PALEARCTIC WADERS IN COASTAL GHANA IN 1985/86

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Information on the distribution and abundance of Palearctic waders has been of a patchy and restricted nature. Comprehensive surveys undertaken during November 1985 - February 1986 counted all waterbirds, waders and seabirds at 81 sites along Ghana's 500 km coastline. Lagoons and salt-pans adjacent to the predominantly sandy coast were the favoured Palearctic wader habitats. The estimated total Palearctic wader population overwintering in coastal Ghana was over 42 000 birds of 29 species. This amounts to *c.* 1% of the probable total of waders wintering on the Atlantic coast of Africa. Curlew Sandpipers *Calidris ferruginea* were the most abundant species (36% of the total). Five other species each comprised 5% or more of the total. These 6 most numerous species together account for 80% of all Palearctic waders recorded. Fifteen sites each held 10% or more of the estimated total waders, and 3 of these (peak counts ranging from 6 000 to 10 000 birds) together held 60% of Palearctic waders. Coastal Ghana supports internationally important popolations of 9 species. Ghana appears to be particularly important for the Black-winged Stilt *Himantopus himantopus*, Spotted Redshank *Tringa erythropus* and Greenshank *T. nebularia*.

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INTRODUCTION

Reported information on the distribution and abundance of Palearctic waders in coastal Ghana is confined to serial counts at discrete locations (*e.g.* Grimes 1969, 1974, MacDonald 1978a,b). Such data provide an interesting and important insight into the seasonal distribution of waders, and in particular the migratory movements of Palearctic species. However no data have been available to indicate the total coastal wader population during the northern winter, nor its spatial distribution. Thus there has been no basis upon which to judge the importance of coastal sites for Palerctic waders either within Ghana, or internationally in the context of the East Atlantic flyway.

Two 4-week long ornithological expeditions were mounted in November/December 1985 and January/February 1986 under the auspices of the 'Save the Seashore Birds Project - Ghana' (SSBP-G, see *WSG Bulletin* 44:6, 1985), with the object of compiling an inventory of all waterbirds, waders and seabirds along Ghana's 500 km coastline. The results of these expeditions constitute the first comprehensive information on the country's waders population. This paper summarises the data obtained on Palearctic migrant waders overwintering in coastal Ghana, and assesses the most important sites for this group.

COASTAL HABITATS

The coastline of Ghana is dominated by sandy beaches separated by rocky headlands, which occasionally rise to heights of several metres to form low cliffs. Areas of intertidal sandflats and mudflats are scarce. The most important wader habitats are found landward of the beaches, and are both natural lagoons and artificial salt lagoons ('salines') used in commercial salt production. Emergent vegetation associated with these open water areas made it sometimes difficult to count accurately the wader populations. Nevertheless the counts do provide a reflection of the order of magnitude of wader numbers, and an accurate picture of their spatial distribution.

PALEARCTIC WADER POPULATIONS

Table 1 summarises the winter population estimates based on the SSBP-G surveys in November 1985-February 1986. The 2 surveys covered 81 separate localities along the Ghana coast, from Newtown in the east, adjacent to the Ivory Coast, to Keta Lagoon a few kilometres from the border with the Togo Republic. Each site was visited on at least one ocasion during each survey period. Most sites were visited twice. About 90% of the entire coastline and associated coastal habitats (*e.g.* lagoons and salt pans) were included in the inventory. In all but the most complex and extensive sites most waders were located, and we consider that no large concentrations of waders were overlooked. The counts probably have underestimated the wader populations, since some birds will have been hidden by vegetation. However our counts should give a clear indication of the order of magnitude of wader numbers, and give an accurate picture of their spatial distribution along the Ghana coast.

The surveys recorded 29 Palearctic wader species. The estimated total population was over 42 000 birds. Curlew Sandpipers *Calidris ferruginea* were by far the most numerous, accounting for over 36% of the total. A further 5 species (Little Stint *C. minuta*, 13%; Sanderling *C. alba*, 11%; Greenshank *Tringa nebularia*, 7%; Ringed Plover *Charadrius hiaticula*, 7% and Knot *Calidris canutus*, 5%) each comprised more than 5% of the total. These, together with Curlew Sandpipers, were 80% of the estimated total population of waders.

Table 1. Palearctic wader population estimates.

	Nov/Dec 1985	Jan/Feb 1986	total*
OYSTERCATCHER *Haematopus ostralegus*	17	17	19
BLACK-WINGED STILT *Himantopus himantopus*	1 228	1 013	1 520
AVOCET *Recurvirostra avosetta*	74	235	266
LITTLE RINGED PLOVER *Charadrius dubius*	3	2	5
RINGED PLOVER *Charadrius hiaticula*	2 678	1 328	2 893
KENTISH PLOVER *Charadrius alexandrinus*	5	1	6
GOLDEN PLOVER *Pluvialis apricaria*	0	1	1
GREY PLOVER *Pluvialis squatarola*	1 563	1 036	1717
KNOT *Calidris canutus*	1 942	266	2 076
SANDERLING *Calidris alba*	3 472	2 784	4 646
LITTLE STINT *Calidris minuta*	5 120	3 143	5 448
TEMMINCK'S STINT *Calidris temminckii*	1	0	1
CURLEW SANDPIPER *Calidris ferruginea*	11 174	7 934	15 524
DUNLIN *Calidris alpina*	1	1	2
RUFF *Philomachus pugnax*	32	22	39
COMMON SNIPE *Gallinago gallinago*	3	6	8
BLACK-TAILED GODWIT *Limosa limosa*	0	160	160
BAR-TAILED GODWIT *Limosa lapponica*	293	145	329
WHIMBREL *Numenius phaeopus*	427	219	477
CURLEW *Numenius arquata*	37	34	58
SPOTTED REDSHANK *Tringa erythropus*	950	1 297	1 971
REDSHANK *Tringa totanus*	336	65	349
MARSH SANDPIPER *Tringa stagnatilis*	407	393	528
GREENSHANK *Tringa nebularia*	2 460	1 806	2 979
GREEN SANDPIPER *Tringa ochropus*	2	0	2
WOOD SANDPIPER *Tringa glareola*	174	124	213
TEREK SANDPIPER *Xenus cinereus*	2	0	2
COMMON SANDPIPER *Actitis hypoleucos*	720	360	806
TURNSTONE *Arenaria interpres*	222	83	267

