

Criteria for Ageing and Sexing Waders: Introducing a new *Bulletin* series

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Introduction

Male, female, juvenile, immature and adult waders may differ in many aspects of their life, such as habitat selection, behaviour, migration distance, timing and strategy. Therefore the ability to determine the age and sex of live birds accurately is often of crucial importance in wader research. The BTO's *Guide to the identification and ageing of Holarctic waders* written by Tony Prater, John Marchant and Juhani Vuorinen published in 1977 was a milestone for wader researchers. It is still in print and widely used, but after 30 years many new methods for determining age and sex have been discovered. Hence there is an urgent need to review existing knowledge and summarise what we know species by species. Moreover, growing interest in the waders that inhabit the Southern Hemisphere, as well as lesser known species, suggests that the scope of a new account needs to be broader.

The plan is to publish a series of short articles in the

Wader Study Group Bulletin summarizing recent knowledge of ageing and sexing, but also highlighting gaps in knowledge. The series will be focussed mainly on live birds in the hand, but should be helpful in field observations as well as in studies of museum skins. I will act as coordinator of the series. Potential contributors are asked to get in touch with me or the Editor.

Most people who catch waders only do so during limited parts of the year and/or in limited parts of the world, so expertise on ageing and sexing criteria tends to be restricted. Frequently it has been found that characters that work at one time of year and place do not at others. Therefore these articles will seek to gather the expertise that is available and at the same time make it clear where and when it is known to be applicable. This does not necessarily mean that it will not be applicable in other circumstances; just that there is a need for caution.

Terminology

Although different plumage and moult terminologies are used in different publications and in different parts of the world and there is much confusion, this series aims at simplicity and is based on the following key definitions:

Juvenile plumage – the plumage of a newly-fledged chick. Most of it is usually retained for only a few weeks, but sometimes longer. Vestiges of juvenile plumage (often inner median coverts) can often be used to determine age for six to nine months or more after fledging.

During **post-juvenile moult** juvenile plumage is progressively replaced by first non-breeding season plumage (first winter plumage). This is often the same as adult non-breeding plumage. However, in most species flight feathers (primaries, secondaries and tertials) and tail feathers are retained and become more worn and pointed compared with those of adults. In some species, especially in the Southern Hemisphere, all or some primaries may be replaced during the latter half of the bird's first year.

First breeding plumage is attained by first year birds as a result of a partial first pre-breeding season moult. In many small and medium sized shorebirds, this plumage is indistinguishable from adult breeding plumage. However, in

larger species and in those populations in which first year birds do not return to the breeding grounds, some feathers from previous plumages are usually retained and/or most or all newly-moulted feathers are non-breeding rather than breeding plumage.

Adult non-breeding plumage is acquired after the complete adult post-breeding moult.

Adult breeding plumage is acquired as a result of a partial pre-breeding season moult of body plumage (not flight or tail feathers).

In some larger species, which reach maturity after two to three years, ageing is possible up to the second non-breeding season. However their ageing is based mainly on bare-part colours, not plumage.

Timing and schedule of moult are very important in ageing and will be described separately for each species or subspecies.

A future article in this series will describe general principles of ageing and sexing waders worldwide, but the series starts with one on the *curonicus* subspecies of the Little Ringed Plover *Charadrius dubius*.

