Moult and plumage variation in immature Lesser Black-backed Gulls in the Netherlands

Juvenile plumage

Juveniles are variable in several respects. Birds observed in the Netherlands, especially later in autumn, quite often show reduced markings on their head and underparts, sometimes appearing whitish. The underlying coverts are less often all dark brown and regularly greyish brown to off-white densely and finely barred brown — rather similar to European Herring Gull *L. argentatus* or pale, sometimes similar to Caspian Gull *L. cachinnans*. The tail often shows more white, which on the palest birds produces a dark subterminal tail-band with some fine barring towards the base, again somewhat similar to Caspian Gull. Some birds show a similarity to many *fuscus*, and the occasional bird may actually have been this taxon, but in general I believe most of these birds originate from within the distribution of *intermedius* based on their rather regular occurrence and features observed on the few ringed juveniles. More in general, the variation seems to be rather continuous, with *intermedius* being on average rather intermediate between the two other taxa.

Appearance during first spring

Second-generation scapulars replacing the juvenile
Feathers during the first moult are very variable and the coloration and patterning seem to depend to some extent on the time the feather is grown. These are also the most variably patterned and conspicuous of all feathers at any age.

As a rule, within a single bird, when these feathers are grown later dark markings tend to be less pronounced (or absent) and pale edges tend to become paler and broader. There is, however, much variation between individuals, both in patterning and in the influence of the ‘ageing-effect’: on some birds, up to three ‘generations’ of feathers can be distinguished, while others with a supposed similar moult development may not show any obvious differences.

Most second-generation scapulars can be described as follows: a rather brown to grey base fading into a more or less broad pale brown to white tip with dark markings varying from a semi-circle to a narrow anchor, which may be totally absent. The shape of these dark markings is almost always rather poorly defined and often diffusely bordered. The darkest part is almost always a diffuse, rather broad shaft-streak. This may be reduced to a fine dark streak but also enhanced to a diamond shape at the base of the feather. These markings tend not to show sharp markings, pale grey tones and strong contrasts as is usual among many other ‘large white-headed gulls’ and their general appearance is often rather drab grey to brown, occasionally being evenly dark grey to blackish, often with pale tips and edges. The actual variation allowed by this framework is very wide but not all variation is equally frequent or even present in all populations.

As graellsii is earliest in acquiring new scapulars, these birds often show the boldest and best defined markings and little prominent pale tips and edges. The colour-ringed intermedius usually showed grey-brown scapulars with a diffusely demarcated broad pale tip and edges and a diffuse dark shaft-streak, often confined to the distal part of the feather (plate 180). These feathers seem to represent the pale end of gradual variation that leads to the typical fuscus-scapulars. Other birds with an intermedius-type moult pattern showed more grey scapulars with a broad pale tip and reduced dark markings, similar to faded graellsii-type feathers.

Renewed coverts usually are similar to the scapulars in general coloration and patterning. New tail-feathers among juvenile ones can be detected by their fresh appearance, with dark parts being black, and usually a white trailing edge. The patterning may be similar to the juvenile tail, or show reduced black. Replaced secondaries may be very hard to detect but often show broader pale tips and edges and a darker centre, but this is most obvious if both generations of feathers are present (plate 190). If the feathers of head and body have been replaced, these are white. The amount of brown markings is then reduced and usually limited to diffuse spots to the lower neck and flank, if present. Such markings are usually more sharply defined than on the juvenile feathers and may appear as pale brown barring on the flank.

Appearance during second spring Fuscus (and some intermedius) will finish the second moult on the wintering grounds. If so, some of these birds may show a small white mirror on the outer primary which is probably best seen as an indication that the feather was grown during the second winter, as I have never seen it on birds finishing their moult in western Europe. Furthermore, only ‘large white-headed gulls’ that have large white mirrors on p10 as an adult regularly show this feature on primaries grown during the autumn of the second calendar-year (eg, most Great Black-backed Gulls L. marinus, Caspian Gulls and some...
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Scandinavian Herring Gulls *L. a. argentatus*.

