

# WADER HOTSPOTS IN AFRICA

As the northern summer draws to a close, millions upon millions of waders prepare to travel south. The Arctic summer is short and, although it provides pastures of plenty for a brief part of the year, for six months or more the same pastures are icebound and inhospitable. By migrating to and from this region, birds are able to capitalize on the brief summer bounty to rear their broods and then escape the winter rigours by flying south to more benign climes. Different birds move different distances south – some travel no further than to temperate northern coasts while others finish their southward migrations at the very southerly limits of the world's land masses where the days of the southern summer are long and warm.

Migration is not haphazard – well-defined migration routes are followed, three of which have Africa as their final destination. Most of the waders migrating to Africa come from a huge area that stretches from northern Europe across to the Taimyr Peninsula of northern Siberia. Some travel even further, from close to the shores of the Bering Straits. Their migration routes, because they are so well established, are termed flyways. The East Atlantic flyway follows the coasts of western Europe and Africa, with some birds crossing the western Sahara. The Mediterranean flyway crosses the eastern Mediterranean and the Sahara *en route* to West/Central Africa. The East African flyway passes over the Middle East and then follows both the East African coast and the Great Rift Valley, south to southern Africa.

The non-breeding ranges of many wader species are huge, but large numbers of birds are concentrated at specific sites, typically estuaries and inland wetlands. Concentrations of birds that can be found in a few square kilometres of estuarine mudflat during the northern winter may occupy tens of thousands of square kilometres during the breeding season.

Because of these large non-breeding concentrations, certain sites become absolutely critical for the global conservation of waders. The loss of even one important non-breeding site could result in the death or displacement of, in some cases, literally millions of waders.

This is no new realization and more than 20 years ago the Ramsar Convention on Wetlands of International Importance set about identifying vital wetland sites around the world and promoting their conservation and wise use. Sites identified by the Convention range in size from nearly seven million hectares (the Okavango Delta of Botswana) down to one hectare (Hosnie's Spring on Christmas Island). It is not easy to identify a single criterion that makes a wetland of great conservation importance for waders (the Ramsar >

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*The numbers of migrant waders entering Africa each year have been estimated at between 30 and 40 million birds. Phil Hockey visits some of the 'hottest' wader sites on the continent and reviews the wealth of birds they support.*

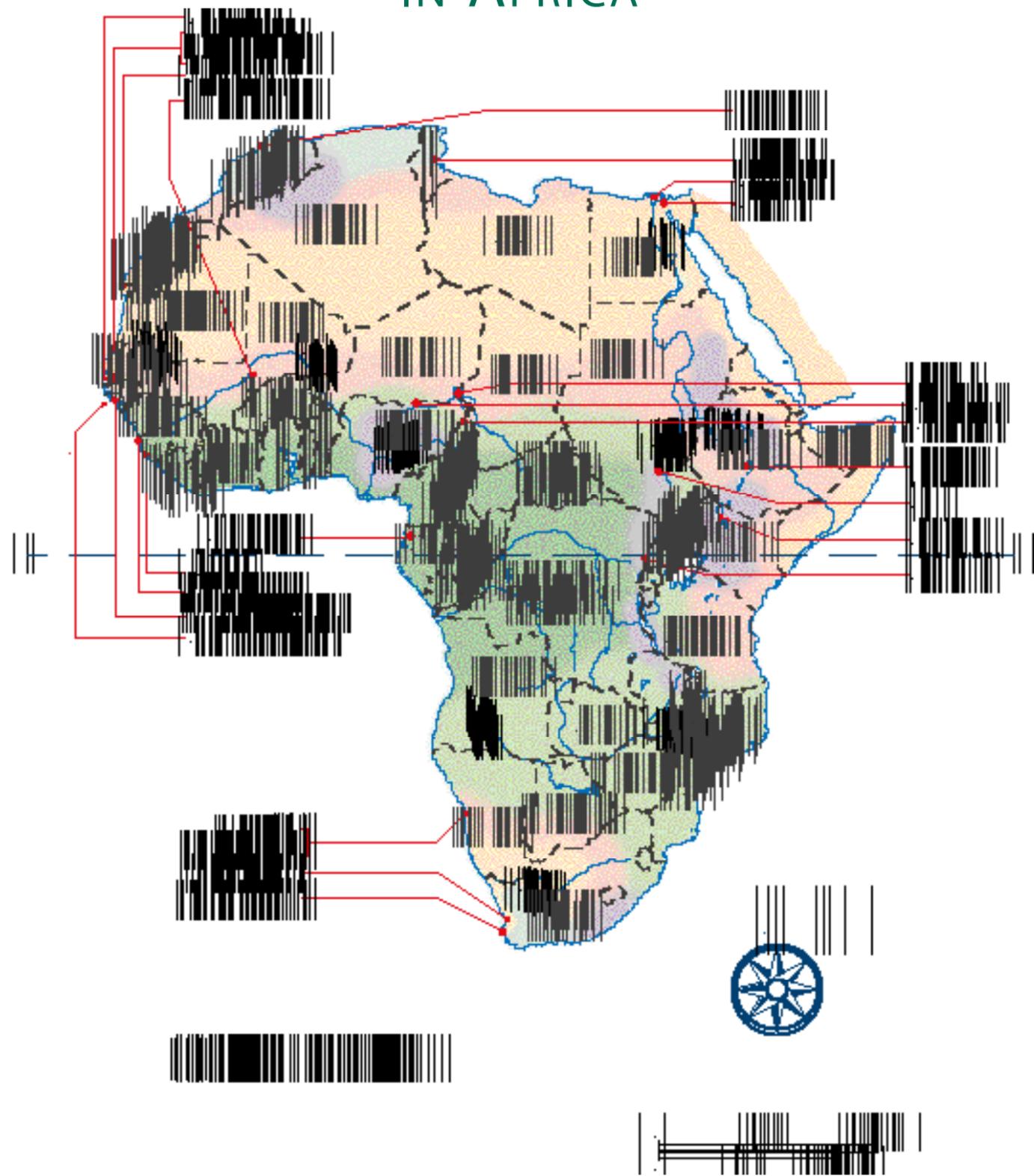
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Right **Greenshank**

