GREAT SKUA (BONXIE) *Stercorarius skua*

There were five records of singles between 26 November and 2 December 2009 off the north Fylde coast, Birkdale and Jenny Brown's Point, probably involving just one or two individuals, and one off Pilling on 7 February 2011.

SJW

BLACK GUILLEMOT *Cepphus grylle*

A male was at Heysham Harbour in summer 2008, prospecting a suitable nest site and displaying to Feral Pigeons; it was joined briefly by a second-calendar-year bird but nothing came of this.

The following year what was presumably the same male was present from spring onwards, joined in the area by a second-calendar-year bird on one date and an adult female during May and June but it is not clear if breeding was actually attempted.

The only winter record was one off Formby Point in January 2011.

SJW

RAZORBILL *Alca torda*

Since the mid-1980s there has been a marked increase in the number of Razorbills recorded off the Lancashire coast, particularly in autumn, from all our main seawatching stations. This may in part be a function of an increased interest in seawatching coupled with continuous improvements in the optical qualities of telescopes, but these factors do not account for the simultaneous decline in counts of Guillemots from around the same time.

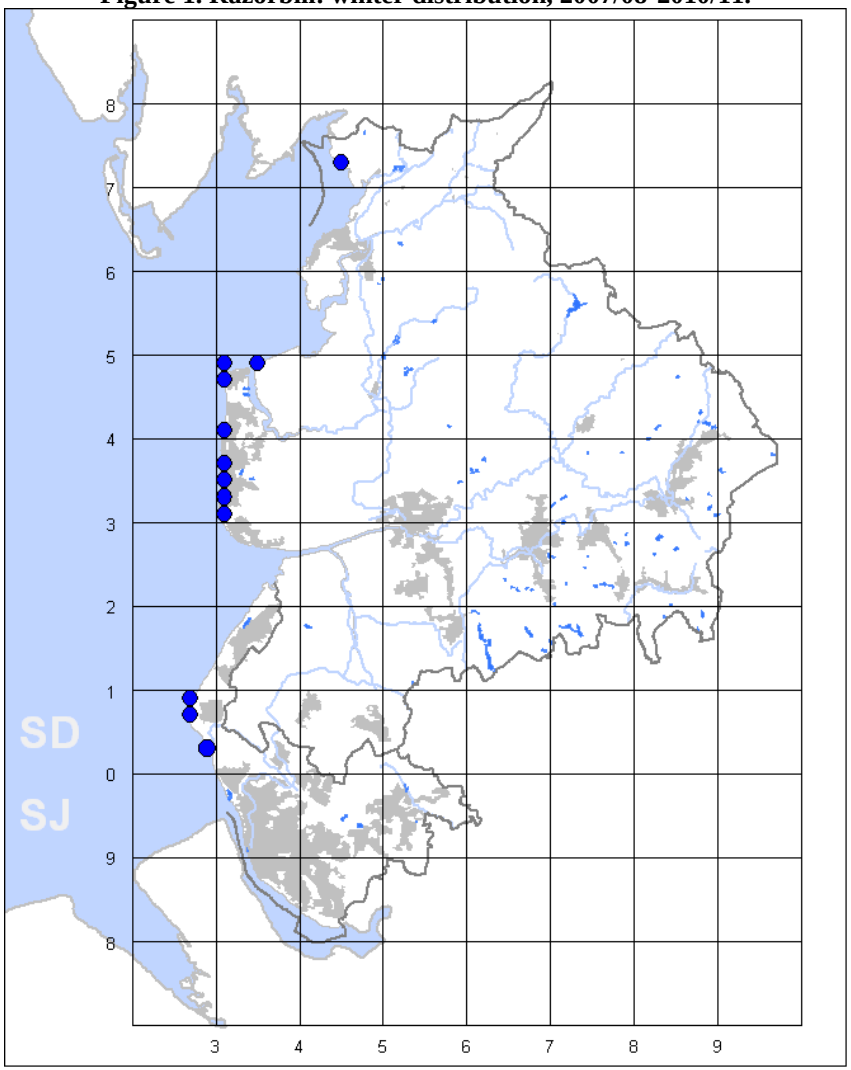
Razorbill movements on our coast show a marked peak during October, but a variable number of late migrants are very likely to be in our waters in November. Some of the records mapped below came from that month, such as five off Heysham in 2009 and 17 off Formby Point in 2011 and may well involve such passage birds rather than true winter residents.

The winter distribution map shows that Razorbills were recorded in or from only twelve tetrads during 2007/08-2010/11, nine of these from Blackpool northwards and three in the Formby Point area (Fig.1).

It is possible that higher numbers winter offshore beyond the range of land-based observers, but the majority of counts from all watchpoints during the survey period were in low single figures. The highest totals were off Formby Point, with eight in February 2008, 19 in February 2009 and 18 in January 2011; there were six off the Fylde coast in December 2008 and up to five off Blackpool in January 2011. The average winter population in our inshore waters is estimated at about 20 individuals.

BM

Figure 1. Razorbill: winter distribution, 2007/08-2010/11.



LITTLE AUK *Alle alle*

There were just three accepted winter records: one found dead at Crosby Marine Lake in November 2007 with another offshore there later that month, and two off Formby Point in December 2009.

SJW

GUILLEMOT *Uria aalge*

This was formerly much the commoner of the two regular auk species in Lancashire waters, but a decline in numbers began in the early 1990s, coinciding with an increase in counts of Razorbills. The latter species continues to predominate to the present time with substantial autumn movements recorded in most years, particularly in October, whilst peak numbers of Guillemots have dwindled to mere single figures on most seawatches at any time of the year.

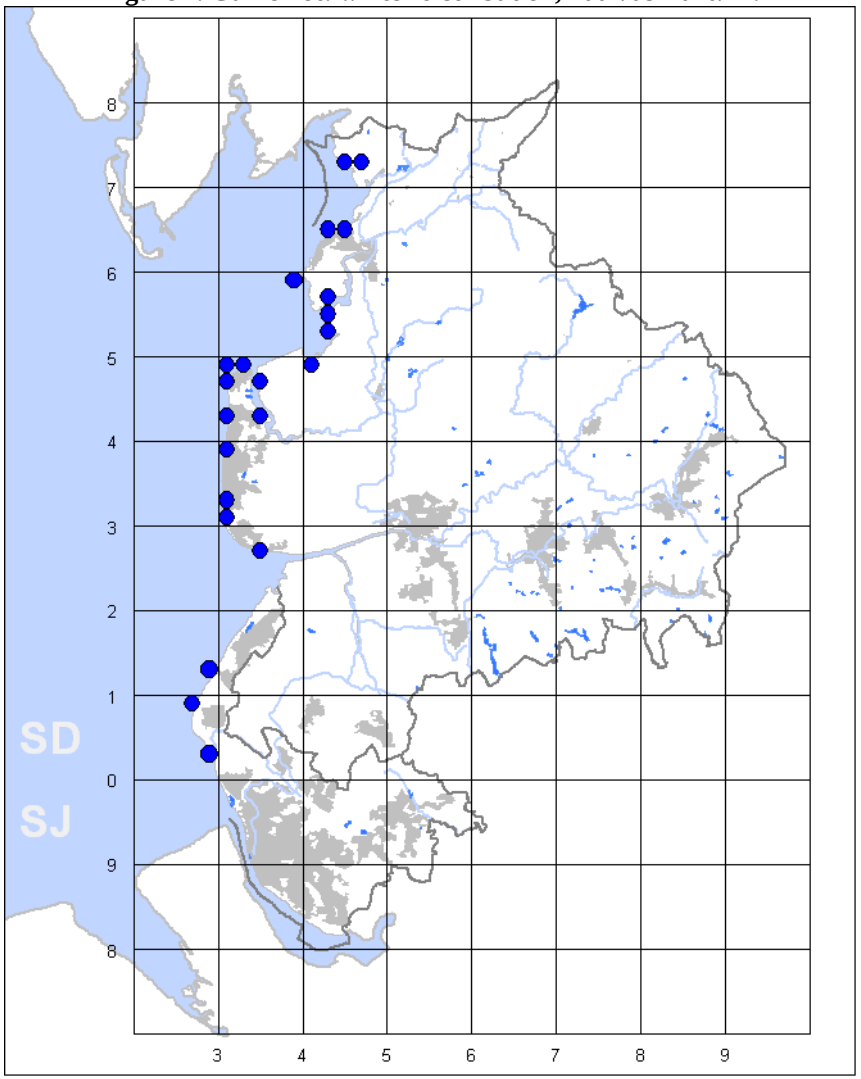
Very few Guillemots are recorded nowadays from shore in winter, and aerial and boat surveys off the Sefton and Fylde coasts have tended to confirm that only small numbers are normally present further offshore. That this may not always be the case, however, is suggested by the fact that winter storms occasionally produce moderate influxes, as at Heysham in December 2011 which involved about 30 birds, peaking at eleven.

The present survey recorded Guillemots in (or more accurately from) 22 tetrads (Fig.1). As the map shows, these were distributed along the entire coastline from Jenny Brown's Point to Crosby, but tetrad density was markedly higher on the Fylde and northern coasts; this may merely be a function of the fact that suitable seawatching stations are more plentiful in the north than south of the Ribble.

Peak counts during 2007/08-2010/11 were eight off Formby Point and six off Blackpool in February 2009. The mean inshore wintering population is 'guesstimated' at ten individuals, but several hundreds may occasionally overwinter in our offshore waters.

BM

Figure 1. Guillemot: winter distribution, 2007/08-2010/11.

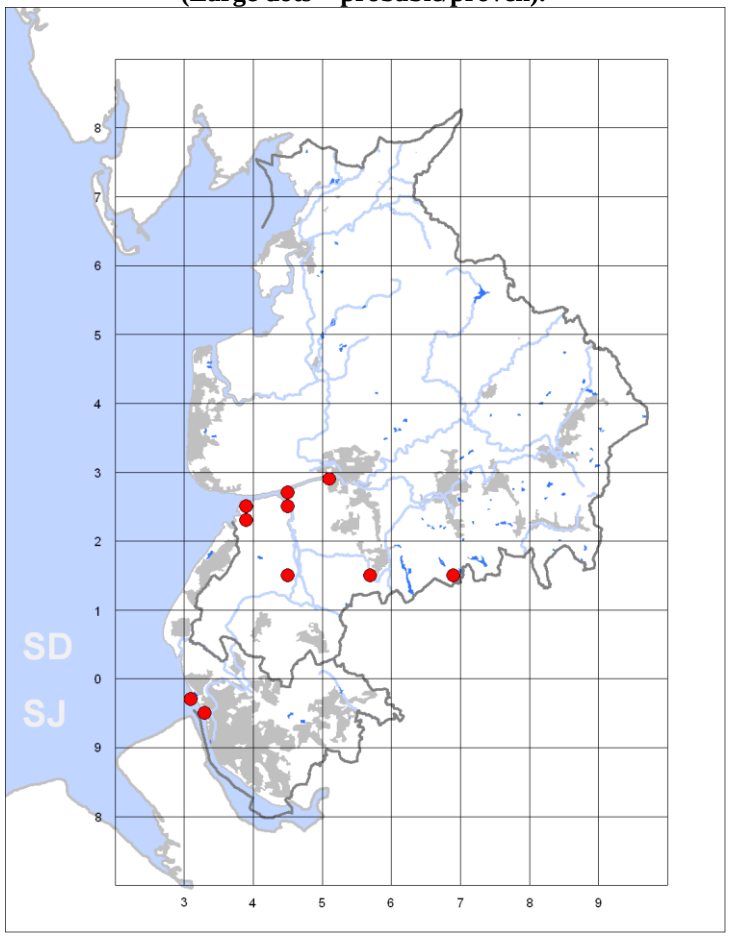


COMMON TERN *Sterna hirundo*

The ten years since the first Lancashire atlas survey have seen an increase in the numbers of Common Terns breeding in the county from around 300 pairs in 1997-2000 to at least 650 pairs during 2008-2011.

This optimistic picture is at first sight strengthened by the increase from nine to eleven in the number of tetrads in which Common Terns were proven or thought possibly to have bred, but things are not quite so straightforward.

Figure 1. Common Tern: breeding distribution, 2008-2011. (Large dots = probable/proven).



Two sizeable new colonies have been established in recent years together with smaller numbers at two other sites: at Preston Dock in 2009 and Liverpool's Langton Dock in 2010, and Delph Reservoir in 2008, Birkacre in the Yarrow Valley Country Park in 2009. In addition to these, breeding was thought possible at Jumbles Reservoir in Rossendale on the boundary with Greater Manchester.

The Preston Dock colony began with a single pair and grew to at least ten pairs in 2011 with another increase in 2012, while those at Delph Reservoir and Birkacre only held single pairs.

The Langton Dock situation was more complicated. Following the desertion of the very large colony at Shotton Steelworks on the Welsh Dee, many birds decamped initially to Seaforth but then relocated into the working docks, where at least 125 pairs bred successfully. Even larger numbers were present in 2011 when at least 300 nests were occupied but the whole colony was predated late in the breeding season and no young were raised. During the following winter the nest site was made unusable and, rather surprisingly, the birds failed to find another in the dock complex.

Lancashire's two main colonies at Seaforth and on the Ribble Marshes survived the decade intact. Numbers at Seaforth are limited by the number of rafts available to about 200 pairs but competition for space from the Shotton birds has led to very poor productivity since 2010.

The colony on Banks Marsh held 111 pairs in 2008; it has not been fully surveyed since but it is thought that numbers have at least remained stable. Common Terns have also showed some interest in colonising the recently restored Hesketh Out Marsh but without settling, while in 2009 34 pairs nested on Longton Marsh. This latter site is very inaccessible and did not appear on the 2000 map, but it seems likely that it has been occupied for many years.

Set against this relatively positive picture is the apparently complete loss of Common Terns as a breeding species in north Lancashire with the demise of the colony on Colloway Marsh on the Lune, where successful breeding last took place in 2004.

SJW

ROSEATE TERN *Sterna dougallii*

Although Roseate Terns have been seen with increasing frequency in Lancashire in recent years during spring and summer, especially at Seaforth, sometimes as pairs in courtship display, they had never shown any real intention to breed.

That is until a female paired up with a Common Tern at Seaforth in 2009, taking over an abandoned Coot nest but never laying. The following

year the pair returned and joined the 'overflow' ternery on the Langton Dock where two eggs were laid with one hatching and fledging. They returned to the same site in 2011 but their nest was predated.

Since there is no evidence that the species has ever nested in Lancashire previously this constituted our first breeding record – but whether a pure pair will ever do so remains a fairly forlorn hope.

SJW

ARCTIC TERN *Sterna paradisaea*

The Arctic Tern has an uncertain history as a breeding bird in Lancashire but it is likely that numbers have always been fairly small in comparison with Common Terns. A small population in the Sefton Coast dunes succumbed in 1962. Breeding has always occurred within Common Tern colonies and Arctics have probably never made up much more than 10% of the total, with the possible exception of the recently extinct colony on Colloway Marsh on the Lune, where breeding was last confirmed during the previous atlas survey in 1999.

The longest surviving extant colony is at Longton Marsh on the Ribble where breeding was first documented by Oakes in 1917. This site has always been inaccessible and the numbers breeding there during the atlas period are uncertain, but probably in low single figures.

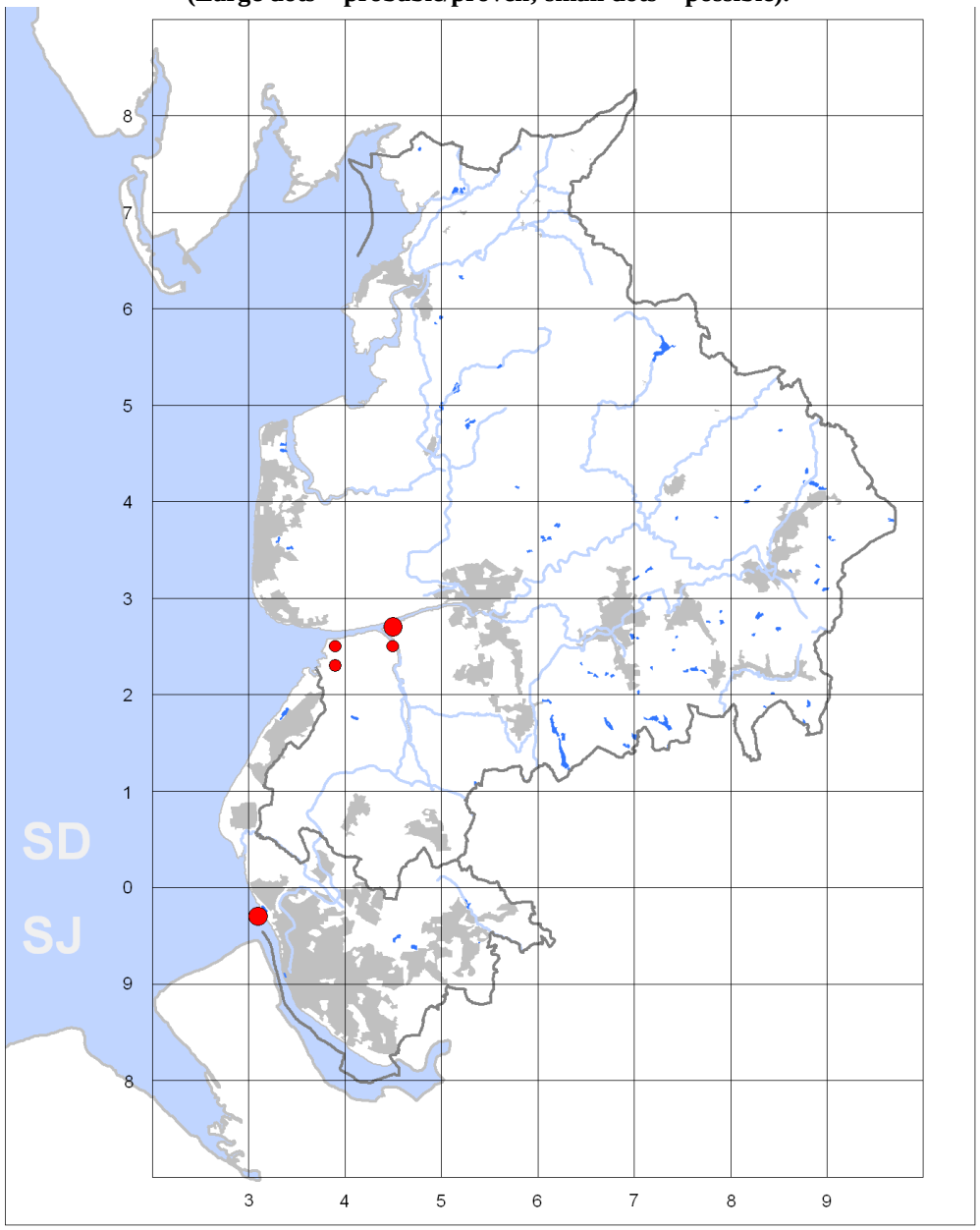
Breeding has probably also taken place elsewhere on the Ribble Marshes for more than 50 years, initially mainly on Hesketh Out Marsh before it was reclaimed and more recently on Banks Marsh. Numbers peaked at around 20 pairs at the latter site during the 1980s but have declined since; although evidence was found only of possible breeding during this survey it is fairly certain that nesting did take place.

The only other breeding record during 2008-2011 was at Seaforth where a pair defended territory and built nests in May 2008 and 2009 but never laid.

The county population is currently estimated at 10-15 pairs; higher than the four pairs estimated in the last atlas but that was almost certainly due an underestimate.

SJW

Figure 1. Arctic Tern: breeding distribution, 2008-2011.
(Large dots = probable/proven; small dots = possible).

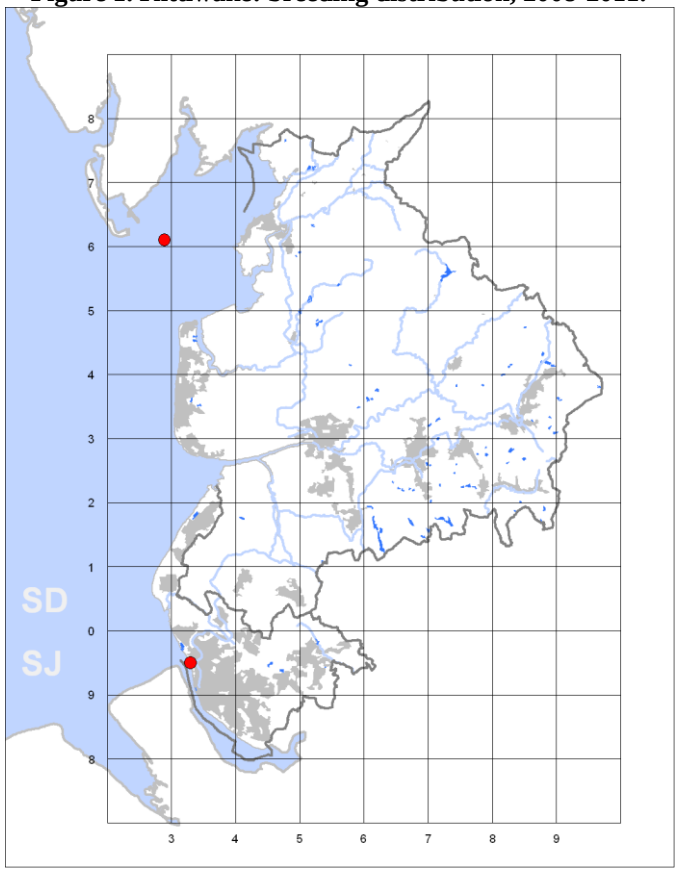


KITTIWAKE *Rissa tridactyla*

Breeding

The small colony in the Liverpool Docks that nests on a sheltered ledge on the seawall has been present since at least 2004. It is extremely difficult to monitor as it is only properly viewable from the Wirral side of the River Mersey, but it is thought that some 40-50 pairs nested during 2008-2011 with varying degrees of success.

Figure 1. Kittiwake: breeding distribution, 2008-2011.



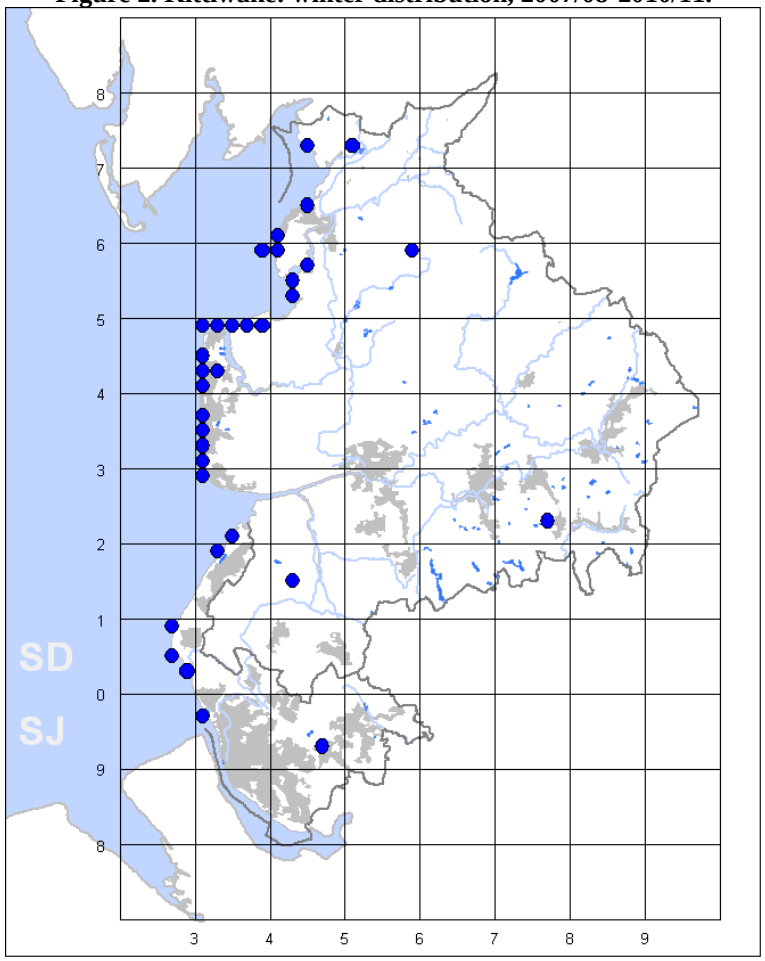
The county's first colony became established on the gas rigs in Morecambe Bay in 1998 and has grown from strength to strength with 180 pairs nesting in 2009 (their approximate location is mapped in Fig.1).

Finally, observations by seawatchers from Formby Point suggest that rigs of the BHP Billiton oil/gas field in Liverpool Bay now also support breeding Kittiwakes but this has yet to be confirmed.

Winter

Kittiwakes spend the winter far offshore and the majority of records during 2007/08 to 2010/11 were of late-departing birds in November or early migrants in February. Thus, although birds were recorded in 33 tetrads during the survey period (Fig.2), just 13 of these were truly winter records in December and January.

Figure 2. Kittiwake: winter distribution, 2007/08-2010/11.



All four inland records – three in November and one in February – were migrants making brief appearances: at Martin Mere, Prescot Reservoirs, Holden Wood Reservoir and Langden Head (presumably flying over).

A total of 655 individuals was counted during the four 'winters' but more than half of these were accounted for by just three large movements: 101 off Fleetwood, 137off Pilling and 147 off Jenny Brown's Point.

SJW

BLACK-HEADED GULL *Chroicocephalus ridibundus*

Breeding

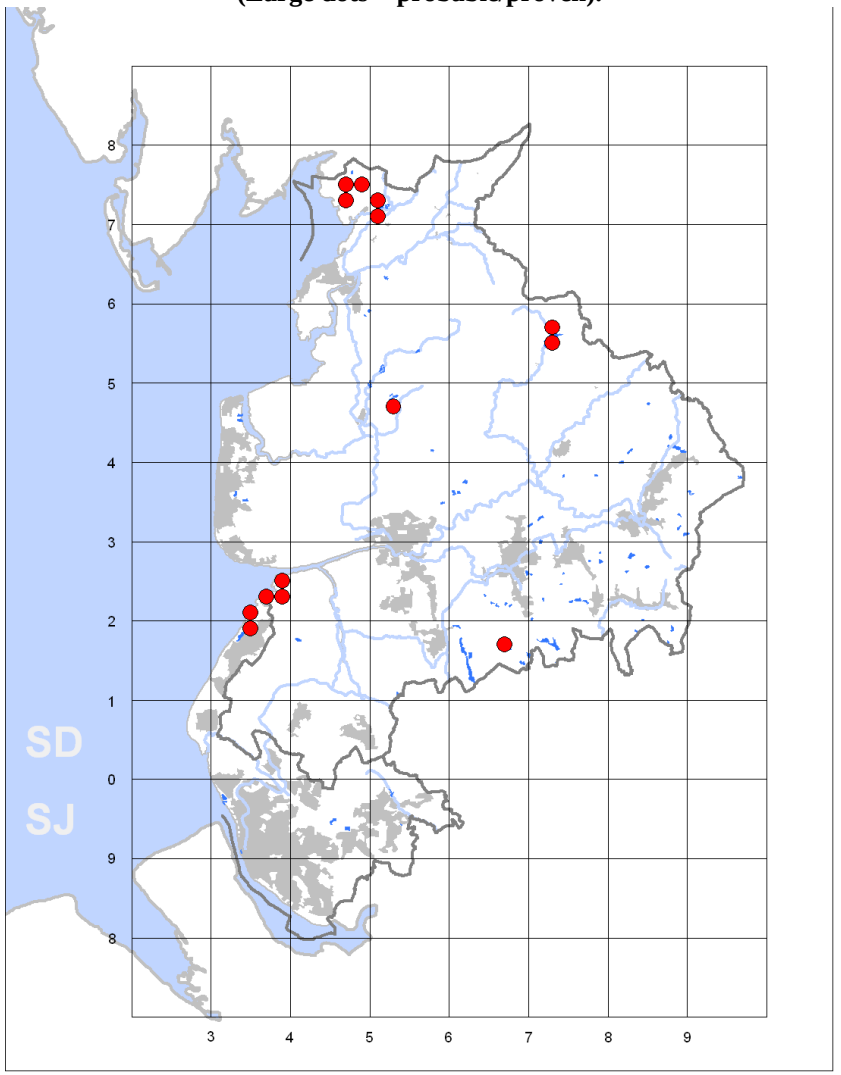
Black-headed Gulls nested in 14 tetrads during 2008-2011, far fewer than either of our other two common breeding gulls due to their failure to adapt to urban nest sites (Fig.1).

They were almost entirely confined to four major colonies. The largest was established on the Ribble marshes in 1949 and peaked at around 20000 pairs in 1989; it is now largely confined to Banks Marsh where numbers declined to 14300 pairs during the 1997-2000 atlas survey and 5242 pairs in 2008 (with 160 on Crossens Out Marsh in 2009). None nested during the present survey on the north Ribble marshes, where 2000 pairs bred on Warton Marsh in 1997.

Lancashire's other major colony at Belmont Reservoir had, prior to the first Lancashire atlas survey (which recorded 70 pairs in 1999), only seen sporadic breeding by a maximum of 30 pairs since the 1950s. Since 2001 the Belmont colony has grown at an astonishing rate to 3540 pairs by 2007, while an aerial photographic survey in 2011 identified 6738 nests.

Two other large colonies are extant in Lancashire, at Stocks Reservoir and at Leighton Moss and the Eric Morecambe complex. The Stocks colony has previously been subject to widely fluctuating estimates of its size with the 6000 pairs reported in 1978 questionable given the size of the nesting island. The present survey recorded 1000 pairs in 2009 but this was possibly an underestimate considering that 1580 pairs had been located by a full survey in 2002.

Figure 1. Black-headed Gull: breeding distribution, 2008-2011. (Large dots = probable/proven).



The colony at Leighton Moss first became established in 1919 and grew to 631 pairs in 1983 before mostly shifting to the newly-constructed Allen/Eric Morecambe Pools, where 1220 pairs nested in 1998. During the present survey, 260 pairs bred at Leighton and 340 pairs on the Eric Morecambe complex in 2008.

A few smaller colonies were active during 2008-2011. Barnacre Reservoir on the western edge of Bowland held up to 23 pairs, the former gravel pits in the Dockacres/Pine Lake area an estimated 15 pairs, the freshwater marsh and saltmarsh at Marshside, adjacent to the south Ribble Marshes, 53 pairs in 2011 and Martin Mere two pairs in 2011. Intermittent breeding attempts by odd pairs were also recorded on Longton Marsh and in the West Pennine Moors at Delph Reservoir (the site of a former colony up to the 1960s), and on flooded peat workings on moorland at Aushaw Moss.

Lancashire is of considerable national importance for breeding Black-headed Gulls, with its estimated 16000 pairs representing nearly 12% of the British breeding population and including probably the two largest colonies in the country; between them Belmont and the Ribble marshes are thought to hold over 10% of the British breeding population.

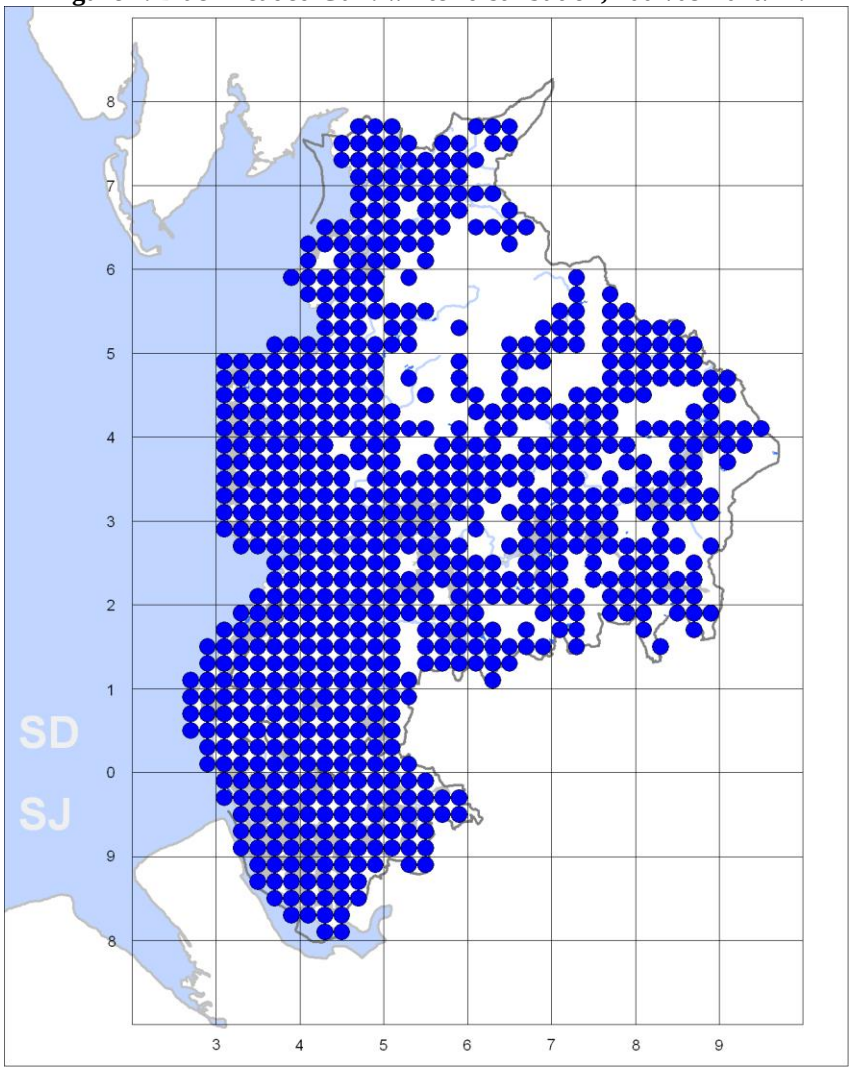
Winter

Black-headed Gulls were recorded in 764 tetrads, some 81% of the county total (Fig.2). They were distributed throughout the county with only the highest moorland areas devoid of wintering birds. This is consistent with their catholic feeding habits on a varied range of habitats, including arable land, pasture, estuaries, suburban environs and urban areas being able to sustain often highly site-loyal populations.

