

STOUR AND ORWELL ESTUARIES

Site description

The Stour is a long and straight estuary, which forms the eastern end of the border between Suffolk and Essex. The estuary's mouth converges with that of the Orwell, which extends from Ipswich to Felixstowe, as the two rivers enter the North Sea. The outer Stour is sandy and substrates become progressively muddier further upstream. There are seven shallow bays along the estuary and much of its length is bordered by sharply rising land or cliffs, covered with ancient coastal woodland and agricultural land, leaving little room for saltmarsh development. Much of the intertidal substrate of the Orwell is fairly muddy. In mitigation for the latest port development, both the north and south shores of the lower reaches of the estuary have had soft silts placed behind stiff clay bunds within the intertidal areas, changing the substrate again. Long stretches of farmland and wet meadow are situated along the mid-estuary, the latter providing roost sites for waterbirds. Nature conservation in the area includes the Stour & Orwell Estuaries Ramsar site and SPA, with management by RSPB, Woodland Trust, Essex Wildlife Trust and Suffolk Wildlife Trust. Some sailing and shooting occurs, and disturbance is an issue, though the major concern remains continued expansion of dock operations and subsequent land claim of important feeding areas. The estuaries are here considered together as one functional unit to reflect the extent of the SPA designation.

General bird distribution 2004/05

Areas covered 1,627/1,227 ha (Stour/Orwell); Mean total birds 38,495/17,747; Mean bird density 23.7/14.5 birds per ha.

The Orwell supports four species in nationally important numbers (plus Redshank in internationally important numbers), and of these the two waders are widespread with both Black-tailed Godwit and Redshank most concentrated on flats under the Orwell Bridge. Dark-bellied Brent Geese were also widely distributed, though most were below Nacton, especially at Jill's Hole. The two wildfowl species, Gadwall and Pintail, favoured Trimley Marshes; Loompit Lake and Mulberry Middle were also preferred by the two species respectively.

The Stour has very different characteristics, with more sheltered intertidal habitat in a series of bays. A wider variety of waders are attracted in important numbers. Most are found throughout the site, with each bay supporting concentrations of waders. Black-tailed Godwit were distributed mostly west of Holbrook Bay, an area also harbouring Grey Plover. Redshank too were predominant in the west of the estuary. Golden Plover and Turnstone occurred in the bays along both shores, whilst Knot were densely packed throughout the estuary. By contrast, Great Crested Grebe and Goldeneye were thinly distributed, tending to the west of the Stour. Dark-bellied Brents were present on many count sectors, especially those on the north bank around Erwarton Bay. Conversely, most Pintail were on the opposite side of the river channel in areas such as Copperas Bay and Mistle.

Comparative bird distribution

Counts from the winter of 1996/97 were selected for comparison, and Shelduck and Dunlin have been selected as species undergoing declines according to WeBS Alerts (Maclean *et al.* 2005). Average site density of Shelduck on the Stour is comparable for the two winters (1996/97: 0.66 birds per ha; 2004/05: 0.63 birds per ha). On the Orwell, however, the corresponding figures are 0.42 and 0.24 birds per ha, suggesting that changes on the latter are reflective of trends detected by WeBS Alerts. Though Trimley Marshes now attracts more Shelduck, the north bank from Orwell Bridge to Loompit Lake has witnessed greatest reductions in sector density.

Likewise, average Dunlin densities are similar between winters on the Stour (7.53 and 7.41 birds per ha) but not the Orwell (10.02 and 4.78 birds per ha). Land claim is likely to have affected Dunlin numbers and consequently site use; the most profound changes, however, have occurred on the upper reaches, between the head of the river and Mulberry Middle, and on the flats near Loompit Lake. Substrate change, improvements to sewage outputs and especially disturbance are pertinent explanatory factors. The latter is partially from dog-walkers and bait-diggers, causing high disturbance on the upper Orwell (Ravenscroft

2005); potentially this may contribute to changes in Dunlin distribution. The Stour & Orwell Estuaries are counted by Suffolk Wildlife Trust under contract to

Harwich Haven Authority. These data are generously made available to The Wetland Bird Survey.