NIGEL J. DENNIS



# WADER HOTSPOTS IN AFRICA



JAN VAN DE KAM

Above *Flamingos and waders on Mauritania's Banc d'Arguin provide bright contrast to the stark Saharan backdrop.*

Convention has many such criteria). For the sake of simplicity, however, I have assumed that sites which regularly support more than 25 000 waders during the southern summer qualify for inclusion. It is certain that the suite of sites I have identified is not exhaustive – some sites that probably qualify for inclusion have never been properly surveyed, and others have not been surveyed at all. It is also tricky to define a 'site', and some of those that I have included are very large. Generally, I have assumed that a site must stand alone as a geographical entity. For example, while the Red Sea coast of Sudan and Eritrea supports tens of thousands of waders, this area has not been included.

## North Africa

The major wader site in this region is the Banc d'Arguin, a massive area spanning some 150 kilometres of the Saharan coast of Mauritania and incorporating nearly 550 square kilometres of tidal flats. The area is huge, but so too are the numbers of waders. Estimated totals of migrant waders range from 1.9 million to 2.25 million, and six species have populations totalling more than 50 000 individuals. There may be as many as 136 000 Common Ringed Plovers – almost half of the total number along the Atlantic coast of Africa. The Banc d'Arguin is also home to more than half a million Bar-tailed Godwits (75 per cent of the Atlantic coast total). Other impressive peak numbers include 818 000 Dunlins, 367 000 Red Knots, 174 000 Curlew Sandpipers and 70 000 Common Redshanks. Fortunately, in October 1982, not long after the

discovery of this major wintering ground, the Banc d'Arguin became a designated Ramsar site.

Moving north-east along the coast to Morocco, only one wetland qualifies for inclusion. This is Merja Zerga, a shallow 2 200-hectare lagoon. Excluding species that forage in adjacent saltmarshes, this lagoon regularly supports 35 000–50 000 migrant waders. In some years, numbers are even higher than this. In January 1964, perhaps as a consequence of extreme weather conditions in western Europe the previous winter, there could have been as many as 360 000 waders present, including 150 000 Dunlins, 120 000 Bar-tailed Godwits, 50 000 Northern Lapwings and 10 000 each of Common Ringed, Grey and Eurasian

Below *The Northern Lapwing reaches the southern limit of its non-breeding range on the North African coast.*