Lancashire's wintering birds are a mixture of British breeders and migrants from northern and eastern Europe and it is thought that between 50000 and 100000 birds winter in Lancashire, between 2% and 4% of the British population.

The majority were recorded on the Sefton and Fylde coasts and on the Lune Estuary, but, while most roost on the coast, the majority feed some way inland (Fig.3). The largest coastal counts during 2007/08-2010/11 included 10000 at Seaforth, 22000 in four tetrads between Ainsdale and Birkdale, 6000 on Southport Marine Lake, 7000 at Lytham and Poulton-le–Fylde, 4000 at Preesall, and 4000 at Aldcliffe. The outstanding count, however, was a WeBS low tide count of 25000 between Formby Point and Southport Pier in November 2009.

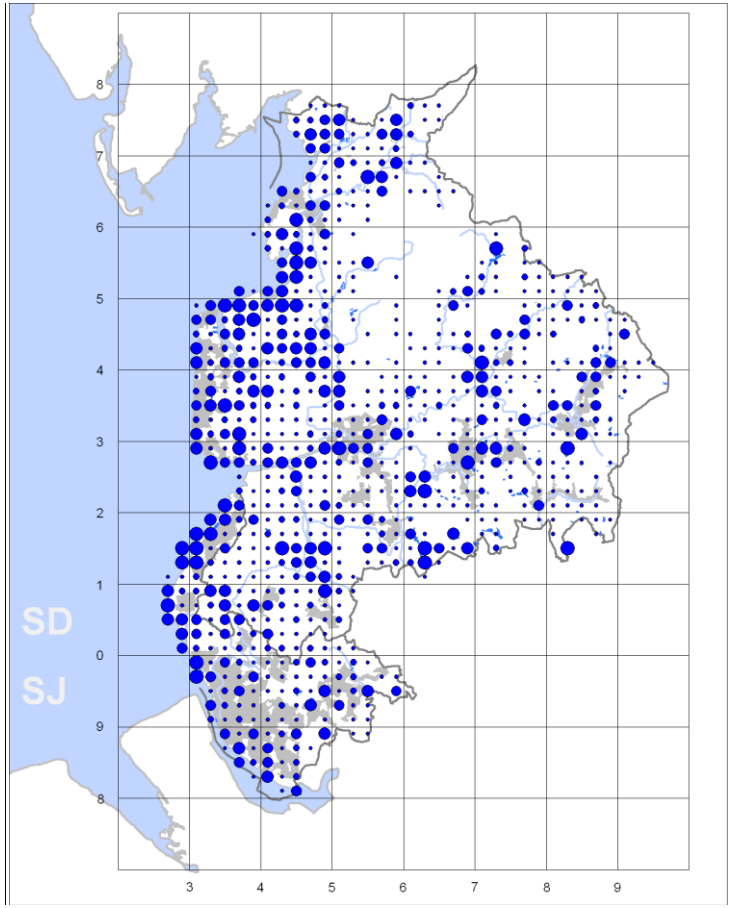
Figure 2. Black-headed Gull: winter distribution, 2007/08-2010/11.



Inland gatherings of 3000 near Skelmersdale, 5000 at Withnell landfill and 6000 near Stonyhurst were notable, together with more expected high numbers from regular roost sites of 4000 at Martin Mere, 9000 on the Rivington Reservoirs, 6000 at Fishmoor Reservoir and 3500 at Stocks Reservoir.

SJM

Figure 3. Black-headed Gull: relative abundance in winter, 2007/08-2010/11.



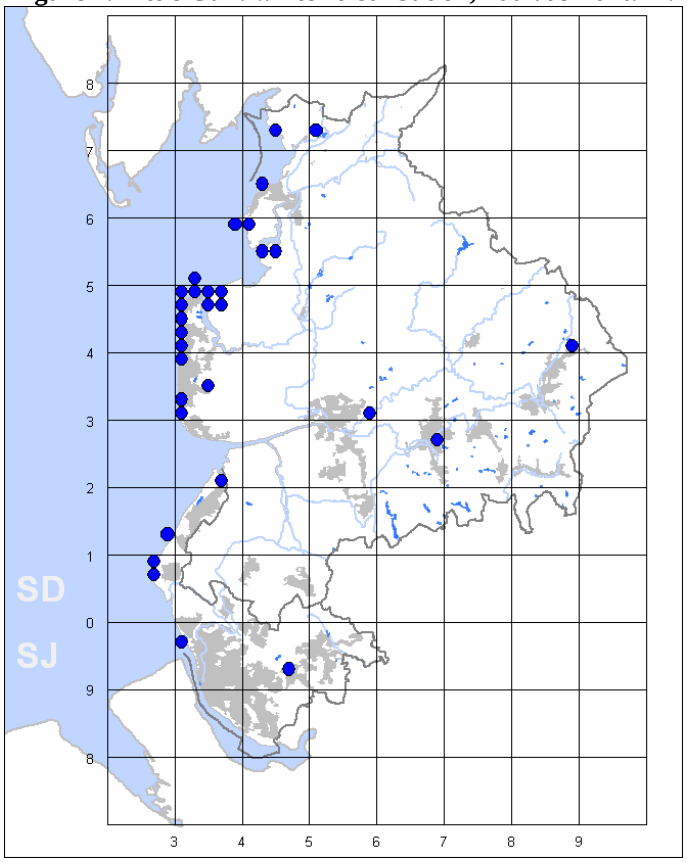
Dot size in descending order: 2000-10000; 500-1999; 200-499; 100-199; 1-99

LITTLE GULL *Hydrocoloeus minutus*

Little Gulls have wintered in Liverpool Bay since at least the 1980s, initially off both the outer Mersey and the north Fylde coast but the southern population had largely disappeared by the mid-1990s.

This concentration of records is well illustrated in the distribution map – although birds were recorded in 31 tetrads, half of these were on the Fylde coast with those further north probably all originating from the same wintering population (Fig.1).

Figure 1. Little Gull: winter distribution, 2007/08-2010/11.



The location at sea of these wintering flocks is not known with any precision and undoubtedly varies somewhat both within and between winters, but surveys in the 2000s pointed strongly to the Shell Flat/Lune Deep area as a favoured site.

The largest count by far was 771 in onshore winds off Rossall Point on 26 February 2008 with the next largest 30 off Lytham St. Anne's/Blackpool on 18 January 2011; the only other double-figure counts during 2007/08 to 2010/11 came from Seaforth, Formby Point, Bispham/Cleveleys and the mouth of the River Wyre.

There were five inland records, the largest 17 at Foulridge Reservoirs and others at Marton Mere, Prescot Reservoirs, Pine Lake and Brockholes but

three of these – including at Foulridge – were in November and were almost certainly late migrants.

Calculating the winter population size is very difficult but it is probably at least 500 on average; on that basis the county supports roughly 20% of the British wintering population.

SJW

MEDITERRANEAN GULL *Larus melanocephalus*

Breeding

A recent colonist to the UK with breeding first recorded in 1968, the population grew slowly at first to some 110 pairs by 2000, all within Black-headed Gull colonies. It has expanded rapidly since to over 1000 pairs at 34 sites in 2010, albeit still largely restricted to the south and south-east coasts of England.

Breeding was first attempted in Lancashire in 1990 when a pair moved between Dockacres and Leighton Moss, but both attempts were unsuccessful. It was not until 1997 that breeding was confirmed with a pair successfully fledging two young on the Eric Morecambe complex and a pair probably breeding at Stocks Reservoir. Surprisingly, there have been no further confirmed breeding attempts in the Leighton Moss area since.

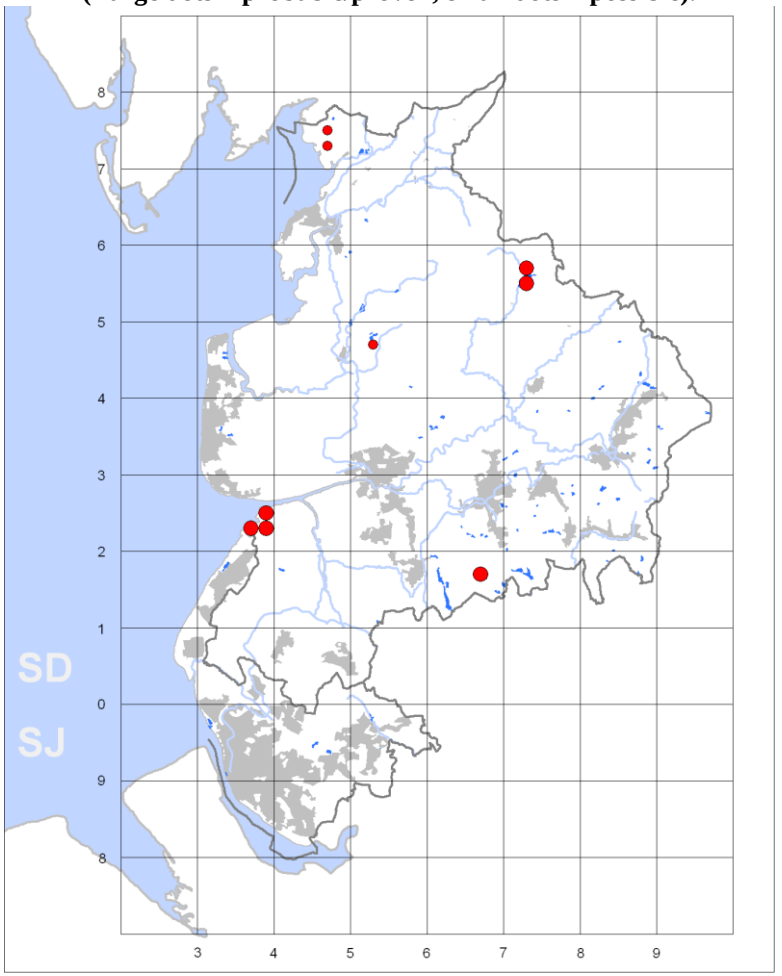
Birds have bred at Stocks Reservoir annually since then, with two pairs in 1999 increasing to three by 2004, five in 2009 and six pairs in 2011.

Breeding had long been suspected within the huge Black-headed Gull colonies along the south Ribble Marshes but it was not until 2001 that breeding was finally confirmed there. Surveying this large remote colony is fraught with difficulties so the five pairs reported here in 2003 and 2008 are thought likely to be underestimates.

Birds were first seen at Belmont Reservoir in 2004 with breeding confirmed by at least one pair the following year. Numbers had grown rapidly there by the time of the 2008-2011 survey, mirroring the vast increase in the Black-headed Gull colony, to seven pairs in 2008, eleven in 2010, and it is currently thought to be the largest inland Mediterranean Gull colony in the UK. A gathering at Belmont of 29 birds immediately prior to breeding was a record county total.

The distribution map also shows displaying birds at Barnacre Reservoir and at Leighton Moss/Eric Morecambe complex (Fig.1).

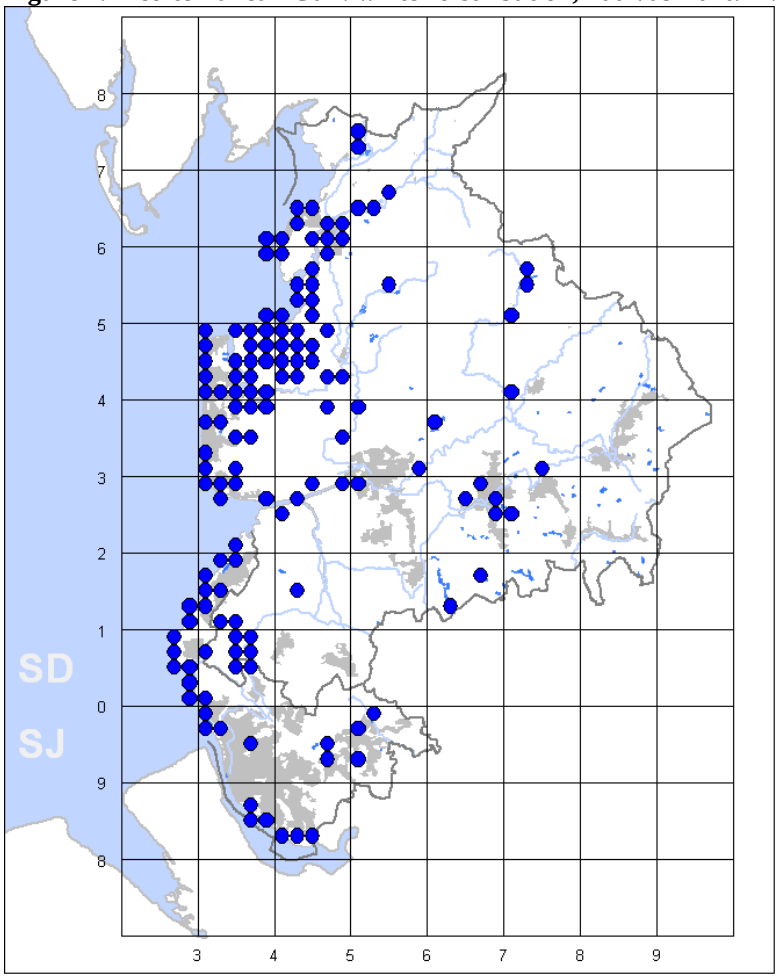
Figure 1. Mediterranean Gull: breeding distribution, 2008-2011. (Large dots = probable/proven; small dots = possible).



Winter

The winter range was spread over 138 tetrads, 15% of the county total (Fig.2). Their distribution was predominately coastal with very few individuals spending the winter inland, although odd individuals occur at the major inland roosts such as up to three at Fishmoor Reservoir. Several inland records relate to early-returning birds to the Belmont and Stocks Reservoirs breeding sites in the last days of February, with up to six recorded at the latter site.

Figure 2. Mediterranean Gull: winter distribution, 2007/08-2010/11.



The distribution map does, however, give a false impression of wintering numbers; in part because birds are highly mobile and many will have been recorded in multiple tetrads, but also because a large proportion of coastal records, as well as those inland, occurred in November and particularly February. Mediterranean Gulls are early migrants – at Seaforth, for example, 'spring' numbers peak during February and March.

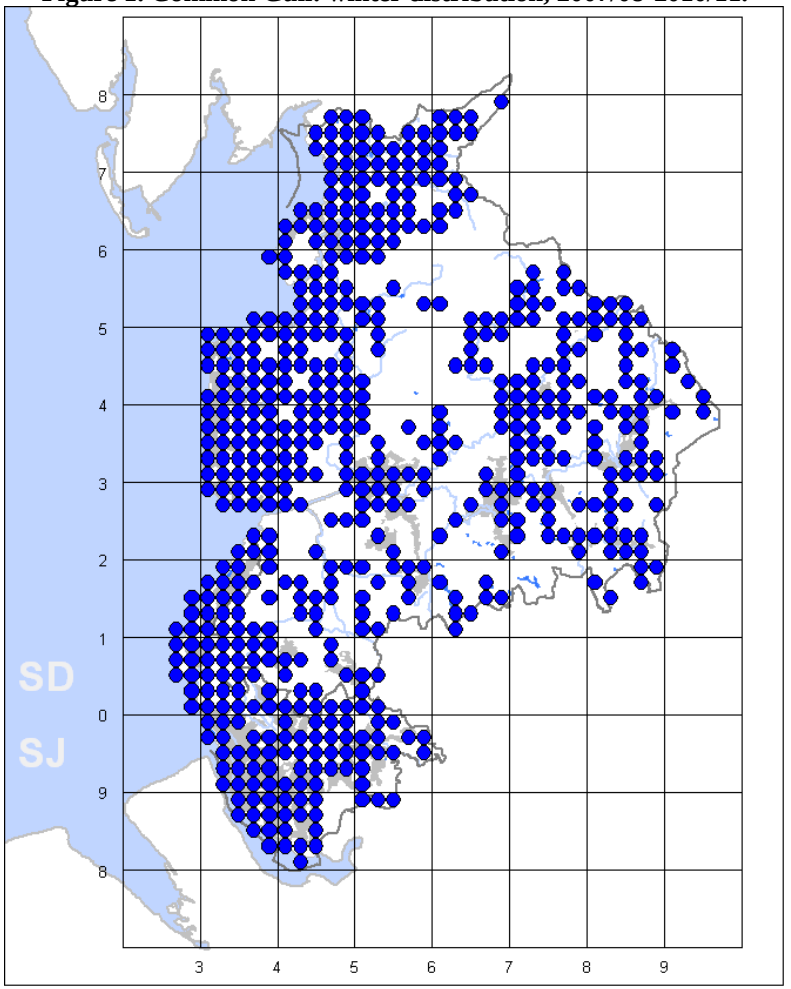
The number of individuals in the county in midwinter is probably around 30 out of a national population of some 1800 birds, with notable day-counts of five from Seaforth, eight at nearby Walton Hall Park, six at Haskayne and seven at both Ainsdale and Pilling during 2007/08-2010/11, although ten were known to be at Seaforth in February 2011 and twelve on the Fylde in December 2007.

SJM

COMMON GULL *Larus canus*

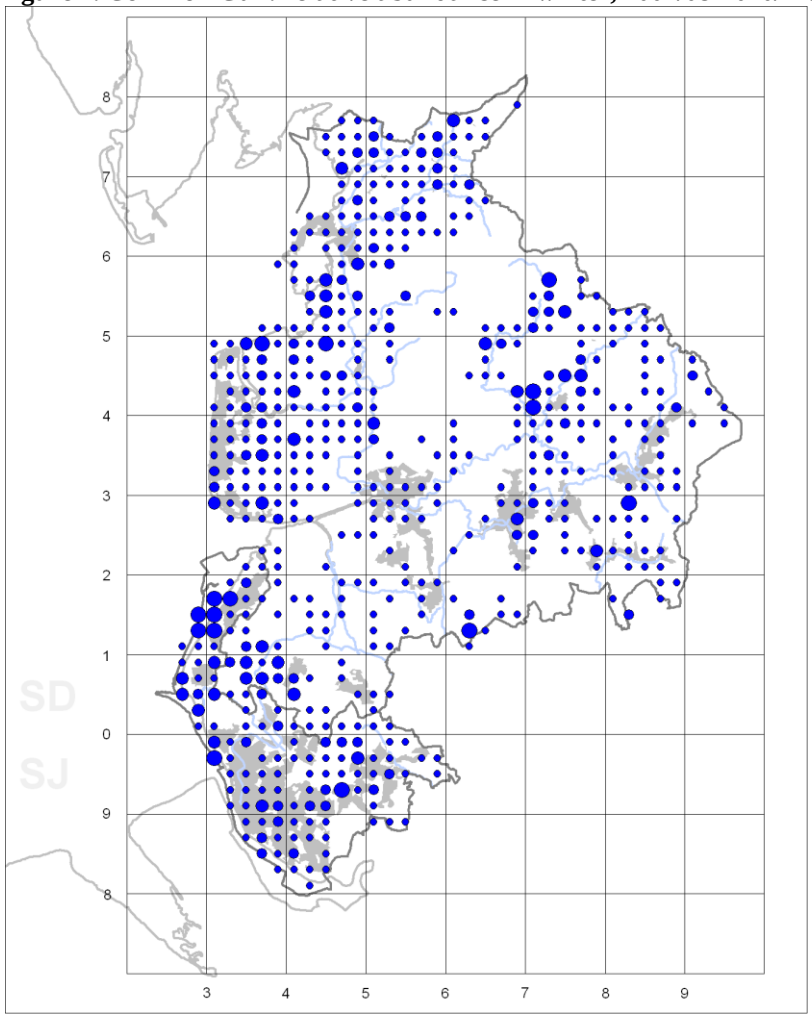
Common Gulls are very widespread in winter throughout Lancashire and North Merseyside and were found in 568 tetrads, 60% of the county total, during 2007/08 to 2010/11 (Fig.1).

Figure 1. Common Gull: winter distribution, 2007/08-2010/11.



In the east of the county significant numbers feed primarily on lowland and upland fringe pasture land as well as landfill sites, roosting on reservoirs, but about 75% of occupied tetrads were in the west of the county where many also feed inland, roosting mainly on the coast.

Figure 2. Common Gull: relative abundance in winter, 2007/08-2010/11.



Dot size in descending order: 1000-8000; 300-999; 100-299; 1-99

They were largely absent from the moorlands of Bowland, north Lancashire, the West Pennine Moors and South Pennines, as well as much of the agricultural land in West Lancashire.

The largest numbers were recorded roosting on the Sefton Coast between Seaforth and Southport with other significant roosts in north Fylde, reservoirs in east Lancashire, Rossendale and the West Pennine Moors, and feeding flocks on the fringes of Bowland in the Hodder Valley (Fig.2).

The highest counts of 8000 came from four tetrads between Formby and Southport, 7000 at Stocks Reservoir, 4000 at Seaforth, 1500 at Pilling-Cockerham and in the Bashall-Withgill area, and 1000 at Rivington, Clowbridge and Prescot Reservoirs.

Away from these areas numbers were generally much lower, often in single figures but averaging around 70, mostly small flocks feeding on farmland. A total of 95000 was counted during the four winters of the survey but these undoubtedly included a fairly high degree of duplication both within and between winters and the average winter population was probably in the region of 30000, around 4% of the British population. However, no winter during the survey period experienced a shellfish wreck on the coast which, when they occur, are capable of attracting close to 100000 birds.

SJW

RING-BILLED GULL *Larus delawarensis*

All winter records were in Merseyside at Seaforth/Crosby Coastal Park, Netherton and Prescot Reservoirs. All involved single adults seen in all four winters and most if not all were probably returning birds.

SJW

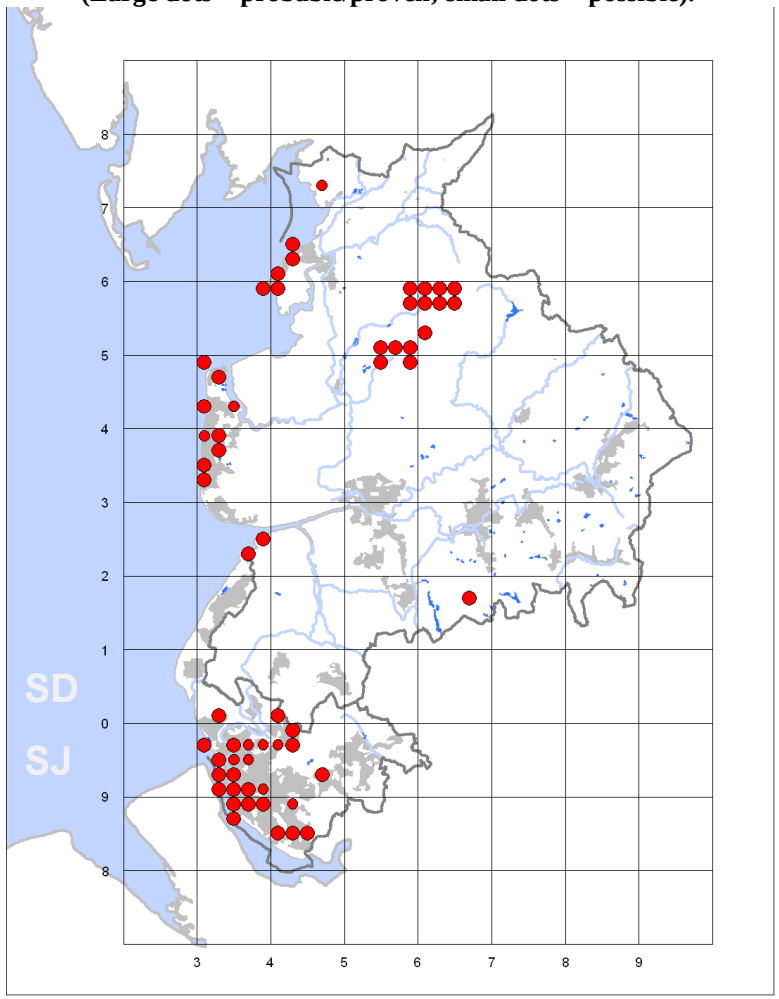
LESSER BLACK-BACKED GULL *Larus fuscus*

Breeding

Lancashire is of considerable national and international importance for breeding Lesser Black-backed Gulls with the estimated 15000 pairs in the county representing over 13% of the British breeding population, which itself is some c.65% of the world total of the sub-species *L. f. graellsii.*

Breeding was confirmed in 48 tetrads during 2008-2011, representing a 60% increase in range since 1997-2000 (Fig.1). However, the vast majority of pairs were found at the two main colonies in Bowland and the south Ribble marshes, as they were during our previous survey.

Figure 1. Lesser Black-backed Gull: breeding distribution, 2008-2011. (Large dots = probable/proven; small dots = possible).



The Bowland colony, at Tarnbrook on the Abbeystead Estate, became established in 1936 and grew to 25000 pairs in 1981 before nesting birds began to be culled, ostensibly to alleviate water contamination, reducing the population to 7984 pairs in 1985. When the avicide alpha-chloralose licence was revoked the colony bounced back to 18993 pairs by 2000, but intensive shooting and nest-destruction since then has had reduced it to 1571 pairs by 2011, although still occupying the same 8km² of moorland across Tarnbrook, Mallowdale, Whitendale and Brennand Fells.

As a result of these events at Tarnbrook, a new Bowland colony has become established in the past ten years just 8km away. Initially sited on White Moss, continued culling on the Bleasdale estate has pushed the colony eastwards onto the United Utilities estate at Langden Head. The colony now covers an area of 1km² and has grown from 200 pairs in 2003 to 3937 nests in 2011.

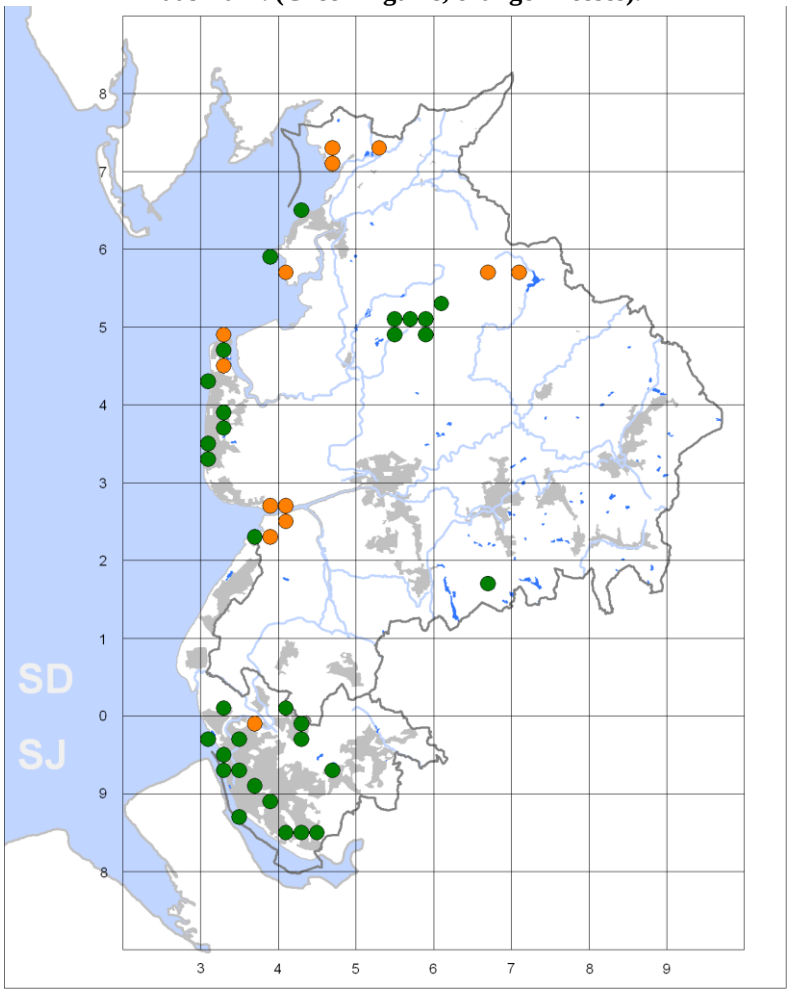
Despite the two main Bowland colonies heading in different directions numerically, the overall Lesser Black-backed Gull population within the Bowland SPA has fallen significantly below the population level that obtained at the time of its designation. This has prompted Natural England to call for a cessation of culling and disturbance of this species in Bowland and they are currently seeking a negotiated agreement with the Abbeystead Estate to secure the its long-term future in Bowland.

Lancashire's other major colony on Banks Marsh was first recorded in 1969 and grew steadily to an estimated 5000 pairs during the 2008-2011 survey – although a systematic survey in 2012 estimated 8267 nests there. This colony too is now under threat, but for quite different reasons. BAE Systems has obtained permission to cull up to 550 pairs annually in order to reduce the risk of collisions with aircraft.

Urban roof-nesting was first suspected in Lancashire in the late 1980s but was still restricted to just 26 pairs in Liverpool, Fleetwood and Heysham by 1994. By the time of the first Lancashire atlas, these roof-top colonies, including a new one at Blackpool, were thought to number just 89 pairs. This had increased dramatically by 2008-2011, to some extent in the Blackpool area but especially in the Liverpool conurbation, which largely accounts for the 63% increase in range to 49 tetrads (Fig.2).

The Liverpool population probably now exceeds 500 pairs and includes 120 pairs in the city centre and over 60 pairs on the Jaguar/Land-Rover factory at Halewood. Colonies have also become established as far inland as the BICC factory in Prescot (15 pairs in 2009) and at Knowsley Industrial Estate (15 pairs in 2009). A further development was of three pairs that nested on the ground in central Liverpool in 2011.

Figure 2. Lesser Black-backed Gull: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



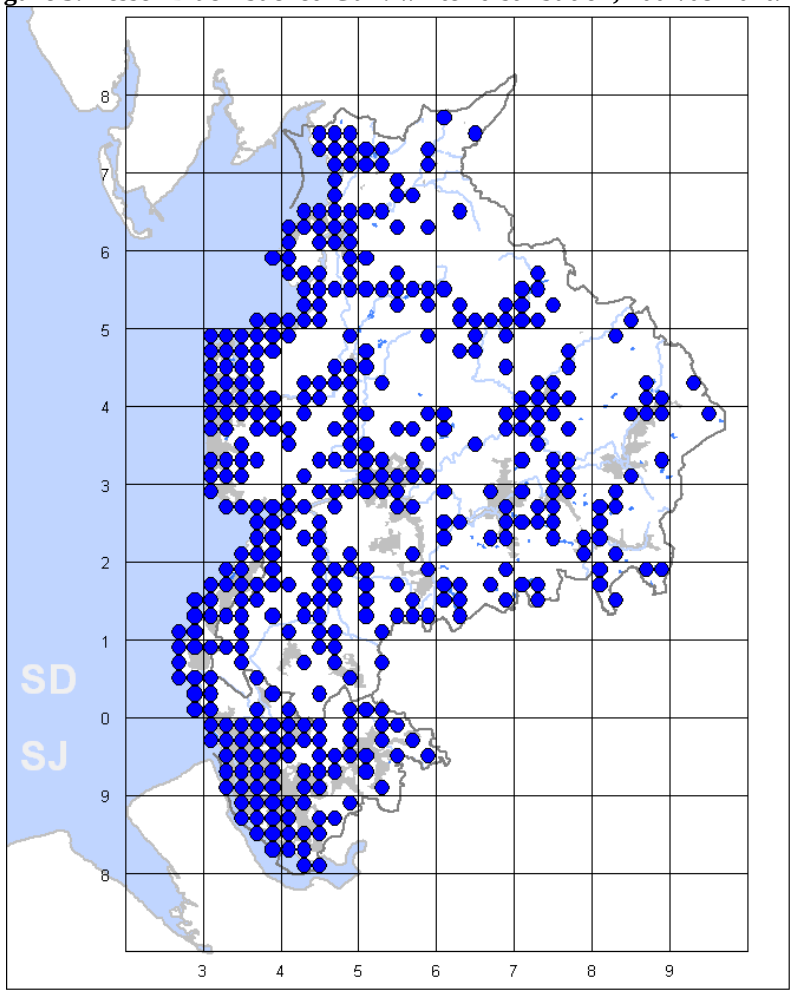
In 2011, at least 69 pairs nested at Heysham and 17 at nearby Middleton, with estimates of four pairs in Morecambe and 50+ pairs in the Blackpool/Fleetwood area during the survey period. The absence of breeding records from Southport is surprising.

