

Spring arrival of adult Lesser Black-backed Gulls *Larus fuscus* nesting in Guernsey, Sark and Herm, Channel Islands

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Abstract

Lesser Black-backed Gulls *Larus fuscus* nest in all the Channel Islands, with strongholds in Alderney and Sark. Breeding numbers in the islands (c. 1,730 pairs) appear presently stable, and the whole population is believed to leave the islands in winter. A colour-ringing programme began in 2008 and the timing and pattern of arrival for 125 colour-ringed adults, believed to be local breeders, was recorded at a landfill site on Guernsey from 1 January to 8 May 2010. Birds arrived back from 15 January to 1 May. Arrivals were slow initially, with only 6% back by mid February and 22% by the end of February. Peak arrival was from 27 February to 10 March, when 34% of birds were first recorded, and by the end of March 82% of birds had returned. Males did not arrive earlier than females. Five birds left the Channel Islands again soon after arriving, although all returned within a few days or weeks. Winter 2009/10 was unusually long and cold in the Channel Islands, and most of Western Europe, and further study should ascertain whether the arrival pattern of Lesser Black-backed Gulls in spring 2010 was affected by the harsher than average winter weather.

Introduction

For much of the twentieth century, populations of Lesser Black-backed Gulls *Larus fuscus* increased in Western Europe and the species' breeding range and habitats expanded, probably through a combination of reduced exploitation, and new feeding opportunities at refuse landfill sites and from fisheries discards (Furness *et al.* 1992; Camphuysen *et al.* 1995; Pons & Yésou 1997; Calladine 2004). This increase continued in Britain and Ireland until 1998–2002, at least at coastal colonies (Calladine 2004), although there was a substantial decrease in UK breeding numbers between 2000 and 2003 (JNCC 2010). The causes of this recent decline are unknown, but may include the reversal of factors contributing to earlier population increases, namely decreased availability of organic refuse and reduced discards from fisheries (Calladine 2004).

Lesser Black-backed Gulls breed in all the Channel Islands (CI), with numbers having increased by 470% between 1969–70 and 1998–2002 (Calladine 2004). The CI population numbered 1,734 apparently occupied nests (AON) in 1998–2002 (Calladine 2004), with up to 1,575 of these being in the Bailiwick of Guernsey, comprising Guernsey (100–125 AON), Alderney (320–370), Sark (810–900), and Herm and its adjacent islets (140–180) (Hooper 2007). While there

has been no further comprehensive census across the islands, there has clearly been further growth of the overall population, although the true extent of this has been obscured by a marked (but unquantified) reduction on Sark (pers. obs.) and a larger increase on Alderney. Counts on Burhou Island (off Alderney, now the largest CI colony) of 1,085 AON in 2005 and 1,074 in 2010 (J. Stockdale pers. comm.) suggest the CI population may now have stabilised.

British and Irish breeding Lesser Black-backed Gulls were almost exclusively migratory until the 1950s, since when numbers wintering in the British Isles increased from a few hundreds to over 60,000 by 1993 (Cramp & Simmons 1983; Hickling 1986; Burton *et al.* 2003), with further increases in some regions to 2004 (Banks *et al.* 2009); these include birds breeding in continental Europe, the Faeroes and Iceland, as well as British and Irish breeders (Rock 2002). Despite this, no large change was found in the proportion of British and Irish-ringed birds recovered dead in winter in Britain and Ireland compared to abroad, before (15%) or after 1970 (22%), nor any major change in their overseas distribution in winter (Rock 2002). The CI breeding population appears to have remained migratory and the species is scarce in winter in all the islands, with recent maximum daily counts in November/December of no more than ten birds on each of Jersey and Guernsey (Dryden *et al.* 2007–2009; pers. obs.), which are not thought to be local breeders.

Although over 3,500 Lesser Black-backed Gulls have been metal-ringed since the inception of the Channel Islands Bird Ringing Scheme in 1946, only once a colour-ringing scheme began in the Bailiwick of Guernsey in 2008 have individuals been identifiable in the field. This paper details the return dates in 2010 for 125 adult Lesser Black-backed Gulls colour-ringed in the CI in spring and summer 2008 and 2009.