* the estimated total population is based on 'summed totals', combining the peak counts for species during the two surveys.

The species differed considerably in their distribution. Grey Plovers *Pluvialis squatarola*, although ranking only 8th in numerical importance, were the most widespread and were recorded at 58 (71%) of the sites. In contrast, Curlew Sandpipers were recorded in flocks of up to 6 500 birds but from only 23 (28%) sites, principally the salt pans and lagoons of the eastern part of the coast, despite being the most numerous species.

SITE AND SPECIES EVALUATIONS

At the national level it is clear that the eastern sector of the coastline, where coastal salt pans and lagoons predominate, holds the largest concentrations of Palearctic waders (Figure 1). The western sector, where sandy beaches and rocky headlands are the main habitats, holds only 18% of the estimated overwintering wader populations. Fifteen sites each hold more than 10% of the waders recorded, and these together hold 95% of the total. Peak counts at thr 3 top Palearctic wader sites in Ghana ranged from 6 000 to 10 000 birds, and these sites accounted for 60% of the estimated population. These sites are all in the eastern sector. Two are complex lagoon/active salt-pan sites, and the other is an extensive shallow lagoon and associated marshland adjacent to the Volta River mouth.

From an international perspective, Ghana's estimated total population of Palearctic waders is small when compared to the estimated numbers from some other West African countries such as Mauritania 2.3 million (Altenburg *et al.* 1982), Giunea-Bissau 1.2 million (Zwarts 1984), and Sierra Leone 185 000-275 000 (Tye and Tye 1987). However it probably amounts to around 1% of the current estimated total on the Atlantic

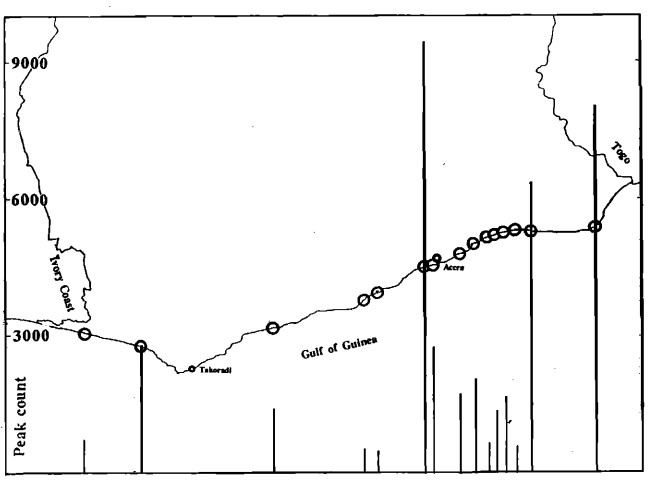

Figure 1. The location of peak numbers of waders counted in coastal Ghana during winter 1985/86.

coast of Africa (Altenburg *et al.* 1982, Piersma *et al.* 1987).

Whilst the overall totals appear relatively small, 9 species are sufficiently abundant to comprise 1% or more of its estimated East Atlantic flyway population (Table 2). Ghana appears to be especially important for its overwintering populations of Black-winged Stilts *Himantopus himantopus*, which may be a mixed population of Palearctic migrants and afrotropical residents (or perhaps local migrants); Spotted Redshanks *Tringa erythropus*, possible trans-Saharan migrants which are scarce elsewhere in coastal West Africa (Grimes

Table 2. Internationally important populations of Palearctic waders in coastal Ghana.

	% East Atlantic flyway*
BLACK-WINGED STILT *Himantopus himantopus*	15
RINGED PLOVER *Charadrius hiaticula*	1
GREY PLOVER *Pluvialis squatarola*	1
SANDERLING *Calidris alba*	3
LITTLE STINT *Calidris minuta*	4
CURLEW SANDPIPER *Calidris ferruginea*	4
WHIMBREL *Numenius phaeopus*	1
SPOTTED REDSHANK *Tringa erythropus*	8
GREENSHANK *Tringa nebularia*	7

* based on data in Altenburg *et al.* (1982, p. 99)

1969, 1974, Altenburg *et al.* 1982); and Greenshanks *Tringa nebularia*.

This assessment of key sites and species is a preliminary stage in the eevaluation of the importance of Ghana to Palearctic waders in the East Atlantic flyway. Data continues to be collected at regular intervals at selected caostal sites by staff of the Department of Game and Wildlife Research Division, under the auspices of the SSBP-G, to improve understanding of the temporal pattern of wader distribution and abundance, and the relative importance of coastal sites to Palearctic migrants in both a national and an international context.

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