NIGEL J. DENNIS

Right *Djoudj National Park in Senegal, covering 16 000 hectares, was designated as a Ramsar site in July 1977.*



TIM DODMAN

Golden plovers. Further to the east, Tunisia's claim to wader fame lies in the eastward-facing Gulf of Gabès, where more than 260 000 waders gather. Almost half of these are Dunlins, but 20 700 Grey Plovers, 30 500 Little Stints and 13 300 Kentish Plovers help swell the total past the quarter of a million mark. Within the Gulf, the key areas are around Kneiss and include some 14 600 hectares of mudflats which extend for 20 kilometres along the coast and are up to 12 kilometres wide.

North-eastern Egypt has two key wader sites, Lake Manzala and El Mahala. The former is the largest lake in the Nile Delta, lying to the west of Port Said, and is the most important single wader site in Egypt, although it barely compares to the Banc d'Arguin or the Gulf of Gabès. Among its 45 000 waders are important populations of Pied Avocets (9 500) and Kentish Plovers (4 300). These are also among the most important species at the hypersaline El Mahala lagoon (150 square kilometres), which lies in the north-western corner of the Sinai Peninsula and supports about 32 500 waders.

#### West Africa

This region contains half of the top wader sites in Africa, extending from the Senegalese coast

in the west to north-eastern Nigeria and Lake Chad in the east. The coastal lowlands of Senegal include no fewer than three major wader areas: in the north the Senegal River Delta and adjacent Djoudj National Park, and in the south the Saloum Delta. In the past, as many as a million Ruffs are estimated to have been present in the Senegal River Delta, although recent counts typically have been between 40 000 and 125 000. It is also important for Pied Avocets (5 000+) and Black-tailed Godwits (almost 20 000). There is doubtless much interchange of birds between the delta and Djoudj – in January 1972 there were estimated to be 500 000 Ruffs in Djoudj, this number increasing to almost one million by the end of February of the same year. In the Saloum Delta to the south, Little Stints make up about 90 per cent of the 110 000 waders present.

Immediately to the south of Senegal lies Guinea-Bissau and, although by African standards the country is tiny, its wader populations almost rival those of the Banc d'Arguin. The intertidal flats of Guinea-Bissau support almost one million waders, especially important areas being around the Geba and Buba rivers, and the Archipelagos dos Bijagos – a group of offshore islands. The islands alone support some 700 000 waders. Overall, there are important populations of Sanderling (10 800), Common Ringed Plover (57 000), Kentish Plover (18 500), Grey Plover (57 000), Curlew Sandpiper (250 000), Little Stint (123 000), Red Knot (144 000),



JAN VAN DE KAM

Above *The wet rice paddies of Guinea-Bissau are home to many waterbirds other than waders: here, Western Reef Herons forage alongside Grey Herons and a Great White Egret.*

Common Redshank (82 500), Bar-tailed Godwit (155 500) and Whimbrel (41 500). Gull-billed Terns are also particularly common here, with a population of more than 10 000.

The coastal lowlands of Guinea-Bissau contain another important wader habitat – wet rice paddies. More than half of West Africa's wet rice paddies are in Guinea-Bissau, and for some waders they are a feeding paradise. Seventy-five thousand Red-winged Pratincoles spend the northern winter here, along with 120 000 Black-tailed Godwits and 50 000 Wood Sandpipers. Raptors also abound in these rich hunting grounds – the number of European Marsh Harriers alone can exceed 1 500.

Not far to the south of Guinea-Bissau is Sierra Leone, and two sites here – the Sierra Leone River and Yawri Bay – qualify for inclusion as hotspots. The Sierra Leone River is physically complex as several subsidiary rivers join it near the coast. The shore length is approximately 110 kilometres and there are about 1 800 hectares of sand- and mudflats. Of the 46 000 waders in the system, there are about 8 600 Common Ringed Plovers, 16 600 Curlew Sandpipers, 4 000 Common Redshanks and 4 700 Common Sandpipers. Yawri Bay, which lies to the south of the Sierra Leone River, has a 60-kilometre shoreline bordered by mangroves and slightly more than 9 000 hectares of tidal flats, mostly muddy. Of the 47 000 waders present, Common Redshanks account for 14 000, Common Ringed Plovers

for 6 000 and Common Sandpipers for 4 500.