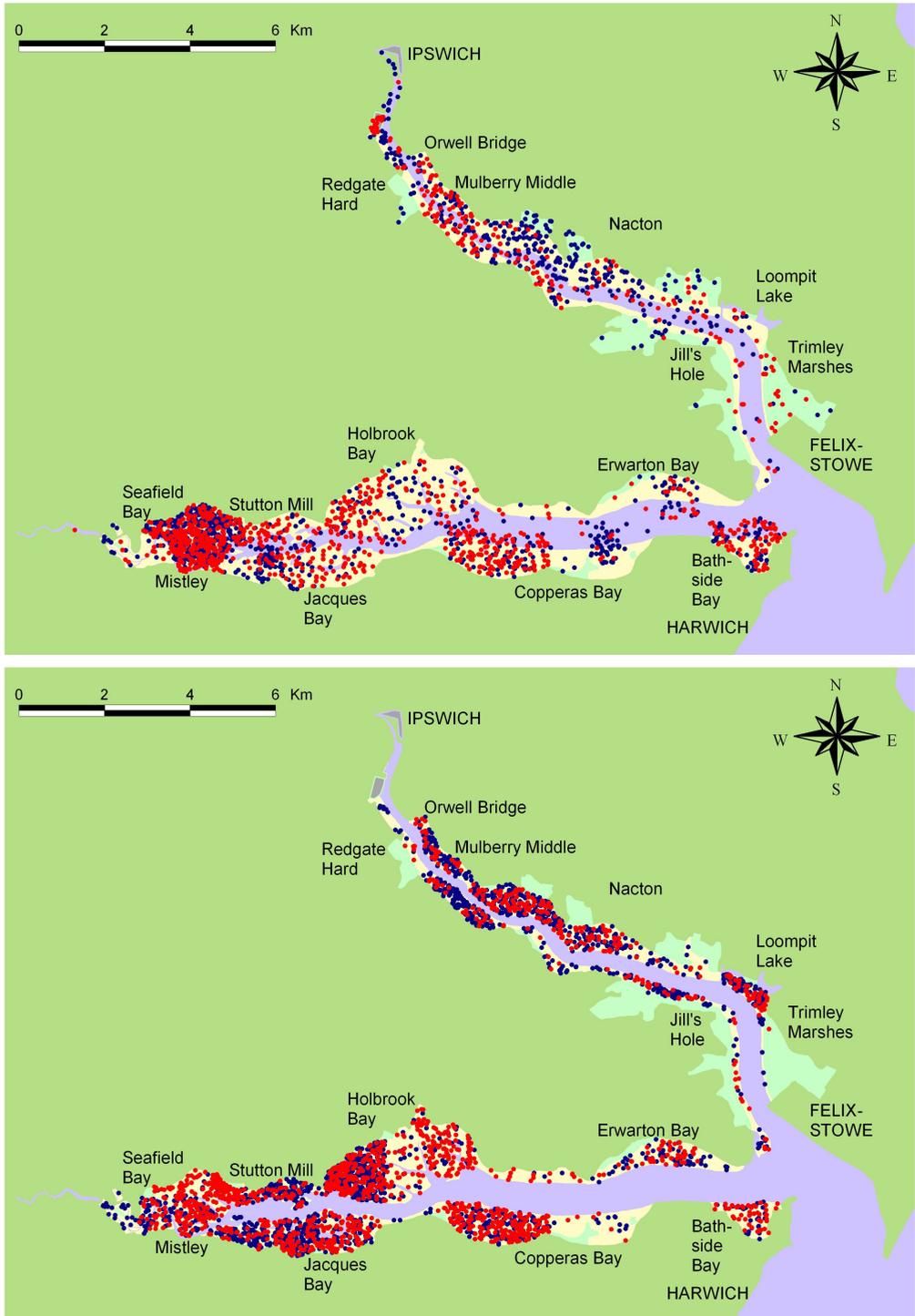


Figure 72. Low Tide distribution of Shelduck (above) (1 dot = 2 birds) and Dunlin (below) (1 dot = 10 birds) for the winters of 1996/97 (blue dots) and 2004/05 (red). Yellow = intertidal; pale blue = subtidal; pale green = nontidal. Grey areas not counted in earlier winter.