Study Area & Methods

The Bailiwick of Guernsey, in the Bay of St Malo, comprises the islands of Guernsey, Alderney, Sark, Herm and Jethou, along with their associated islets (Figure 1). Most Lesser Black-backed Gulls nest on Burhou Island (off Alderney) and Sark, where access is either difficult (cliffs) or restricted (private islands and reserves), and viewing the colonies on a daily basis is impractical. However, a large landfill site for the disposal of organic waste at Mont Cuet on the north coast of Guernsey, the only such landfill in the CI, attracts large flocks of gulls throughout the year. During winter up to 5,000 gulls (mostly Herring Gulls *L. argentatus*) can be present, although estimates of the total present at any one time and the high turnover of colour-ringed birds suggest numbers using the site can exceed 10,000 per day (pers. obs.). Peak counts of 700 Lesser Black-backed Gulls have been made at Mont Cuet in early April, and over 400 adults can be counted on most days from mid March to early August, depending upon weather and tidal conditions, landfill operations and disturbance levels, and the availability of other food sources, including fisheries discards (pers. obs.).

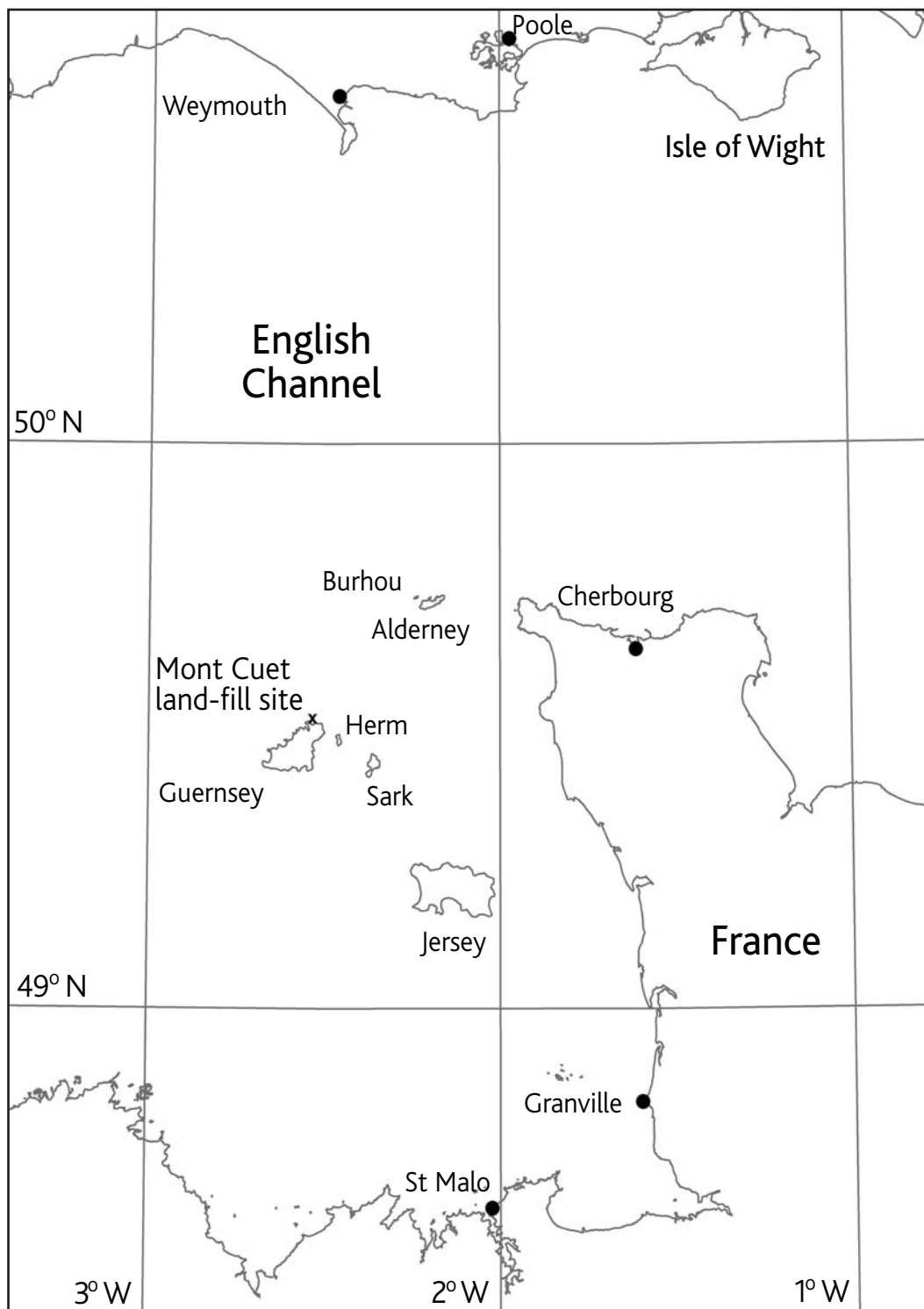


Figure 1. Map of the Channel Islands showing the location of islands mentioned.

Between 24 May and 6 July 2008, 16 adult Lesser Black-backed Gulls were colour-ringed at Ty Coed, one km from Mont Cuet landfill, and a further 122 adults were colour-ringed at Mont Cuet and Ty Coed between 4 April and 5 July 2009. Only birds in full adult plumage when caught have been included in this analysis. It is assumed (from the dates of capture) that these were birds nesting in the Bailiwick of Guernsey, an assumption supported by the fact that, to date, none has been reported from any breeding sites outside the Bailiwick. Further adults were trapped on their nests and colour-ringed at colonies on Sark (17) and Burhou, Alderney (67) in May and June 2009, respectively. Birds were sexed according to the combined length of head and bill (Baker 1993). Of the 157 adults colour-ringed, 53% (83) were identified as males, 36% (57) as females, and 11% (17) were left unsexed as their measurements fell in the overlap zone between the sexes. There was a significant bias towards males in the sample ($\chi^2 = 4.829$, $df = 1$, $P < 0.05$).

