

# WADERS IN THE GULF OF ARTA, NW GREECE, IN APRIL 1982

by Meinte Englemer and Joke Bloksma

Some of the wader populations wintering in N.W. and W. Africa probably return to the breeding grounds by using the Mid-Eurasian flyway. Their migration routes are probably across to the Mediterranean coasts; Tunisia, Greece and Turkey, across the Black Sea, and along the Urals to the mid- and possibly East Palearctic breeding grounds. Our knowledge of the stop-over areas used during migration on these routes is rather scanty and incomplete. Therefore, during a short holiday in Greece (13-27 April 1982) we counted the numbers of waders present in some areas in the Gulf of Arta (39°N, 21°E), along the N.W. coast of Greece. For waders that were seen migrating, data on group sizes and departure times were gathered.

There are saltmarshes along the north side of the Bay, whereas the whole southern and the largest part of the eastern shorelines are cliffs. Most of the extensive low lying northern areas further inland are cultivated with orange, lemon and olive trees, whereas the saltmarshes and pastures near the water's edge are extensively grazed by cattle and sheep. Most waders were found here. Along the whole northern shoreline fishing basins existed, surrounded by small dikes. The whole Gulf covers about 850 km<sup>2</sup> with about 50 km<sup>2</sup> of suitable wader habitat.

During our stay the weather was quite bad between 21 and 24 April, with snow high up in the mountains and rain in the lower regions, combined with northerly winds. It caused flooded areas on the saltmarshes and pastures. In these areas, most waders were foraging on the numerous shrimps and small fishes in salt water and tadpoles in fresh and brackish water. Apart from this period, the weather was sunny with high temperatures.

We counted three areas in the Gulf of Arta (Figure 1), using 7 x 50 binoculars and a 15-60x zoom telescope. The counting area (A) near Virla was an extensive saltmarsh with several pools and small lakes. Few waders were counted here (Table 1) although the area appeared well-suited. Mainly Black-winged Stilts *Himantopus himantopus*, Ruffs *Philomachus pugnax* and Spotted Redshanks *Tringa erythropus* were observed. Several pairs of Black-winged Stilts were breeding or noted giving alarm calls. In the evening a group of 30 Ruffs (90% females) was observed to leave the area in a NE direction, fifty minutes before darkness.

In the second area, around the Isle of Koronisia, little suitable wader habitat was available. As a matter of fact, grilled Easter-lambs were far more numerous on this isle! The Whimbrel *Numenius phaeopus* and the Little Ringed Plovers *Charadrius dubius* and Kentish Plovers *Charadrius alexandrinus* stayed on a relatively small beach with shallow pools near the village. In these pools, there were high densities of Hermit crabs (10-100 m<sup>-2</sup>). Some worms and *Hydrobia* specimens were also found here. On the beach, the many Sandhoppers could have served as food for waders. The Whimbrel was observed to eat large crabs (2cm). Both Plovers displayed territorial behaviour.

The easternmost counting area in the Bay, near Komeno, had the highest numbers of waders. This could have been due to the bad weather conditions some days before, through which spring migration was held up. On the first evening with clear weather, several groups of waders (and also Little Egrets *Egretta garzetta*) were seen leaving the area (Table 2). The waders departed in a NE -ENE direction between 19.30 and 21.30 hours, after 20.20 hours in darkness.

The area near Komeno was similar to the area near Virla: saltmarshes with pools and pastures fringed by hedgerows. Nearly all waders were found in or around the many shallow pools or in the flooded *Salicornia* areas. Possibly the Stone Curlews *Burhinus oedicephalus*, Pratincoles *Glareola pratincola* and some of the Black-winged Stilts and Redshanks *Tringa totanus* were breeding in the area. The first two species were found mainly on the pastures, further inland, than the Stilts and Redshanks which were mainly on the saltmarshes. The most abundant waders were Black-winged Stilts, Little Stints *Calidris minuta*, Curlew Sandpipers *Calidris ferruginea*, Ruffs, Spotted Redshanks and Wood Sandpipers *Tringa glareola*. As near Virla, nearly all the Ruffs (97%) counted here were females.

