feather.

There are some geographical variations in the outer primary pattern. Birds from the southern Indian Ocean display two mirrors (with all potential exceptions noted in fact being advanced fourth-years), while the rule is one small mirror for birds of the Falklands, South Georgia, Antarctica and South America. A small minority of South American birds may show a second mirror, but this is very rare. In New Zealand, both kinds of pattern are common, as some 35% of birds show a second white mirror on P9 (D.J. James in Higgins & Davies 1996; F. Jiguet pers. obs.). In South Africa and Madagascar, there is one small mirror on P10. Kelp Gull from southern Africa is said to have a slightly narrower white tertial crescent and trailing edge to wing.

Head and underparts

The head is invariably white, even during the non-breeding season. Some birds show a very few grey spots/streaks on the head just after the post-breeding body moult. Some of these are probably sub-adults (*ie* advanced third-winters or fourth-winters). The underparts are entirely white, as are the underwing coverts.

Bare parts The bill is bright yellow, often orange tinged, with a large red spot on the lower mandible at the gonys. During the non-breeding season, the bill is duller yellow with a smaller red gonydeal spot and creamy-yellow tip. The iris varies from cream to pale yellow, while adults from South Africa have darker eyes (see below). Variations in other populations of presumed nominate *dominicanus* also



Plate 26. Third-winter Kelp Gull *Larus dominicanus*, Kerguelen Islands, South Indian Ocean, June 1996 (Frédéric Jiguet).

Although the plumage is fully adult, the legs are still pinkish and the bill still shows some immaturity.



Plate 27. Third-winter Kelp Gull *Larus dominicanus*, Falkland Islands, South Atlantic, October 1980 (Alain Guillemont).

This bird shows some non-adult lesser coverts on the upper- and underwing, and limited dark speckling in the tail.



Plate 28. Third-summer Kelp Gull *Larus dominicanus vetula* moulting to its first adult winter plumage, Cape Town, South Africa, February 2000 (Ian Sinclair). The all-dark primaries are about to be replaced, whilst some fresh feathers are scattered amongst the wing coverts.

Plate 30. Third-summer Kelp Gull *Larus dominicanus* moulting to first adult winter plumage, Kerguelen Islands, South Indian Ocean, December 1995 (Frédéric Jiguet). Note the mixture of old and new wing feathers.



Plate 29. Third-summer Kelp Gull *Larus dominicanus*, Concon, Chile, March 1998 (Alvaro Jaramillo). Although adult-looking, this bird has only tiny white spots on the primary tips and lacks a white mirror on the outermost primary – a sure sign of immaturity.

Plate 31. Adult summer Kelp Gull *Larus dominicanus vetula* moulting to winter plumage, Cape Town, South Africa, February 2000 (Ian Sinclair). A bird with a rather pale iris. Note the bare parts colours can alter during active moult.





Plate 32. Adult Kelp Gull *Larus dominicanus*, Punta Tombo, Argentina, November 1986 (Alain Guillemont). This bird is dark-eyed (like most 'Cape Gulls') and appears big-billed and flat-headed, although this may be due just to this bird's immediate mood.



Plate 33. Adult summer Kelp Gull *Larus dominicanus*, Kerguelen Islands, South Indian Ocean, March 1996 (Frédéric Jiguet). In adult Kelp Gull the black upperparts contrast little with the closed primaries. Note the pale eye – 'Cape Gull' is dark-eyed.



Plate 34. Adult winter Kelp Gull *Larus dominicanus*, Marion Island, South Indian Ocean, September 1979 (Ian Sinclair). Note the short wings (only 4-5 primary tips being visible beyond the tertials). This individual also shows a short bill and short legs.

Plate 36. Adult summer Kelp Gull *Larus dominicanus*, Crozet Islands, South Indian Ocean, December 1995 (Frédéric Jiguet). This individual is of the type which shows a white tip to P10 and a mirror across both webs of P9.



Plate 35. Adult Kelp Gulls *Larus dominicanus*, Algarrobo, Chile, October 1998 (Alvaro Jaramillo). Note the size variation here. Adult Kelp Gulls are as dark above as the darkest Lesser Black-backed Gulls.

Plate 37. Adult summer Kelp Gull *Larus dominicanus*, Terre Adélie, Antarctica, January 2000 (François Prud'homme). Note the very broad white tips to the secondaries.



include a brown-speckled yellow (and thus dark) iris. In Chile, the majority of birds appear dark eyed, while most are pale eyed in Antarctica and Argentina.

Breeding birds have bright red orbital rings, which turn to orange-red during the non-breeding season (southern Indian Ocean, New Zealand), or orange-red orbital rings (Chile). Kelp Gull is similar in this respect to Lesser Black-backed Gull. The legs are mustard-yellow in breeding birds, but fade to straw-yellow, greyish-yellow, olive-grey or, rarely, bluish-grey during the non-breeding season. However, *L. d. vetula* in full nuptial plumage has a yellowish orange orbital ring. In non-breeding *vetula*, the colour is almost totally washed out and a hardly noticeable pale yellow. Adult *L. d. vetula* never has bright yellow legs. At most, in fresh full nuptial, they may show a tinge of yellow to the overall olive-coloured legs. The eye is dark all year round and appears as a small black eye on a large and rakish head. At close range, the true iris colour is a dull, olive-brown, sometimes with paler variations (dull yellow or cream and brown-speckled iris, but appearing dark brown at distances beyond one metre). The Kelp Gull on Madagascar, although not prone to vagrancy, might cause identification problems with northern gulls. Although the Malagasy birds display a similar primary pattern to South African birds, they have bright, chrome yellow legs and a very pale eye (almost white with a tinge of lemon-yellow). This is completely different from *L. d. vetula*, and would suggest Baltic Gull but for the body shape and short wings.

Summary

More vagrants of this enigmatic gull species are surely on their way to the Western Palearctic. Attentive gull watching along the Atlantic coast of North Africa (and further North!) could certainly reveal more Kelp Gulls. Facing any putative Kelp Gull, special care should be taken to take notes on the structure and moult stage, as well as on the wing and tail patterns for immatures and on primary and secondary patterns and bare parts colours for adults. Geographical variations in the structure, size and plumage within Kelp Gull certainly need more work and clarification. Our preliminary comparison of different populations of Kelp Gulls shows that Indian Ocean birds are diagnosably different from African and New

World birds, while African birds differ in some ways from other populations, and the population on Madagascar needs to be examined further. Quite how these all relate to the New Zealand and Australian group is also still unclear.

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