
REVIEWS

Rhijn, J.G. van 1992. *The Ruff: individuality in a gregarious wading bird*. T. & A.D. Poyser, London.

The Ruff *Philomachus pugnax* is one of, if not the most, spectacular bird in the Palearctic fauna. It is a migratory species wintering in southern Europe, Africa, the Gulf and India. It breeds in northern Europe, from Holland more or less continuously to the Bering Strait. To most European bird-watchers and ringers it is perhaps most well-known as a migrating bird and is a species which has been extensively studied while on migration. Some work has also been undertaken on its feeding ecology in African wintering quarters.

The spectacular and bizarre part of Ruff life, however, takes place while breeding. The Ruff is a lekking species which means that males congregate in small display grounds, called leks, during the breeding season. Here they defend small territories, a few square metres wide, against intruders by sometimes intense fighting. Females visit male territories only to mate. They nest alone, away from the lek, and they take care of the young by themselves. Such a mating system may seem bizarre but is nevertheless also found rarely in other birds, both in close relatives such as Buff-breasted Sandpipers and Great Snipe, and in rather different birds such as the Black Grouse. No other lekking bird however, and for that matter no other bird at all, exhibits such a bewildering breeding plumage polymorphism. Rather than describing it, which is done accurately in *"The Ruff"*, suffice it to say that, while breeding, no male looks like any other male. What is more, this plumage polymorphism is tied to behavioural differences between two types of males and perhaps to size differences.

Males in dark coloured plumages belong to the independent behavioural morph and act like males of any other lekking bird. They attempt to defend a territory at a lek site. Sometimes they succeed and are called residents, or they fail and are termed marginals. This particular dichotomy often used in the Ruff literature is unfortunate because it implies clear cut differences between residents and marginals which do not exist. Rather the two classes of males grade into each other. Marginals are often young and inexperienced birds. In other lekking birds, also young and inexperienced males fail to establish lek territories. The dichotomy between independents and satellites, however, is a real one. Satellites have light coloured plumages, are perhaps smaller than independents and never attempt to defend territories. Satellites rather act as parasites when they visit the leks. They often attend when females are present and establish short-term associations with territory-holding independents. Satellites act submissively in these interactions, lying flat on the ground. The resident stands in front of the satellite and pecks his bill over the head of the satellite, sometimes actually hitting him. The satellite never reacts aggressively towards this behaviour which looks like ritualized fighting. Residents perform most of the matings on the leks but sometimes when resident birds are distracted a satellite may sneak matings, which seems to be the reward of the submissive behaviour. The evolution and maintenance of this behavioural dimorphism has for long been a puzzle to evolutionary biologists.

Johan van Rhijn's book covers female breeding behaviour, breeding range, migration, moult, morphology and other topics but the merit of this book is the detailed accounts of male breeding behaviour. This is done in a very personal and accurate way. Van Rhijn has a vast experience of male behaviour from the many mornings he has spent watching leks in the Netherlands. Not only the behaviour of the birds is described but also his feelings about sitting and watching a lek for hours and hours or finding his blown away hides. Van Rhijn states very early that "The Ruff" is not written as a handbook. Instead the function and evolution of the Ruff's behavioural dimorphism is the main theme. It is perhaps a mistake that van Rhijn did not stick closer to this promise. The first chapter of the book deals with this main question and covers 101 pages. The chapter on female breeding biology is 9 pages. This is followed by a 39 page chapter which deals with almost all the remaining Ruff biology (distribution, diet and foraging, moult, migration and other topics). These latter chapters, though well written, do not add much new knowledge and produce an unbalanced book. The final chapter of the book compares the Ruff with other waders, contrasting their breeding systems and life-histories. Van Rhijn also compares the Ruff with other non-wading birds which have a similar mating system. An attempt to reconstruct the phylogeny of the Ruff and link it to changes in mating system and life-history parameters is done. I find this last chapter interesting and illuminating to "the main theme of the book".

Is this a good book? The answer depends on who is asking. The Poyser series is known to aim at advanced amateurs and professionals. The previous books in the series has been much more of the handbook type, an aim which van Rhijn clearly did not have with *"The Ruff"*. The strength of the book is the detailed accounts of male lek behaviour and the discussions related to the evolution of the behavioural dimorphism. This must be exciting reading for anyone interested in natural history and is certainly enjoyable reading. The professional scientist, either expecting the final word on behavioural dimorphism of the Ruff, or interested in moult, migration or wintering ecology will be disappointed. This is because *"The Ruff"* does not add much new information, which van Rhijn is the first to point out and because by addressing the book to a wider public van Rhijn has slacked the rigour of the "scientific apparatus". Throughout there are no statistics. Graphs, Line drawings, photographs and maps are sometimes of poor quality. Tables are hard to read. All this makes van Rhijn's interpretations of male behaviour hard to evaluate. The drawings by Ian Willis are very nice though.

Having just launched my criticism I do not, however, hesitate to recommend the book. First of all because Ruffs are fascinating beasts and also because Johan van Rhijn writes splendidly about them. This is not a book to bring to the office and use in scientific research, rather it is something to enjoy reading in front of the fire like a good novel.

◆ Jacob Hoglund

