

# REVIEWS

MORRISON, R.G. & ROSS, K.L., 1989. *Atlas of Nearctic Shorebirds on the coast of South America*. Two volumes. Special publication of Canadian Wildlife Service, Ottawa. 325 pp. (Available from Canadian Wildlife Service, Ottawa, Canada K1A 0H3).

This impressive publication comprises the results of a series of aerial surveys carried out in January-February from 1982 to 1986 to determine the main wintering areas of Nearctic shorebirds on the South American coast. All coastal areas believed to be important for shorebirds, covering 28,000 km (!) of the coastline of the continent, were surveyed from the air. This resulted in observation of almost 3 million Nearctic shorebirds. Because many species appeared to concentrate on a small number of different sites, the main wintering areas for many species are well-known.

The report consists of two volumes. The first deals with introductory remarks, species overview (also in French, Spanish and Portuguese), distribution, coastal environment, and international conservation aspects. In Volume 2 the data is presented country by country. The country contributions are co-authored by 16 local wader and wetland specialists. For each country, data on the general geography, coastal morphology, and on shorebird numbers and habitats (with photographs) for each surveyed sector are given. Each volume is interspersed with tens of maps and tables with detailed information. A summary of Volume 2 is also presented in other languages.

Of the 2.9 million shorebirds counted, by far the largest numbers were located in Suriname (1.5 million, 52% of total). Other numerically important areas included French Guiana (431,000, 15%) and Brazil, especially the north-

central coast (398,000, 14%). Other countries had lower numbers (though often with significant numbers of individual species), with up to 4% of the continental total. The three areas mentioned above cover only 12% of the coastline surveyed, but had 81% of the total number of shorebirds located. For some species (groups) Suriname appeared to be of utmost importance. For instance, the number of small shorebirds in Suriname (95-99% made up of Semipalmated Sandpipers *Calidris pusilla* based on my own censuses in the 1970s) represented a significant proportion of the South American north coast (65%) and continental population (58%). For Yellowlegs *Tringa flavipes* (species combined) 80% of the north coast total and 73% of the continental coastline population was found in Suriname. For Short-billed Dowitcher *Limnodromus griseus*, Whimbrel *Numenius phaeopus*, Willet *Cataprophorus semipalmatus*, Black-bellied Plover *Charadrius squatarola*, medium-sized and large shorebird populations, these figures were more than 10%.

I was rather surprised to see that Short-billed Dowitcher (46% of South American total) and Willet (35%) were counted in Suriname in significant numbers. In 1971-73, I found very pronounced peaks for both species in transect counts along that coast during autumn and spring migration, with very few birds in-between, suggesting that the two species hardly winter on that coast. The uneven distribution of shorebirds on the coast may explain the

difference between the two sets of counts for the Willet (no birds seen by Morrison & Ross in those parts of the coast covered by me in 1970s), but not for Short-billed Dowitcher. To compare the importance of coastal stretches for shorebirds directly, it would have been helpful if the numbers had been given per kilometre. However, the reader can calculate these data himself, as the length of each sector covered is given separately.

The authors correctly point out that the atlas contains information only on the relative abundance of species in areas, because birds may have been overlooked, especially in mangrove areas. The numbers given, therefore, are minimum figures. Morrison and Ross stated that they could not undertake ground-truthing operations to determine accuracy of counts. I believe that some information could have been obtained by comparing their results with data obtained by others from the ground. In Table 1 I have done that for Suriname based on transect counts I made there during the northern winter in the early 1970s. As one can see, there are differences between the two data sets, but the numbers of both are of the same order. The results may indicate that large shorebirds are covered rather well from the air, but that small and medium-sized birds are under estimated up to a factor of two. One has to bear in mind, however, that the estimates based on the transect counts were obtained by addition of the maximum numbers found for each species during the winters involved.

Because of the problems just mentioned, it is a pity that aerial survey procedures are given rather superficially. True, it is said that flights were timed to coincide with high water whenever possible (but where not?) so that shorebirds numbers were encountered in roosting flocks along the



Table 1. Numbers (x1,000) of shorebirds (size-classes) counted by Morrison & Ross (1989) compared with maximum numbers estimated by Spaans (1978)<sup>1</sup> from transect counts along the coast of Suriname for same season.

