

REVIEWS

Ornithological Studies in Egyptian Wetlands 1989-90. Eds P.L. Meininger and G.A.M. Atta. FORE Report 94-01, WIWO Report 40. 1994. 402pp. Available from Stichting WIWO, Lindengracht 9, 3633AS Vreeland, The Netherlands. Price 35 Dutch florins per copy, plus 15 Dutch florins per order.

The Nile Valley is one of the major migratory highways in the world. Together with the Red Sea, it provides a corridor across inhospitable desert, linking Europe and Asia with sub-Saharan Africa, and ultimately with South Africa. However, Egyptian wetlands, like wetlands in many other countries, are threatened by factors such as pollution (by sewage, industrial waste, agricultural run-off), reclamation (for agriculture, fish ponds, urban development) and human activities (such as hunting and tourism).

The purpose of the expedition which produced this report was to make a complete census of waterbirds at Egyptian wetlands, in "winter" (i.e. December-January), when wetlands support individual birds more-or-less continuously, and to estimate the numbers, especially migrant waders, in "spring" (March-June), when a continuous turnover of birds utilise the wetlands to refuel on their journeys to the breeding grounds.

A total of 600 000 waterbirds was counted in winter 1989-1990: 32% were gulls, mostly Blackheaded Gulls *Larus ridibundus*; 22% were ducks, with the European Shoveller *Anas clypeata* being the most abundant; and 19% were waders, with Dunlin *Calidris alpina*, Little Stint *C. minuta* and Avocet *Recurvirostra avocetta* accounting for about two-thirds of the waders.

A conservative estimate of the number of waders passing through five of the more

accessible wetlands in spring was 180 000: the most numerous were Little Stint (minimum passage 70 000 birds), Curlew Sandpiper (at least 40 000) and Ruff (at least 30 000). Peak Curlew Sandpiper passage was from 10-17 May, which is about mid-way between the time of departure from South Africa (late April) and their arrival on the breeding grounds on the Taimyr Peninsula (early June).

A total of 1 543 birds was ringed during the expedition using rings from Radolfzell (one of the German schemes), including waders visiting southern Africa such as Little Stints (352) and Curlew Sandpiper (70). A chapter provides details of 155 ringing recoveries supplementing, as far as possible, an earlier list of all known recoveries involving Egypt, published in 1988.

Some of the other chapters in the report deal with the passage of birds of prey, a Cattle Egret *Bubuleus ibis* colony in Cairo, numbers of Greater Flamingos *Phoenicopoterus ruber roseus* (over 20 000, many more than expected), aspects of the biology of gulls and terns, Kentish Plover *Charadrius alexandrinus*, Blackshouldered Kite *Elanus caeruleus*, and notes of the occurrence of Bluewinged Teal *Anas discors*, Pectoral Sandpiper *Calidris melanotos* and Brownthroated Sand Martin *Hirundo paludicola*, the first records for these species from Egypt. One of the appendices provide information on other taxa recorded during the expedition, from dolphins to dragonflies.

One chapter describes hunting methods and sales of wild birds in local markets. During 27 visits to the market at Port Said and 26 visits to the market at Damietta, 11 708 birds were found for sale. The most numerous species were Laughing Dove *Streptopelia senegalensis* (1 391 dead and 2 680 alive) and

House Sparrow *Passer domesticus* (2 290 dead) at Damietta, but the list of species found in the markets included Avocet, Greater Flamingo and the Bluewinged Teal noted above as the first record for Egypt. There is even a table of prices – the conclusion is drawn that bird meat is expensive relative to beef or fish, and is insignificant as a source of protein for people.

The report provides valuable insights into an area from which up-to-date information was lacking. As an expedition report, it provides a model for how such documents ought to be written (except that it took rather long to pro-

duce). But no less than 29 publications (listed in an appendix) have already resulted from the expedition, so the participants have been hard at work – some of these publications are reprinted as chapters of the report.

The report is one of an important series. WIWO is a Dutch foundation that coordinates waterbird studies, mainly conducted by Dutch postgraduate students, throughout the world. The WIWO report series publishes the results of these expeditions, frequently at a level of detail that would not otherwise be published.

L G Underhill

Jenni, L. & Winkler, R. 1994. *Moult and ageing of European passerines*. London: Academic Press. 224 pp, 514 colour photographs, £40.

Together with breeding and migration, moult is one of the major events in the annual cycle of birds. Moult involves considerable time (on average 1-3 months at least once a year) with major energetic and nutritional implications during which the bird's flying capacity may be partially impaired. It is nevertheless essential for the long term survival and overall success of the individual, and birds have developed various strategies to fit moult into the annual cycle in order to combine it optimally with other priority activities important for the immediate survival of the individual or for the long term success of its genes (reproduction).

These different strategies have resulted in differences in the pattern and extent of moult between species, and even more between age classes within species. Juveniles of many passerines adopt a different moult strategy to adults, and a proper understanding of the moult process and extent, together with the differences in appearance of the different feather generations that can occur simultaneously on a bird, allow differentiation between

age categories in living birds (at least when the moult strategy is known).

This book starts with an extremely comprehensive 57 page review of anything you could wish to know about moult of passerines and everything you need to know in order to understand ageing based on features resulting from moult. The review is based on the authors' extensive experience of ringing large numbers of passerines at migration research stations (particularly in Switzerland), but it also examines the vast literature on the subject exhaustively, including journals previously overlooked as obscure. Papers in 10 different languages have been consulted, thereby breaking through the oft encountered language specific biases and providing a rather rare 'European integration' on the subject. The only aspects of moult not covered, or only marginally so, are those of energetics, nutrition and endocrine control, but these have little direct relevance to age determination, the main objective of the book. Without doubt, this readable and easy to understand treatise is the most comprehensive on the subject I have come across. New insight has also been brought to the subject of moult strategies. Instead of the classical four (summer partial, summer complete, winter partial, winter