West Africa has some of the greatest river systems in Africa and some of these have impressively large floodplains. The Niger inundation zone in Mali attracts some quarter of a million Ruffs, 55 000 Black-tailed Godwits, 10 000 Little Stints and 6 000 Black-winged Stilts. Greater Painted Snipe is common here and this is an important passage area for Great Snipe. One of Africa's unusual resident waders, the Egyptian Plover, is also numerous along the perennial watercourses. The Hadejia–Nguru wetlands of north-eastern Nigeria are centred on the Hadejia and Jama'are rivers. In the 1950s, the inundation area of this system was about 3 000 square kilometres. Since then, impoundments and an increasing demand for irrigation water have reduced this area to about 500 square kilometres. Typically of such West African wetlands, Ruffs dominate the wader population, numbering some 70 000.

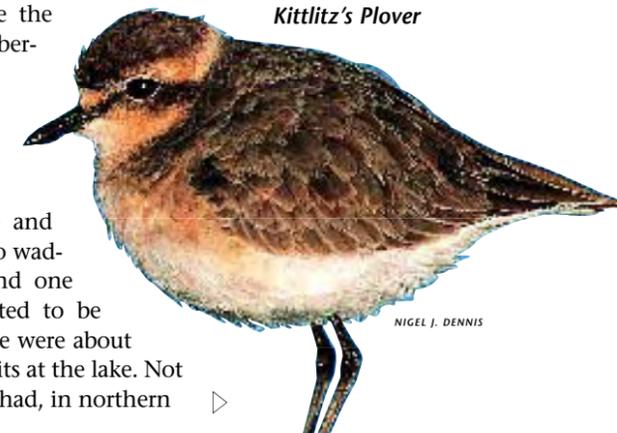
To the east of the Hadejia–Nguru wetlands lies Lake Chad. This is a poorly known wetland, variable in size and probably in importance to waders. Between 200 000 and one million Ruffs are estimated to be present, and in 1986 there were about 30 000 Black-tailed Godwits at the lake. Not far to the south of Lake Chad, in northern

Chestnut-banded Plover



NIGEL J. DENNIS

Kittlitz's Plover



NIGEL J. DENNIS



JAN VAN DE KAM

Above **Bar-tailed Godwits** gather to roost along mangrove fringes in the Archipelagos dos Bijagos, Guinea-Bissau.

Cameroon, is the Waza–Logone area. This is a large site of more than 8 000 square kilometres that includes the floodplain of the Logone River and incorporates both the Waza and Kalamaloué national parks. In January 1996, there were more than 50 000 waders in the complex, 95 per cent of which were Ruffs.

The final site identified in West Africa is the Baie de Corisco: this is the most northerly major estuary in Gabon. The intertidal mudflats of Corisco extend over more than 4 000 hectares, and there are also extensive mangrove swamps. Little Stints (10 000+) account for about 30 per cent of the waders at this site.

### East Africa

Despite its Mecca-like status in the eyes of birders, in terms of major wader sites East Africa does not hold a candle to its western counterpart. The Sudd area, abutting the White Nile in southern Sudan, is thought to hold somewhere between one and three million waders, but these figures are arrived at more by estimates than by actual counts. Some of the more impressive estimates from the Sudd are 1.5 million Common Snipes, one million Ruffs, 500 000 each of Little Stints and Wood Sandpipers, 10 000 each of Caspian Plovers, Jack Snipes, Common Greenshanks and Marsh Sandpipers,

5 000 Spur-winged Plovers, 2 000 Little Ringed Plovers and 1 000 White-tailed Plovers.

The East African Rift Valley lakes have only one definite contender for inclusion as a hotspot. Lake Turkana in northern Kenya is a vast waterbody, supporting up to 60 000 Little Stints, 8 000 Common Ringed Plovers, 5 000 Marsh Sandpipers and more than 12 000 Black-winged Stilts. Large numbers of Turkana's shorebirds are concentrated around Ferguson's Gulf in the northern reaches. In the Rift Valley to the north of Lake Turkana, Ethiopia's Lake Abijata is home to more than 75 000 waders. The more common species are Little Stint (32 000), Kittlitz's Plover (11 000), Ruff (7 000), Pied Avocet (7 000) and Black-winged Stilt (4 000).

