PROGRESS REPORT ON THE MAURITANIAN EXPEDITION

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In spite of the advances in the knowledge of wader migration in Europe and North Africa in the last few years, very little is known about the importance and position of the West African coastline in the migration systems of Palearctic waders. This autumn a six-man expedition from England and France is based at the Banc d'Arguin in Mauritania to attempt to answer some of the many questions which have arisen as a result of recent studies in Europe.

The Banc d'Arguin consists of a huge complex of mudflats and islands bordered entirely by the Sahara Desert, and is probably the most important wintering area for Marine Palearctic waders in West Africa. A count of waders in December 1971 indicated that there were probably at least one million waders wintering there. The main objectives of the present expedition are twofold : firstly, to census the number and species of waders at the Banc d'Arguin from September until December, to tie in with the International Wader census in Europe; secondly, to determine the geographical origin of the waders by means of ringing and biometric studies.

The expedition is land-based and is using two Land- Rovers and an inflatable boat with outboard motor. After a somewhat exhausting two-week journey from England, including crossing the Sahara via Algeria, we arrived in Nouakchott, the capital of Mauritania, on the 14th September, complete with mist netting equipment and two common nets. Whilst we sorted out a number of customs and other problems we spent one night mist netting 10 miles to the south of Nouakchott on a pool flooded by recent rains, and were pleasantly surprised that the first Sanderling we caught carried a British ring and the first Ringed Plover a Swedish ring!

The Banc d'Arguin is situated about 150 miles north of Nouakchott and can be reached along the beach at low tide and cross country. The logistic problems of working at the Banc d'Arguin are proving considerably more difficult and different than on previous "Wader Expeditions". We are using solar stills to convert sea water to fresh water as the nearest supply for water, fuel and food is Nouakchott. In addition we are learning new catching skills to obtain fresh fish. We have established a "base camp" by an inlet near to the main complex of mudflats. We have now spent six weeks in the field, and the following is a summary of some of the results obtained so far.

Wader Counts

We have attempted to locate and count all the high-tide wader roosts, which is not an easy task, as the Zostera covered mudflats extend to about 15 miles by 12 miles interspersed with islands. To reach all the roost sites we have enlisted the help of the local Imraguen fishermen who can navigate the difficult channels between the mudflats in their boats with very shallow draughts. On the high tide series of 10th-13th October, we estimated the totals given in Table 1.

TABLE I - WADER CENSUS, BANC d'ARGUIN 10th-18th OCTOBER, 1973

Bar-tailed Godwit	213,000
Redshank	100,000
Knot	125,000
Oystercatcher	3,000
Grey Plover	2,000
Turnstone	3,000
Curlew	1,000
Whimbrel	2,000
* Small Wader Spp.	176,000
TOTAL :	625,000

* Estimated proportions in Small Wader spp:

Ringed Plover	9,000
Kentish Plover	4,000
Little Stint	4,000
Dunlin	123,000
Curlew Sandpiper	27,000
Sanderling	9,000

The estimation of the composition of the "small wader spp." is somewhat tentative because of differences in the composition of feeding flocks from one place to another, and the difficulty of distinguishing species in mixed flocks in flight. In addition, the figure is almost certainly an underestimate as the small waders tend to roost in looser flocks along the tidewrack.

It is clear that the situation has been changing continuously with large arrivals of many species (particularly Bar-tailed Godwit and Redshank) towards the end of September and early October. From the basis of the counts of December 1971, there are probably many more waders (particularly Dunlin) to arrive yet. Clearly the Banc d' Arguin is an especially important wintering area for the Bar-tailed Godwit.

Ringing

We have found an excellent mist netting site at a tidal lagoon at Cáp Timinis, where we have caught up to 300 birds per night, and 1,398 in six nights netting. It has been difficult to avoid catching some of the 20,000 Black Terns which roost in the lagoon! Common netting is a less suitable technique as there are few suitable sites and the tidal range is, at the most, 2 metres. To date, 3,136 birds have been caught, including 32 foreign controls as shown in Table II.

TABLE II - RINGING TOTALS 16.9.73 to 29.10.73

	No. of Birds Caught	No. of Controls	(%)	Origin of Controls
Oystercatcher	1	1		
Ringed Plover	55	1	1.82	Sweden
Little Ringed Plover	1			
Kentish Plover	13			
Grey Plover	16			
Turnstone	69	1	1.45	Finland
Whimbrel	5			
Bar Tailed Godwit	66			
Redshank	178	1	0.56	Belgium
Greenshank	2			
Knot	435	1	0.23	Poland
Little Stint	48			
Dunlin	991	2	0.2	Norway, Britain
Curlew Sandpiper	409	1	0.24	? Morocco
Sanderling	80	1	1.25	Britain
Black Tern	298			
Common Tern	180	9	5%	5 British 2 German 1 Dutch 1 Spanish
Sandwich Tern	67	15	22.4	9 British 5 Danish 1 German
Miscellaneous	220			
	3,136	32		

Some preliminary comments can be made on the data collected so far.

Knot

A number of factors suggest that the adult Knot population may well be of Russian, as opposed to Greenland, origin.

a. The percentage of controls obtained (1 control out of 346 adults caught) is lower than might be expected for Knot migrating through Britain.

b. It would appear that the bill lengths of adult Knot are approximately 2 mm. longer than the Icelandic samples. The biometrics of Russian Knot populations have not been well established yet.

c. The Knot here are moulting considerably later than the Greenland populations in Britain.

d. The control from Poland strongly suggests that these populations are following an easterly migration route (only 1 Polish control has been recorded in Britain).

The wide range of moult scores of the Knot caught so far suggests many may be first summer birds. It was also interesting that many adults have been increasing in weight towards the end of their moult, up to about 150 gms.

The situation regarding juvenile Knot is less clear as it is believed that some juvenile and first summer Greenland Knot winter south of Britain and these populations might not have arrived in West Africa yet. We have found many juvenile Knot in a highly exhausted condition. A major objective for November is to catch as many Knot as possible.

Dunlin

Detailed biometric analysis will be required to separate the populations present but it seems that the majority of Dunlin caught so far are Schinzii with smaller numbers of alpina and virtually no arctica. 720 of the 991 Dunlin caught so far have been juveniles but this could be partially due to catching bias, as almost all were not netted. With luck it will be possible to common net a larger roosting sample in November.

Other Species

It is hoped that sufficiently large samples can be trapped of most species (except Bar-tailed Godwit) to allow useful analysis. The data will inevitably be less complete, however, than for the Knot and Dunlin.

The plans for the next month, before we leave Mauritania for England, at the beginning of December, are to make a further wader count at the end of November, and to continue to obtain ringing samples at Cap Timiris at intervals of about two weeks. In addition, we shall be trying to common net samples of waders for the larger roosting flocks as their composition may well be different from our mist netted samples. We are also collecting mud samples, and the invertebrate fauna seems to be immensely rich. Liver samples are being collected for pesticide analysis.

The Banc d'Arguin is certainly a very remarkable area indeed, not only for its populations of wintering waders, but also for its unique breeding colonies of ground-nesting Pelicans, Spoonbills, Egrets, Herons and Cormorants. Fortunately the area is well protected by natural barriers but breeding colonies are extremely vulnerable to any developments in, for example, tourism which might occur.