

BIRD-IN-THE-HAND

AGEING BY MOULT OF CROWNED PLOVERS, STEPHANIBYX CORONATUS

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INTRODUCTION: During the period 1972-1974, 140 individual plovers were captured and examined on the Grahamstown Airport. Largely as a result of a successful rate of recapture, determination of ages was established, based upon plumage characteristics and moulting. Plovers have ten primaries and twelve secondaries, and twelve tail feathers.

Moulting has a peak in late summer when birds of all ages are in active moult, the first summer birds are moulting out of their fledgling plumage, the second summer birds are continuing their moult into adult plumage, and the adults are undergoing a post-nuptial moult.

Analysis of moult activity shows that the first summer birds have finished their moult by the end of April, but about 20% of adult birds are still moulting by May. Second summer birds resume (or in some cases only just start) their primary, secondary or tail moults as early as October.

FIRST SUMMER: This plumage condition, after the bird has fledged is characterised by fluffy material protruding from the tail-tip and wing tips. There are also buff edges to most of the feathers especially those on the upper surface of the wing. Several weeks or a few months after fledging, the fluff falls away, and during late summer and autumn the bird begins to undergo body-moult. Through this process, most of the buff-tipped feathers are replaced, except those on the inner wing coverts, median coverts and scapulars.

In many instances, depending on how early in the summer the bird had fledged, individuals begin to moult the tail and remiges. The replacement of these large feathers usually begins at the tail where the centre two feathers are renewed first (continuing in sequence outwards). By the time the second-from-centre tail feathers are in active moult, primary moult also begins, starting from the centre of the wing. As many as four of the primaries (on one wing) and two of the six tail feathers (on one half of the tail) can be renewed by the onset of winter and the termination of the moult.

FIRST WINTER: This age category is in a phase of inactive moult, since moult ceases in winter. From the description of First Summer plumage, it is obvious that First Winter birds will be in various stages of arrested moult. Some will be in fledgling plumage entirely, others will be in tail moult only, some in primary moult only (just the first primary) and yet others in tail and primary moult.

The great distinguishing feature however, is the presence of buff tipped feathers to the inner wing coverts, the median coverts and the scapulars. The buff diminishes from those areas in the order of scapulars, median coverts and inner coverts, and is related to the progression of primary and tail moult.

There are two records of individuals that moulted all their buff feathers by the first winter, but each had moulted its first four primaries and two tail feathers (on one half of the tail).

SECOND SUMMER: A characteristic of birds in this age category is the continuation of moult from as early as October and November -- which normally is the height of the Plover breeding season. As no breeding plovers were found to be in moult, it was deduced that plovers in their second summer plumage do not breed. By mid-summer, most of these birds have lost the buff-tipped plumage on the inner coverts.

The moult remains sequential, the primaries and tail continuing to moult towards the outside. However, once the moult has progressed as far as the fourth primary, the first of the twelve secondaries at the centre of the wing starts to moult. Shortly afterwards, the outer secondaries (those nearest the body) start moulting, and the result is that the secondaries moult towards each other.

Tail moult is completed during the second summer. There is a strong possibility that primary and secondary moult is completed by birds that had an advanced moult during their first summer. However, from the data available, the second summer birds under observation did not complete their primary moults (the first seven primaries had been replaced) or their secondary moults (the centre six feathers still not replaced).

SECOND WINTER: Here classification becomes more difficult, especially with birds caught for the first time. If one works by the second summer moult pattern, this age category should have the last feathers of the primaries and the central feathers of the secondaries faded, and all the rest new. Alternately, the last primaries and central secondaries will be new, indicating that the bird has recently moulted out of its juvenile plumage.

When dealing with all the above age groups, the emphasis is on the sequential nature of the moults as they occur during the first and second summers.

ADULTS: Examination of adult birds that were or had been nesting highlights the intricacies of Plover moult sequences.

For instance, birds in their third summer may in fact moult their last three primaries, but at the same time the first primaries will be in the process of renewal as well. However, as a result of this, one can therefore identify three distinct ages of feathers -- new, faded and old. It therefore stands that any bird in three phase moult must be three summers old, or older.