Size-class	Morrison & Spaans (1989)	Spaans (1978) <sup>1</sup>
Large	22	5-20
Medium-sized	148	231-313
Small	1,347	2,025-2,112

<sup>1</sup>Wilson Bulletin 90: 60-83.

Table 2. Species of shorebirds regularly wintering in Suriname in significant numbers according to Spaans (1978), based on extrapolations of transect counts, that were absent or recorded only in small numbers recorded from the air according to Morrison & Ross (1989).

Species	Morrison & Ross (1989)	Spaans (1978) <sup>1</sup>
Semipalmated Plover	0	10,000-50,000
Solitary Sandpiper	0	2,500-10,000
Spotted Sandpiper	10	10,000-50,000
Ruddy Turnstone	619	10,000-50,000
Red Knot	0	< 500
Sanderling	42	ca. 2,500
Western Sandpiper	0	ca. 2,500
Least Sandpiper	0	50,000-100,000
Stilt Sandpiper	0	2,500-10,000

<sup>1</sup> Wilson Bulletin 90: 60-83.

coast of Suriname, but were regularly censused on the ground by me in 1970-73, with numbers for some species of up to 50,000-100,000. Except for Sanderling and Red Knot (already known from other studies) areas of special interest for most of these species have still to be established.

Despite these points, the atlas gives a very good picture of the distribution of many shorebird species on the South American continent and presents therefore a very useful basis for conservation related activities. In fact the concept of the Western Hemisphere Shorebirds Reserve Network (WHSRN) is largely based on the work that Morrison and Ross have undertaken. For inclusion in the WHSRN the authors list 9 sites with 'hemispheric status' (over 250,000 shorebirds during the course of the year or 30% of flyway population of a single species) and 42 sites with 'regional status' (over 20,000 shorebirds or 5% of flyway population of a single species). Suriname was the first country on the South American continent that joined the WHSRN and brought large areas of important shorebird habitats on that coast into the network (see *Wader Study Group Bull.* (1989): 36-37). Hopefully, more countries will follow soon!

The atlas is an important book for wader and wetland specialists of the South American continent and provides a good basis for future wader studies. The authors are therefore to be congratulated for the results of their efforts.