The only other regular Lancashire breeding site is at Belmont Reservoir, a 'natural' site where two nests were located in 2009 on the edge of the large Black-headed Gull colony.

Winter

Numbers of Lesser Black-backed Gulls wintering in Lancashire started to increase in the 1950s and, for a species once regarded as a migratory summer visitor, its presence in 418 tetrads during the winter period represents a notable continuing change.

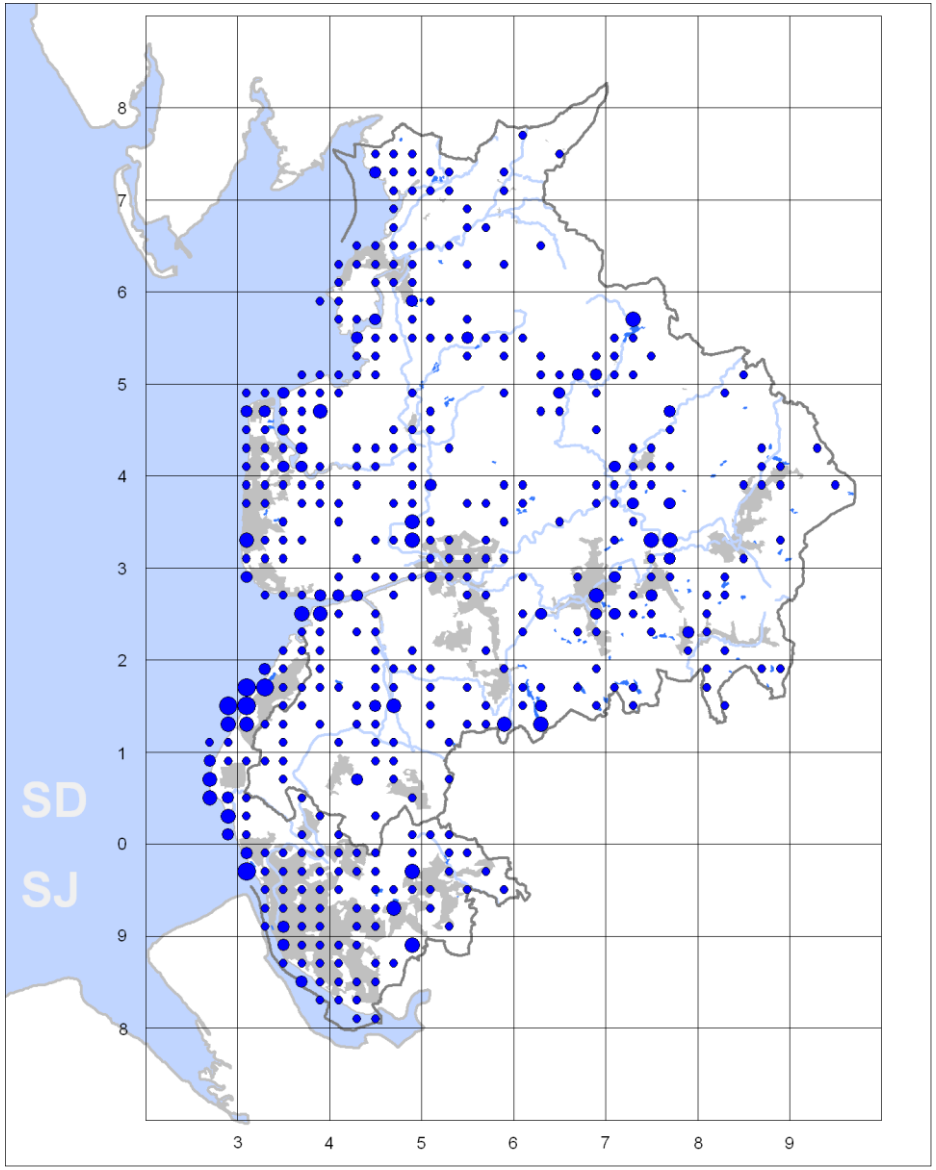
Figure 3. Lesser Black-backed Gull: winter distribution, 2007/08-2010/11.



Distribution is widespread all along the Lancashire coast, including a continuous presence immediately inland from Liverpool to north Fylde (Fig.3). Birds are, however, seen regularly further inland and in the east of the

county, mostly associated with feeding on landfill sites and roosting on reservoirs.

Figure 4. Lesser Black-backed Gull: relative abundance in winter, 2007/08-2010/11.



Dot size in descending order: 750-3000; 100-749; 25-99; 1-24

Most, though, were recorded on the coast, particularly on the Sefton Coast between Seaforth and Southport (Fig.4). The largest counts recorded during 2007/08-2010/11 included 1450 at Formby Point and at Birkdale, and 3000 at Southport Marine Lake with, apart from 800 at Seaforth, no other count exceeding 400 birds. Other major concentrations during the atlas period included 5000 between Formby Point and Southport Pier in November 2009, and a peak WeBS count on the Ribble Estuary of 9005 in 2007/08 and a low-tide count there of 6800 in November 2009. The largest inland concentrations were 400 at Rishton Reservoir, 315 at Stocks Reservoir, 300 at Jackhouse and 225 on the Rivington Reservoirs.

The Lancashire wintering population was estimated at 5000, some 4% of the 125000 birds nationally. As in summer, Lancashire is of major significance for Lesser Black-backed Gulls and the Ribble and Alt Estuaries SPA is one of just three sites in Britain of international importance for the species (Morecambe Bay is another but most of its birds are in Cumbria).

SJM

HERRING GULL *Larus argentatus*

Breeding

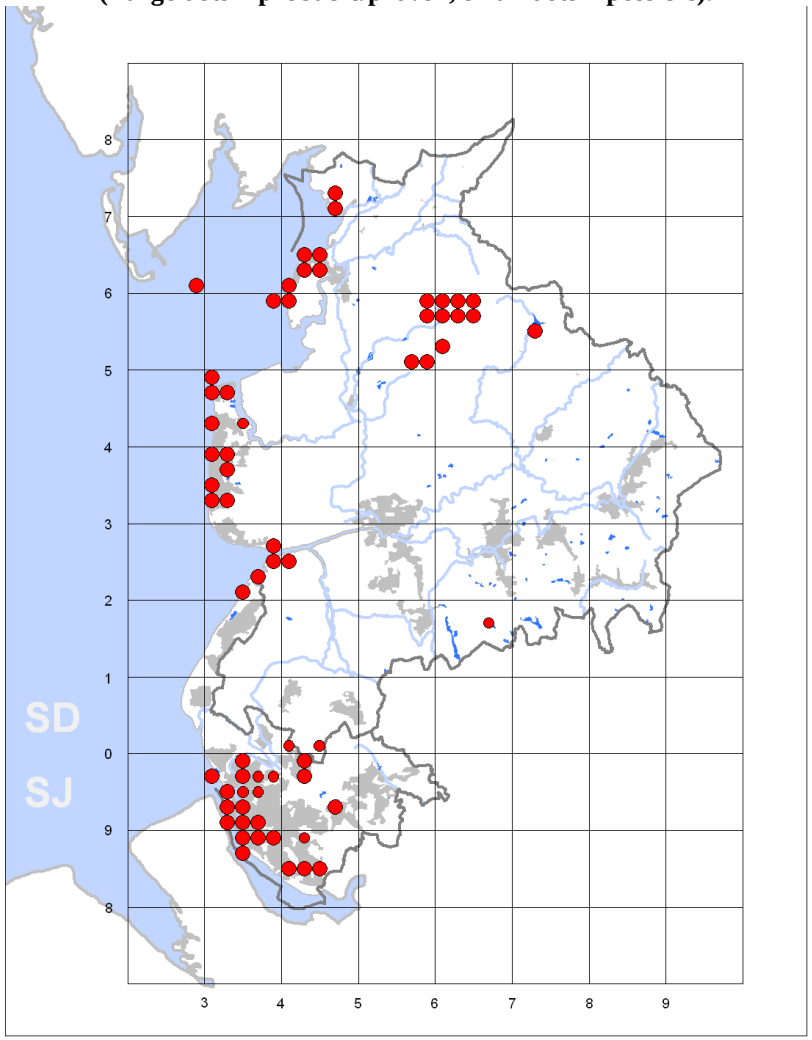
Herring Gulls suffered a population decline of 38% nationally between 2000 and 2010 and the *argenteus* sub-species that breeds in Britain and western Europe is now 'red listed' as a species of conservation concern.

Despite this, the Lancashire population appears to have grown to some 1800 pairs, nearly 1.5% of the British population, between the two county atlases although there have been differing fortunes between the major Lancashire colonies. With few exceptions, they breed alongside Lesser Black-backed Gulls in Lancashire, although almost always in lower numbers.

Herring Gulls nested in 55 tetrads during 2008-2011, an 80% increase in range since 1997-2000 (Fig.1).

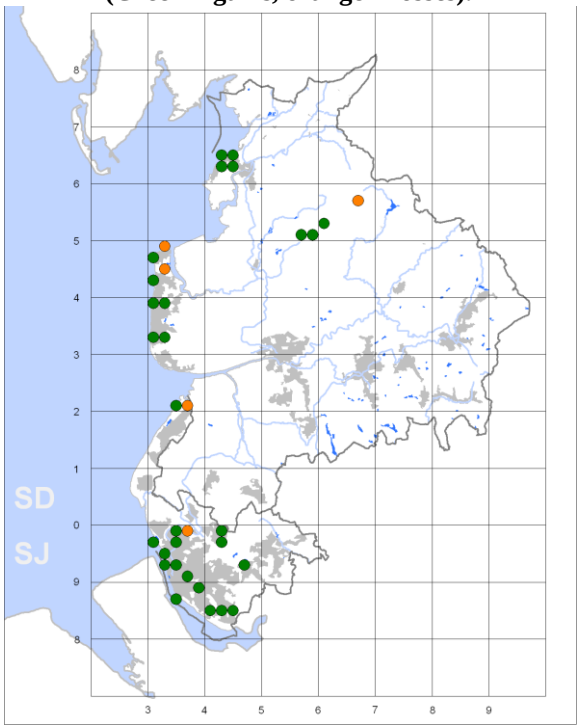
This increase was overwhelmingly in urban areas (Fig.2) although the majority of the breeding population remained in colonies that existed ten years ago and longer.

Figure 1. Herring Gull: breeding distribution, 2008-2011. (Large dots = probable/proven; small dots = possible).



Breeding was first recorded on Banks Marsh in 1967, with numbers increasing to 730 pairs in 1998; only 460 pairs were estimated at the start of the present survey in 2008 but a systematic survey in 2012 estimated 1346 nests, making it easily the largest Lancashire colony. However, in 2013 BAE Systems were given the go-ahead by the government to exterminate the entire population, potentially reducing the Lancashire population by two-thirds.

Figure 2. Herring Gull: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



Herring Gulls first bred in 1949 within the Lesser Black-backed gullery at Tarnbrook in Bowland, where up to 3000 pairs were estimated by the 1970s but heavy culling reduced numbers to 475 pairs by 2001 and to 159 pairs during the present survey – although the total by 2011 was possibly as low as 50 pairs. Following the establishment of the nearby Langden Head gullery since 2000, the species increased to 50 pairs in 2009 although only 30 pairs were thought to be present in 2011, despite the continuous growth of the Lesser Black-backed colony.

The other two natural sites in the county were at Stocks Reservoir, with one pair nesting in 2011, and the Eric Morecambe complex where one pair bred in 2009 and 2010.

The first urban roof-nesting in the county was at Birkdale in 1974 with some 32 pairs recorded in Liverpool, Heysham and the Fleetwood area by 1994. Just seven years later, the 1997-200 survey recorded an increase to 189 pairs on roofs at Blackpool, Heysham, Morecambe, Liverpool and Fleetwood.

These have increased dramatically in the past decade, with at least 180 pairs nesting throughout the Liverpool conurbation and as far out as Kirkby and Prescot, 48 pairs in the Heysham and Morecambe area and possibly 150 pairs between Blackpool and Fleetwood.

In what is believed to be a first for UK offshore platforms a pair first nested on the Morecambe Central Gas Platform in 1998 increasing to eight pairs in 2009 (their approximate location is mapped in Fig.1).

Winter

Herring Gulls were recorded during 2007/08-2010/11 in 423 tetrads, 45% of the county total (Fig.3).

Figure 3. Herring Gull: winter distribution, 2007/08-2010/11.

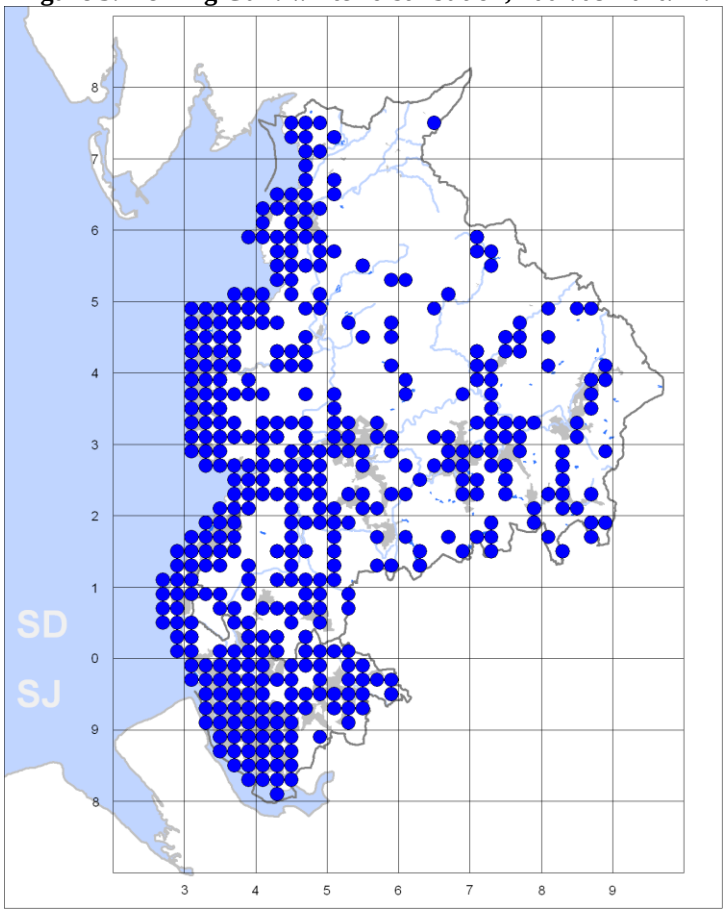
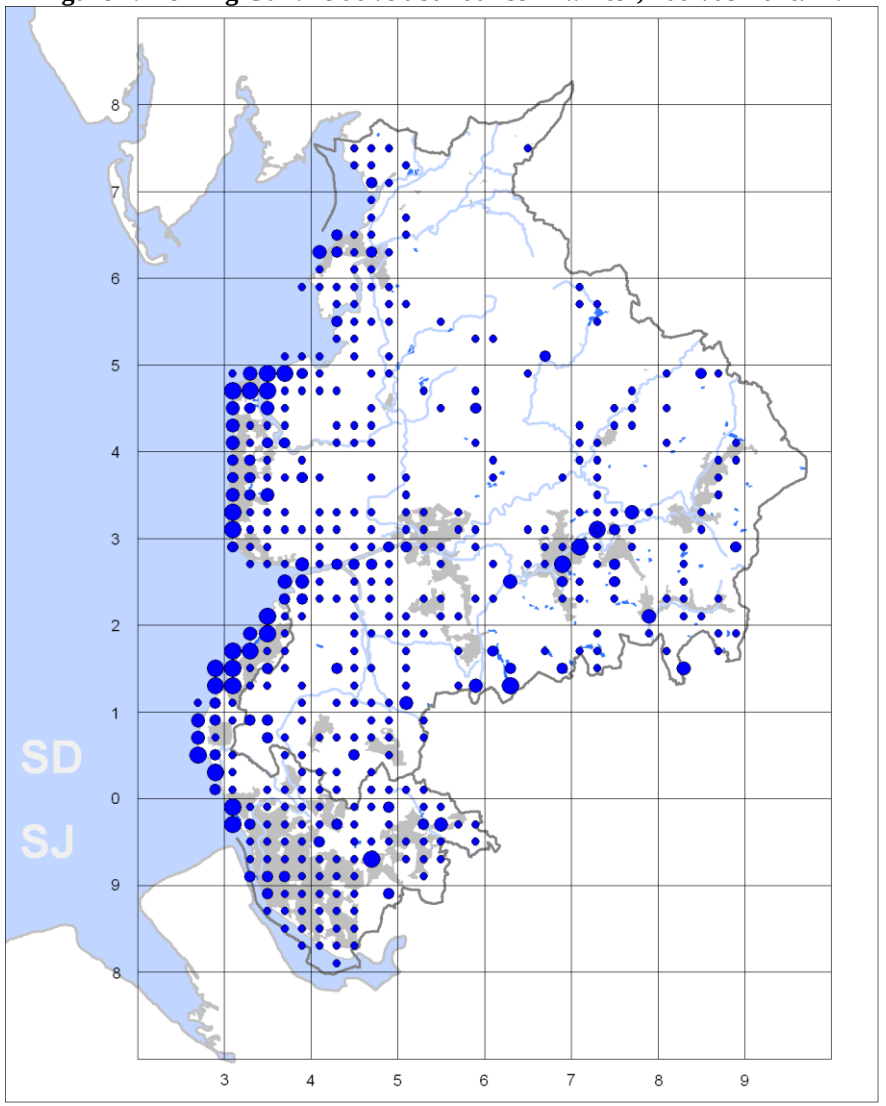


Figure 4. Herring Gull: relative abundance in winter, 2007/08-2010/11.



Dot size in descending order: 1000-6750; 150-999; 50-149; 1-49

Their distribution was essentially identical to that of Lesser Black-backed Gulls, predominantly in the west but with widespread records further inland. The majority were found on the Sefton and Fylde coasts but large numbers were also recorded in four inland areas, notably 3000 at Prescot

Reservoirs, 2050 on the Rivington Reservoirs, 2000 at Fishmoor Reservoir and 3000 at Rishton Reservoir (Fig.4).

Counts of 2000 or more were made in 13 coastal tetrads, including 4500 at Knott End, and 30250 in eight adjacent tetrads between Formby and Marshside in November 2009 which included 6750 at Birkdale and 4000 at both Southport and Formby Point. The Ribble Estuary is by far the most important site in Britain for wintering Herring Gulls and only one of two that are of international importance; this was highlighted by a WeBS low tide count that recorded 29000 in November 2009.

Although the winter population fluctuates enormously between years, on average Lancashire supports around 50000 birds – a considerable proportion, possibly as much as 7%, of the British wintering population.

SJM

YELLOW-LEGGED GULL *Larus michahelis*

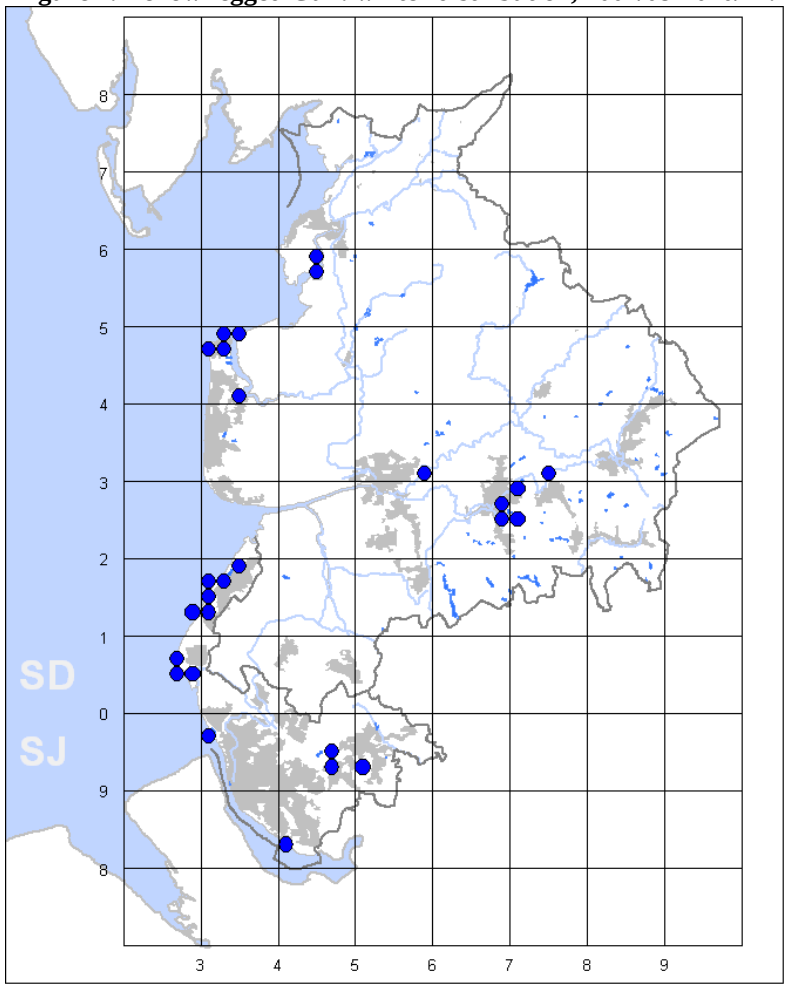
Yellow-legged Gulls were identified in 27 tetrads, 19 of them on the coast, during 2007/08-2010/11 (Fig.1). The majority of coastal records were at various sites on the Sefton Coast with several on the north Fylde coast and two on the Lune Estuary, probably reflecting as much the presence of dedicated gull-watchers as that of Yellow-legged Gulls.

Inland they were recorded at Prescot Reservoirs and surrounding areas, at Brockholes and roosting on the Blackburn reservoirs after feeding at Whinney Hill Tip in Accrington.

Most records were at Seaforth but this was probably because of the amount of time they are looked for there. Estimating the county population is not easy as numbers vary between years and finding them is to some large extent hit and miss, but on average around ten are seen annually in, roughly 1% of the British wintering population.

SJW

Figure 1. Yellow-legged Gull: winter distribution, 2007/08-2010/11.



CASPIAN GULL *Larus cachinnans*

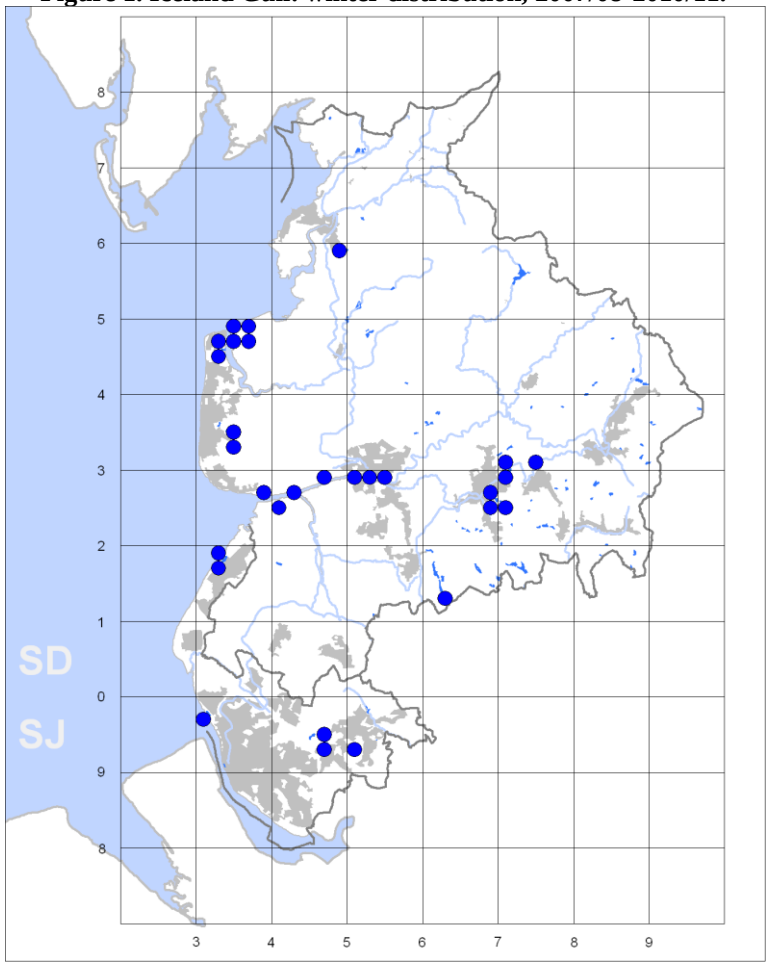
Eight records were confirmed during the atlas period. Two were in early autumn 2010 at Skippool Creek and Fishmoor Reservoir, but the others, involving at least six individuals, were in winter: two at Fishmoor Reservoir and Whinney Hill Tip in both 2007/8 and 2008/9, at Seaforth in 2009/10 and Fishmoor and Knott End in 2009/10.

SJW

ICELAND GULL *Larus glaucoides*

Iceland Gulls breed in Greenland and the Canadian Arctic and a proportion of the population winters in Britain.

Figure 1. Iceland Gull: winter distribution, 2007/08-2010/11.



Although they are overwhelmingly a coastal species, in Scotland in particular, with a strong affinity for fishing-ports, Iceland Gulls in Lancashire have shown a much greater propensity for wintering on inland tips and reservoirs than its close relative, the Glaucous Gull. Almost a third of the 260-plus records since 1960 have been inland, virtually three times the proportion for the larger species. Iceland Gulls have been recorded in all months, but occurrences are heavily biased towards the December-April period, with peak counts during January to March.

The present survey located birds in 29 tetrads (Fig.1). The distribution map shows 19 occupied tetrads in coastal or near-coastal locations, with clusters in north Fylde, the north shore of the Ribble Estuary and the Preston area. The previous preponderance of records on the Sefton Coast no longer holds as only four occupied tetrads were south of the Ribble. As in the case of Glaucous Gulls this may reflect the greater availability of landfill sites and fishing discards on the northern coast.

The ten inland tetrads were concentrated in the Blackburn-Accrington-Burnley area, where the Fishmoor Reservoir-Whinney Tip-Rowley Lake complex has been a magnet for Iceland (and Glaucous) Gulls since the early 1990s. Outlying tetrads were in the St. Helens area and at Anglezarke Reservoir.

The mean winter population is estimated at ten individuals.

BM

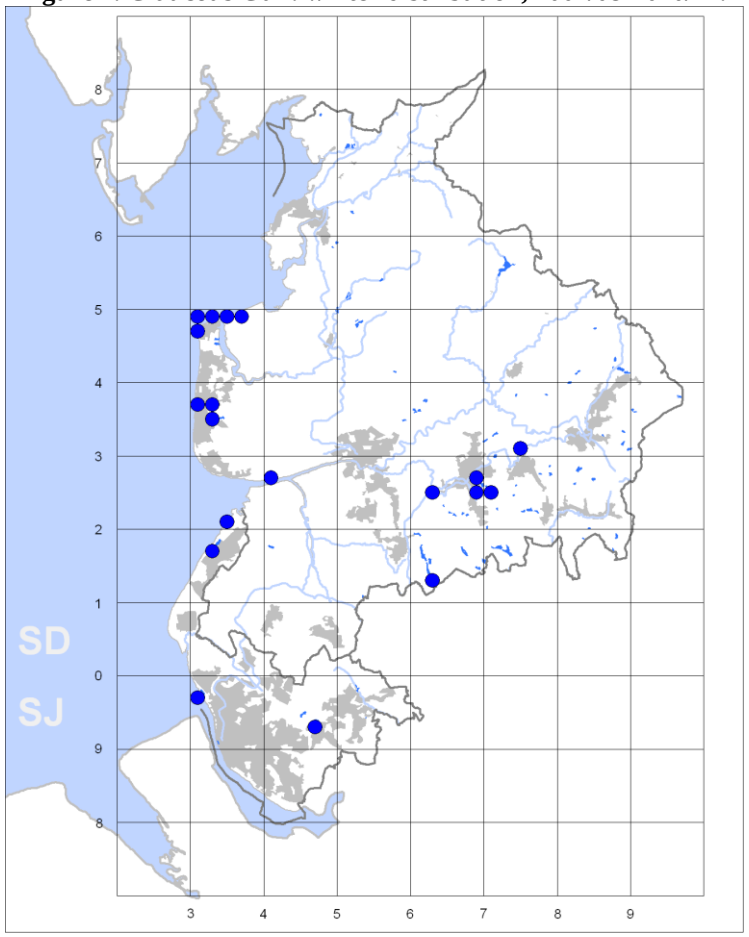
GLAUCOUS GULL *Larus hyperboreus*

Glaucous Gulls are mainly uncommon winter visitors to Britain and Ireland from breeding grounds on the coasts of Iceland and Arctic Russia, although odd birds may be recorded in any month of the year. In Lancashire most have been recorded at coastal sites, but an increasing proportion have turned up at inland reservoirs and landfill sites since the first occurrence at Appley Bridge as recently as 1983.

The great majority are recorded between December and March, although records of passage birds are not unusual during April and May. Total numbers in Lancashire increased dramatically from an annual mean of around ten in the 1970s to 19 or 20 during the 1980s and 1990s, before declining sharply to fewer than five a year since 2000.

The present survey located Glaucous Gulls in 19 tetrads, twelve on the coast and the other seven well inland (Fig.1).

Figure 1. Glaucous Gull: winter distribution, 2007/08-2010/11.



In contrast to the historical pattern, which saw a significant bias towards the Sefton Coast, nine of the coastal tetrads were north of the Ribble with a marked cluster in the Fleetwood-Rossall-Pilling area, presumably because of closure of landfills in the south and availability of these, plus fishing discards, further north.

Inland records were concentrated at a roost on Fishmoor Reservoir, Blackburn and a feeding site on nearby Whinney Hill Tip in the Accrington area, with outliers at Prescot Reservoirs and on Lower Rivington Reservoir.

The winter population is estimated at fewer than five individuals. Although some are known to have returned year after year, a reasonable number of new first-winter birds were recorded during the survey period.

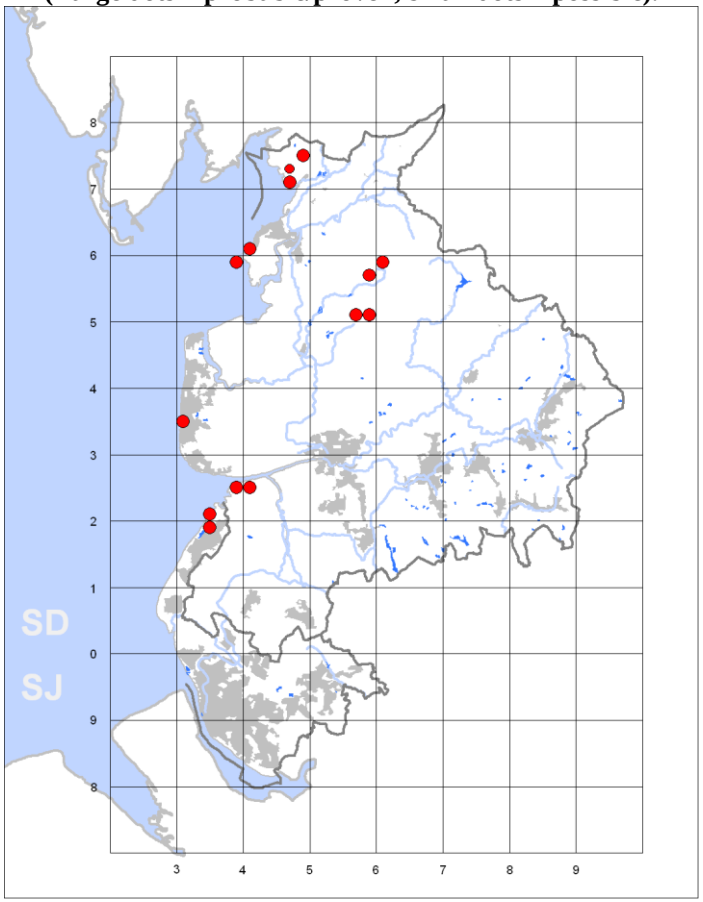
BM

GREAT BLACK-BACKED GULL *Larus marinus*

Breeding

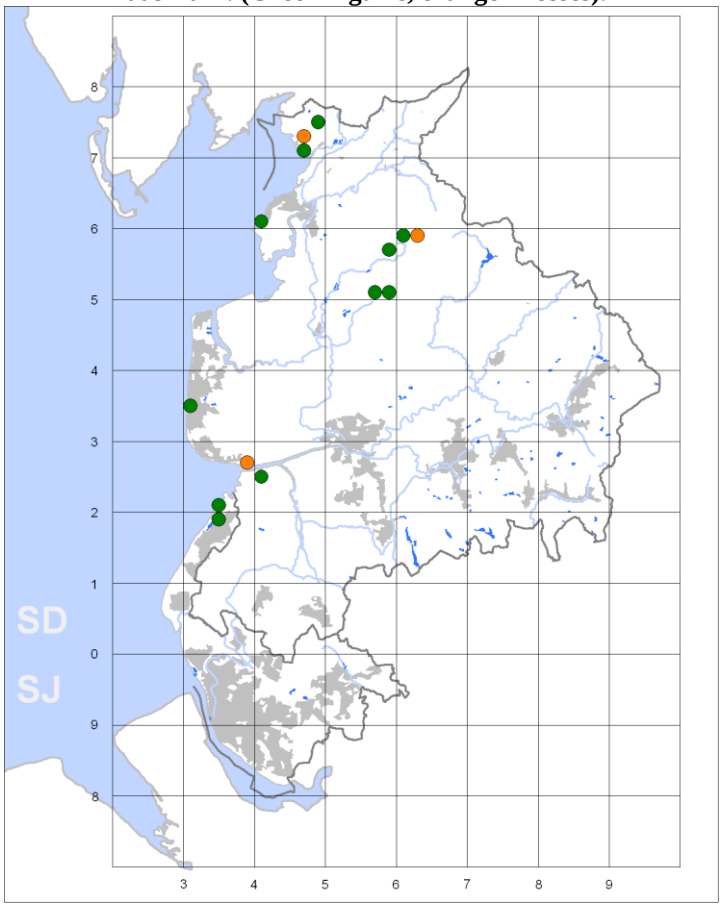
Great Black-backed Gulls are known to have nested in eleven tetrads during 2008-2011, thought probable in another two and possible in one other (Fig.1). Although this represented a potential range expansion of four tetrads, the number of occupied sites only increased from six to seven (Fig.2).

