### First winter wing moult

The young of migrant waders which winter in the tropics seem less well able to delay their post-juvenile wing moult until the beginning of their second year than migrants from arctic or sub-arctic breeding grounds which winter, for instance, in western Europe. Not only does plumage deteriorate more rapidly in the tropics, but a young bird which migrated north in its first spring, then completed moult along with adults during its second winter, would have to retain its juvenile outer primaries for three ong migrations and up to 18 months. Some Ruffs and Wood Sandpipers for example seem to do this, but many young birds of these and similar species are caught in Kenya in spring at low weights and in poor plumage. They presumably do not migrate far, and may well begin to moult in late summer a few weeks earlier than adults. There is, however, a tendency for first year birds to renew primary feathers in tropical Africa during late winter. In some small species in which wear is extremely rapid and in which breeding is probably common during the first summer, an extra full wing moult is introduced during the first winter.

In the Greenshank and the Ruff, first winter primary replacement is uncommon, and confined to one outer feathers in each wing. The same pattern is observed rather more often in the Marsh Sandpiper, and very commonly in the Curlew Sandpiper and the Wood Sandpiper in which the four to six outer feathers in each wing are typically renewed. The Common Sandpiper has developed a more complete first winter moult, which usually involves the secondaries as well as the primaries. It is more rapid than that of adult birds however, and does not involve the tertials. Moreover, some old inner primaries, and some of the secondaries are usually retained. A complete first winter moult identical in pattern to that of adult birds occurs in the Little Stint and the Ringed Plover. The situations to be seen in Kenya in the Marsh Sandpiper, the Wood Sandpiper and the Common Sandpiper may well represent a series of stages in the evolution of this development. It would be valuable to learn more-of the moult habits of these species in other wintering areas.

#### REFERENCES

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## WADERS AND WADER RINGING IN BOTSWANA, SOUTHERN AFRICA

Besides having its own resident population of waders Botswana is probably an important wintering area for large numbers of Testern Palaearctic breeding waders, especially the Ruff and Little Stint.

The most important area for water birds is the huge Makarikari salt pan which in a good rainy season becomes flooded up to a few feet deep for thousands of square miles with numerous sandy islands. On a recent flight over I was able to pick out hundreds of pelicans and flamingoes swimming and wading in its shallow perimeters. With the abnormal amount of rain we have just received (40" compared with 7" last year) large quantities of small fish and fresh water creatures get washed into the pan from the northern rivers helping to swell the diet of the larger waders.

The Okavango Delta in the north is a massive complex of rivers, islands and sandbanks and although probably poor in wader numbers has produced interesting inland records of Sanderling, Turnstone and Bartailed Godwit in a land-blocked area 700 miles from the nearest coast.

Of the palaearctic migrant species the most numerous are probably Ruff, Little Stint and Curlew Sandpiper. Species which are not so numerous but very common, occurring on most stretches of river, flood pan and swamp, include Marsh Sandpiper, Greenshank, Common Sandpiper and Wood Sandpiper. There have been odd records of Grey Plover and Bartailed Godwit, usually in the west near to Lake Ngami or the Okavango Swamps.

To date I have accomplished a rather limited amount of ringing, only about 4C waders, but fortunately most of these have been palaearctic migrants, including Little Sting, Curlew, Sandpiper and Ruff. Unlike U.K. where the wader ringer seems to be hampered on all sides by economic progress ruining the ever dminishing suitable wader haunts, out here I am hampered by the very vastness of the country. There is so much attractive wader country at the moment, it is difficult to find suitable concentrations of birds for a concerted ringing programme. This state of affairs has been brought about by this seasons heavy rains. The rains have also resulted in inevitable flooding making travel to many areas impossible.

Prior to the arrival of the rainy season, I found a very suitable and workable pan with newly arrived migrant wader flocks; unfortunately it also happened to be the domain of a number of game. I found it rather disconcerting one evening whilst doing a round of the nets to find a rather large looking lioness padding along in front of me. Needless to say I didn't check the nets again for a few hours.

It is now early March and the local wader breeding season is drawing to a close and along with the Swallows most of the migrant waders are already moving north. By next season I will have a much more detailed knowledge of the country and hope to accomplish much more in the wader ringing field.

# A NOTE ON THE PRIMARY MOULT OF CALIDRIS MINUTA - LITTLE STINT IN BOTSWANA

A small sample of 20 birds was caught on a flooded pan on 1.12.73 in Northern Botswana, Southern Africa. This sample consisted of 6 juveniles and 14 post juveniles.

Of the 14 post juveniles 3 had completed their primary moult (with scores of 50); one had not started and the remainder had scores ranging from 10 to 30 with definite bias around 15.

Taking a linear pattern of primary moult and allowing for a primary moult duration of 60 days as suggested for Morocan birds by Pienkowski (1974) it would appear that the majority of these birds commenced their primary moult during the second week of November, but note that moulting rates may differ greatly in different dreas. This would fit in with the pattern indicated by Middlemiss (1961) who suggested Little Stints wintering in South Africa begin their primary moult during the first week in November. The single bird which had not commenced primary moult (feathers very abraded and still with signs of summer body plunage) had possibly newly arrived at its moulting area, this is additionally indicated by its relatively low body weight (20 grams).

The three birds which had completed their primary moult were possibly failed breeders which had returned to the Southern Hemisphere ahead of the main migration and completed their moult earlier. They were also heavier than the rest of the sample, possibly due to being past the period of energy demanding primary moult. Two of these three individuals having completed their moult had wing lengths greater than the remainder of the sample (both being 100 mm).

A single bird caught in the same area on 17.2.72 had completed its primary feather moult and had a weight of 29.5 grams.

### References:

Middlemiss, E. 196. Biological aspects of <u>Calidris Minuta</u> while wintering in south-west Cape. <u>Ostrich</u> 32: 107-121

Pienkowski, M.W. (Ed.) 1974. Wader research in Morocco 1972 (In press) D.J. Stanyard, P.O. Box 498, Francistown, Botswana, Southern Africa.

### Mauritanian Dunlin

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Ringing recoveries and biometric analyses both suggest that Dunlin wintering in Mauritania are almost entirely of the race <u>schinzii</u>, and probably principally from Icelandic rather than Scandinavian breeding areas. A fair proportion of the 2,000 Dunlin ringed there from September until November, 1973 should be migrating through Britain, and particularly down the West coast, this autumn. A special Dunlin ringing effort during the <u>schinzii</u> passage period this autumn would be particularly valuable to establish if juvenile Dunlin move north during their first summer. One Mauritanian Dunlin ringed as an adult was controlled by Harry Green on 5th May this year near Cardiff. All Mauritanian ringed Waders carry "Museum Paris" rings.

#### 1973 SIDI MOUSSA EXPEDITION

#### Francis Argyle

Ten days were spent netting at Sidi Moussa between the 10th and 19th August 1973, this period coinciding with the spring tides. A further 2 weeks were spent here between August 26th and September 7th, again with the spring tides though towards the end netting was continued on neaps. About 450 feet of net were used and catching took place from 1700 hours, through until dawn, most catching however took place at dusk and again at high tide. Biometric data and moult were recorded, the former on Wader Study Group forms, and the latter on moult cards. The birds were ringed with rings kindly supplied by M. Thevenot. The expedition was highly successful and the average catch for each of the twenty nights was 40 birds a total of 817 were caught. The breakdown of these is set out below:-