STRANGFORD LOUGH

Site description

Strangford Lough is a large shallow sea lough on the east coast of Northern Ireland, protected as a SPA, a Marine Nature Reserve, and a Ramsar Site. The site includes the Narrows, a deep rocky channel to the Irish Sea. The main body of the lough is sheltered to the east by the Ards Peninsula, and is fed by various rivers and tributaries. Downpatrick and Newtownards are the largest human habitations nearby. Within the lough there are numerous rocky outcrops and small islands. The north of the lough in particular holds extensive intertidal mud and sand flats and there are countless other bays and inlets, and large expanses of open water, providing a wide diversity of habitat. Since 2001, mobile gear fishing has been banned in Strangford Lough to allow populations of the Horse Mussel *Modiolus modiolus* to recover. Static fishing and catching of crustaceans still occurs. There is some recreational activity within the lough, including sailing, and Strangford Narrows is proposed to be a test site for a marine current turbine to generate renewable energy. Despite the enormity of Strangford Lough, dedicated counters are able to count along the majority of its shoreline, and do so at low tide annually - an impressive achievement.

General bird distribution 2004/05

Area covered 4,335 ha; Mean total birds 43,182; Mean bird density 10.0 birds per ha.

Twenty-seven species are of international or national importance at Strangford Lough, meaning that most parts of the site, especially the bays and expanses of intertidal, are important for at least one species at low tide. Several species were found at high density over the majority of the site, including Nearctic Light-bellied Brent Geese (here at their most important wintering site, though typically in smaller numbers than in earlier months), Shelduck (especially in the north of the lough), Lapwing and Redshank, whereas others were widespread at much lower density (Red-breasted Merganser, Greenshank, Curlew). The north of the bay, between Castle Espie and Newtownards, contains the most profitable feeding flats. Species found here at high density were typically waders such as Ringed Plover (also around the east coast), Golden Plover (also in dense pockets

elsewhere), Grey Plover (restricted here), Knot (restricted to the area), Dunlin (also densely distributed in smaller bays), Black-tailed Godwit (most north west of Ardmillan Bay and Bar-tailed Godwit (from Ardmillan Bay to Greyabbey). Mute and Whooper Swans were associated with Ardmillan Bay and Castle Espie, and clumps of Teal, Mallard, Pintail, Shoveler and Goldeneye were recorded in areas such as Danes Point, Castleward Bay, Mount Stewart, Ardmillan Bay and Castle Espie, the latter also featuring Great Crested Grebe.

Comparative bird distribution

Low Tide Count data from 1994/95 are displayed for comparison with bird distribution ten years later in 2004/05, for Wigeon and Oystercatcher, both of national importance at the site. The former has undergone some apparent within-site movements over the past ten winters; these could be due to changes in habitat suitability, or simply reflect behavioural patterns. The most profound changes have occurred in two areas; the small islands around Ballymoran and Quarterland Bays, and in the south around Gores Island. In 1994/95, the average size of Wigeon flocks was over 150 birds at a density of 0.37 birds per ha off Ballymoran Bay. Although Wigeon were recorded close to shore in 2004/05, none were present on the count sector further offshore. However, in the south of the lough, below Gores Island, an average of 247 birds, at a density of 3.92 birds per ha, was recorded in the later winter. Wigeon density in this area was just 0.06 birds per ha in 1994/95, suggesting that the area has assumed greater importance for Wigeon. The overall effect of changes on the site is to produce a consistent mean site density (0.07 in both winters).

Oystercatcher in 2004/05 were present in second highest average site densities (the highest being Golden Plover). Most sectors around the site supported some Oystercatchers, though the intertidal expanse in the north was most favoured in both winters studied. From Ardmillan Bay north to Newtownards, sector densities of the species were generally greater in the later of the winters or similar between winters. However, on the east coast, from Newtownards to Greyabbey, density in the later winter was considerably lower. Why this

area should now be unfavourable is unclear, but it may be that a lower number of Oystercatcher using the site can feed profitably

on the main northern mudflats and elsewhere around the lough (average site density has dropped from 1.72 to 1.25 birds per ha).