Figure 1. Great Black-backed Gull: breeding distribution, 2008-2011. (Large dots = probable/proven; small dots = possible).



The longest-established of these is within the moorland gullery at Tarnbrook, where breeding was first recorded in 1949 and where numbers peaked at 35 pairs in 1972. Due to heavy culling numbers there fell to eight pairs in 1999 and just two in 2009, possibly signalling the end of the species' 60-year tenure. However, a nest was found in 2009 at the recently established moorland gullery at nearby Langden Head, to which many of Tarnbrook's Lesser Black-backed Gulls have been displaced, and at least two pairs are now breeding there.

Figure 2. Great Black-=backed Gull: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



With the demise of the Tarnbrook colony, the south Ribble marshes are now the main Lancashire breeding site. Breeding first occurred there in 1979 and had grown to six pairs in 1998 and thirteen pairs in 2008.Nearby Marshside recorded two breeding pairs during 2008-2011 but none was recorded at the former breeding site of Warton Marsh on the north Ribble Marshes.

One or two pairs have bred irregularly on Carnforth Marsh since 1979 and at Leighton Moss since 2006, unusually in association with Black-headed Gulls. The 2008-2011 survey recorded single pairs at both Leighton Moss and one on the Eric Morecambe complex.

Great Black-backed Gulls have been nesting in urban situations in Lancashire since the first at Fleetwood Docks in 2002. During the present survey two pairs bred on the roof of the old Fisher's building at Heysham in 2010 and one pair in central Blackpool. The absence of this species from the growing urban gull population in Liverpool is perhaps surprising, possibly it is just too far from the sea.

The county population was estimated at 25 pairs.

Winter

Great Black-backed Gulls were recorded during 2007/08-2010/11 in 202 tetrads, some 21% of the county, less than half the number that Herring and Lesser Black-backed Gulls were found in (Fig.3).

As befits the most maritime of our commonest gulls, most were seen on the coast although there were a handful of large counts inland (Fig.4). A massive low-tide WeBS count of 1700 between Southport Pier and Formby Point in November 2009 dwarfed the usual winter peak there of around 300-500 birds. The other largest winter counts were also made on the Sefton Coast, with 400 at Birkdale and Formby Point and 150 at Southport; the largest on the Fylde coast was 133 at Fleetwood. Large inland roost counts included 180 at Fishmoor Reservoir, 150 at the Rivington Reservoirs, 80 at Rishton Reservoir, 50 at Delph Reservoir and 35 at Prescot Reservoirs.

The estimated average winter population was around 1000, roughly 1% of the British population, but was clearly considerably larger than this in 2009/10.

SJM

Figure 3. Great Black-backed Gull: winter distribution, 2007/08-2010/11.

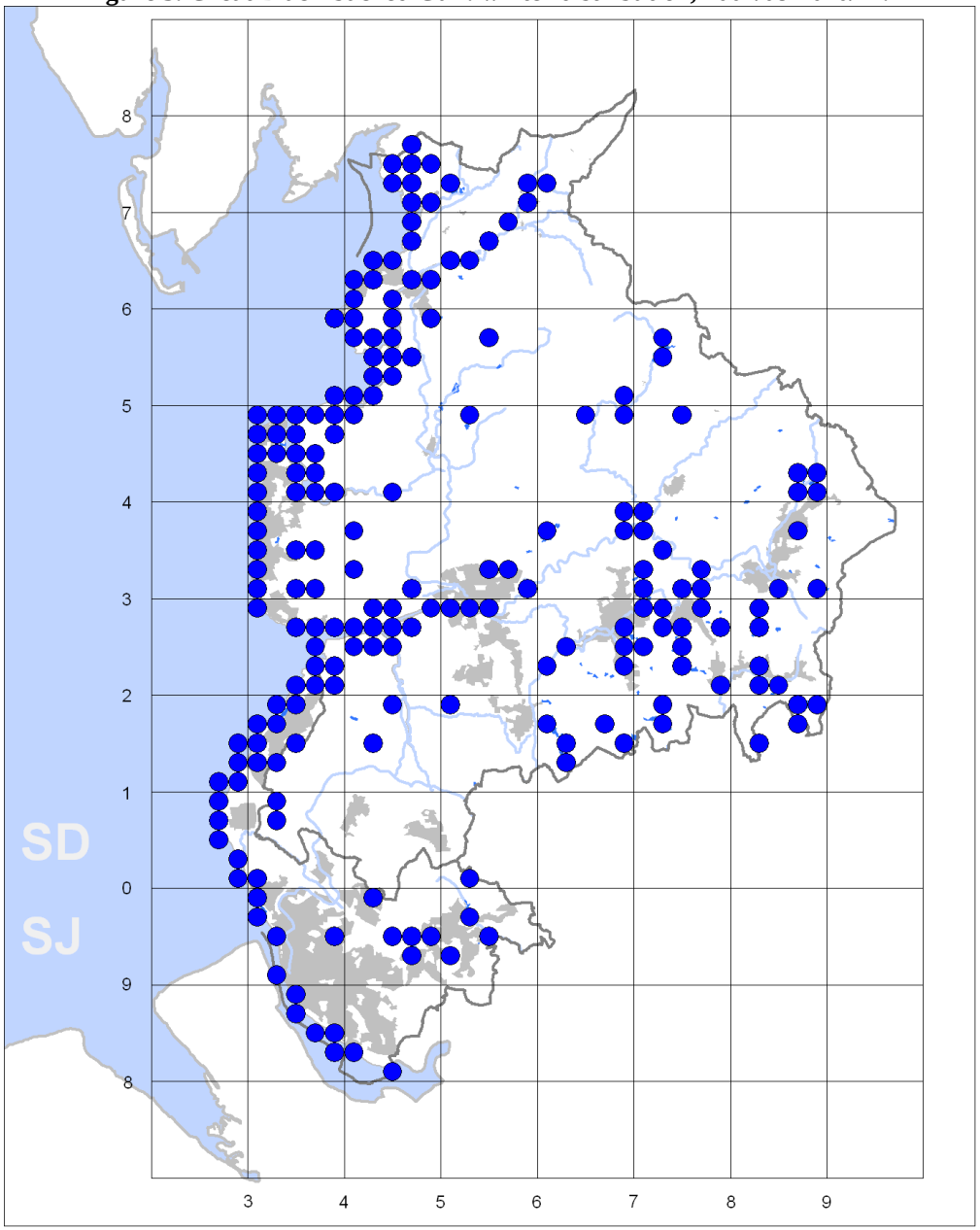
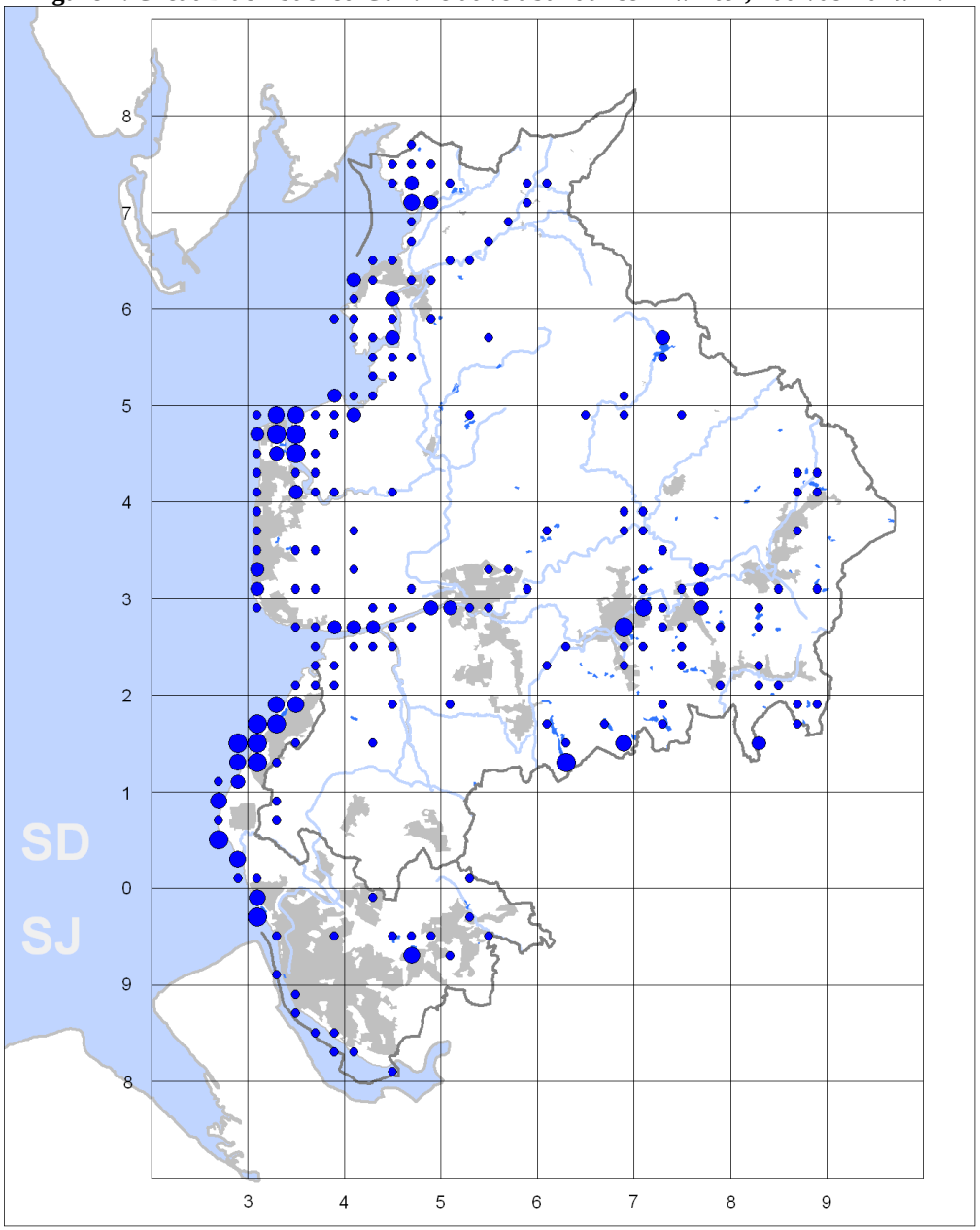


Figure 4. Great Black-backed Gull: relative abundance in winter, 2007/08-2010/11.



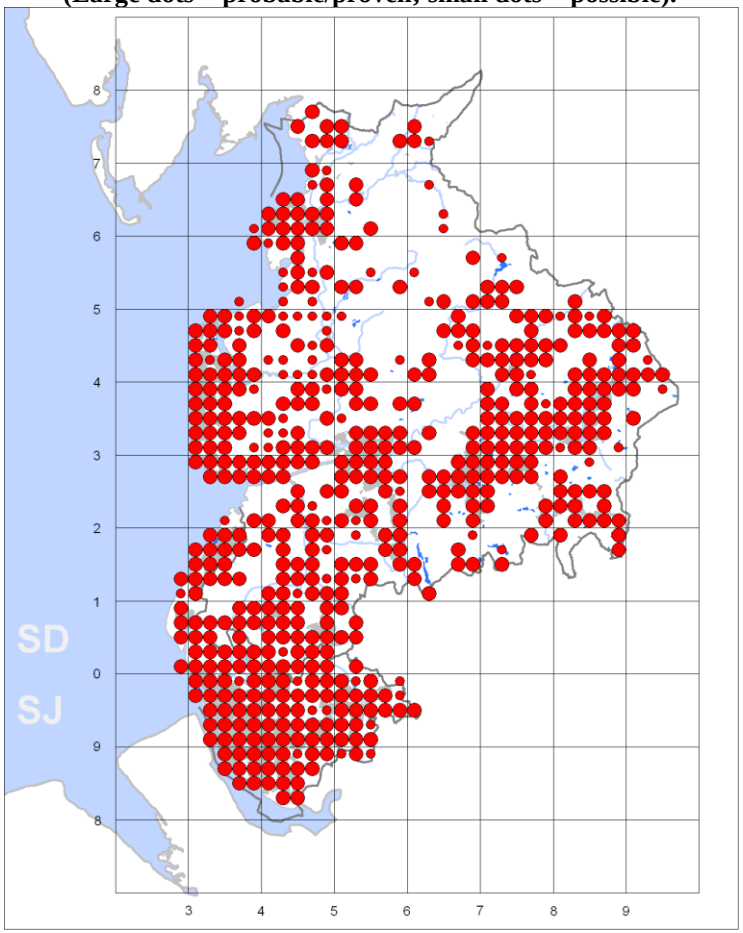
Dot size in descending order: 100-400; 40-99; 10-39; 1-9

FERAL PIGEON *Columba livia*

Breeding

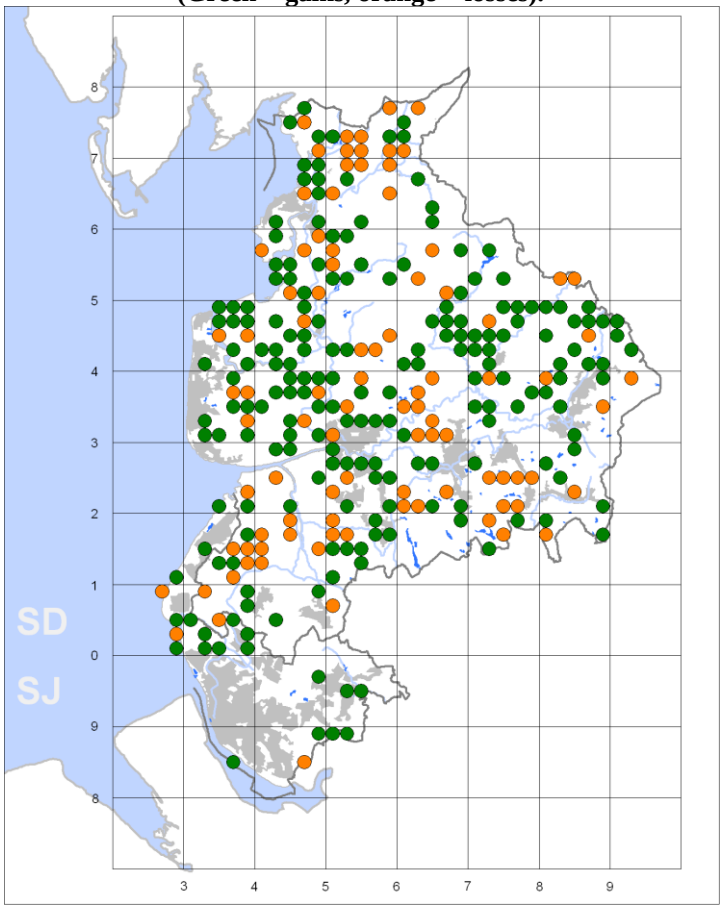
Although often disregarded by birders the Feral Pigeon continues to thrive in Lancashire in a remarkable range of habitats, predominantly urban, but by no means restricted to the stereotypical inner city streetscape; the Wildfowl and Wetlands Trust reserve at Martin Mere, for example, hosts a large population, presumably due to the availability of large quantities of supplementary bird-food.

Figure 1. Feral Pigeon: breeding distribution, 2008-2011. (Large dots = probable/proven; small dots = possible).



Breeding may take place in any month and even the coldest winter conditions appear to constitute little deterrent to reproduction. The breeding distribution map records nesting in 557 tetrads, 59.5% of the county total and an increase in range of 24% on the 450 identified by the 1997-2000 Atlas (Fig.1). This contrasts with a national population decline of 13% between 1995 and 2010.

Figure 2. Feral Pigeon: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



The breeding change map shows range expansions throughout the county in urban, rural, lowland and upland tetrads, a gain of 196 compared with a loss of 93 (Fig.2). Only in urban south Liverpool is there no evidence

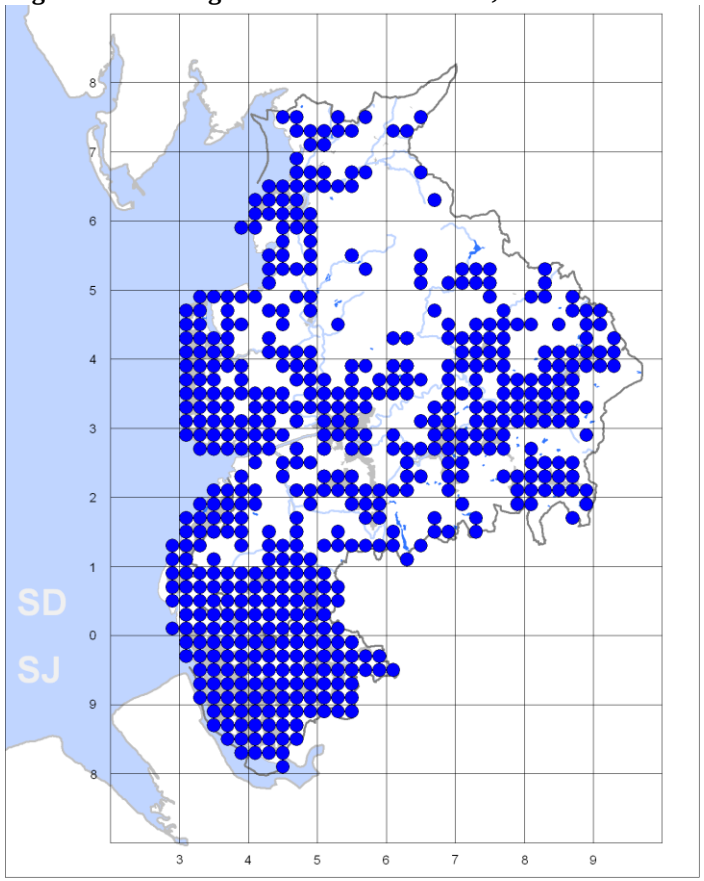
of range extension, for the simple reason that all but one available tetrad had already been occupied in 1997-2000.

The population is estimated at 15000 pairs, roughly 3% of the British population, reflecting Lancashire and North Merseyside's high level of urbanisation. Although the species breeds in isolated farm buildings even in the uplands, relative density is more than twice as high in the south and west as in the more extensively rural north and east.

Winter

Winter distribution matches that for breeding very closely, but since Feral Pigeons may nest throughout the year the distinction between breeding and winter distributions is largely inappropriate for this species.

Figure 3. Feral Pigeon: winter distribution, 2007/08-2010/11.



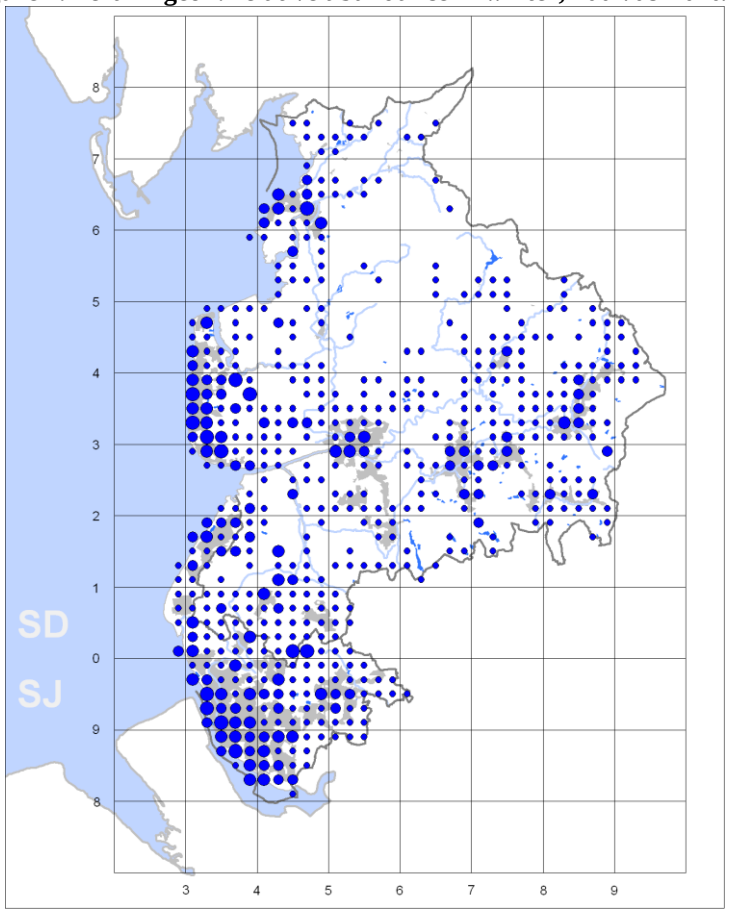
Birds were present in winter 2007/08-2010/11 in 541 tetrads, 58.1% of the total (Fig.3). However, Feral Pigeons were recorded in a total of 660 tetrads in either summer or winter and, given their almost completely sedentary nature, it seems likely that both the breeding and winter ranges are closer to this figure.

The relative abundance map shows clear clusters of high density on Merseyside and the Fylde Coast, and to a lesser extent in the Preston, Lancaster and the Blackburn-Burnley areas.

The population was estimated at 50000 individuals.

BM

Figure 4. Feral Pigeon: relative abundance in winter, 2007/08-2010/11.



Dot size in descending order: 300-1260; 100-299; 40-99; 1-39

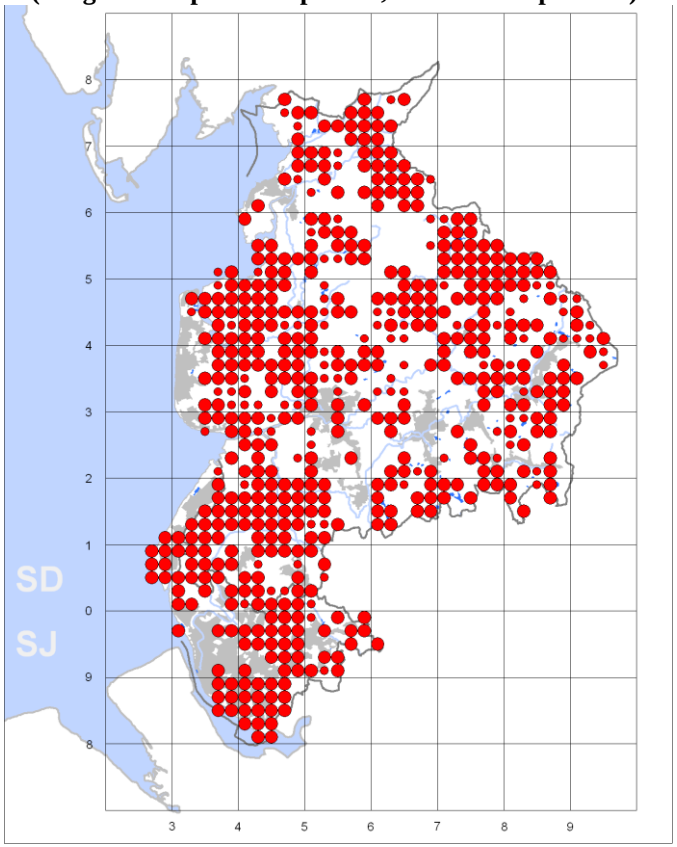
STOCK DOVE *Columba oenas*

Breeding

Apart from a period of decline in the mid-twentieth century, associated with the use of organochlorine pesticides on arable crops, the Stock Dove appears to have enjoyed steady population growth and range expansion in Lancashire since the 1870s, advancing inland from an originally coastal distribution.

Stock Doves in Lancashire are very adaptable in terms of breeding sites, from tree-holes in copses and larger woodland tracts in farmland on the coastal plain to barns and derelict buildings in the uplands. They take to nest-boxes very readily and local populations have been significantly increased by this means in a number of areas.

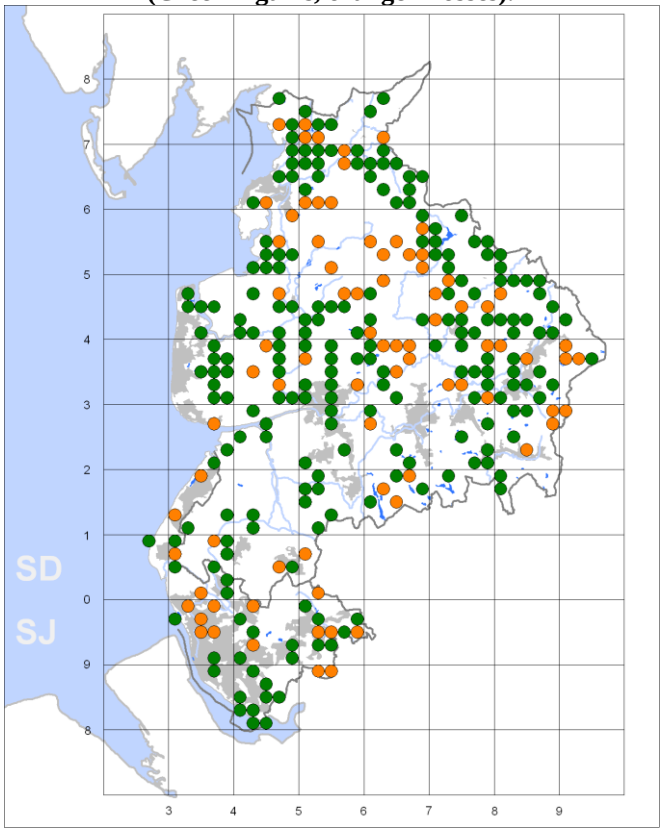
Figure 1. Stock Dove: breeding distribution, 2008-2011. (Large dots = probable/proven; small dots = possible).



The 1968-72 Atlas found the species in 47 10 km squares; this had increased to 49 by the Lancashire Atlas of 1997-2000.

Stock Doves were recorded in 556 tetrads during 2008-2011, 59% of the county total and a 30% range increase since 1997-2000 (Fig.1). The species was very widely if patchily distributed; although Stock Doves are present in most parks in Liverpool, most urban and suburban areas and the highest moorland stretches are largely shunned.

Figure 2. Stock Dove: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



A total of 212 tetrads were newly-occupied in the past ten years for a loss of 81 (Fig.2). The regions of greatest range expansion were the Fylde, the lower Lune Valley, the eastern and western fringes of Bowland and south Liverpool.

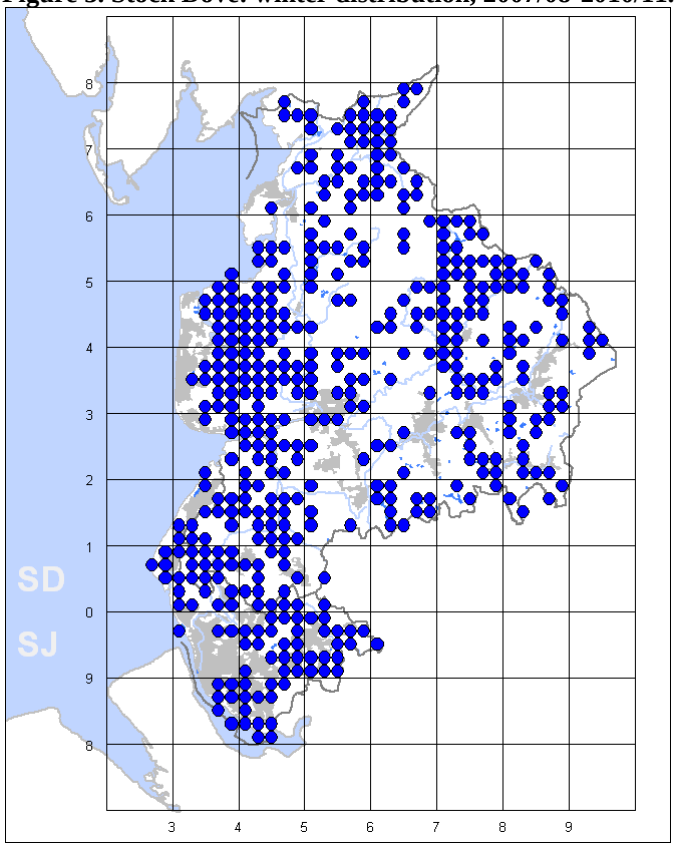
Breeding densities in occupied tetrads were significantly higher in the west of the county than further to the east. The population was estimated at 1700 pairs, three pairs per occupied tetrad.

Winter

Stock Doves tend to form flocks in winter, especially in lowland regions and, although they remain largely sedentary, they were recorded in 75 tetrads in winter where they had not been found in summer – perhaps reflecting relatively local movements within the breeding range to exploit feeding resources.

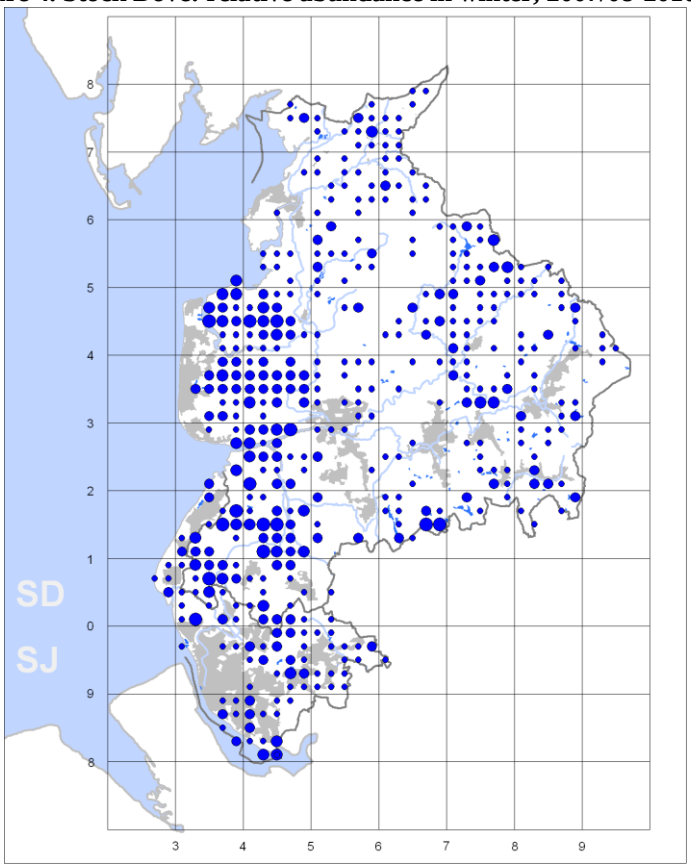
The winter distribution map records presence in 431 tetrads, 45.6% of the total; this was ten percentage points lower than in summer and there was a slight but noticeable pattern of withdrawal from some of the breeding areas at higher altitude (Fig.3).

Figure 3. Stock Dove: winter distribution, 2007/08-2010/11.



The relative abundance map confirms the breeding density statistics; with the exception of two tetrads in the West Pennine Moors the largest numbers were all recorded in the western third of the county between Crosby and north Fylde (Fig.4).

Figure 4. Stock Dove: relative abundance in winter, 2007/08-2010/11.



Dot size in descending order: 50-190; 20-50; 5-19; 1-4

Counts of 50 or more were made in 14 tetrads, the highest being 190 at Copthorne and100 at Little Crosby and the Wyre Estuary.

