

Standards for Banders

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Owing to the lack of a definitive manual such as the British Trust for Ornithology (B.T.O.) *Ringer's Manual* or periodicals such as the *Ringer's Bulletin* devoted exclusively to the publication of banding and trapping methods and techniques, many new banders learn unorthodox practices through the absence of a suitable reference. While this paper partially duplicates an earlier paper by H. J. Disney, 1963 (*Bird Bander* 1:98-100) I have expanded some items and further defined others to conform with practices in Britain and the U.S.A.

Historical

A large number of 'standard' measurements are based upon museum specimens, particularly scarce species or those from a limited or remote area. Acceptable measurements are those which can be taken upon museum skins, frequently old and brittle, and the methods used on living birds should ideally duplicate these.

The four generally accepted standard measurements are **Wing, Bill, Tarsus** and **Tail**.

Standards

The accepted units of measurement are the millimetre and the gramme. The B.T.O. (*Ringer's Manual*, 1966, Amendment 1, p. 3) recommend that measurements should be made to the nearest millimetre with the following exceptions:

wings of over 300 mm.

bill of small birds—to nearest $\frac{1}{2}$ mm.

tarsus of small birds—to nearest $\frac{1}{2}$ mm.

No limits for weighing appear to have been defined, but from correspondence and personal experience it appears that a 3 per cent variation is reasonable, particularly with spring balances.

Purpose

Only accepted and standardised measurements can be of value in field taxonomy. Where reliable measurements have been recorded on acceptable standards these may be used as an adjunct to the separation of races and the identification of difficult species.

Measurements

The measurements and methods listed have been selected as being least likely to injure the bird, most easily reproduced, and comparable with measurements from skins. At all times the safety of the bird has been the primary consideration.

Wing—Three measurements are commonly used. All are taken with a stopped rule from the carpal joint to the tip of the longest primary, and the difference between the three lies in the amount of curvature permitted in the third dimension of the wing. Since only two relate closely to museum specimens I have only compared these.

MINIMUM CHORD—The wing is laid on the rule with the carpal joint against the stop, the longest primary being used as an indicator of length. The wing is **not** flattened. This method has been shown to give variable readings due to the degree of dampness straightening the curvature of the wing feathers to a greater or lesser degree. (*Bird Study* 1:23-38).

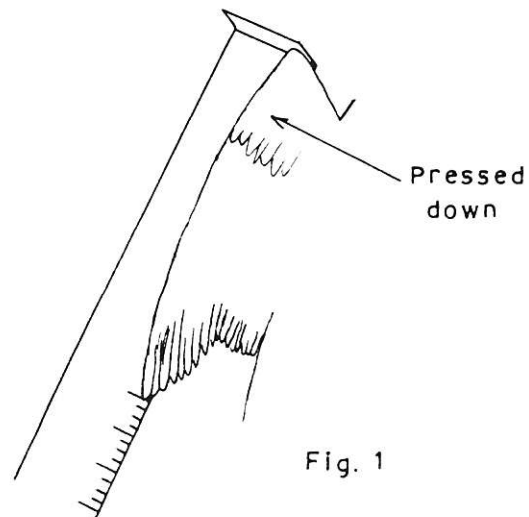


Fig. 1

FLATTENED CHORD—The wing is laid on the rule as in the previous method, but gentle pressure is applied to the coverts (Fig. 1) to



Fig. 2a

Junction of bill and skin from above

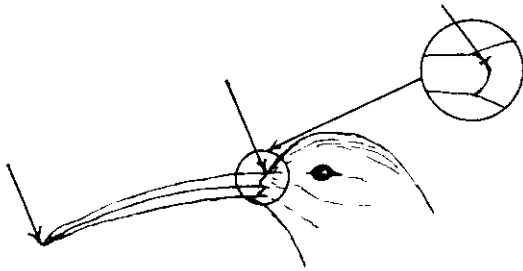


Fig. 2b

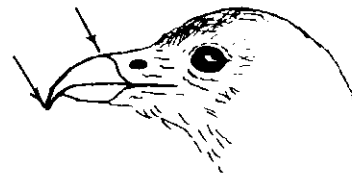


Fig. 2c

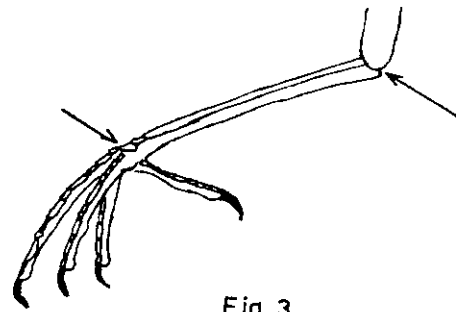


Fig. 3

flatten the camber. The primaries are not straightened.

I personally prefer the latter method since it permits the wing to be held in control while measurements are taken. Variations between observers can occur, but the differences between experienced banders in the field are negligible.

The third method, using the flattened and straightened wing, is of most use on seabirds, raptors and large waders where possible observer differences are greatest. It is not described since it can cause injury in passerines, and the flattened chord method can normally be used in a prepared site.

Bill—Three measurement standards are used depending upon the species of the bird and the nationality of the observer. The main difference between countries is that in areas oriented towards the United States "Tip to Feathers" is normally used in preference to "Tip to Skull" in passerines.

TIP TO SKULL (Fig. 2a)—In Britain used on passerines. The point of the dividers is placed at the junction between the bill and the skull with the other at the tip of the bill—a very definite measurement since the angle between the skull and the bill provides a positive stop. Until international agreement is reached it should be stated whether this or the following measurement is used for passerines.

TIP TO FEATHERS (Fig. 2b)—In Britain used on waders and long-billed birds. In U.S.A. on all non-raptors.

A rather imprecise measurement since it makes no allowance for abrasion or loss of feathers from the basal end of the bill. It is suggested that this measurement be taken from the tip of the bill to the junction between the horn of the bill and the skin which may or may not be feathered.

TIP TO CERE (Fig. 2c)—Owls, parrots and birds of prey—from the tip of the bill to the junction of the bill and skin.

Tarsus—The diagonal of the metatarsal bone. (Fig. 3)—taken from the depression of the intertarsal joint ("knee") to the last complete scale before the toes diverge.

It is not necessary to bend the foot at right angles to find the correct scale—this may injure the bird.

Tail (Fig. 4)—Measured from the underside to prevent possible damage to the preen gland.

The dividers are slid between the central rectrices until they come to a stop against the root of the tail, the measurement being to the tip of the longest feather.

"Fork"—occasionally used to separate difficult terns; the measurement is the difference between the longest and shortest tail feathers.

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