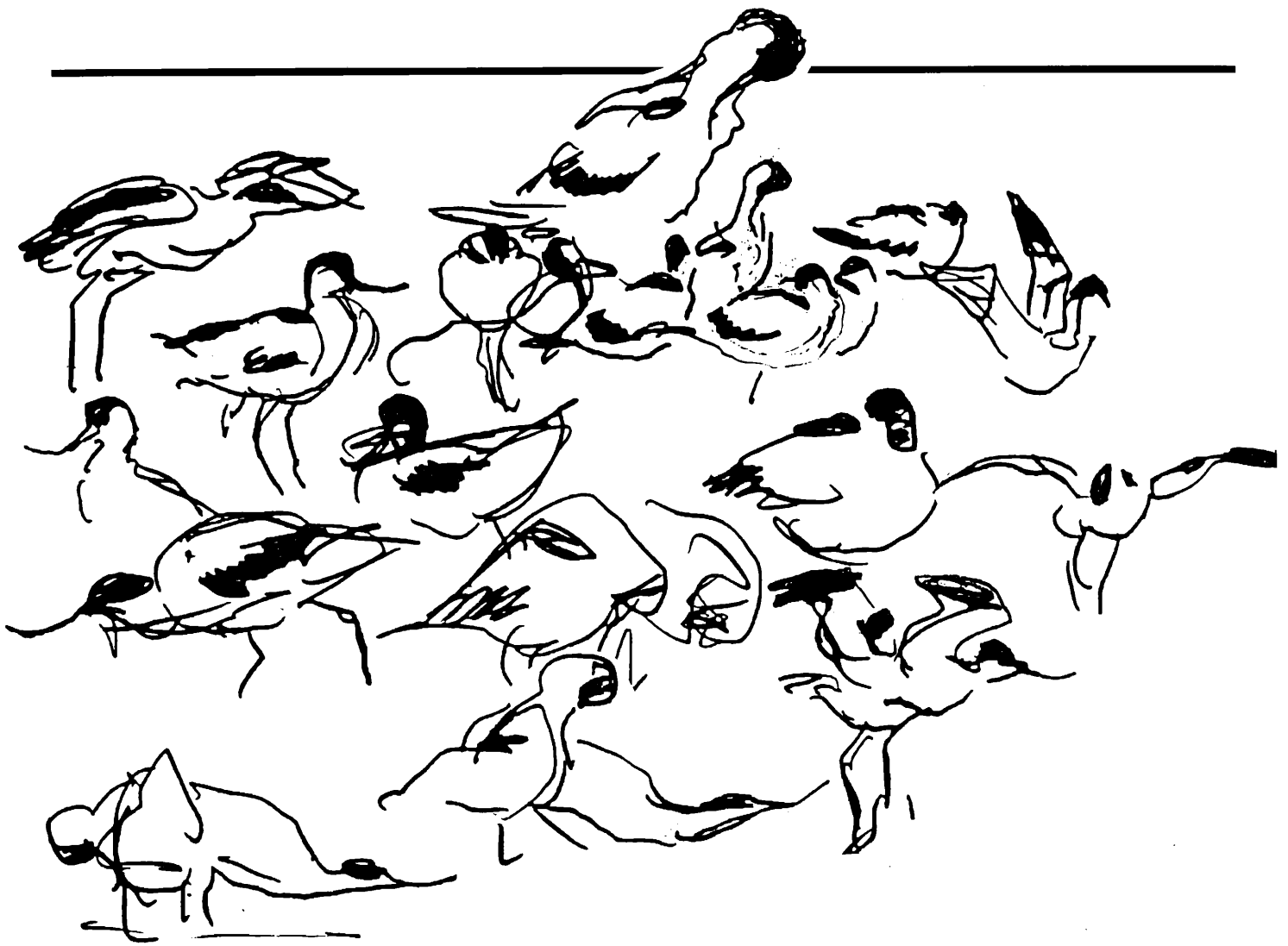
Arie L. Spaans

water's edge. However, in mangrove-fringed coastlines, it is very important to know whether flights were made during neap tide (in Suriname a zone of up to a few hundreds of metres remains uncovered by water then, enabling shorebirds to roost around high water on the mudflats), half-tide (no mudflats uncovered around high water and many shorebirds roosting within the mangroves - under and in trees! - or spring tide (many shorebirds roosting in lagoons elsewhere on the coast).

It appeared very difficult to identify most shorebirds seen to species level from the air, except for conspicuous species, such as Black-bellied Plover, Whimbrel, Willet, and Red Knot *Calidris canutus*.

Some species such as the Yellowlegs had to be grouped together. Sometimes sibling species could be identified to species level on geographical grounds (Short-billed Dowitcher) or because of habitat preferences (Sanderling *Calidris alba*). Ground counts sometimes revealed that more than 90% of a species group in a given area were of one particular species (e.g. White-rumped Sandpiper *Calidris fuscicollis* in Brazil and, as already mentioned, Semipalmated Sandpiper in Suriname). However, the balance can be made up by significant numbers of other species, as pointed out by Morrison and Ross. As an illustration, in Table 2 I have listed species which were absent or rarely identified from the air along the





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## OIL POLLUTION AND WADERS

The problem of waders and oil pollution has been little studied, but is no less important than that of oiling of seabirds. An oil spill in Washington State, USA, gave the opportunity for observations of impact on waders as indicated by the following abstract:

Larsen, E.M. & Richardson, S.A. (1990). Some effects of a major oil spill on wintering shorebirds at Grays Harbor, Washington. *North-western Naturalist* 71(3).

### ABSTRACT

Shorebirds wintering at Grays Harbor, Washington were oiled when No. 6 fuel oil spilled from the barge *Nestucca* on 22 December 1988. Counts and observations on eight days during the

ensuing two months provided information on the effects of oiling on Black-bellied Plover (*Pluvialis squatarola*), Semipalmated Sandpiper (*Charadrius semipalmatus*), Sanderling (*Calidris alba*), Western Sandpiper (*C. mauri*), and Dunlin (*C. alpina*).