Extensive observations at Mont Cuet in summer 2009 and spring 2010 found that Lesser Black-backed Gulls nesting on Sark (14 km away) made regular feeding trips to the landfill (16 of the 17 adults colour-ringed there being seen), while only four of the 67 adults colour-ringed on Burhou (32 km away) were seen there, and then only irregularly. This corroborated a study of Lesser Black-backed Gull feeding behaviour on Burhou in July 2006, when in 14.5 hours of observations of 1,189 birds leaving Burhou and 855 returning, gulls flew NNW from the island to feed in the English Channel, not southwest towards Guernsey (Sanders 2007).

To those colour-ringed on Guernsey and Sark in 2008 (16) and 2009 (139), i.e. excluding those ringed on Burhou, were added two adult Lesser Black-backed Gulls colour-ringed at Gloucester, England in winter, but present throughout summer 2009 in Guernsey and therefore assumed to have been nesting locally. Using an annual adult survival rate of 93% (Wanless *et al.* 1993), it was estimated there should be 145 colour-ringed adults to look for in spring 2010, i.e. the 2008 total (16) \times 93% = 15 birds \times 93% = 14 birds, plus the 2009 total (including the two English-ringed birds) of 141 \times 93% = 131.

Mont Cuet landfill and three nearby beaches on Guernsey's north coast were visited regularly from 1 January to 8 May 2010 to record the arrival dates of returning adults. The visits, normally lasting two to three hours, were made during the first four hours of daylight on nine days in January, 23 in February, 27 in March, 29 in April, and seven in May.

Results

No colour-ringed birds were seen on six visits in early January, the first sighting (on 15 January) being of an unsexed bird ringed on Guernsey in June 2009. Thereafter, a series of arrivals and several minor peaks of up to nine birds per day (2 March) occurred, with 27% of birds seen in 2010 having returned by 1 March, 50% by 9 March and 75% by 26 March (Figure 2). The most concentrated arrival (42 birds, 34% of the total) was from 27 February to 10 March, inclusive, and while 60% of arrivals occurred in March, the other 40% were

spread over a period of 15 weeks. By 21 April all but one of the 125 colour-ringed Lesser Black-backed Gulls seen in 2010 had returned, with the last arrival recorded on 1 May, the total seen being 14% fewer than predicted by a 93% survival rate (145). The return dates for males (mean = 15 March) was no earlier than females (mean = 10 March) ($t_{107} = 1.29$, ns; Figure 2).