The Omo Delta of Ethiopia may also support more than 25 000 waders, but no counts are available to confirm this. Tanzania has no sites that currently qualify for inclusion, although the Rufiji Delta may be in the running. Mafia Island, which lies offshore of the Rufiji Delta could, however, support as many as 10 000 Crab Plovers. If this estimate is correct, this one site alone would hold 20 per cent of the world's Crab Plover population during the non-breeding season and would qualify as a site of international importance on this criterion alone. Despite its extensive areas of wetland, the Democratic Republic of Congo (DRC, formerly Zaïre) also has no known qualifying sites, but this may be due more to a lack of knowledge than a paucity of birds. ▽

In eastern DRC, Lake Edward does support large numbers of waders. In early 1974, Leon Lippens and Henri Wille (*Les Oiseaux du Zaïre*) reported 'several thousand' Caspian Plovers along the lake's shores, along with 'thousands' of Little Stints. The same authors report 'enormous concentrations of Wood Sandpipers along the lakes and rivers of eastern Zaïre' and a 'major passage' of Common Sandpipers at Lake Edward in March.

### Southern Africa

Southern Africa's coastal wetlands support some very high densities of waders, but overall numbers by African standards are rather small. The Namibian wetlands of Walvis Bay Lagoon and Sandwich Harbour are both hotspots. There is a case for considering these two wetlands as one because there is undoubtedly substantial interchange of birds between them. Walvis Bay Lagoon can support 40 000–45 000 waders in summer, including about 18 000 Curlew Sandpipers and up to 10 000 Sanderlings and 4 000 Ruddy Turnstones. Overall wader numbers at Sandwich Harbour are comparable, and White-fronted Plover numbers here sometimes exceed 1 500. In global terms, however, the most important wader population at these two sites is that of Chestnut-banded Plover. Numbers of these plovers peak during winter and, in July 1996, 9 731 birds were counted. This may be more than 70 per cent of the world population.

In South Africa, the only two sites that qualify as wader hotspots are also close together and waders undoubtedly move between the two. Langebaan Lagoon and the Berg River estuary both lie on the west coast north of Cape Town. Wader numbers at Langebaan fluctuate between 30 000 and 40 000 birds, while the Berg River supports just under 30 000. At both sites Curlew Sandpipers make up 60 per cent or more of the total numbers.

Of the 24 'hotspots', only six (in Mauritania, Senegal, Namibia and South Africa) are Ramsar-designated sites. Other hotspots in Morocco, Tunisia, Egypt, Guinea-Bissau, Sierra Leone, Mali, Nigeria, Chad, Cameroon, Sudan, Ethiopia, Kenya and Gabon do not enjoy this recognition, despite the fact that any wetland which supports 20 000 or more waterbirds (all species, not just waders) qualifies for registration. Of these 13 countries, all except Sierra Leone, Nigeria, Cameroon, Sudan and Ethiopia have ratified the Convention. Between them, the other eight countries have registered a total of 19 sites with the Convention.

In his posthumous (1972) monograph on Palaearctic–African bird migration systems, Reg Moreau estimated that 5 000 million land birds and 'incalculable water birds' migrated

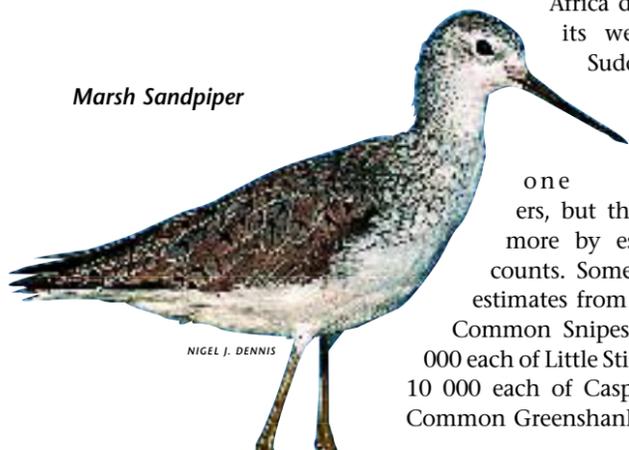
annually into Africa. More than 25 years later, we are able to make a stab at estimating these 'incalculable' numbers, at least for some species. We can be fairly certain, for example, that several million Ruffs (perhaps 5–10 million) are among the wader visitors to Africa. The European breeding population of Common Snipes, many of which migrate to Africa, was estimated in 1997 at 20 million birds. The globally threatened Slender-billed Curlew is also a migrant into Africa. The world population is somewhere between 100 and 400, and any wetland supporting even three of these birds is considered internationally important under the Ramsar criteria.