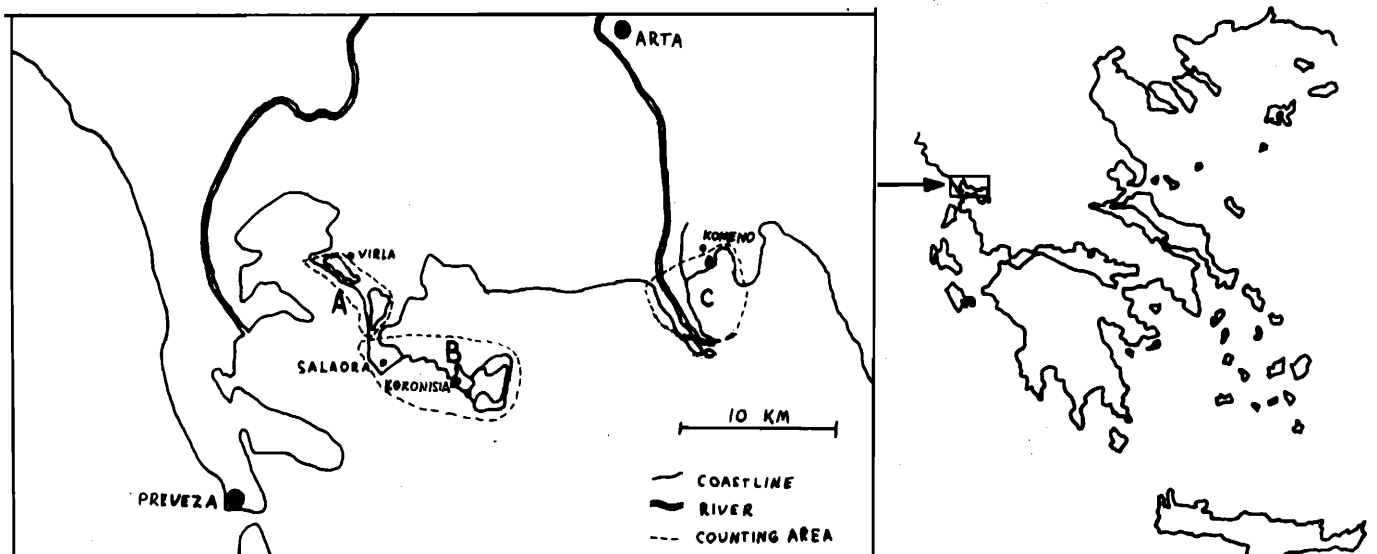


Figure 1. The Gulf of Arta.

Several other areas along the N and E coast of the Gulf seemed well-suited for waders, as far as we could see from a distance. We estimate that we covered about 25% of the total area used by waders in this Gulf. Extrapolation suggests, as a very rough estimate, that about 10,000 waders were present in the area in late April. During our stay we observed a strong migration of mostly Wood Sandpipers, Whimbrel and Curlew, but also Ruffs, Spotted Redshanks, Redshanks, Greenshanks and Common Sandpipers. The Gulf of Arta seems to be important for several wader species during spring migration, where they found a quiet stop-over area. Considering the enormous numbers of shotgun cartridges found everywhere around, this situation will sometimes be rather different.

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Table 1. The numbers of waders counted in three areas in the Gulf of Arta, April 1982.

	A Virla 20-21 April	B Koronisia 18-20 April	C Komeno 24-26 April	Total
<u>Haematopus ostralegus</u>	-	-	6	6
<u>Himantopus himantopus</u>	64	-	195	259
<u>Burhinus oedicnemus</u>	4	-	17	21
<u>Glareola pratincola</u>	-	-	30	30
<u>Charadrius dubius</u>	-	3	3	6
<u>Charadrius alexandrinus</u>	-	4	15	19
<u>Pluvialis squatarola</u>	-	-	1	1
<u>Vanellus vanellus</u>	-	-	1	1
<u>Calidris minuta</u>	-	1	300	301
<u>Calidris ferruginea</u>	-	-	850	850
<u>Philomachus pugnax</u>	105	15	200	320
<u>Gallinago gallinago</u>	-	-	3	3
<u>Limosa limosa</u>	-	-	7	7
<u>Numenius phaeopus</u>	-	1	17	18
<u>Numenius arquata</u>	-	-	11	11
<u>Tringa erythropus</u>	58	-	321	379
<u>Tringa totanus</u>	30	-	28	58
<u>Tringa nebularia</u>	20	-	34	54
<u>Tringa glareola</u>	15	1	156	172
<u>Actitis hypoleucos</u>	35	12	34	81
total	331	37	2229	2597

Table 2. The number and size of groups of waders leaving the area near Komeno in the evenings of 24 and 25 April.

	24 April		25 April	
	n of groups	group size observed	n of groups	group sizes observed
<u>Numenius phaeopus</u>	5	?	1	?
<u>Numenius arquata</u>	2	?	1	5
<u>Tringa erythropus</u>	1	7		
<u>Tringa totanus</u>	1	?		
<u>Tringa nebularia</u>	1	5	1	5
<u>Tringa glareola</u>	15	8,15,5	8	25,12,14,20
<u>Actitis hypoleucos</u>	2	-		
total	27		11	