At least five birds left the Channel Islands again soon after returning in 2010. Three were seen in northwest France: at Mont Cuet 25 January, in Morbihan (202 km SW) 4 February, on Guernsey 8 February; at Mont Cuet 20 February, at a landfill in Mayenne (194 km SE) 5 March, on Guernsey 24 March; on Guernsey 23 February

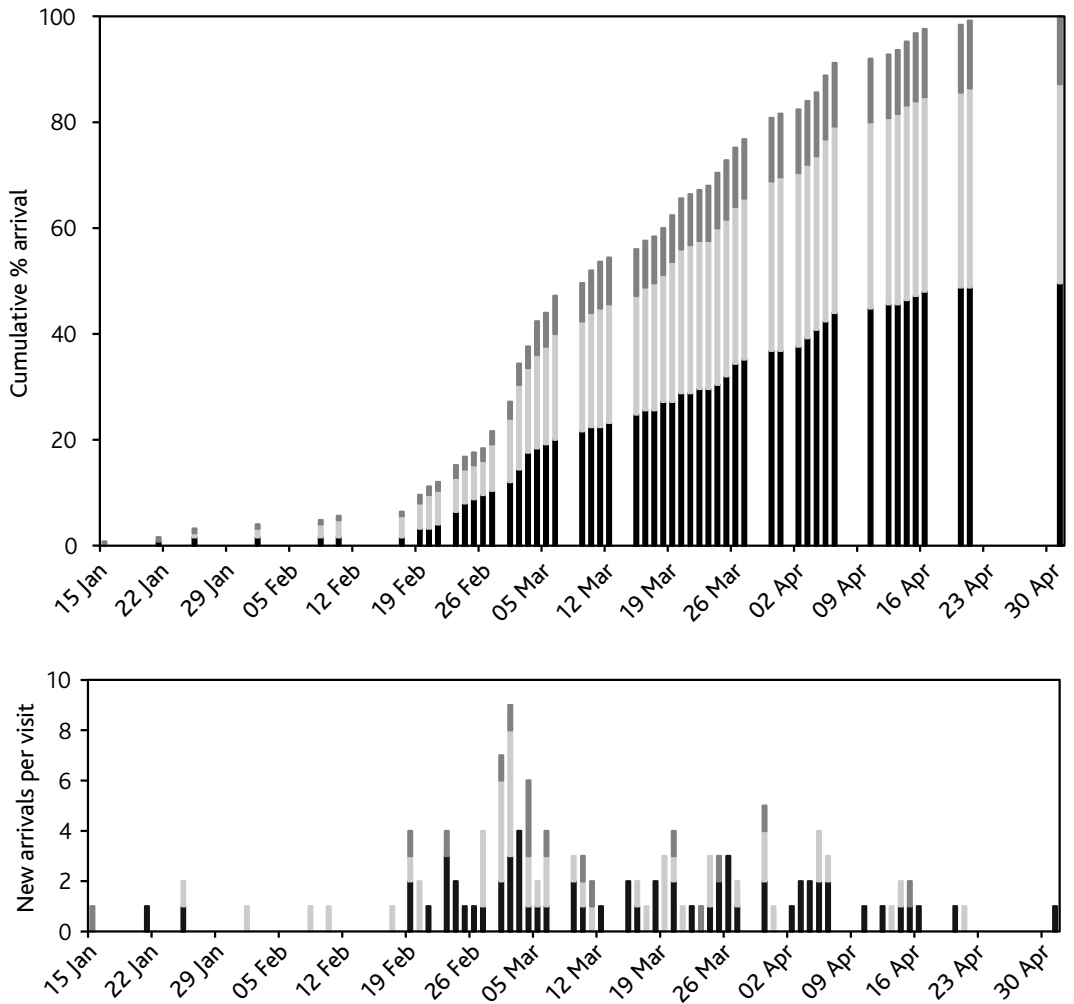


Figure 2. The cumulative percentage arrival (upper) in Guernsey in 2010 of 125 colour-ringed adult Lesser Black-backed Gulls *Larus fuscus*, and (lower) the number of new arrivals recorded per visit to the Mont Cuet landfill and neighbouring beaches; black = males, light grey = females, mid grey = unsexed.