The winter population is estimated at 6000 individuals, 14 per occupied tetrad, the great majority of which are likely to be local breeders and their offspring, as ringing data over the years indicate that winter immigration into Lancashire is very slight.

BM

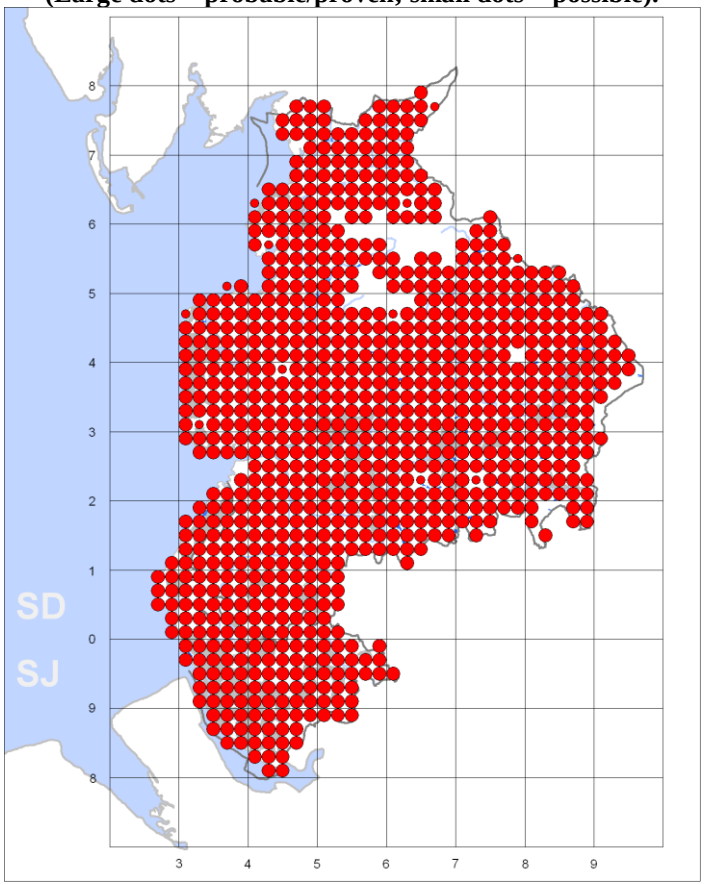
WOODPIGEON *Columba palumbus*

Breeding

Woodpigeon populations just seem to grow and grow both nationally and locally, largely as a result of the increasing availability of food resources such as Oil-seed Rape and a huge decline in shooting.

Although their breeding range was close to saturation in 1997-2000 it had grown by a further 4% by 2008-11 to 893 tetrads, covering 95% of the county total (Fig.1).

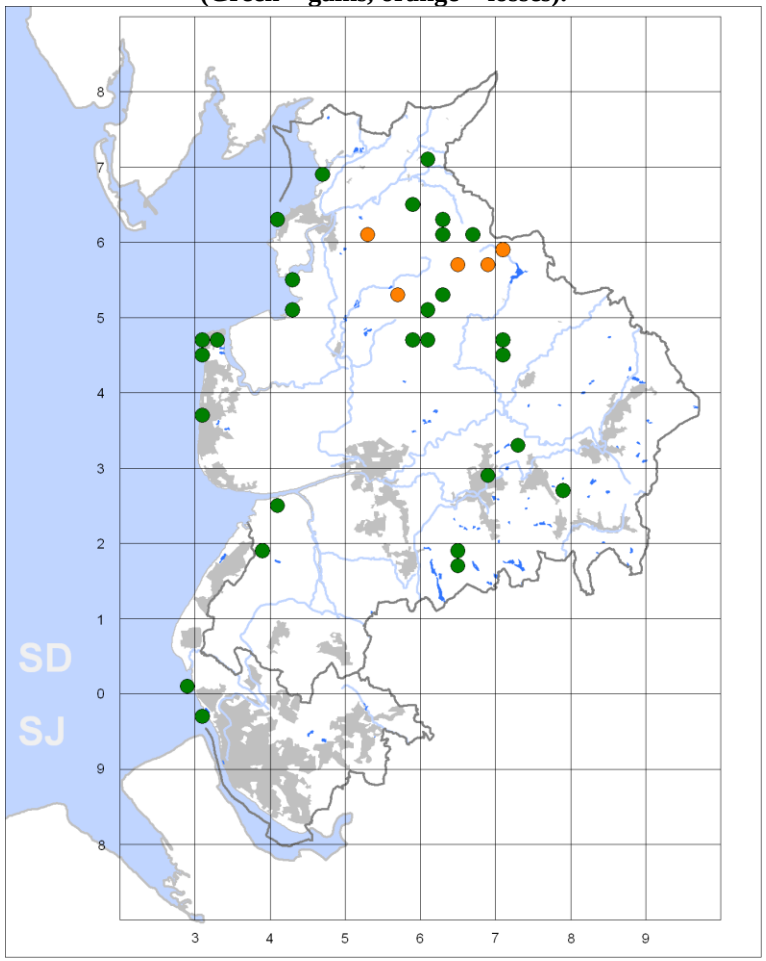
Figure 1. Woodpigeon: breeding distribution, 2008-2011. (Large dots = probable/proven; small dots = possible).



Although the very highest ground continues to be vacant, Woodpigeons are now fairly frequent on all the upland fringes. None bred on the two purely coastal tetrads at Banks Marsh and Carnforth Slag Tips and there were a couple of lowland tetrads where breeding was thought only to be possible. All urban areas are now comprehensively occupied.

Although newly-occupied tetrads significantly outnumbered losses, there were very few of either and both probably occurred in fairly marginal habitats (Fig.2).

Figure 2. Woodpigeon: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



Woodpigeons have long been most abundant on the agricultural land in the south-west of the county and northern Fylde. Population densities in the

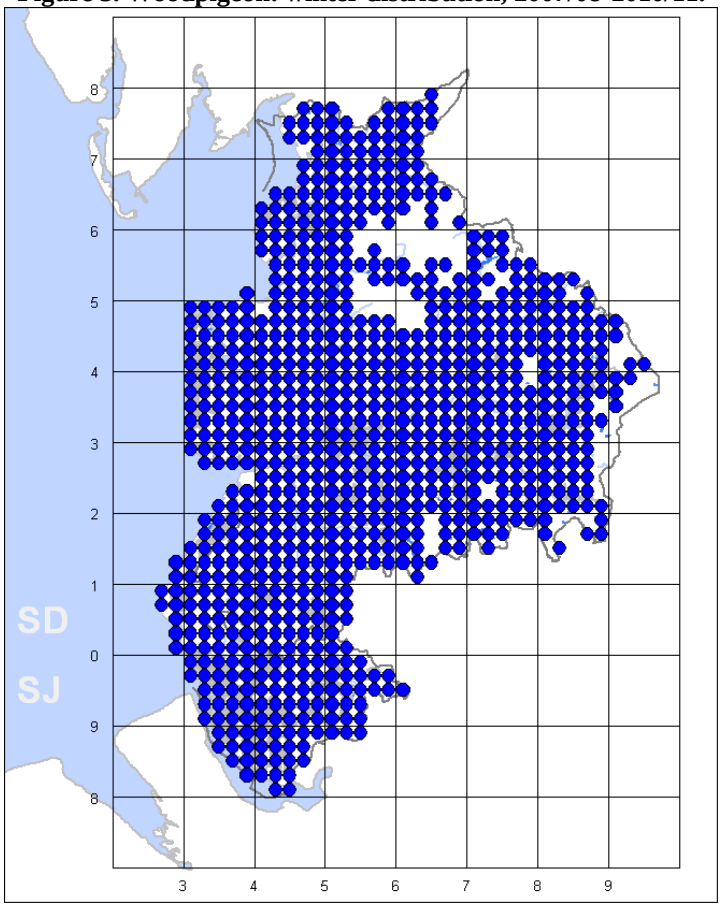
west were five times higher than in the east and 150% higher in the south than the north and in the south-west than the north-west.

Tetrad estimates provided by surveyors indicated an average density of 25 pairs per occupied tetrad, yielding a county population estimate of 22000 pairs, roughly 0.5% of the British total. Woodpigeons made up approximately 4% of all Lancashire's breeding birds of all species.

Winter

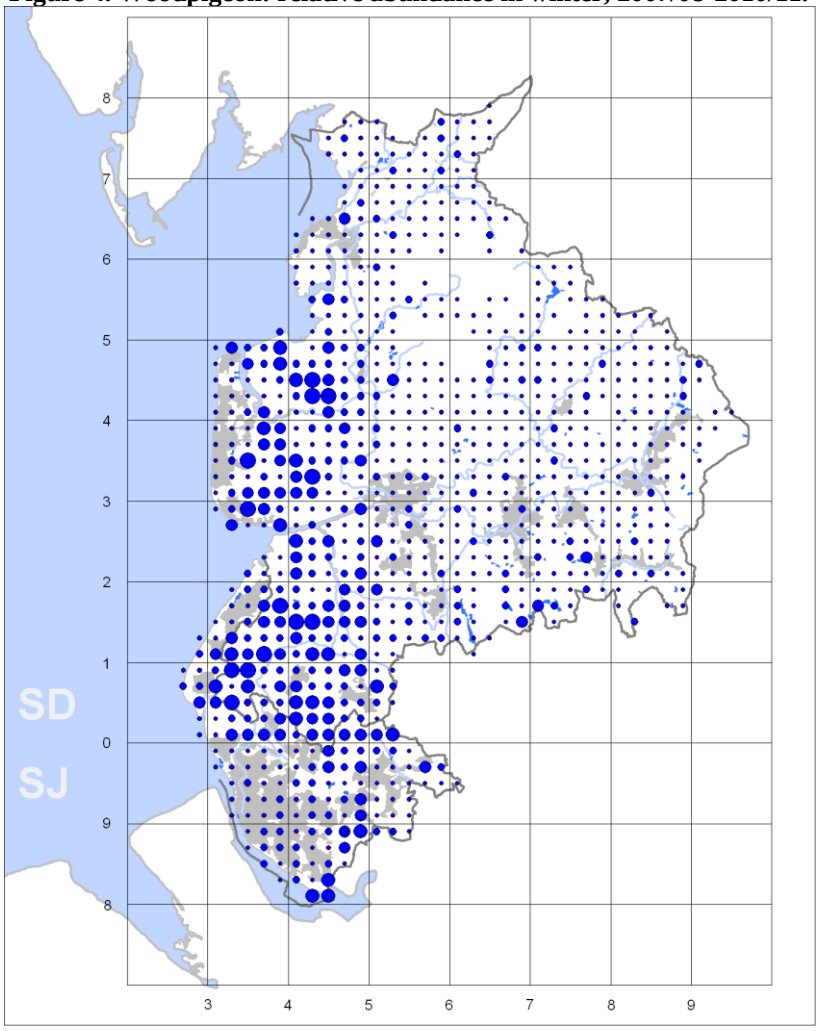
Woodpigeons were present in 865 tetrads, including 92% of the county total – a slightly lower proportion than in summer (Fig.3). Their distribution was essentially the same as in the breeding season but with a limited withdrawal from some upland areas.

Figure 3. Woodpigeon: winter distribution, 2007/08-2010/11.



As in summer the largest numbers and overwhelming majority of birds were found on the arable fields in the south-west and the Fylde (Fig.4).

Figure 4. Woodpigeon: relative abundance in winter, 2007/08-2010/11.



Dot size in descending order: 3000-15000; 1000-2999; 250-999; 50-249; 1-49

Thirty-four tetrads recorded peak counts of 1000 or more, eight of them 5000 or more; the largest were 15000 at Bescar, 8000 at Kirkham and Skitham, and 6000 on several Formby mosses and Rawcliffe Moss.

There was presumably a high degree of overlap both within and between winters and coming up with a population estimate is not

straightforward. The total number of birds counted during the four years of the survey was 165000 but a reasonable guess at average numbers would be 120 per occupied tetrad, suggesting a county total of 100000.

SJW

COLLARED DOVE *Streptopelia decaocto*

Breeding

After first colonising Lancashire in Formby and Ormskirk in 1961, breeding Collared Doves spread steadily if patchily, reaching north Lancashire during the 1960s, east Lancashire in the 1970s and Rossendale in 1979.

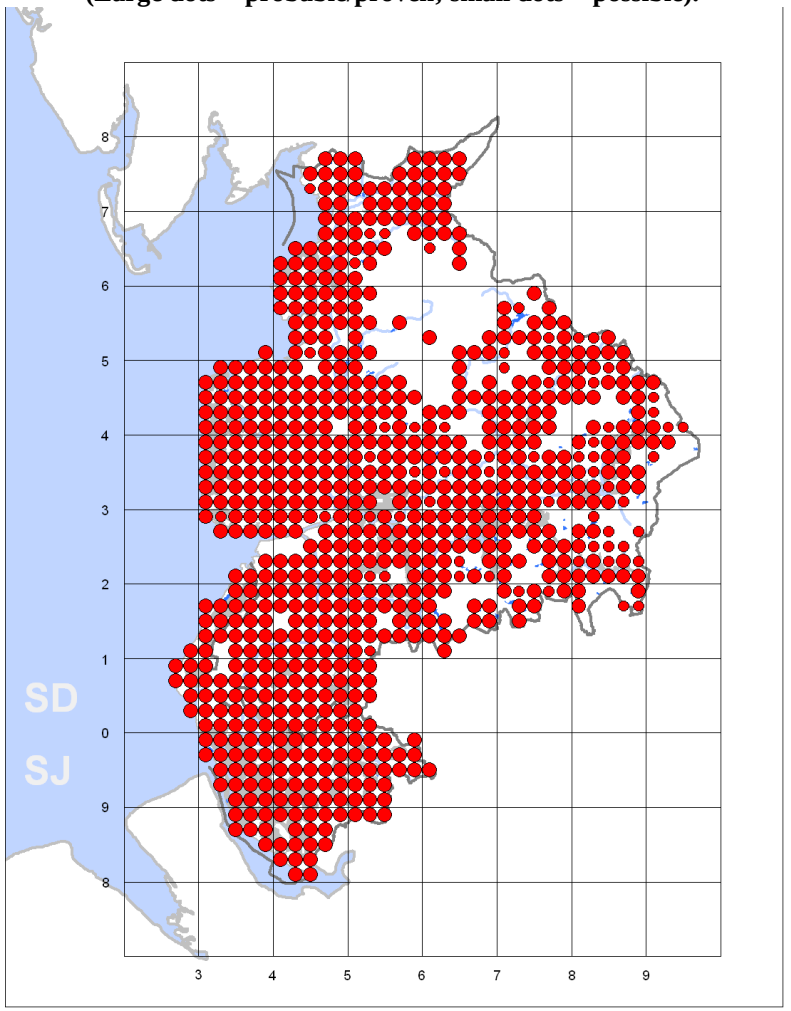
By the end of our first breeding atlas survey in 2000 Collared Doves were present in 689 tetrads and this has increased to 779 tetrads during 2008-2011, covering 83% of the county and representing a 12% increase in range since the turn of the century (Fig.1).

However, for the most part this survey only included records from April to July and, given the Collared Dove's ability to raise young more or less all year, this may be a significant underestimate; birds were found in a total of 809 tetrads during the winter and summer surveys combined.

Collared Doves were almost entirely absent from, or recorded as only possibly breeding in, upland areas in east and north Lancashire, the West and South Pennine Moors and the south Ribble saltmarshes.

With the exception of single tetrads in Liverpool and Preston, all urban areas were fully occupied and contained some of the highest densities of breeding birds; of 17 counts of 30 or more seven were in the Southport area. Others came from Crosby, Ormskirk, Burscough, Tarleton/Longton, Preston and Huyton. All of these areas are in the south-west of the county which overall supported densities in occupied tetrads 60% higher than in the north-west, while densities in the west of the county as a whole were 140% higher than in the east.

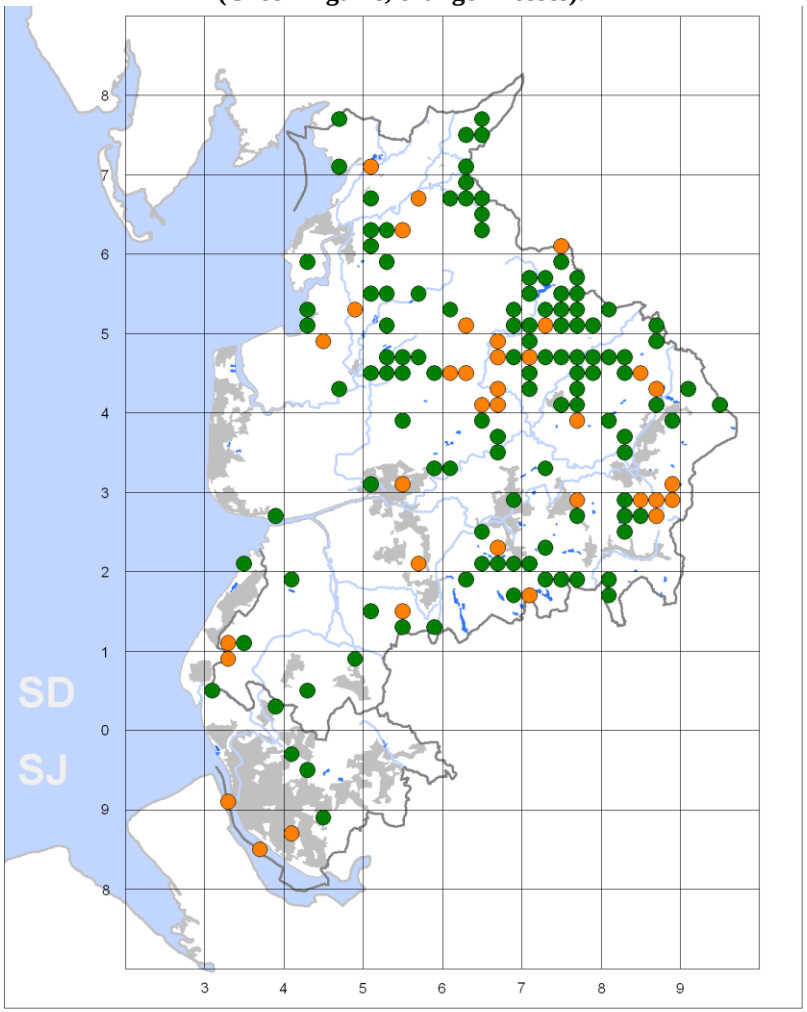
Figure 1. Collared Dove: breeding distribution, 2008-2011. (Large dots = probable/proven; small dots = possible).



Collared Doves were present in 118 new tetrads compared with 1997-2000 but were lost from 35 (Fig.2).

By far the majority of gains were throughout the east of the county but especially in the Clitheroe and Slaidburn areas of east Lancashire, while lost tetrads were fairly widely scattered.

Figure 2. Collared Dove: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).

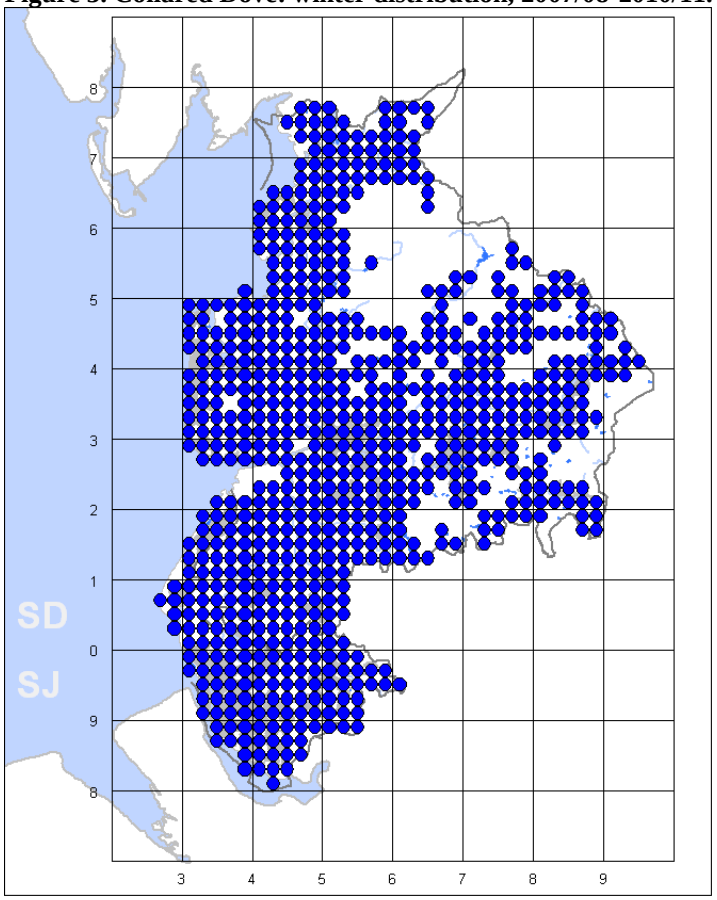


Population estimates were supplied by observers for only 30 tetrads and these were far from representative of the species' distribution in the county, but a 'guesstimate' of 6 pairs per occupied tetrad seems reasonable, implying a county total of around 5000 pairs. This would amount to about 5% of the British population, five times our 'share' according to land area but unsurprising perhaps in the light of the degree of urbanisation in Lancashire and North Merseyside.

Winter

Although small numbers of migrants are recorded at coastal watchpoints in most autumns, Collared Doves are essentially sedentary and their winter distribution matches that of summer almost precisely; they were located in 740 tetrads during 2007/08 to 2010/11, 78% of the county total (Fig.3).

Figure 3. Collared Dove: winter distribution, 2007/08-2010/11.



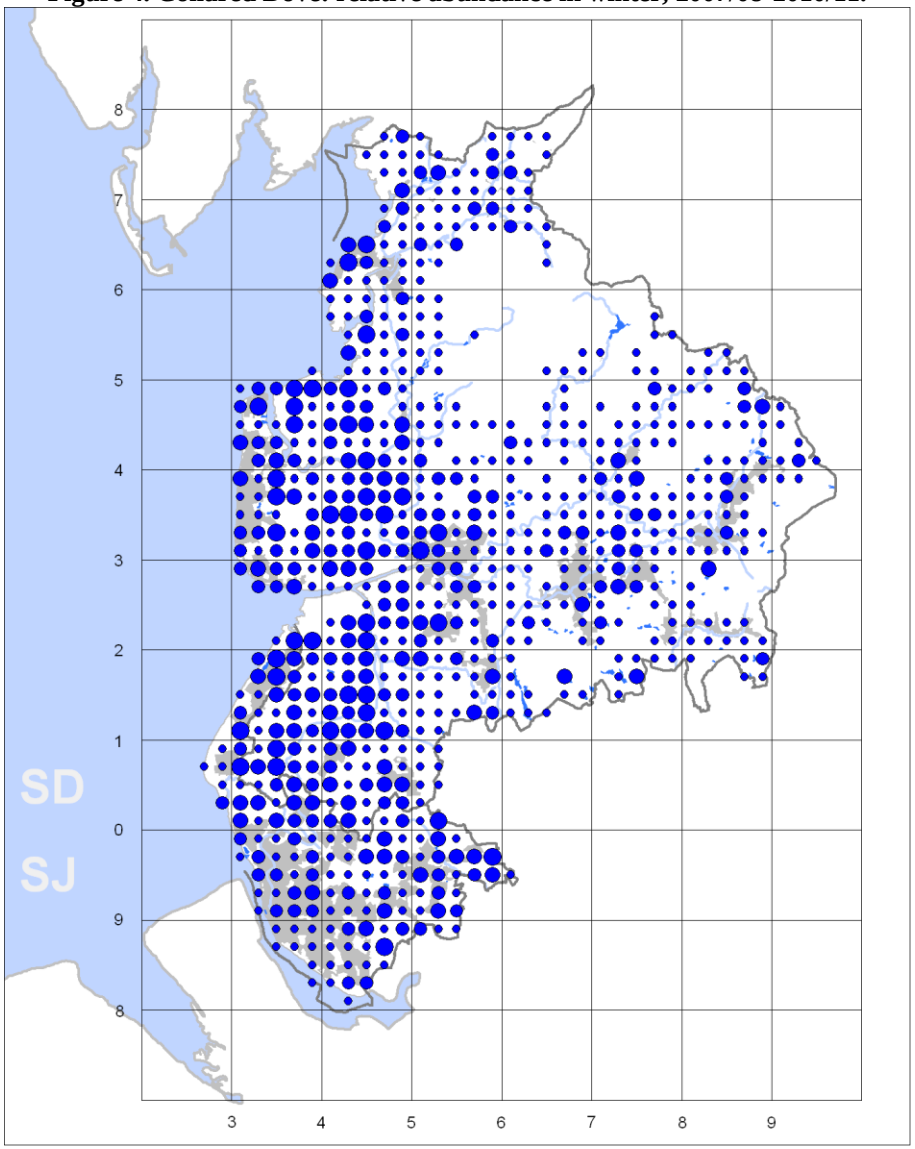
Moreover, as mentioned previously the distinction between breeding and non-breeding seasons is somewhat arbitrary for this species.

Similarly, relative abundance was highest in the south-west of the county, with Southport again prominent, although some high counts were also made in north Fylde and in Morecambe – and lowest throughout the east (Fig.4).

Allowing for an average of one juvenile surviving into mid-winter the county population is estimated at around 15000 birds.

SJW

Figure 4. Collared Dove: relative abundance in winter, 2007/08-2010/11.



Dot size in descending order: 35-102; 20-34; 10-19; 1-9

TURTLE DOVE *Streptopelia turtur*

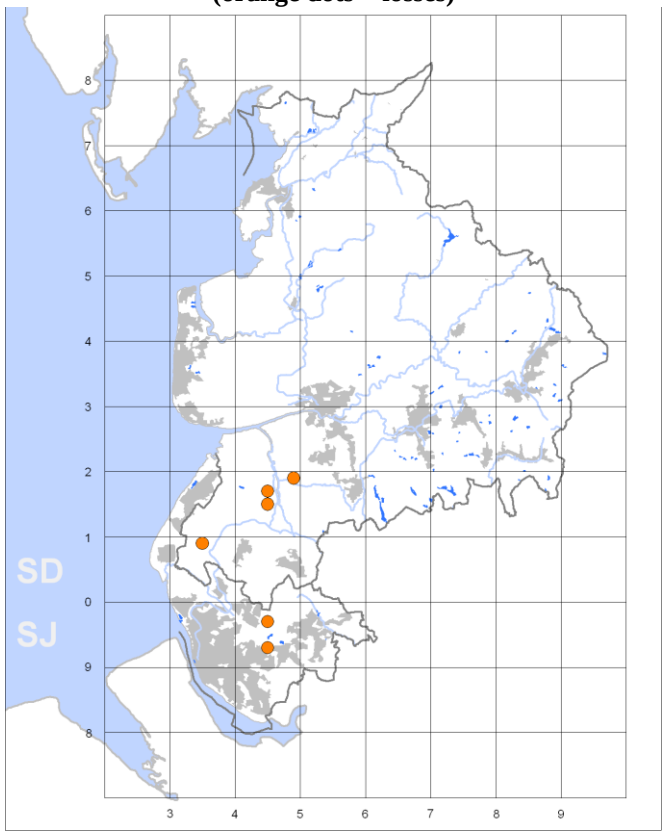
There was only a single record in 2008 at Clowbridge Reservoir on 11 May, and two in 2009 at Marshside on 14 May and Crosby on 25 October, but none was seen in either 2010 or 2011.

The last confirmed breeding record in Lancashire was at Haskayne Cutting in 2001, a year after our previous breeding atlas survey. Turtle Doves must therefore now be regarded at best as scarce migrants (possibly vagrants) in the county.

This has become the first species to have become extinct as a breeding bird in Lancashire and North Merseyside since Corncrakes finally disappeared in the latter half of the twentieth century.

SJW

Turtle Dove: changes in breeding distribution 1997-2000 to 2008-2010.
(orange dots = losses)

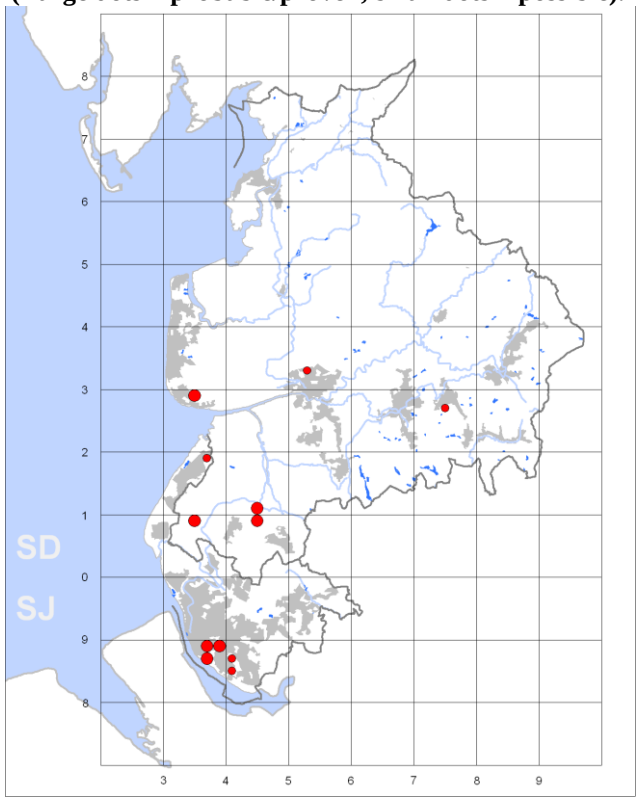


RING-NECKED PARAKEET *Psittacula krameri*

Breeding

A small population flourished briefly in Liverpool in the 1970s but died out in the early 1980s. Ring-necked Parakeets were thought possibly to be breeding during the last atlas survey and one or two pairs may have become established by 2005, but since then breeding has been confirmed in three widely-dispersed areas of the county.

Figure 1. Ring-necked Parakeet: breeding distribution, 2008-2011.
(Large dots = probable/proven; small dots = possible).



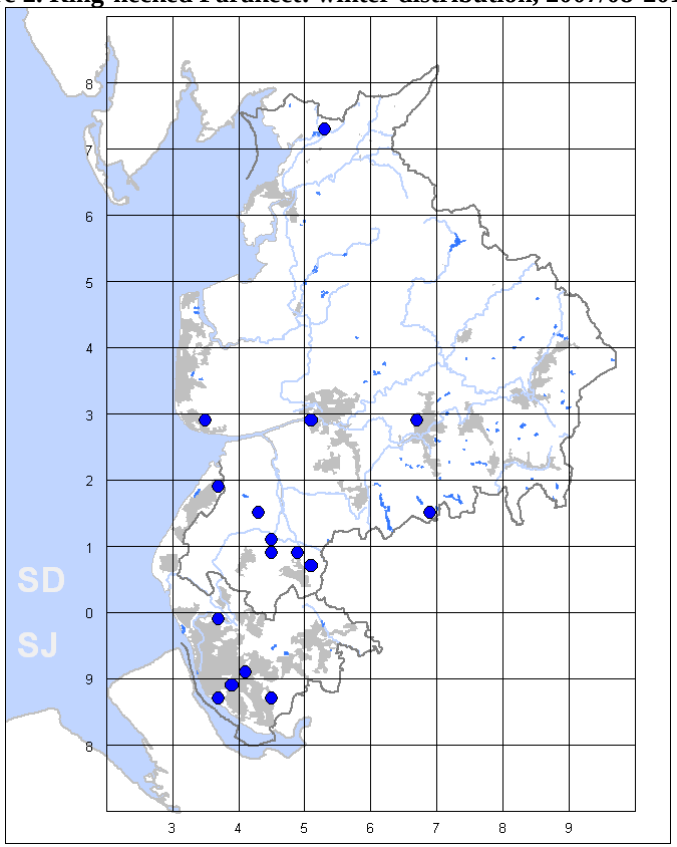
Ring-necked Parakeets were found in twelve tetrads during 2008-11, seven of them associated with probable or proven breeding birds (Fig.1). Breeding was proven at Lytham Crematorium, Sefton/Greenbank Park in south Liverpool and at Lathom but was less certain on Downholland Moss.

Two of the five possible breeding registrations were close to the Liverpool site but three others were far away from any suspected breeding site and may simply have been escaped birds.

Winter

There was at least one record of Ring-necked Parakeets in 16 tetrads during 2007/08-2010/11 (Fig.2). Many of these were in or near to known breeding areas but all but one of the others were much more distant and probably related to escaped birds.

Figure 2. Ring-necked Parakeet: winter distribution, 2007/08-2010/11.