Even with these population estimates, however, we are still not able to calculate the total numbers of migrant waders entering Africa annually. At a guess, the figure lies somewhere between 30 and 40 million birds, but it may be at least another 25 years before we can refine this estimate with any real confidence. The continent is crying out for expeditionary surveys to some of its remote and not so remote wetlands and coastlines. It is sad to think that some wetlands might be lost before we ever knew what was there... □

#### List of species mentioned in the text, in the order in which they appear

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|---|---|
| <b>Common Ringed Plover</b> <i>Charadrius hiaticula</i> | <b>Greater Painted Snipe</b> <i>Rostratula benghalensis</i> |
| <b>Bar-tailed Godwit</b> <i>Limosa lapponica</i>        | <b>Great Snipe</b> <i>Gallinago media</i>                   |
| <b>Dunlin</b> <i>Calidris alpina</i>                    | <b>Egyptian Plover</b> <i>Pluvianus aegyptius</i>           |
| <b>Red Knot</b> <i>C. canutus</i>                       | <b>Western Reef Heron</b> <i>Egretta gularis</i>            |
| <b>Curlew Sandpiper</b> <i>C. ferruginea</i>            | <b>Grey Heron</b> <i>Ardea cinerea</i>                      |
| <b>Common Redshank</b> <i>Tringa totanus</i>            | <b>Great White Egret</b> <i>Egretta alba</i>                |
| <b>Northern Lapwing</b> <i>Vanellus vanellus</i>        | <b>Common Snipe</b> <i>Gallinago gallinago</i>              |
| <b>Grey Plover</b> <i>Pluvialis squatarola</i>          | <b>Caspian Plover</b> <i>Charadrius asiaticus</i>           |
| <b>Eurasian Golden Plover</b> <i>P. apricaria</i>       | <b>Jack Snipe</b> <i>Lymnocyptes minimus</i>                |
| <b>Little Stint</b> <i>Calidris minuta</i>              | <b>Common Greenshank</b> <i>Tringa nebularia</i>            |
| <b>Kentish Plover</b> <i>Charadrius alexandrinus</i>    | <b>Marsh Sandpiper</b> <i>T. stagnatilis</i>                |
| <b>Pied Avocet</b> <i>Recurvirostra avosetta</i>        | <b>Spur-winged Plover</b> <i>Vanellus spinosus</i>          |
| <b>Ruff</b> <i>Philomachus pugnax</i>                   | <b>Little Ringed Plover</b> <i>Charadrius dubius</i>        |
| <b>Black-tailed Godwit</b> <i>Limosa limosa</i>         | <b>White-tailed Plover</b> <i>Vanellus leucurus</i>         |
| <b>Sanderling</b> <i>Calidris alba</i>                  | <b>Kittlitz's Plover</b> <i>Charadrius pecuarius</i>        |
| <b>Whimbrel</b> <i>Numenius phaeopus</i>                | <b>Crab Plover</b> <i>Dromas ardeola</i>                    |
| <b>Gull-billed Tern</b> <i>Gelochelidon nilotica</i>    | <b>Ruddy Turnstone</b> <i>Arenaria interpres</i>            |
| <b>Red-winged Pratincole</b> <i>Glareola pratincola</i> | <b>White-fronted Plover</b> <i>Charadrius marginatus</i>    |
| <b>Wood Sandpiper</b> <i>Tringa glareola</i>            | <b>Chestnut-banded Plover</b> <i>C. pallidus</i>            |
| <b>European Marsh Harrier</b> <i>Circus aeruginosus</i> | <b>Slender-billed Curlew</b> <i>Numenius tenuirostris</i>   |
| <b>Common Sandpiper</b> <i>Tringa hypoleucos</i>        |   |
| <b>Black-winged Stilt</b> <i>Himantopus himantopus</i>  |   |

Marsh Sandpiper



NIGEL J. DENNIS