Initially, 31% of shorebirds we observed roosting on ocean beaches were oiled; 10 days later this dropped to 5%. A harbor rate of 34% oiled shorebirds occurred after the ocean beach rate decline, then percentages of oiled shorebirds at each locality declined to insignificance. We report on behaviour hypotheses to explain the disappearance of over 3,500 oiled shorebirds: self-cleaning, emigration, and mortality.

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SOUNDS OF MIGRANT AND WINTERING BIRDS (WESTERN EUROPE)  
by C. Chappuis

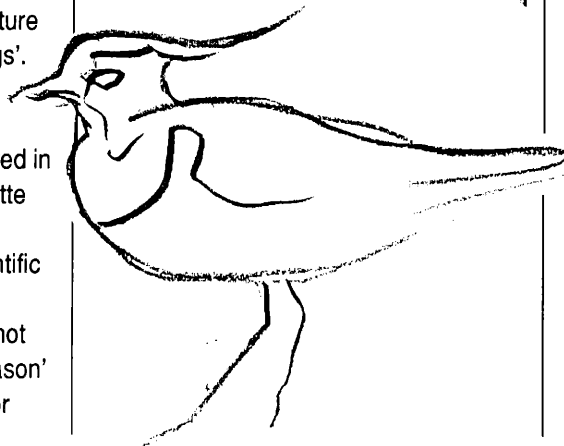
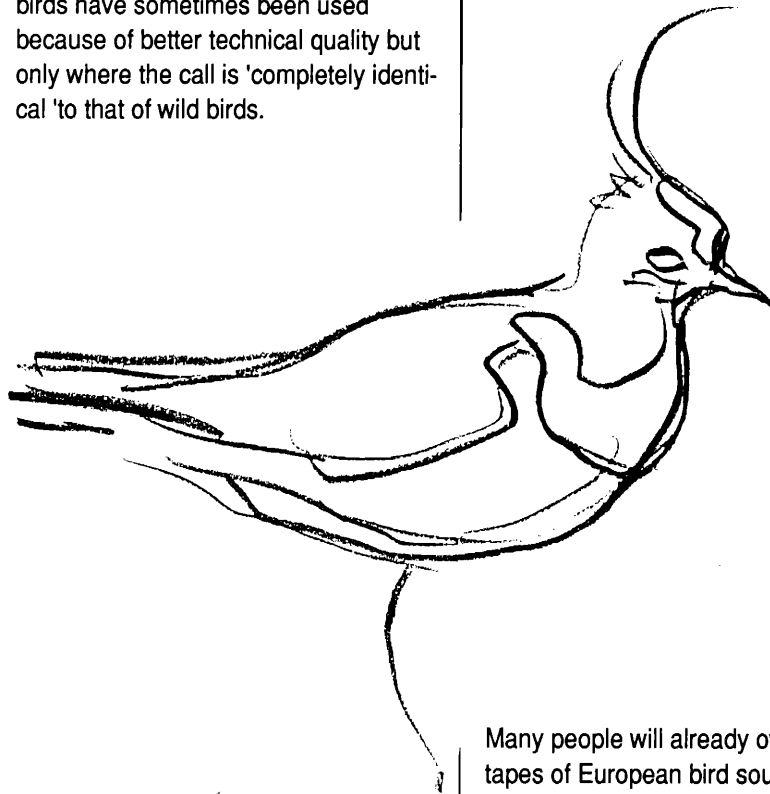
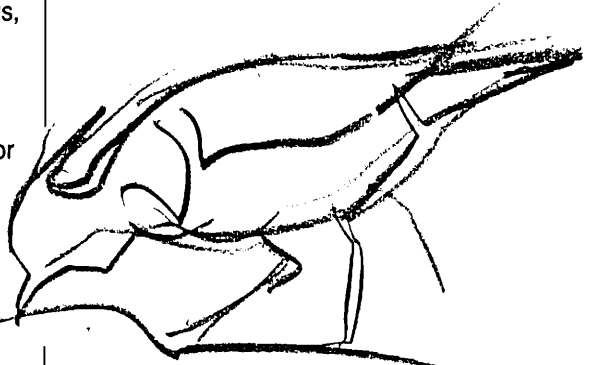
Two tape cassettes (C50, C60) with 30pp. booklet. Available from: F. Franklin, 13 Carden Hill, Hollingbury, Brighton BN1 8AA, price £12 incl. postage and packing. (*Version with French commentary and booklet also available*).