to 6 March, at a landfill in Maine-et-Loire (where it had wintered to 16 February; 249 km S) 10 March, at Mont Cuet 15 March. Two gulls moved 270 km north to landfills in southwest England: at Mont Cuet 2–6 March, around Gloucester 8–11 March, at Mont Cuet 15 March; on Guernsey 22 March, at Cheltenham 23–26 March, at Mont Cuet 2 April.

Discussion

Lesser Black-backed Gulls return to their colonies from mid February to April (Cramp & Simmons 1983), although in much of Britain adults can now occur within their breeding range at all times of year, and may be seen in colonies as early as January (Rock 2002). While four colour-ringed adults had returned to Guernsey by the end of January, the main arrival in 2010 was in March, with 82% back by the end of that month. These observations, however, were of birds around a landfill feeding site and do not necessarily reflect the timing of territory establishment in colonies. Furthermore, winter 2009/10 was unusually cold, harsh and prolonged over much of western Europe and further observations will be needed to clarify whether the timing and pattern of arrival in 2010 was typical or not.

Five adults were known to have left the CI again shortly after arriving, moving south (up to 250 km) to France and north (up to 270 km) to southwest England,



Figure 3. Cannon netting Lesser Black-backed *Larus fuscus* and Herring Gulls *L. argentatus* at Mont Cuet landfill site, Guernsey, Channel Islands, 4 June 2009. © Vic Froome.

only to return within a few days or weeks. Sightings of other colour-ringed birds at Mont Cuet, which then went 'missing' for up to six weeks before being seen again regularly, suggest other birds may also have left Guernsey. However, caution is needed in interpreting these apparent absences because once the gulls have paired and begun holding territories they spend less time at the landfill or loafing on nearby beaches, making their observation less likely.

In contrast to the tens of thousands that now winter in southern Britain (Burton *et al.* 2003), most if not all the 3–4,000 Lesser Black-backed Gulls breeding in the CI leave in winter, despite Mont Cuet landfill attracting thousands of gulls of other species, principally Herring Gulls (pers. obs.). The colour-ringing study is in its early stages, but it appears that individuals breeding in the Bailiwick follow different dispersal and migration strategies, with most spending at least part of the winter in Iberia, others travelling no further south than northwest France, and a minority moving north to winter around landfill sites in southwest England (Veron in prep.).

Urban-nesting gulls benefit from abundant food supplies, safe nesting sites and from the fact that urban areas act as 'heat islands', enabling them to breed earlier and more productively than those nesting in traditional cliff and islet sites within the same region (Rock 2005). Lesser Black-backed Gull populations nesting on Guernsey and Sark (but apparently not those on Burhou) appear to benefit from the proximity of Mont Cuet landfill, and while they continue to nest in natural sites, this close and abundant food supply may enable them to nest as early and be as productive as urban gulls. Certainly, Burhou's Lesser Black-backed Gulls, few of which apparently feed at Mont Cuet, nest several weeks later than those on Guernsey and Sark (pers. obs.) and can have unproductive years, such as in 2007 when few eggs or chicks were found on visits in late June and July (Sanders 2007), and 2008 when 1,001 pairs raised only three young to near-fledging (Veron 2009). Despite this, it is clear that the nesting population on Sark has declined, while that on Burhou has increased (Veron 2009). Dumping of organic waste at Mont Cuet landfill is expected to cease by the end of 2011, and it will be interesting to see what consequence this has for spring arrival dates, timing of breeding, and numbers and performance of Lesser Black-backed Gulls nesting on Guernsey, Sark and Herm.

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