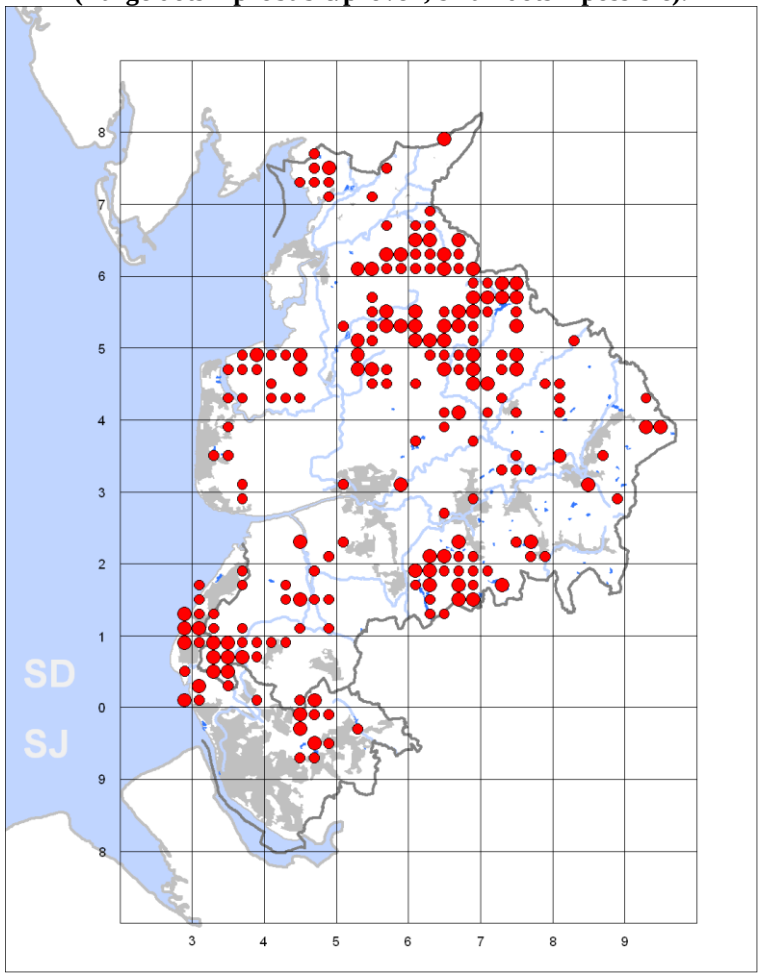
The exceptions were two records in north Skelmersdale, where groups of birds have been seen in gardens for several years and, although evidence of breeding has never been confirmed, it seems likely that it has occurred.

SJW

CUCKOO *Cuculus canorus*

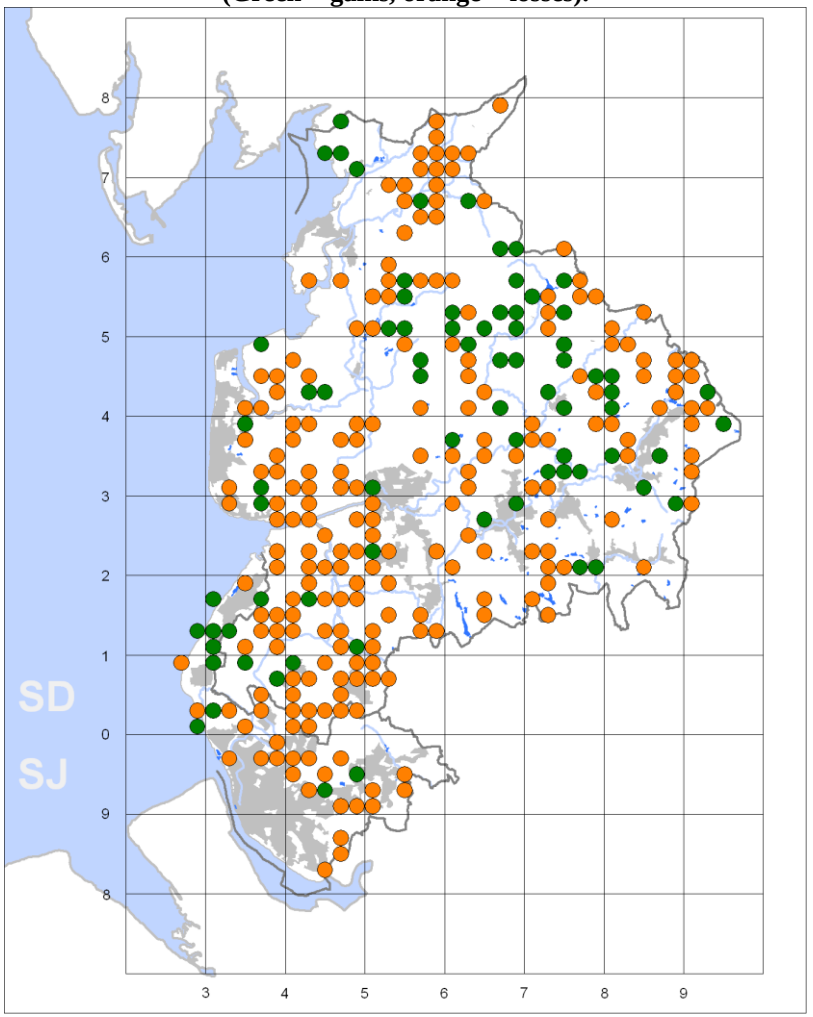
The Cuckoo's British population fell by 62% between 1970 and 2010, and by 49% during 1995-2010. The decline of the Cuckoo as a breeding species in Lancashire may be traced back at least as far as 1973 when Spencer observed that it was generally agreed that numbers had recently fallen.

Figure 1. Cuckoo: breeding distribution, 2008-2011.
(Large dots = probable/proven; small dots = possible).



The subsequent contraction in range and corresponding decrease in population in the county has been steady and apparently inexorable: the 1997-2000 Lancashire atlas estimated a population of 250 'pairs', with confirmed or possible breeding recorded in 346 tetrads; this had fallen to 210 tetrads during the present survey, 22.4% of the total and a range contraction of 40% (Fig.1).

Figure 2. Cuckoo: changes in breeding distribution, 1997-2000 to 2008-2011.
(Green = gains, orange = losses).



Most records were of calling males (130 tetrads) and therefore indicate only probable breeding; add to this the fact that many individuals are highly

mobile, and the real breeding range in both surveys was probably overestimated. The present survey found proven breeding in only five tetrads, at Ainsdale LNR, Mere Sands Wood, in the Ribble Valley, at West Bradford and Wycoller.

With these caveats in mind, the breeding distribution map shows the Cuckoo still to be a fairly widespread species, with modest concentrations in Bowland, on the West Pennine Moors and on the south-west mosslands inland of Southport and Formby.

A glance at the breeding change map, however, brings home the extent of the species' decline, with major range losses all across the Fylde and over most of the south-west, and to a lesser extent in east Lancashire, Rossendale and to the north of the River Lune (Fig.2). The breeding change statistics are stark, 214 breeding tetrads lost for a gain of only 76, with complete absence from two lowland 10km squares, south-east Fylde and the Lune Estuary.

The present population is estimated with moderate confidence at 100 'pairs'.

BM

BARN OWL *Tyto alba*

Breeding

Barn Owls were present in 277 tetrads during 2008-2011, in 82 of which breeding was thought only possible (Fig.1). Although these possible breeding records almost certainly relate to breeding birds, Barn Owls do forage quite widely and it seems likely that not all these tetrads supported nesting pairs.

Birds were recorded as 'summering' in only two tetrads – surely a significant underestimate. If possible records are included then the breeding range included 30% of the county's tetrads but if only the 195 proven/probable tetrads are included this reduces to 21% – the true figure lies probably somewhere between the two.

By either measure the species' breeding range has increased spectacularly since 1997-2000 – by 85% if all breeding records are considered and by 90% if just those with more positive evidence are taken into account.

The 1997-2000 survey showed the species to be essentially confined to the coastal plains of the Fylde and the south-west, but during 2008-2011 they were recorded in 172 new tetrads and were lost from only 45 previously-occupied ones (Fig.2).

Figure 1. Barn Owl: breeding distribution, 2008-2011.
(Large dots = probable/proven; small dots = possible).

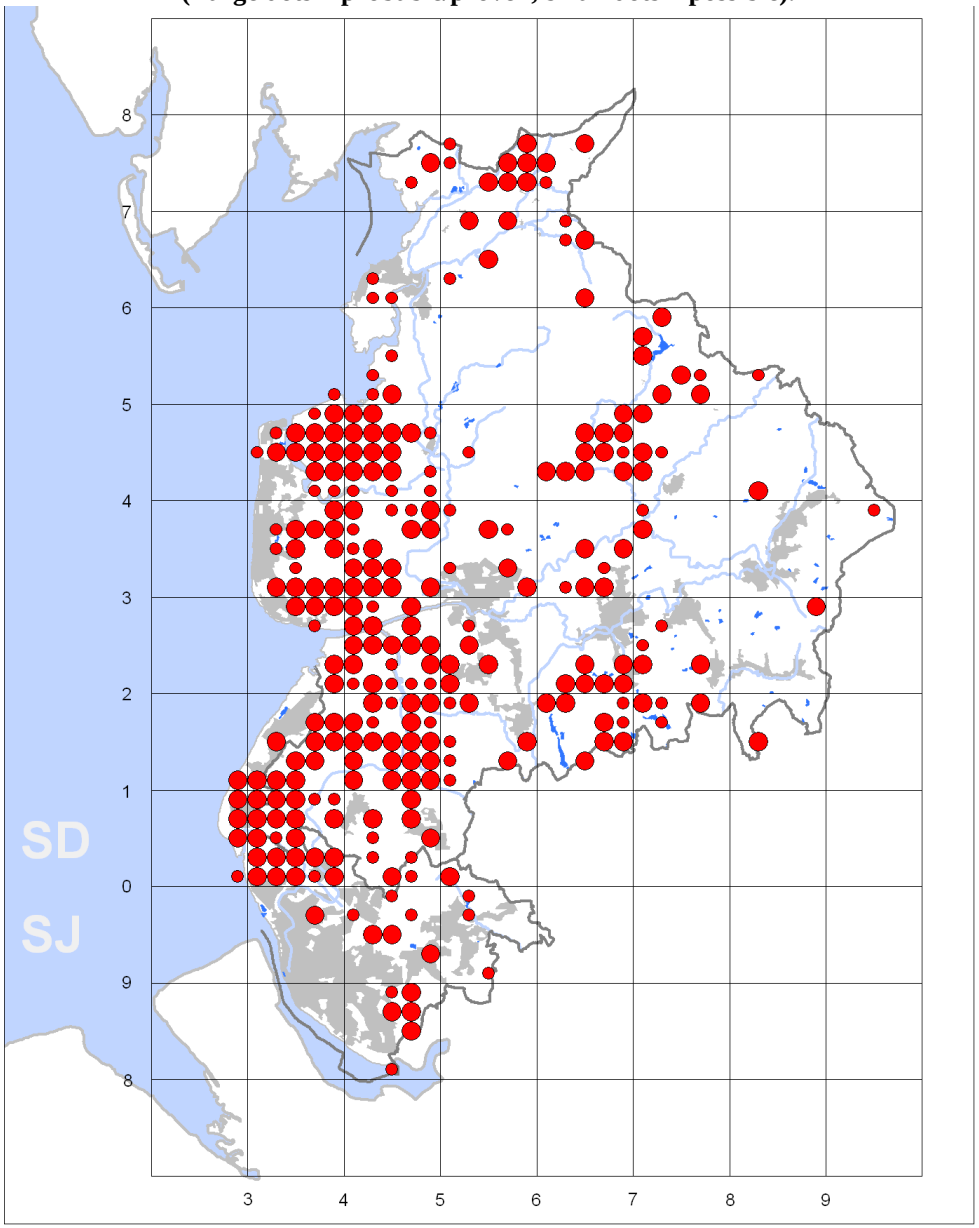
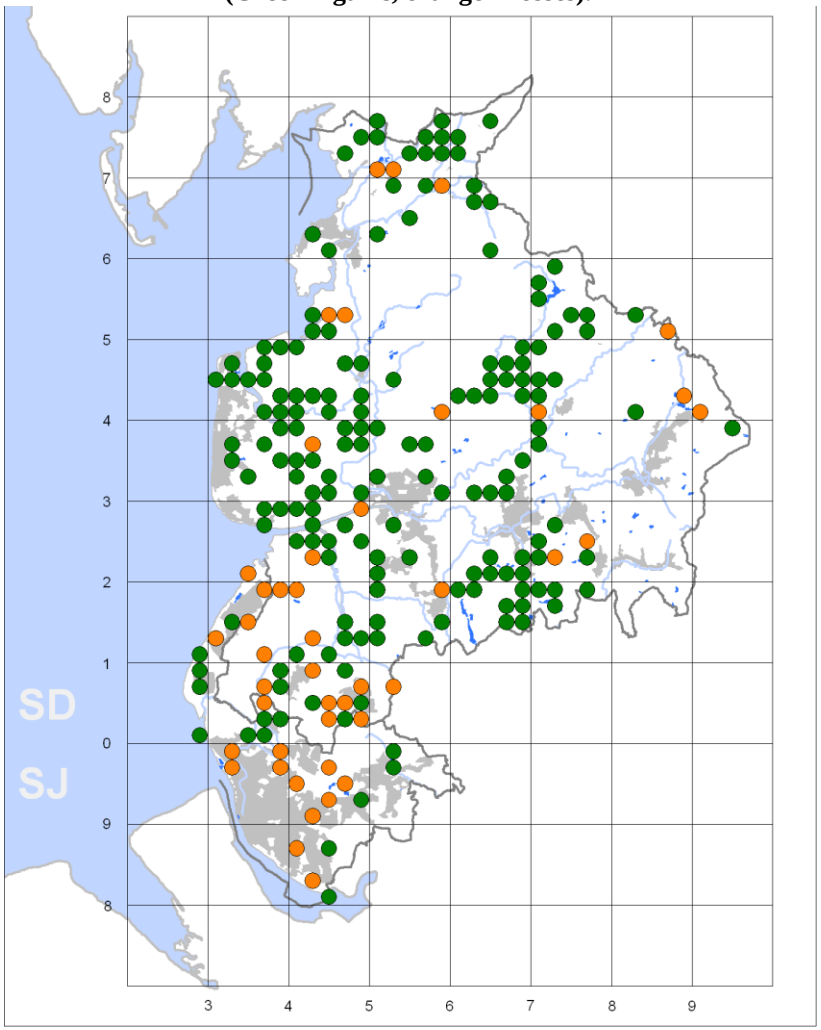


Figure 2. Barn Owl: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



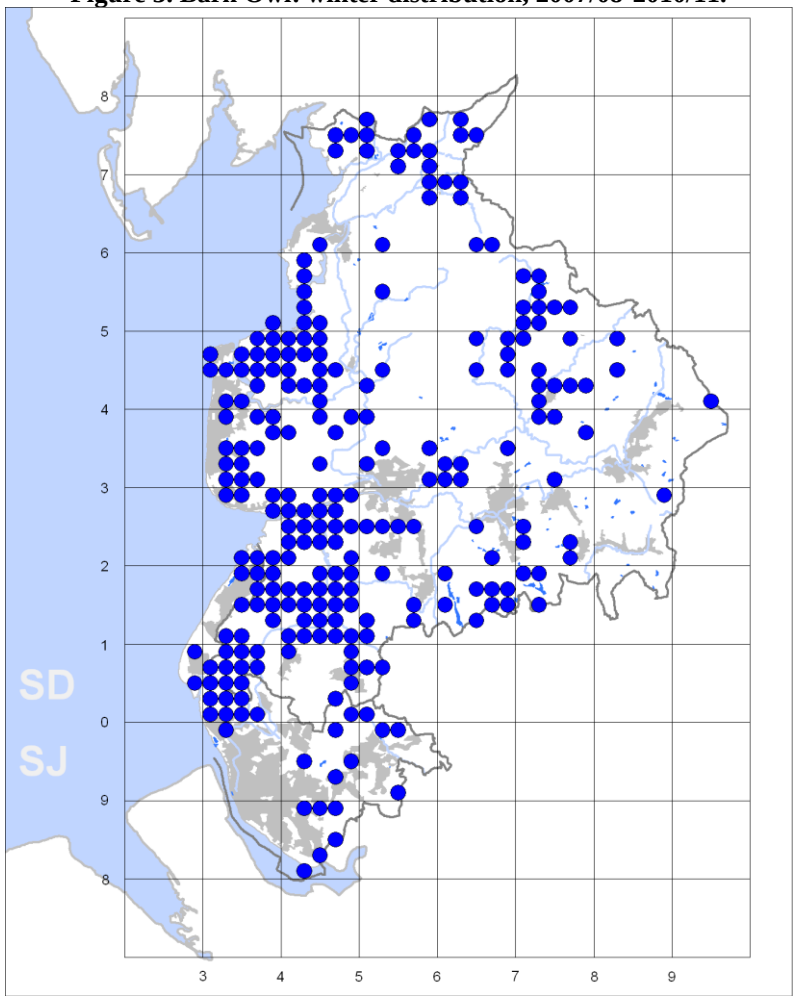
The gains were most obvious throughout the Fylde and in upland Lancashire, from the far north to the West Pennine Moors, with only Rossendale appearing not to have shared in the species' expansion. Significant range increase was also evident in the Fylde, with gaps in the 2000 distribution largely filled in; only in the south-west are range contractions clearly indicated, particularly in areas further from the coast.

The breeding population is estimated at 1.5 pairs per confirmed or probable tetrad giving a total of 275 pairs, more than double the 130 estimated in 1997-2000 and accounting for 7% of the British total – emphasising the county's importance for this species.

Winter

Birds were recorded in 247 tetrads, 26% of the total, a significantly smaller proportion than in summer (Fig.3) – perhaps explained by their greater visibility in the nesting season when daylight hunting is more frequent.

Figure 3. Barn Owl: winter distribution, 2007/08-2010/11.



The winter distribution map clearly matches that of the breeding records very closely, presumably reflecting the Barn Owl's relatively sedentary habits; the largest difference is an apparent absence from much of south Fylde.

Allowing for poor breeding success in wet summers and high mortality in hard winters the mid-winter population is probably not hugely different to that in summer, with perhaps an additional 0.5 birds per pair surviving, a total of around 700 individuals.

BM

EAGLE OWL *Bubo bubo*

A pair that bred for the first time in Whitendale in 2007 remained in that area until at least 2011, nesting successfully for at least a further three years. A second pair became established in another area of Bowland during 2010 and 2011.

More recent escapes, all singles, were recorded during the atlas period in all seasons at Kirkby, Burnley, Downholland Moss, Belmont Reservoir and Thornton, Fylde.

SJW

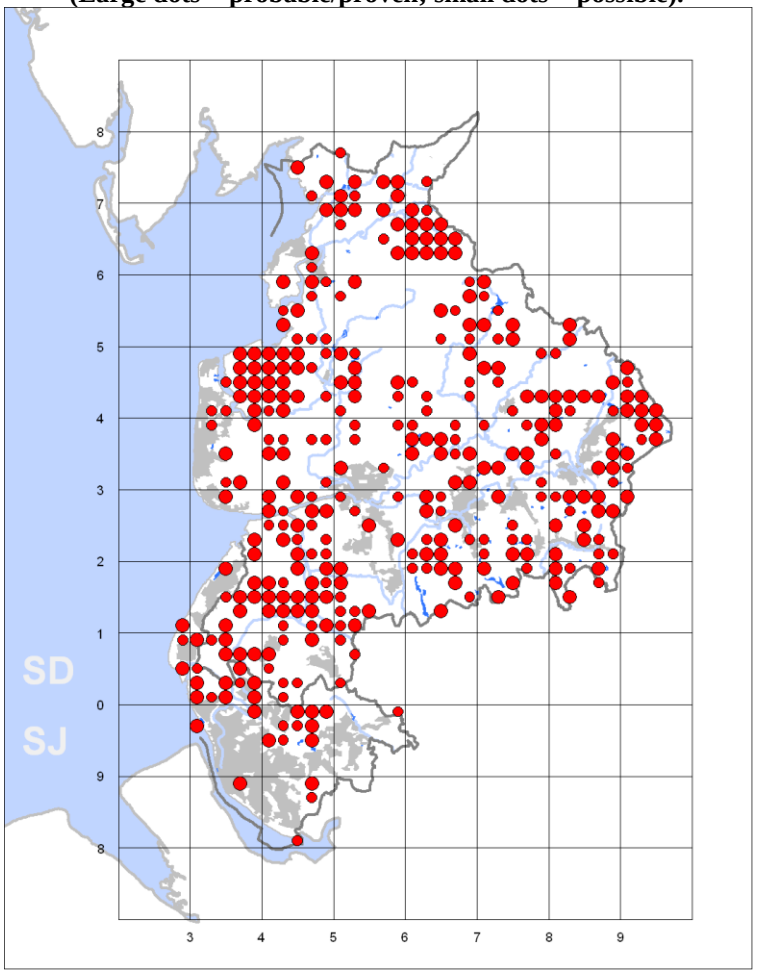
LITTLE OWL *Athene noctua*

Breeding

Little Owls were introduced at several locations in southern and eastern England during the late nineteenth century; the population and range increased exponentially from around 1910 to the 1930s and had extended to all regions of England by the time of the 1968-72 Atlas. Between the first accepted Lancashire record in 1917 and the late 1950s the county was completely colonised, with Little Owls equally widespread on lowland farms in the west and the moorland edge in the east; the species was absent only from urban and suburban areas and from the highest fell country.

The 2008-2011 survey of Lancashire recorded presence in 336 tetrads, 35.7% of the county total, implying a range contraction of 17% since 1997-2000 (Fig.1). This is a fairly sharp decline and one which goes against the impression many Lancashire birdwatchers have, but it is in line with the national picture of a 40% population decline between 1995 and 2010.

Figure 1. Little Owl: breeding distribution, 2008-2011.
(Large dots = probable/proven; small dots = possible).



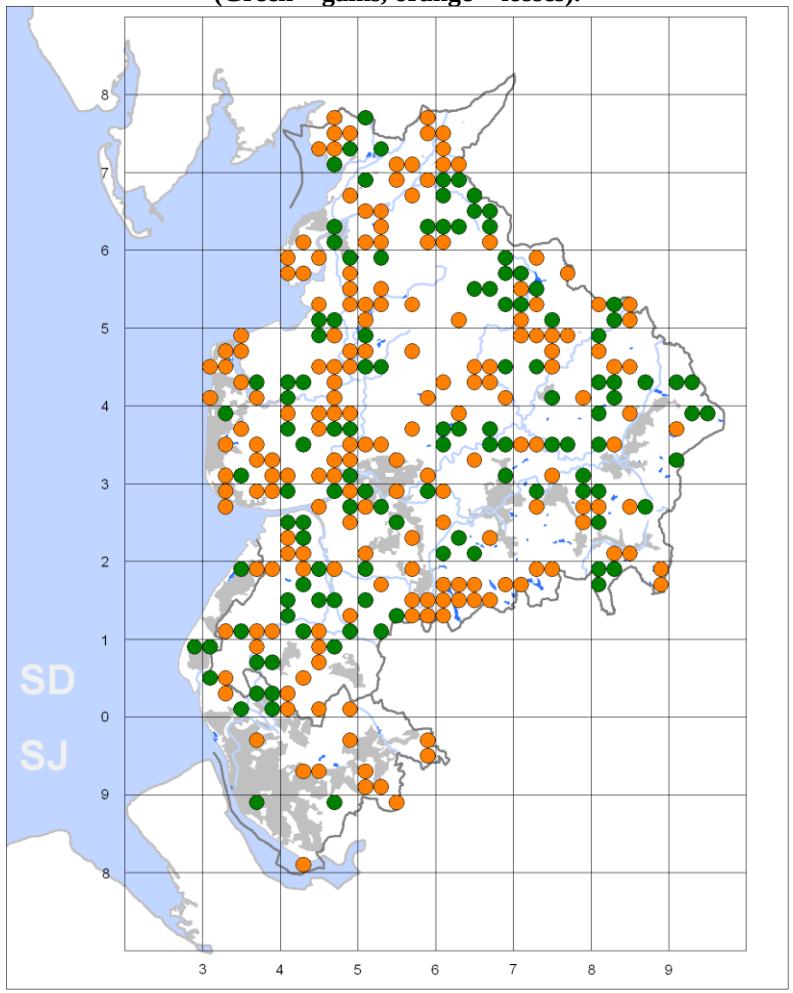
However, Little Owls are extremely sedentary and they were recorded in a total of 425 tetrads in either winter or summer during 2007-2011 so, although this decline is probably real, it seems that the breeding population may be larger than is implied by the breeding season counts alone.

Breeding birds were found throughout the lowlands and upland fringes, avoiding urban areas, but their distribution was solid in north Fylde – no

doubt helped by the nest-box scheme there – and in north-east Lancashire where very intensive surveys were carried out. Newly-occupied tetrads were scattered as were most apparently-abandoned areas, although these were heavier in the West Pennine Moors, the Fylde and the Lune Valley (Fig.2).

The population was estimated at 430 pairs during the breeding survey but for the reasons given above perhaps 500 pairs might be more accurate.

Figure 2. Little Owl: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



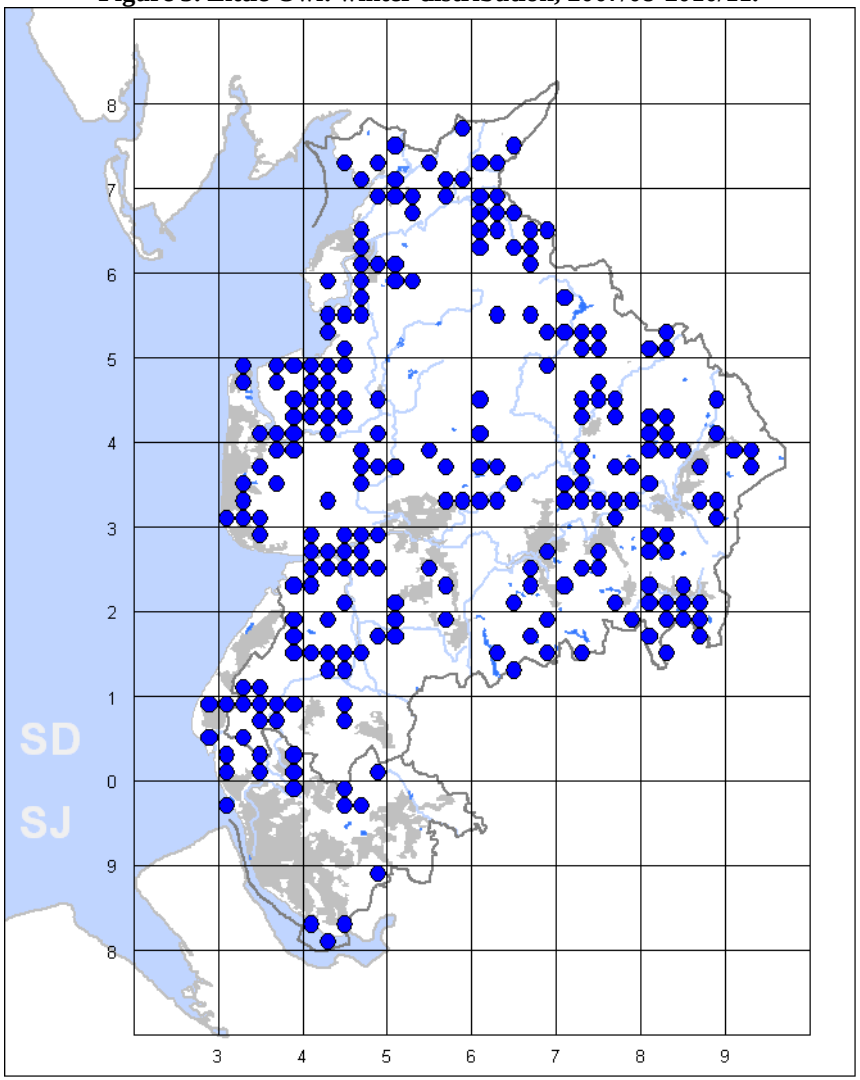
Winter

The winter distribution map shows presence in 242 tetrads, 25.6% of the total, with an indication of limited withdrawal from some upland areas in winter (Fig.3).

The population was estimated at 1200 individuals.

BM

Figure 3. Little Owl: winter distribution, 2007/08-2010/11.

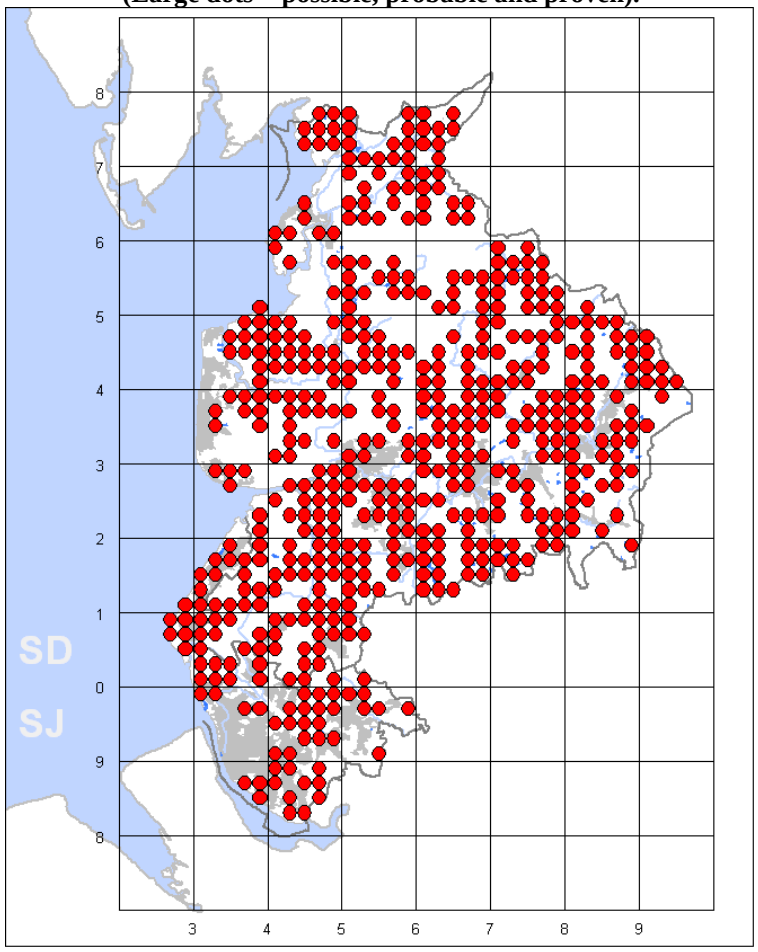


TAWNY OWL *Strix aluco*

Breeding

Tawny Owls were seen – or more likely heard – in 517 tetrads during the 2008-2010 breeding seasons, 55% of the county total (Fig.1). This suggests an 8% increase in range since 1997-2000 but it is perhaps more likely that survey effort differed in the two surveys, influenced in particular by the large number of 'roving records' that were received from various sources during the present one.

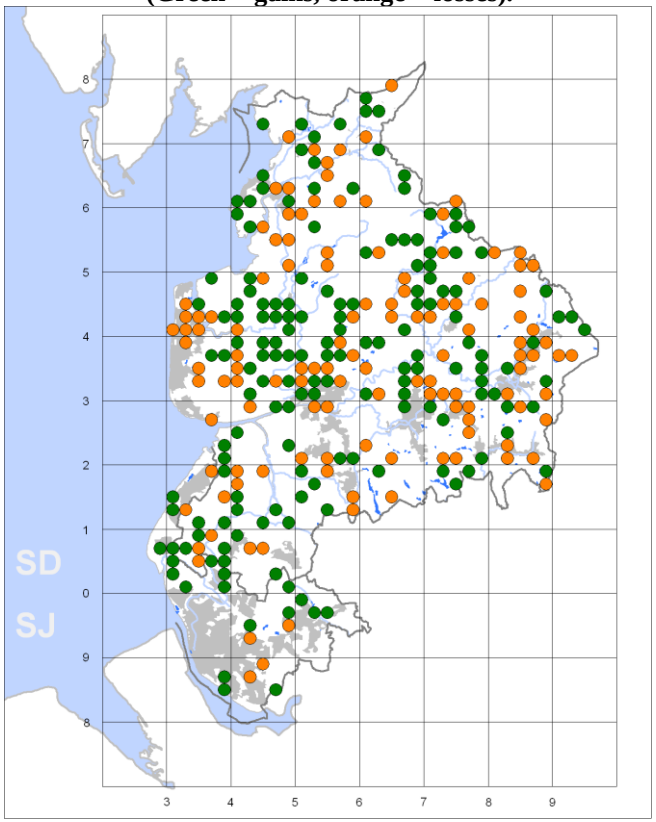
Figure 1. Tawny Owl: breeding distribution, 2008-2011.
(Large dots = possible, probable and proven).