There is a large and growing number of bird sound recordings available to meet many requirements and suit many tastes and pockets. There is now even a Bird Recordings Service and tapes or compact discs can be obtained which cover, for example, all the birds of Europe, sounds of West African birds and, most commonly owned, those which contain a selection of the sounds of the European bird fauna. The repertoire of sound found amongst these birds is vast and no one recording can hope to be comprehensive. Not surprisingly therefore, many of the widely available tapes give for most species the song and perhaps also a flight call or other commonly heard or characteristic call. As the accompanying booklet to these new tapes point out, the breeding season, when birds are usually in song, is also usually a short part of the year. The stated aim of these tapes is to concentrate on other seasons and provide 'original documentation for some 150 species which rarely feature in commercially available recordings'.

Sounds of 147 species are presented in systematic sequence on two cassette tapes, each species being clearly announced by its English and scientific name. Birds omitted include those which, according to the text, do not 'emit calls outside the breeding season' or which are observed only rarely or

those whose calls are very similar throughout the year (e.g. swifts, crows, tits etc.).

In isolation the tapes represent excellent value and are a useful package for sound identification throughout the greater part of the year. The recordings are generally of good quality, though the background hiss on a few becomes obtrusive. Such birds are apparently 'wary' during the breeding season, but then why are these recordings being used on a tape of migrant and wintering birds? Purists should also note that recordings of captive birds have sometimes been used because of better technical quality but only where the call is 'completely identical' to that of wild birds.



Many people will already own a tape or tapes of European bird sounds and it must therefore be asked whether these Chappuis tapes are so different from others that it is worth forking out hard earned cash for. In order to investigate, I spent a while listening to a widely available and presumably popular set of recordings (Kettle & Svensson 1990) making comparisons between the sounds on both tape sets and paying particular attention to the waders. The Hamlyn tapes represented 34 species compared to Chappuis' 32. Twenty-



nine species were common to both tapes: Chappuis lacked Woodcock, Great Snipe and Black-winged Stilt but had, in addition, Dotterel, Red-necked and Grey Phalaropes, Ruff and Terek Sandpiper. So not much difference here. The similarity did extend to some of the recordings too. I found those of the Little Ringed Plover, Spotted Redshank, Greenshank, Green Sandpiper and Whimbrel pretty similar in content. However, the selections for Lapwing, Curlew and Redshank, for example, were quite different, each with excellent recordings of interesting and relevant sounds. For most wader species there was a varying degree of overlap in sound content. For example, the Hamlyn tapes usually included the song and flight calls and alarm calls of waders, whereas Chappuis includes flight calls and 'rudimentary songs'. This can work both ways: the chortling song of the Golden Plover is faded from the Hamlyn tape but is clearly presented on the Chappuis set. The inclusion of many songs or 'rudimentary songs' on this latter tape may be a little misleading - although I have heard northern Golden Plover singing whilst on passage, it is not a particularly common occurrence and perhaps puts undue emphasis on the breeding season again - something the tapes are meant to underplay.

Where the Chappuis tape really scored was in providing a diverse set of recordings to supplement those available for some of the passerines. These included two races of Chiffchaff next to Willow Warbler, and some useful calls from Blackbirds, Goldcrests, Firecrests, Nightingale, Yellowhammer, the croak of a Bittern and the calls of a Quail on passage over a wood near Paris at night! This is a valuable section but is by no means comprehensive. For example, the familiar call of passage Lapland Buntings is not reproduced and the selection for Starling is meagre

considering this species' vast repertoire.

In summary, I think the tapes provide an excellent and worthwhile supplement to a standard set of European bird recordings. They are accompanied by a well written 30-page booklet giving valuable comment on aspects of the birds vocal behaviour and on the recordings themselves.

Just lying back with a drink on a dark winter's evening and letting the recordings wash over you causes all sorts of out-of season images to be conjured up. Roll on the spring passage!

## REFERENCE

Kettle, R. & Svensson, L. (compilers) 1990. Songs and Calls of British and European Birds. Part of the Hamlyn Guide to the Birds of Britain and Europe book and 3 cassette pack.

*Andrew F. Brown*