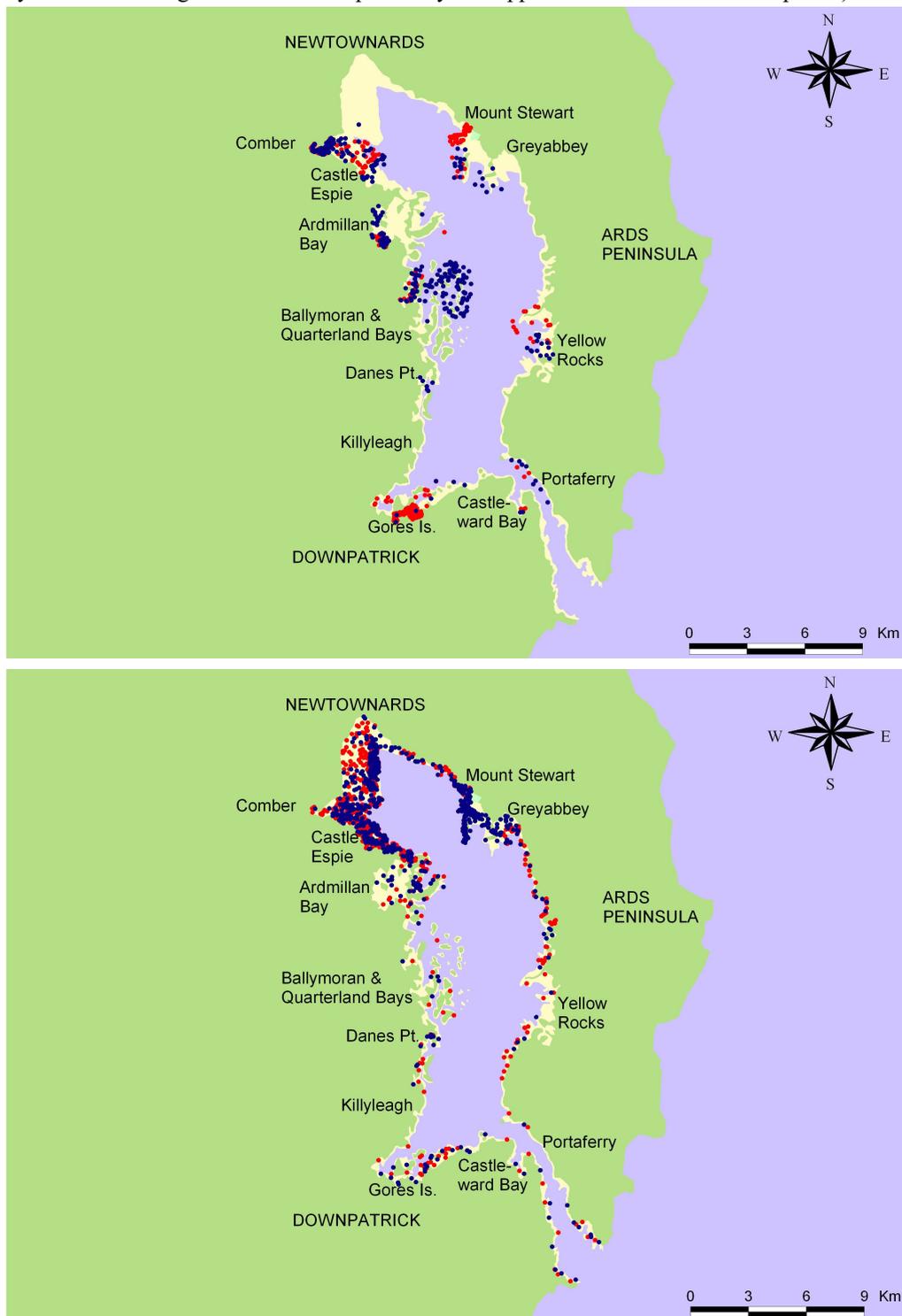


Figure 73. Low Tide distribution of Wigeon (above) (1 dot = 2 birds) and Oystercatcher (below) (1 dot = 10 birds) for the winters of 1994/95 (blue dots) and 2004/05 (red). Yellow = intertidal; pale blue = subtidal; pale green = nontidal. Grey area not counted in later winter.

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Dunlin (John Bowers)