When returning from the wintering grounds after their second winter, Lesser Black-backed Gulls have generally acquired adult-like scapulars. Few birds show pale edges or a pale tip to these feathers. In rare cases, grey may be nearly or completely absent. Such birds show scapulars with a broad pale tip and may show a brown shaft-streak. Any new tertials or coverts are usually of the adult type, but may show a brownish hue or appear rather washed out. The rump and uppertail are unmarked white. New tail-feathers are all white or may show restricted dark markings. If any primaries have been renewed during winter, such birds are easily overlooked as older birds. Many such birds show a broken tail-band, only small black markings or an all-white tail. Retained second-generation primaries are worn and bleached to brown and lack the grey tones over the head. The head, neck and underparts are often all white but quite extensive streaking may be present on the back.

The birds with the least extensive third moult – the average *graellsii*-type – typically show a plain grey back ('saddle'), a medium to pale brown wing and a white tail with an unbroken broad dark tail-band. More advanced birds show black-like wing coverts, and even if just over half of these have been replaced, the overall picture is rather similar to that of an adult on the standing bird, apart form the brown primaries and the dark bill markings. To the unaware, such birds are easily overlooked as others such birds show a broken tail-band, only small black markings or an all-white tail. Retained second-generation primaries are worn and bleached to brown and lack the grey tones they may have shown when fresh. Primaries renewed during winter may result in an adult-like ('inner') hand and such birds look very adult-like overall. When pt0 also has been renewed during winter, such birds are aged by the dark markings to the bill, any dark markings in the tail and possibly brown spotting on the coverts. Always be aware, however, of fourth calendar-year *graellsii*-type birds. Although these birds are a year older, they may be very similar. The rather pale grey upperparts, and often a larger white mirror in the outer primary may be helpful.

Size and structure

The variation in size and structure has been dealt with in sufficient detail elsewhere (e.g. Olsen & Larsson 2004). Despite *fuscus* being described as smaller, slender and longer winged than *graellsii*/*intermedius*, this is not reflected by the measurements published in this reference. Furthermore, even *graellsii* has rather slender wings and shows a relatively narrow wing base compared with other species of 'large white-headed gull'. It is my impression that the general perception of the differences in size and structure between *graellsii*/*intermedius* and *fuscus* has become somewhat exaggerated, possibly because usually the comparison was made between *graellsii* and *fuscus*.

Bare parts

By the first spring, bare parts are variable in all taxa. The bill of most birds shows an extensive pale base and black tip, often with the dark running back along the cutting edges. The base is greyish flesh to pale yellow. All-dark bills occur less frequently. Occasionally, the bill can be yellow, showing a reduced dark tip and sometimes even a hint of red on the gonsys. The legs are greyish flesh or sometimes yellowish.

Most, but far from all, third calendar-year birds show a pale iris. The bill is most often rather adult-like but shows more or less black near the tip. On some birds, the bill shows subdued coloration and on the odd bird may be similar to second calendar-year birds or be even largely blackish. The legs are most often yellow but less intense than on adults, and especially on some small, dark-backed birds may be rather lemon yellow. Occasionally, the colour of the legs too may be similar to those of younger birds.

Field identification of immature *fuscus* in western Europe

Moult was already considered by Jonsson (1998) to be the most important factor in identifying *fuscus* in Western Europe, while plumage features were generally considered to be of less use. In the light of the observations described above, this order can still be maintained. As already indicated by others (Adriaens 2002, Muusse et al 2005), identification features associated with moult should be used with more care than considered before and the few plumage features should also be applied only in case of good observation conditions.

The following two cases illustrate the caution with which the subject should be approached. One rather common type of second calendar-year *fuscus* but, on the dark end, this yields a plumage typical of the latter taxon; this extreme, however, also occurs in *intermedius*. The most striking example of this type is formed by two birds I encountered only minutes apart in the Netherlands. These were very similar in general appearance and their main differences were that one had the first moult progressed to