Further uncertainty about the accuracy of these statistics arises from two sources. Firstly, the combined breeding and winter range extended to 615 tetrads, 66% of the county total. Secondly a total of 200 changes in distribution – 169 gains and 131 losses or nearly 40% of the 2008-11 total – appeared to have taken place between the two surveys. Since Tawny Owls are essentially sedentary, albeit with some longer-distance juvenile dispersal, these factors suggest that the real breeding range may be more extensive than suggested above.

Although including all areas of the county, Tawny Owl distribution is quite patchy, reflecting the dispersed nature of suitable woodland habitat, but urban areas are mostly avoided. Both the newly-occupied and apparently-abandoned tetrads were spread throughout the county but there were clusters of losses on the Fylde coast and of gains in eastern Fylde (Fig.2).

Figure 2. Tawny Owl: changes in breeding distribution, 1997-2000 to 2008-2011.
(Green = gains, orange = losses).

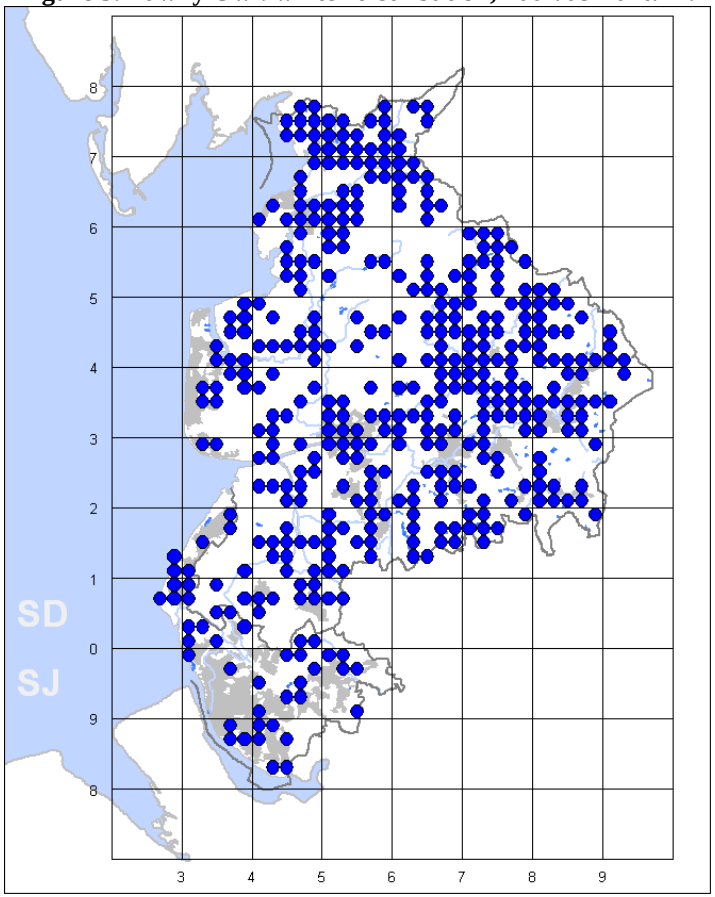


There was little variation in reported breeding densities in any part of the county with most observers recording one to three pairs. The average density was estimated at two pairs per occupied tetrad, producing a county population estimate (on the basis of the most conservative view of the range) of 1000 pairs, around 2% of the British population.

Winter

Birds were found in 411 tetrads covering 44% of the county total, eleven percentage points lower than in summer (Fig.3). This seems likely to have been largely due to differential survey effort or difficulties in detectability during winter.

Figure 3. Tawny Owl: winter distribution, 2007/08-2010/11.



There was little consistent variation in numbers recorded throughout the county and the estimate of Lancashire's winter population is best derived from the estimated number of breeding birds plus one juvenile surviving until midwinter of around 3000 birds.

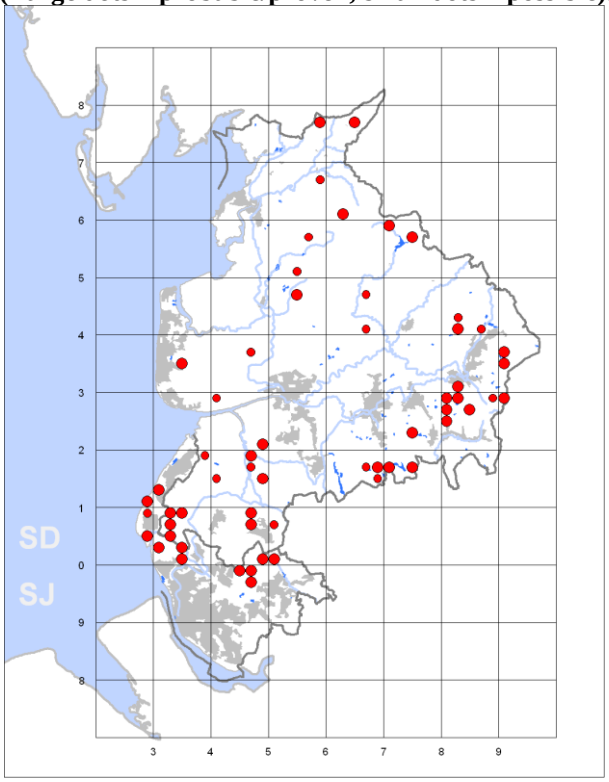
SJW

LONG-EARED OWL *Asio otus*

Breeding

Long-eared Owls are strictly nocturnal and their nesting sites in conifer plantations and small copses are often difficult to access; many breeding records rely on hearing the characteristic calls of the young. This is, therefore, a species that requires dedicated survey effort and is almost certainly under-recorded in many parts of Lancashire.

Figure 1. Long-eared Owl: breeding distribution, 2008-2011.
(Large dots = probable/proven; small dots = possible).

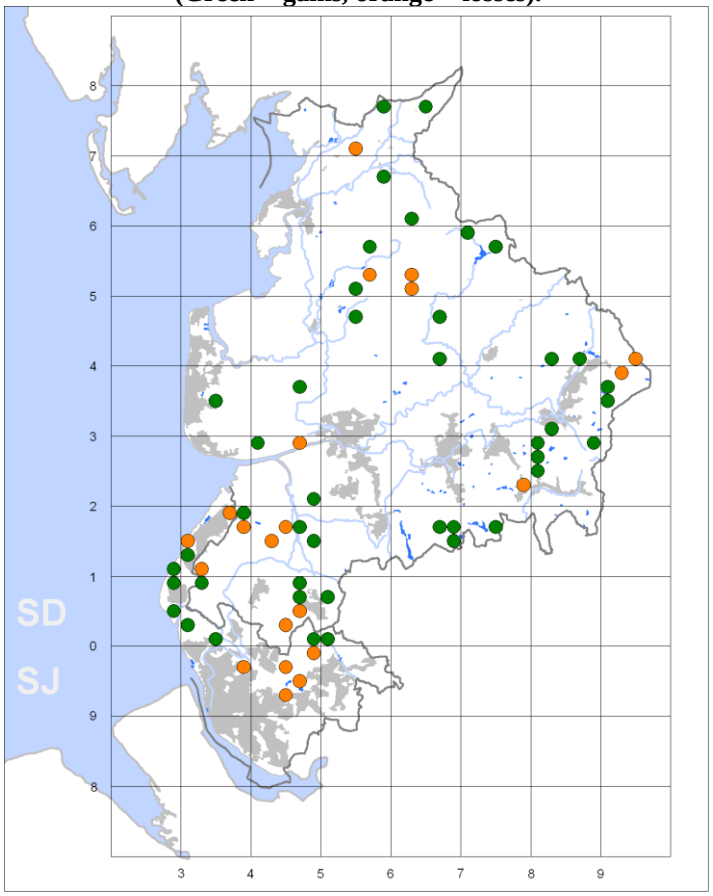


Nonetheless, it was recorded in 58 tetrads during 2008-11, a mere 4% of the county total but suggesting a 50% increase since 2000 (Fig.1).

Long-eared Owls were concentrated to a very large degree in the south of the county with more than a quarter in Merseyside or adjacent areas of West Lancashire, where they typically nest on farmland in small woodlands used for Pheasant-rearing. Other clusters of breeding birds were found on the West Pennine Moors, in Rossendale and south of Burnley.

They were very thinly scattered elsewhere with just one proven (at Marton Mere) and two possible records in the Fylde. Survey effort is known to have been greatest in the south-west but it remains unknown to what extent the species may have been under-recorded elsewhere.

Figure 2. Long-eared Owl: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



It is fairly certain, though, that the apparent 50% increase in records this century was largely an artefact of increased survey effort. Forty previously unrecorded tetrads were found to be occupied during the present survey, mostly in Merseyside and adjacent areas, and in the West Pennine Moors and Rossendale (Fig.2). Set against these, 20 apparent losses were scattered throughout the county but with a cluster in the north of St. Helens.

Population estimates provided by surveyors suggested that an average of 1.5 pairs were found in each occupied tetrad, producing a county total of 75 pairs; this apparent large increase on the 30 pairs estimated in 1997-2000 was, like the distributional changes, probably largely illusory. The British population estimate is very imprecise (1600-5300 pairs) but compared with the midpoint of this range Lancashire supports some 4-5% of the national total.

Winter

Birds were located in 25 tetrads during 2007/08 to 2010/11 (Fig.3), 33% fewer than during the breeding season, probably almost entirely due to the difficulties of surveying this largely silent, nocturnal species; dedicated surveys have always focussed on breeding birds.

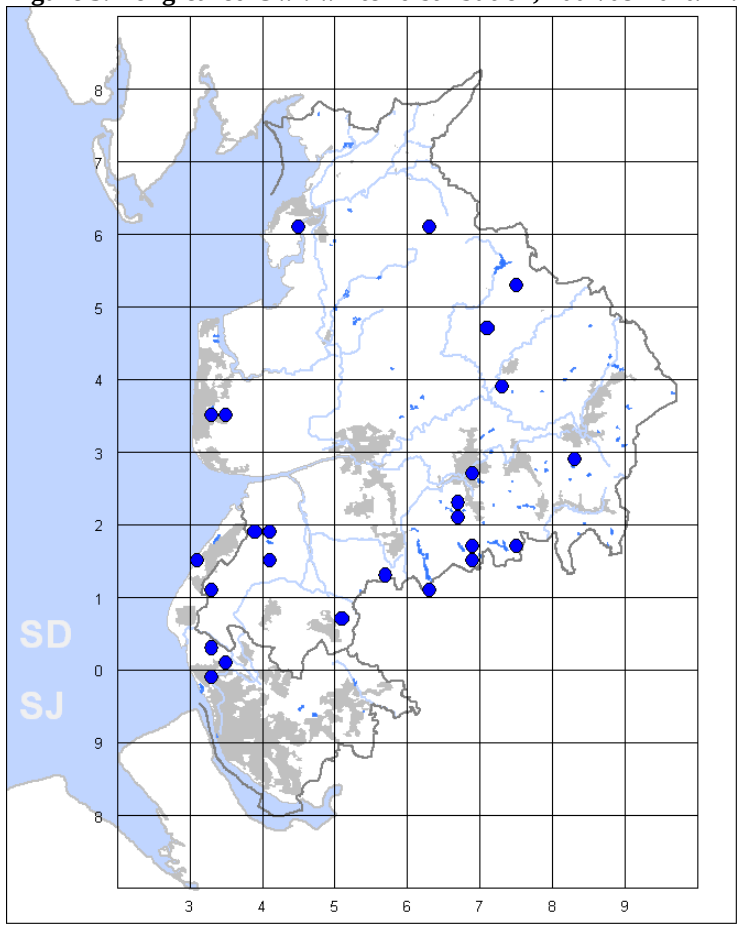
However, birds were found in several tetrads where they were apparently absent during summer: Aldcliffe, Champion Moor, Waddington Fell, Barrow, Darwen Moor/Sunnyhurst, Fishmoor Reservoir, Birkdale, Plex Moss, Coppull Hill, Rivington, Ainsdale NNR, Ince Blundell, Sefton Meadows and the Rimrose Valley.

Several of these additional records probably related to short, possibly juvenile dispersal, movements from breeding sites, and some may have involved longer-distance immigrants. However, given that Long-eared Owls re-establish breeding territories as early as January, it is likely that some, perhaps six or so, were sites that had been overlooked during the breeding season.

Birds were again present annually at the county's only currently known (or publicised) communal roost at Marton Mere.

SJW

Figure 3. Long-eared Owl: winter distribution, 2007/08-2010/11.



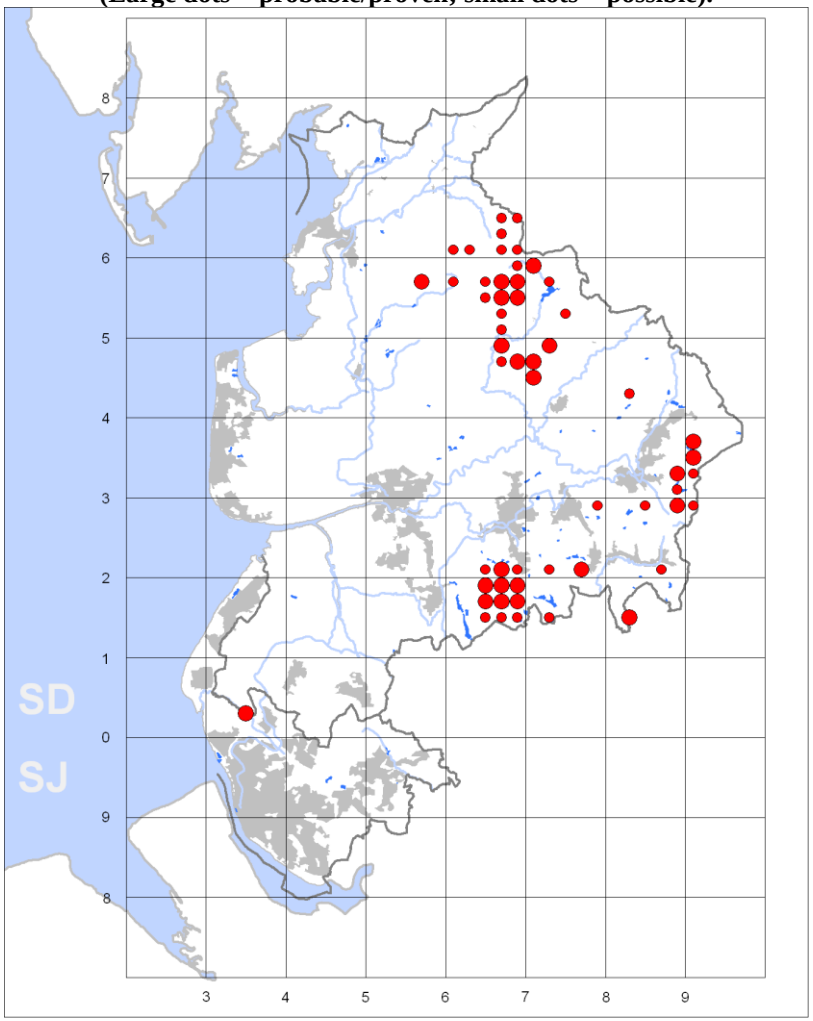
SHORT-EARED OWL *Asio flammeus*

Breeding

The incessant quartering of a hunting Short-eared Owl coupled with their habit of perching openly on fence-posts or dry-stone walls makes this perhaps the easiest of the owl species to locate. When provisioning young, the adults can frequently be seen hunting in broad daylight, will often circle intruders close to the nest and even undertake an elaborate injury-feigning display almost as spectacular as the wing-shivering diving display-flight of the male.

Despite these facts, nest sites are not easy to locate as hunting birds will range over several kilometres from the nest site

Figure 1. Short-eared Owl: breeding distribution, 2008-2011.
(Large dots = probable/proven; small dots = possible).



Numbers and distribution fluctuate widely in synchronicity with Field Vole cycles and site fidelity is poor with the birds essentially nomadic. The distribution map thus tends to overstate the species' distribution in any one year.

The 2008-2011 survey indicated a slight increase in breeding numbers and some subtle shifts in distribution since 1997-2000 with an estimated 40 pairs recorded in 62 tetrads (Fig.1).

Distribution remained fundamentally the same with Bowland and the West Pennine Moors the key areas, but with an increase in the South Pennines, reduced status in Rossendale and an occasional pair on the lowland mosses. However, a decline was also recorded in the south-west Bowland area with birds recorded in just two tetrads in comparison with twelve in 1997-2000. This was surprising, especially given that the species retained a healthy status in north and central Bowland.

Within the core Bowland area, annual breeding figures are available from the United Utilities Bowland estate that covers some 10500 hectares of the central fells. 2008 was a particularly good year with 23 territories and eleven confirmed breeding attempts; during 2009-11 three pairs were confirmed annually, on between five and eleven territories.

The other main area in the county, the western section of the West Pennine Moors, recorded a remarkably constant two or three pairs throughout the four breeding seasons of the survey. Sporadic breeding on the lowland mosses continued during the atlas years with a pair breeding in 2011 at a site in the south-west that has been occupied occasionally since the early 1980s.

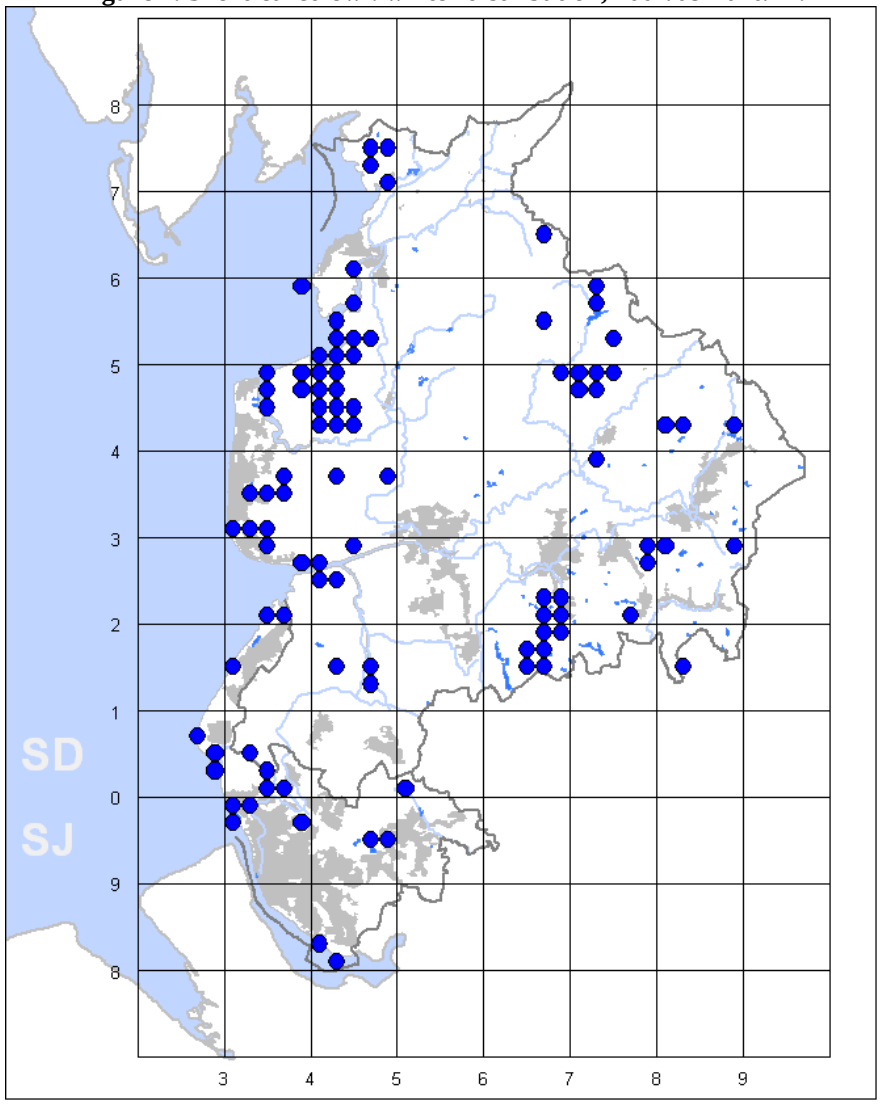
Winter

The winter distribution map of this species is misleading as, although the odd bird does winter there, many upland records relate to birds returning early to the breeding grounds. The majority of the estimated average 30 wintering individuals occurred on the grasslands and marshes of the lowland mosses and estuaries. Birds were present in 97 tetrads with notable concentrations in north Fylde and some of the south-west mosses but also inland, and at altitude in the West Pennine Moors and south-east Bowland (Fig.2).

Most counts related to just ones or twos but seven lowland tetrads recorded over five birds with six each in two tetrads at Lunt Meadows/Altcar Withins, ten each in three tetrads on either side of the Ribble Estuary at Marshside, Crossens and Warton, and seven and six in two tetrads on the north Fylde mosses. Surprisingly, only singles were recorded from the Martin Mere region, an area that once held good numbers of wintering birds.

SJM

Figure 2. Short-eared owl: winter distribution, 2007/08-2010/11.



NIGHTJAR *Caprimulgus europaeus*

A male was churring on Cockerham Moss on 1 June 2011 but was not heard subsequently.

SJW

PALLID SWIFT *Apus pallidus*

One was at Seaforth and Crosby Coastal Park from 30 April to 27 May 2009. Throughout its stay it fed with Common Swifts and several times was seen to head off in the late evening with them towards their breeding site in Crosby, but no other interactions were observed and it is uncertain if it attempted to breed with a Common Swift.

SJW

SWIFT *Apus apus*

The fortunes of Swifts appear to have been in decline in Lancashire, as in most other parts of Britain and north-west Europe, for several decades. However there is a degree of uncertainty about this; although Swifts almost invariably nest in houses and other structures, such a church towers, factories and hospitals, we have little detailed knowledge of their breeding behaviour or populations.

The 2008-2011 survey located proven or probable breeding Swifts in 208 tetrads, 22% of the county total, indicating a range contraction of 34.5% since 1997-2000 (Fig.1).

As in our earlier survey, these were concentrated in urban and suburban areas; although feeding birds often range far from their breeding areas. Nesting Swifts were scarce or absent in the higher fell country and in lowland farming regions without extensive urban clusters, such as inland Fylde and West Lancashire.

There was clear evidence of substantial losses of breeding tetrads all across the 1997-2000 range but particularly in Merseyside, central Lancashire and the main east Lancashire conurbations (Fig.2).

The population is now estimated, with limited confidence, at 1500 pairs.

BM

Figure 1. Swift: breeding distribution, 2008-2011.
(Large dots = probable/proven; small dots = possible).

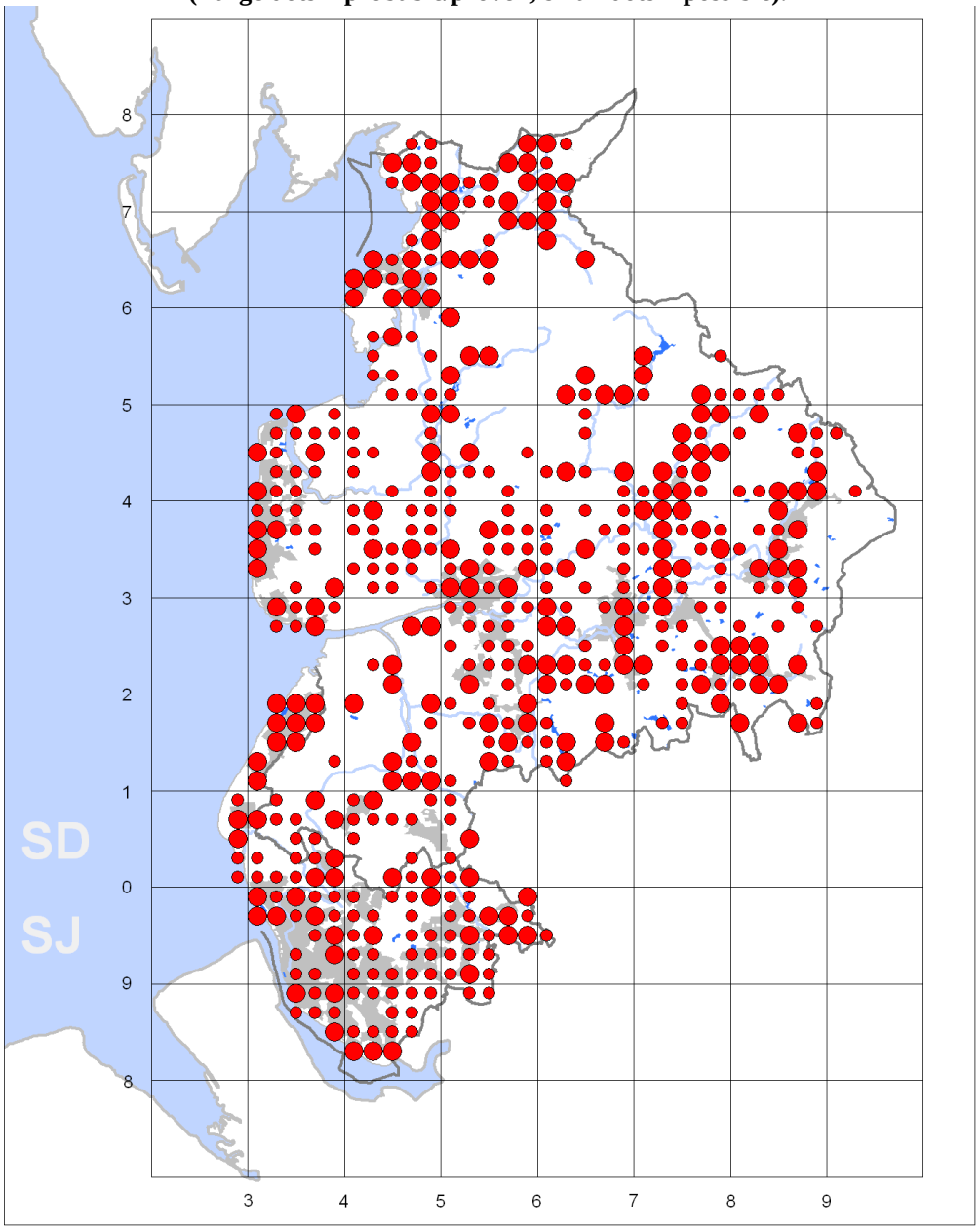
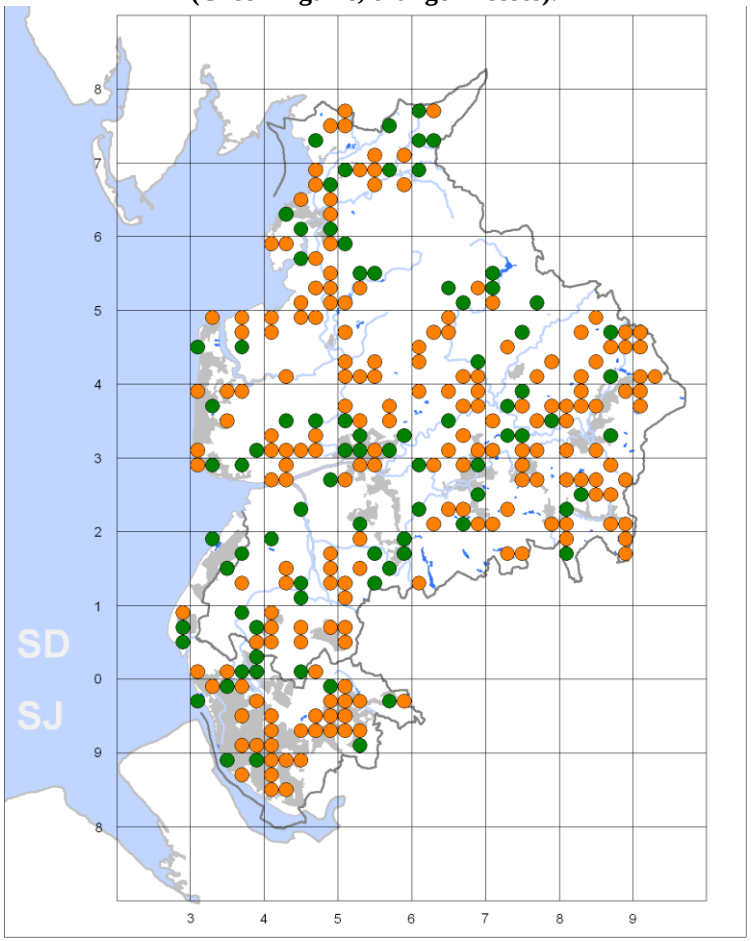


Figure 2. Swift: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



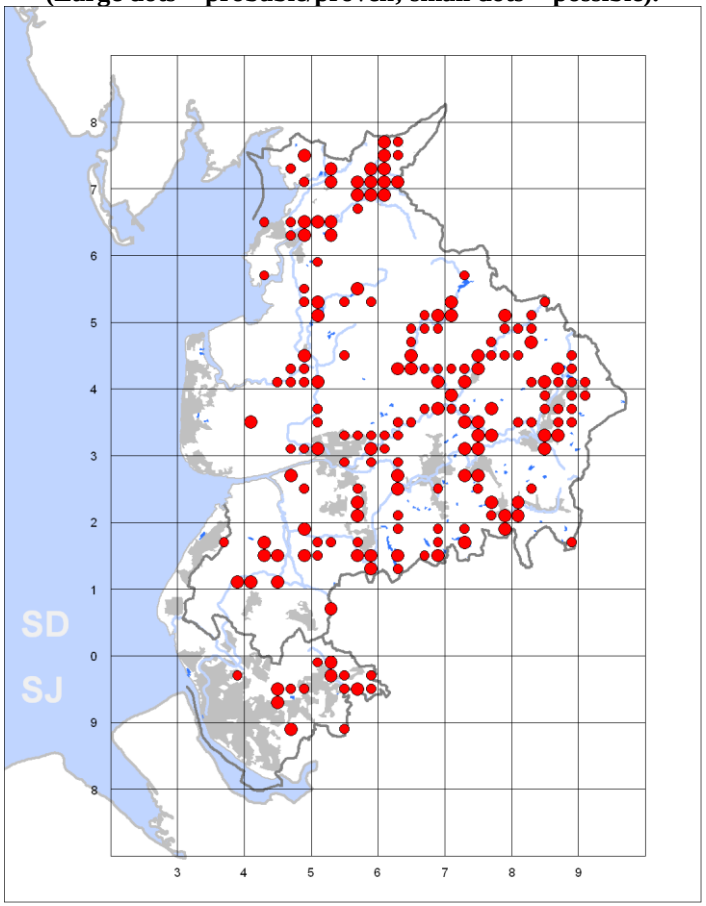
KINGFISHER *Alcedo atthis*

Breeding

Kingfishers were located in 192 tetrads during 2008-2011 but were classified only as either possibly breeding or summering in 106 of these, highlighting probably the highest degree of uncertainty about the status of any of Lancashire's breeding species. There are two main reasons for this: firstly, it is often only the flash of iridescent blue or a loud, piping call that betrays the presence of this secretive species, and secondly, Kingfishers defend relatively large feeding territories, making their precise breeding sites difficult to confirm.

It is therefore safest to treat the 84 tetrads in which breeding was confirmed or thought probable as the minimum extent of their breeding range and 192 as the maximum (Fig.1).

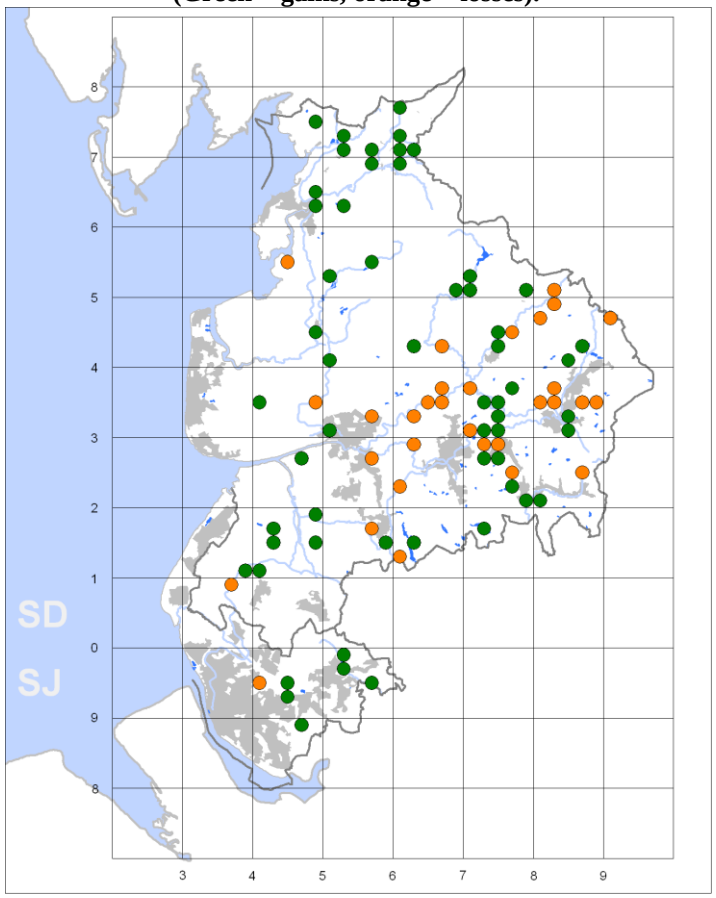
Figure 1. Kingfisher: breeding distribution, 2008-2011. (Large dots = probable/proven; small dots = possible).



On either measure their range increased by 38% between 1997-2000 and 2008-2011. This appears to go significantly against the national population trend which declined by 33% between 1995 and 2010. This discrepancy may be due in part to their breeding habitat, especially water

quality, having improved to a greater extent in Lancashire than elsewhere, or to the fact that the majority of survey work was carried out in the first two summers, prior to the hard winters of 2009/10 and 2010/11 which almost certainly had an adverse effect on the population.

Figure 2. Kingfisher: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



Most Kingfishers nest in river banks but small numbers breed on some reservoirs and canals. Estuaries and other saline habitats appear to be unsatisfactory and, similarly, the upper courses of rivers close to the source do not provide suitable areas of slow moving water. So, although the species' distribution is largely in the east of the county, it is primarily in upland fringe and lowland areas and mostly on the middle reaches of main rivers.

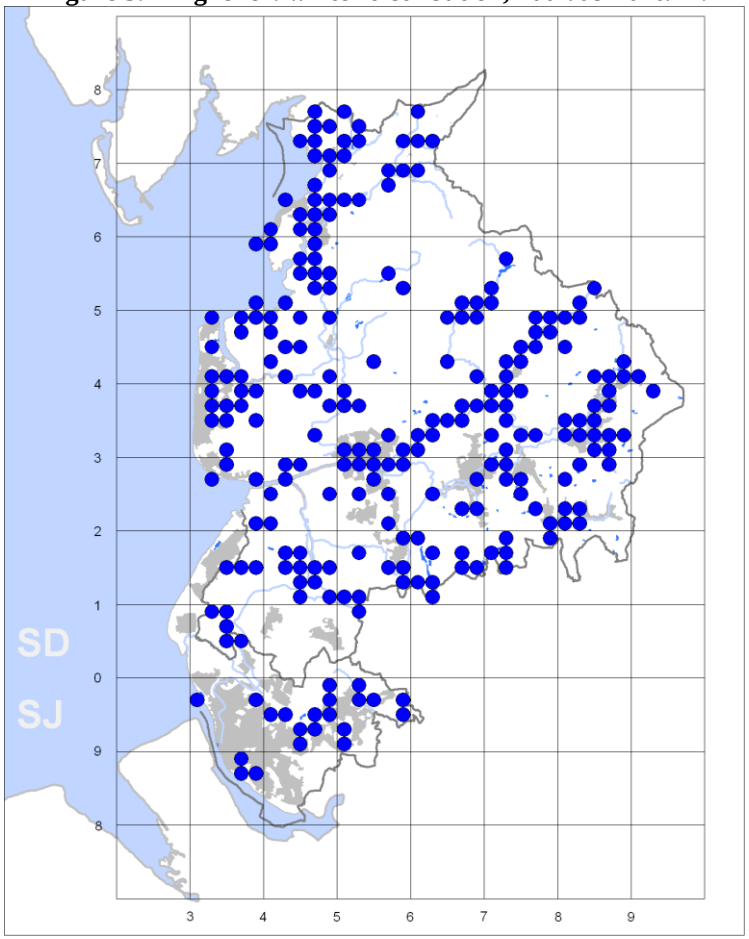
Newly-occupied tetrads were spread throughout the range but with clear clusters on the Lune and in the Blackburn-Rossendale area; there was also a small but significant expansion into Knowsley and St. Helens on the edge of the Merseyside conurbation (Fig.2). There were fewer apparent losses but these were heavily concentrated in the Ribble valley.

The population was estimated at 125 pairs, around 2% of the British population but with similar caveats as with the breeding range.

Winter

Kingfishers are more widespread in winter and were found in 245 tetrads, 26% of the county total, during 2007/08-2010/11 (Fig.3).

Figure 3. Kingfisher: winter distribution, 2007/08-2010/11.



They are able to exploit a wider variety of wetland habitats once freed from the need for riverside banks suitable for nest holes, although many do remain in the breeding areas. However, others do move onto estuaries and other non-breeding habitats, notably in Silverdale, the Fylde, south of Lancaster and the southern and eastern edges of Merseyside, and to the lower reaches of rivers.

Winter is a critical time for Kingfishers; extended periods with temperatures below freezing severely limit the availability of areas of open water that they require for feeding, so that winter dispersal is likely to have been greatest during 2009/10 and 2010/11, when many birds probably perished, reducing the population significantly. At its maximum, though, the population was probably around 375 individuals.

GH

GREEN WOODPECKER *Picus viridis*

Breeding

The habitat requirements of Green Woodpeckers are more demanding than those of Great Spotted Woodpeckers and they have probably always been less widespread in Lancashire. They were found in 228 tetrads during 2008-2011, 25% of the county total (Fig.1). This represented a 33% increase in range since 1997-2000, roughly in line with the 40% increase in the national population between 1995 and 2010.

Almost all were in the east and north-west of the county; the species is almost totally absent from the coastal plains but isolated populations exist in woodlands around Heysham and Formby and in Knowsley Park.

The majority of newly-occupied tetrads were south of the Ribble in east Lancashire and eastern areas of the West Pennine Moors, but there was a marked expansion in the Sefton Coast pinewoods and a minor encroachment into the Fylde (Fig.2).

Losses were most concentrated in the Leyland/Chorley area and in woodlands in the Bowland sections of the Wyre valley.

The population was estimated at 350 pairs.

Figure 1. Green Woodpecker: breeding distribution, 2008-2011. (Large dots = probable/proven; small dots = possible).

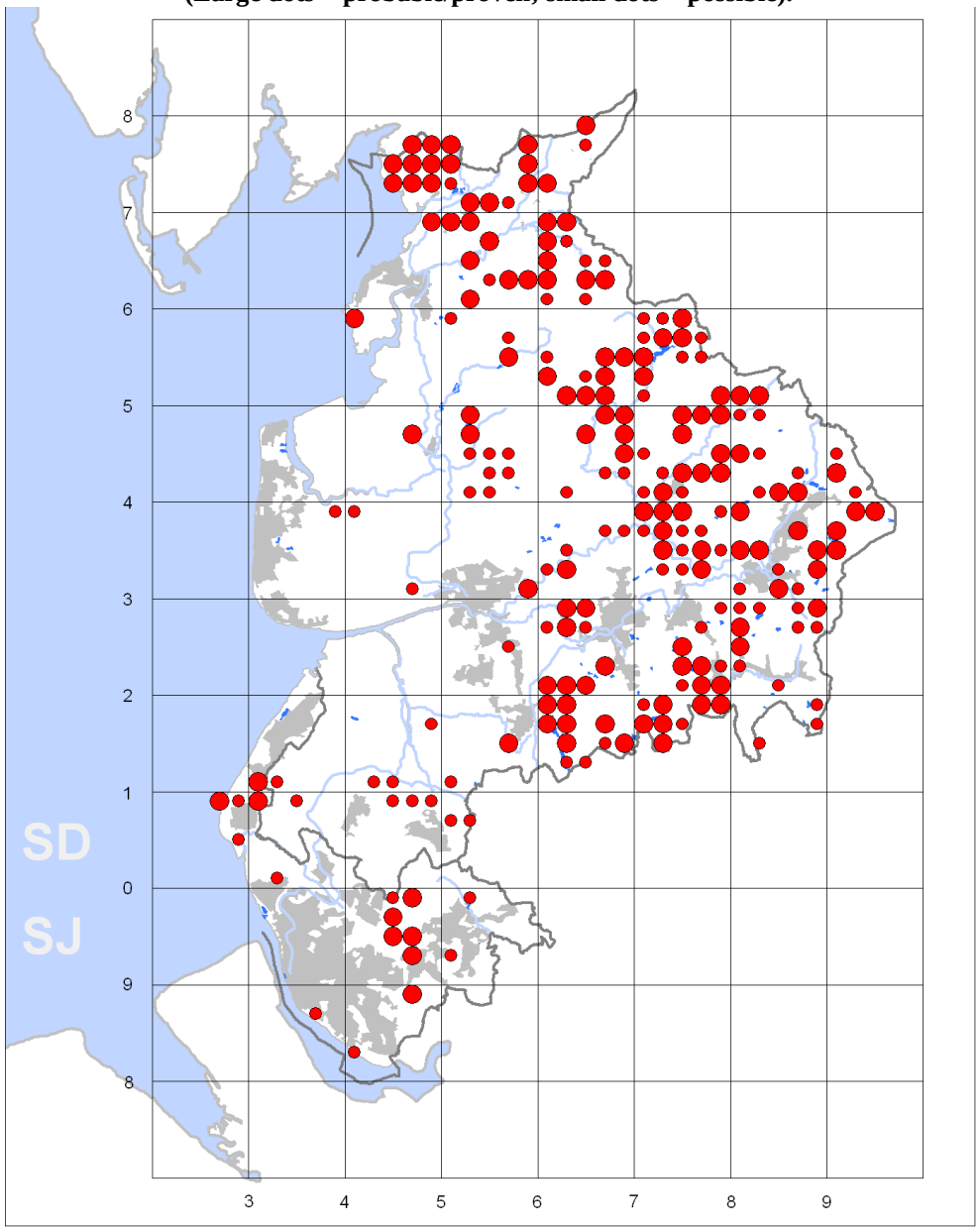
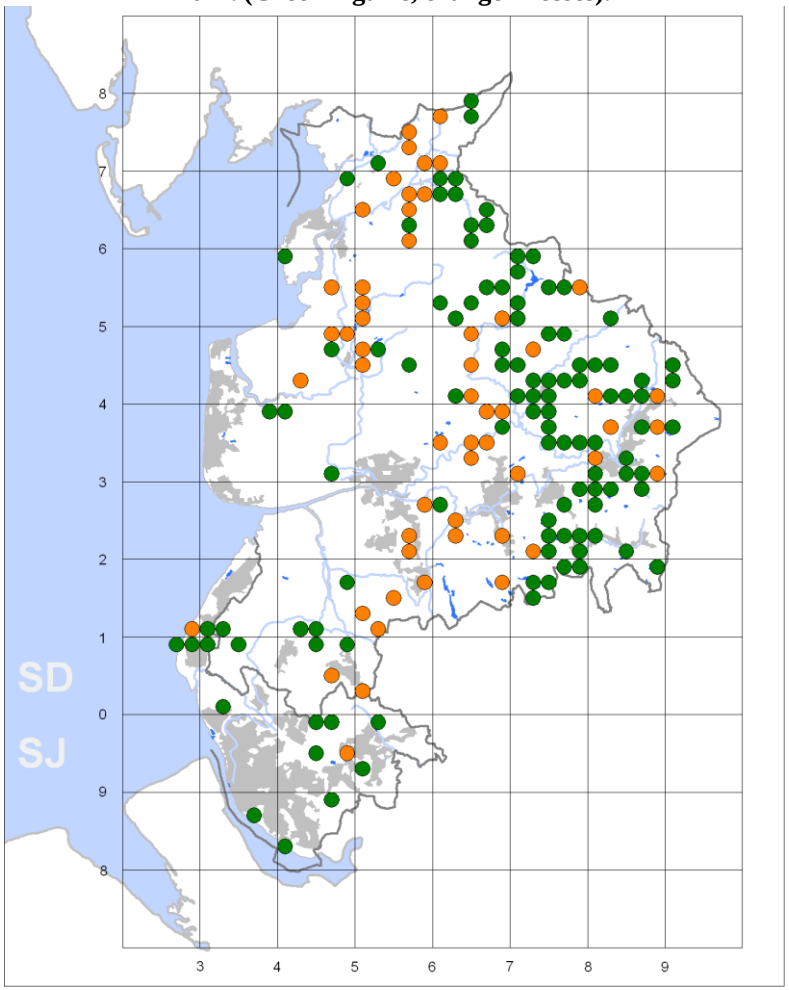


Figure 2. Green Woodpecker: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



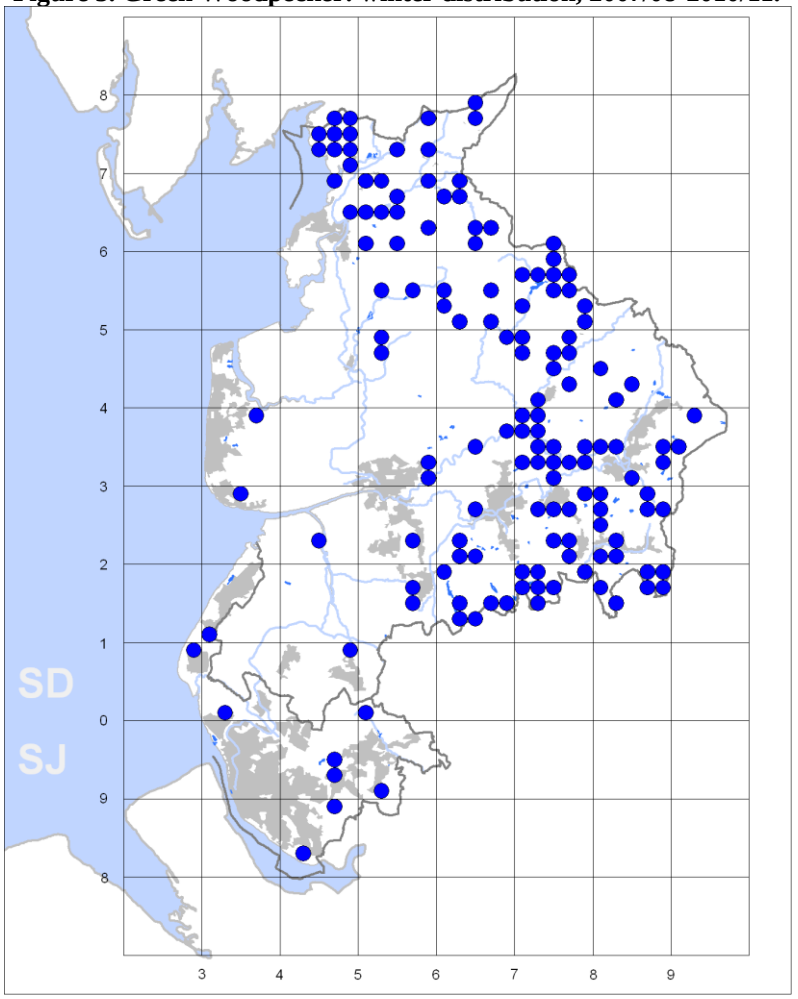
Winter

Although Green Woodpeckers have distinctive and far-carrying calls, they are largely silent outside of the breeding season and much less conspicuous. This may explain the apparent seasonal decrease in range of this sedentary species, which was reported from 143 tetrads during 2007/08-2010/11 – 15% of the county total and 40% fewer than in summer (Fig.3). However, Green Woodpeckers were recorded in 39 tetrads where they were not seen in summer and, although some of these may have involved short movements, it is likely that both the breeding and wintering ranges are closer to the combined total of 267 tetrads. There was some limited evidence of dispersal as records from near Lytham in the Fylde and Tarleton in south-west Lancashire were outside of the known breeding areas.

More than 80% of records were of single birds with only two of three or four, in the Lune Valley and Gisburn Forest. The population was estimated at 1000 individuals.

GH

Figure 3. Green Woodpecker: winter distribution, 2007/08-2010/11.

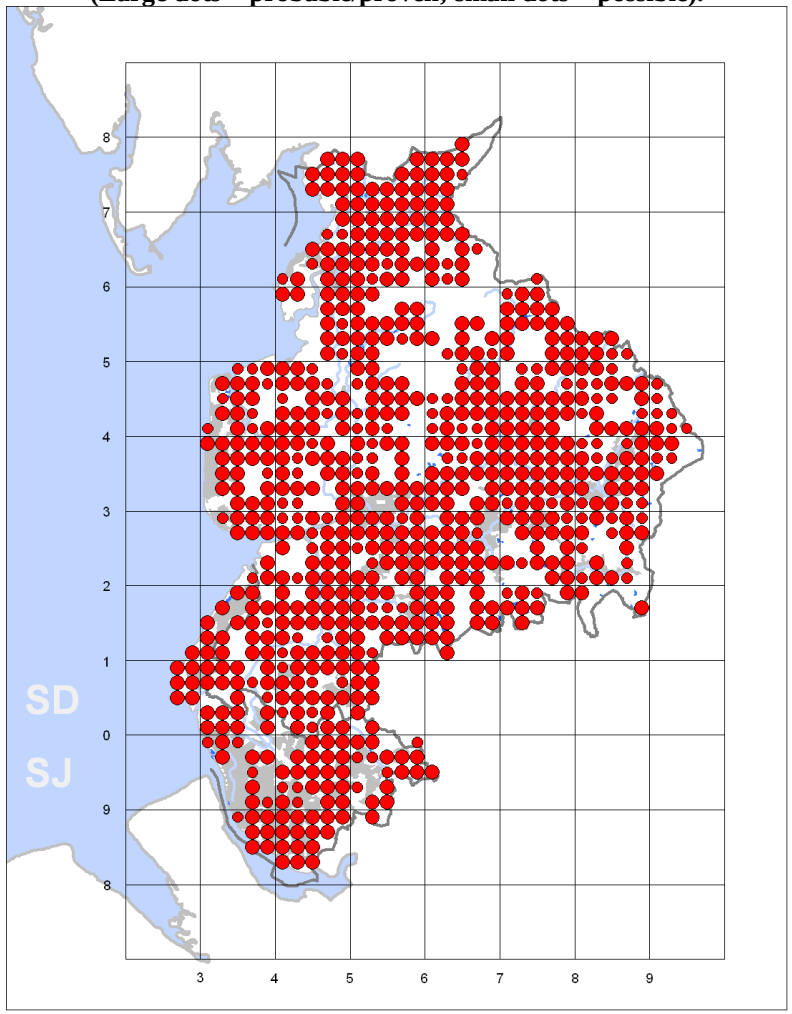


GREAT SPOTTED WOODPECKER *Dendrocopos major*

Breeding

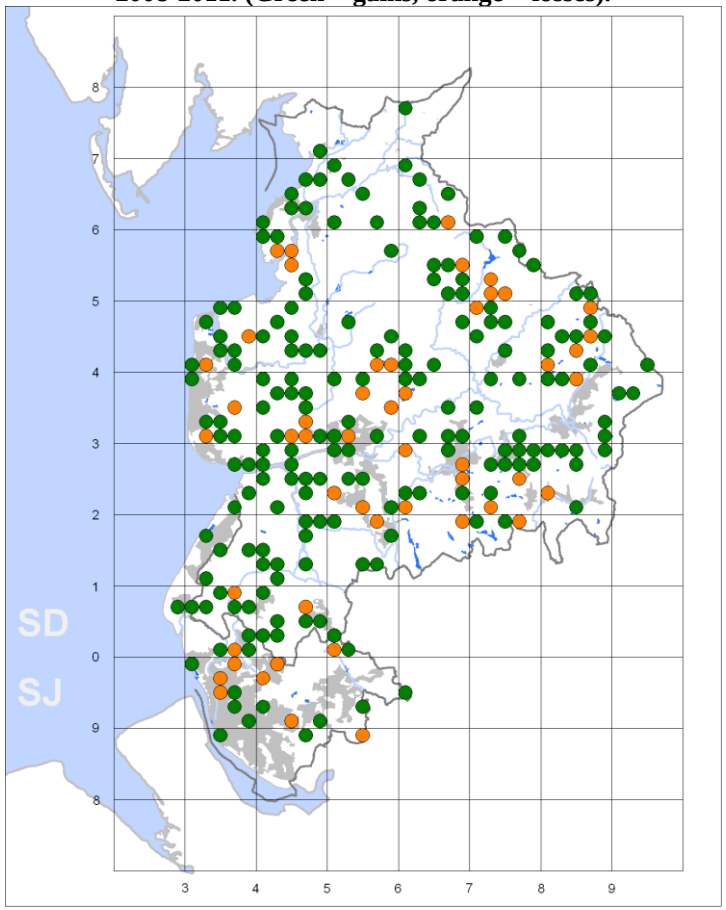
Great Spotted Woodpeckers began to expand northwards in the late nineteenth century after an earlier contraction when they were largely absent from northern England, and their range continued to spread in Lancashire throughout the twentieth. They were located in 723 tetrads during 2008-2011, 77% of the county total (Fig.1).

Figure 1. Great Spotted Woodpecker: breeding distribution, 2008-2011. (Large dots = probable/proven; small dots = possible).



This represented an increase in breeding range of 25% since 1997-2000 and it seems likely that virtually all areas of deciduous, conifer, mixed and open woodland are now occupied. This expansion is broadly in line with a national population increase of 14% between 1995 and 2010. Great Spotted Woodpeckers are absent only from largely treeless moors and agricultural land and from inner urban areas.

Figure 2. Great Spotted Woodpecker: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



A total of 50 tetrads had apparently been abandoned since the previous survey but the majority of these were adjacent to occupied tetrads – perhaps indicating slight shifts in nesting sites or perhaps small mapping errors – or marginal, low-density areas (Fig.2). These were hugely outnumbered by the

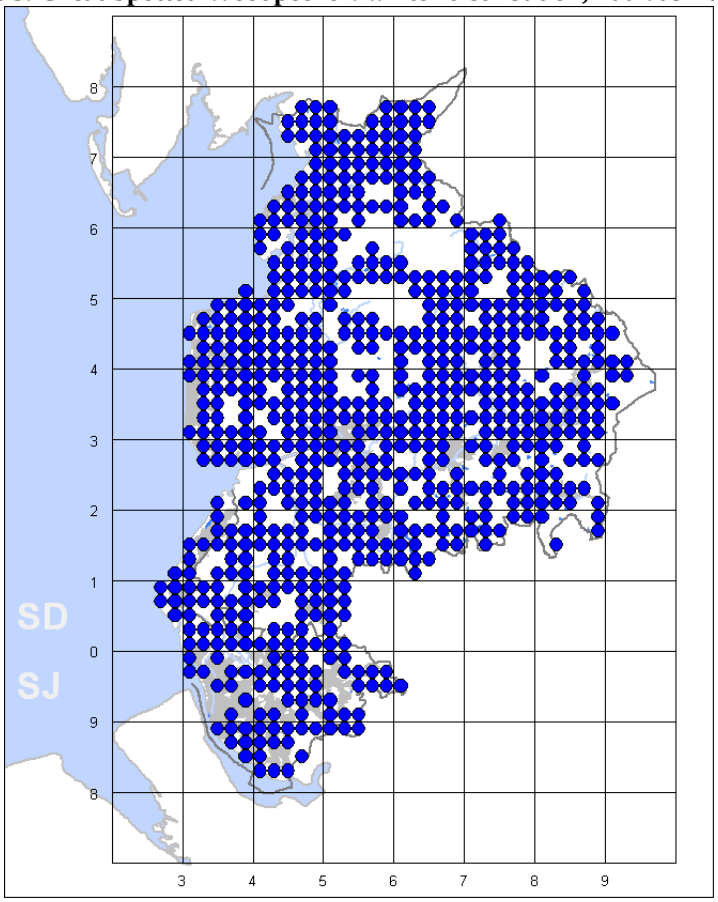
189 newly-occupied tetrads that were spread throughout the county but with one obvious cluster between Blackburn and Burnley; 18 10km squares experienced only gains.

Most counts were in low single figures with only 55 tetrads recording five or more on any visit, the largest being 22 in Knowsley Park where around 20 pairs were thought to have bred. The population was estimated at 1800 pairs, a little over 1% of the British population.

Winter

This largely sedentary species has a similar winter range to that of summer and was recorded in 712 tetrads, 75% of the county total (Fig.3).

Figure 3. Great Spotted Woodpecker: winter distribution, 2007/08-2010/11.



SD45, just south of Lancaster, is the only significant area to show a marked difference, with an apparent expansion west in winter.

Interestingly, just under half of all winter tetrad counts involved more than one bird, reflecting the sociable nature of this species. Double-figure counts were noted at Mere Sands Wood (12) and Rivington (10). The population was estimated at 5500 individuals.

GH

LESSER SPOTTED WOODPECKER *Dendrocopos minor*

Breeding

The only positive comment that can be made about this enigmatic species is that it remained a breeding species in Lancashire during 2008-2011.

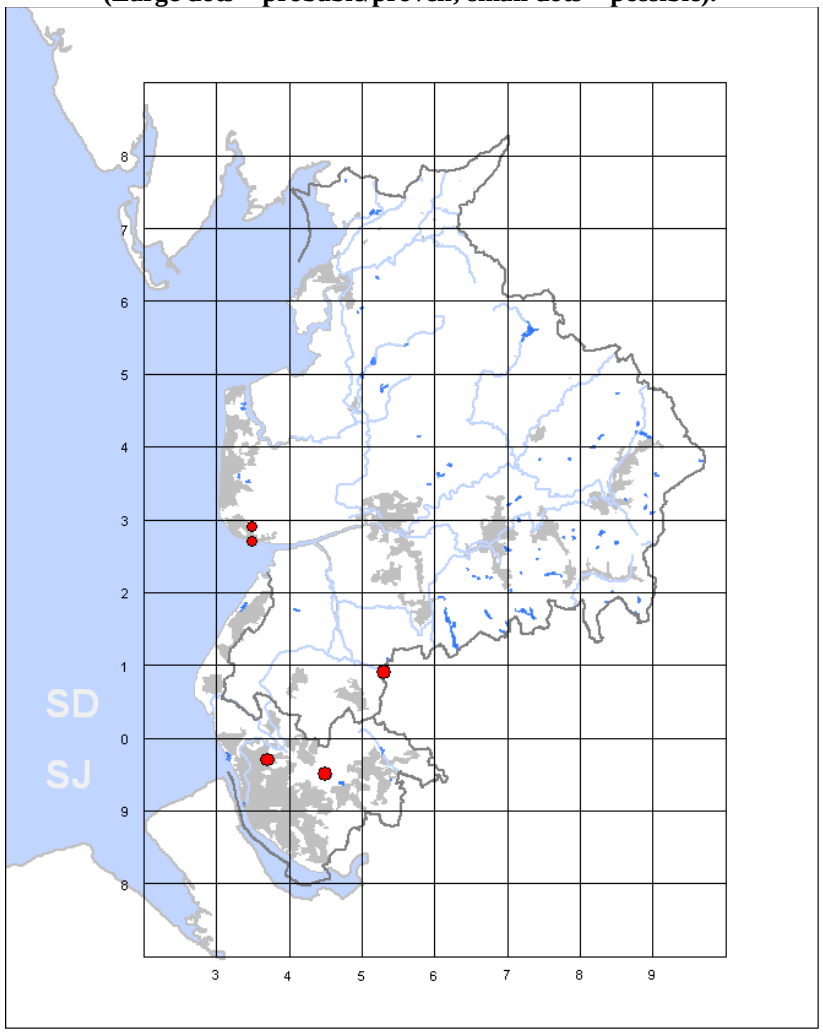
On the other hand, with only three probable or proven breeding records, it is surely on the brink of extinction in the county (Fig.1).

Taking into account the two possible breeding records in Lytham – which almost certainly referred to the same bird – we have witnessed the loss of breeding Lesser Spotted Woodpeckers in 50 tetrads since 1997-2000, a massive decline of almost 95% (Fig.2).

Nor do the three mapped breeding records give much cause for hope. The only one that was proven was at Fazakerley in north Liverpool in 2008. The two ‘probables’ have some uncertainties attached: in Appley Bridge a pair was seen and photographed on garden feeders in July and August but actually just on the Greater Manchester side of this shared tetrad; while the record from the traditional breeding site in Knowsley Park came second-hand from a knowledgeable gamekeeper, although it was backed up by two independently confirmed winter records.

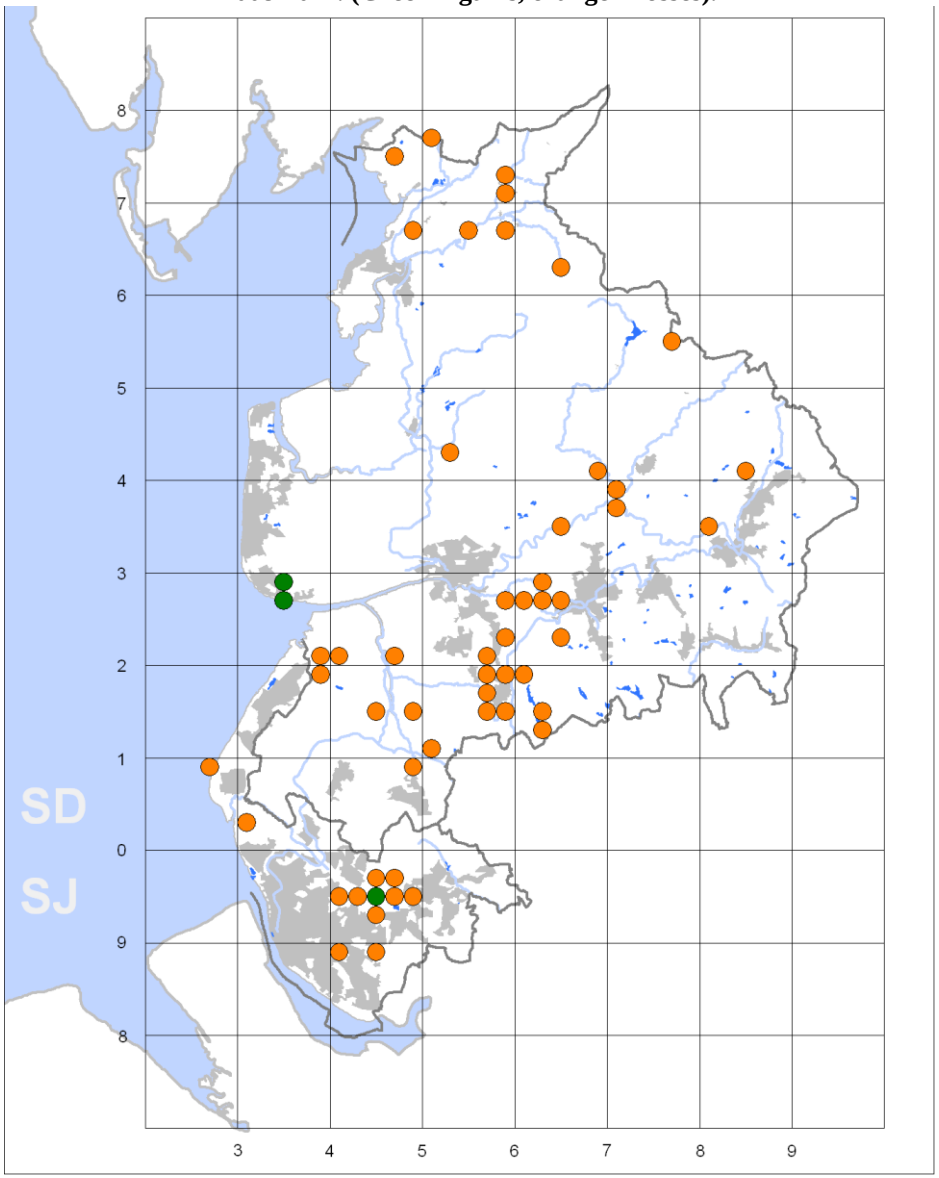
None was confirmed as breeding in the previous Chorley ‘stronghold’ but they were recorded in winter and again in summer 2012, so it appears that they are still hanging on there despite an evidently huge decline. The species does appear to have been lost from north Lancashire and the Ribble Valley and their continuing presence elsewhere in east Lancashire is only supported by a single winter record.

Figure 1. Lesser Spotted Woodpecker: breeding distribution, 2008-2011. (Large dots = probable/proven; small dots = possible).



However, the situation may not be quite as gloomy as pictured above. If winter records and those falling outside of the summer and winter atlas periods are included then Lesser Spotted Woodpeckers were recorded in a total of 17 tetrads during the survey years. However, many of these records were close together and it seems likely that there are no more than five breeding pairs left in the county.

Figure 2. Lesser Spotted Woodpecker: changes in breeding distribution, 1997-2000 to 2008-2011. (Green = gains, orange = losses).



Winter

There were records from 13 tetrads during 2007/08-2010/11(Fig.3). Four of these were technically outside the atlas period during March and may perhaps have been better treated as breeding season records; indeed, most of the records came from current and recent breeding sites in the Chorley area and Knowsley Park.

The two records from north Fylde, singles at Hambleton in January 2008 and Burglar's Alley in November the same year, are most perplexing as they were at a considerable distance from any known breeding site. Were they dispersing birds or did they represent a previously undetected population? Since there have been no further records in this area the former seems more likely.

Other outliers raising similar questions were singles at Parbold, Beacon Country Park in Skelmersdale, Burscough, Pex Hill in Knowsley and Low Moor, Clitheroe.

GH

Figure 3. Lesser Spotted Woodpecker: winter distribution, 2007/08-2010/11.