GUIDES TO MEASURING LIVE BIRDS

By Frank P. Frazier, Sr.

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Measure in millimeters -- weigh in grams -- whenever possible. But weigh and measure live birds, at any rate. Banders have a unique opportunity to get these statistics and add important details to the study of live birds.

Always measure the direct distance - not the curvature.

WING - from the bend of the wing - to the tip of the longest primary

TAIL - from the point between the middle rectrices where they emerge from the skin - to the end of the longest rectrix

BILL (Culmen) - from the tip of the upper mandible - to base of feathers on forehead

TARSUS - from the point of the joint between tibia and metatarsus - to the point of the joint at the base of the middle toe in front

CONVERSION FACTORS

Multiply	By	To Obtain
Inches	2.54	Centimeters
Feet	30.48	Centimeters
Centimeters	0.3937	Inches
Centimeters	10	Millimeters
Grams	0.03527	Ounces
Ounces	28.35	Grams
Ounces	16	Pounds
Temperature -(^{o}C) 17.78	1.8	Temp. (^{o}F)
Temperature -(^{o}F) -32	5/9	Temp. (^{o}C)

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SOME DIFFERENCES BETWEEN JUVENILE, FIRST YEAR, AND ADULT WRENS

By Ike Hawthorn

(We thank Robert Spencer, Editor of The Ringers' Bulletin, organ of the British Trust for Ornithology, for allowing us to reprint Ike Hawthorn's paper, which appeared in Volume 3, No. 9, on pages 9 - 11. Ed.)

On Thatcham Marsh, Berkshire during August to October 1970, I handled about 60 Wrens (Troglodytes troglodytes). These were mainly juviniles undergoing post-juvenile moult, but there were also some adults, and it seemed that certain differences could be categorised which could lead to a reliable method of ageing. After testing this throughout the winter of 1970-71 on a population of about 180 Wrens, also on Thatcham Marsh, I have been able to set out the following details:

Juvenile/Post Juvenile

The juvenile has uniform brown undertail coverts, but during post-juvenile moult (August to October) a pattern of white spots is produced, indicating a post-juvenile wren.

First Year/Adult

Greater Covert differences

During post-juvenile moult, Wrens can moult a variable number of greater coverts. These may range from "none" through "some", to "all". One trend amongst those caught from August to October on Thatcham Marsh in 1970 appeared to be to moult the inner five and keep the outer four so that the contrast between the gingery colour of the unmoulten outers and the more fawny brown colour of the moulted inners made ageing easy. However, when only one or perhaps two inners had been replaced, the difference was difficult to detect; a large number of birds seemed to fall into this category.

Most of the juveniles disappeared from the Marsh after completing post-juvenile moult and were replaced by a wintering population in which only ten out of 100 new birds caught had greater covert differences sufficiently noticeable to warrant definite ageing by this method.

Bastard Wing differences

The pattern of marking on the outer web of the large bastard wing feather appears to fall into three groups. It should be noted that the patterns below are not absulute and serve only to illustrate the general case.

Group I

Figure 1 shows group I, with barring fore and aft; light brown bars on the darker brown backgrounds without any trace of white. May be four or five bars; very occasionally six, usually broad.

Group II

Figure 2 shows group II with barring horizontal light brown without any trace of white. Edges of barring are poorly defined. Intermediate cases of groups I and II often occur when ill-defined fore-and-aft bars merge to form part horizontal bars.

Group III

Figure 3 shows group III with well defined fore-and-aft barring, light brown on darker brown background, narrowing near the outer edge of the web, then broadening slightly with outside tips of bars white or whitish brown on some, but not necessarily all bars. There is sometimes a white leading edge to the web. The number of bars is usually six, sometimes seven, but can only be five.

FIG. 1

FIG. 2

FIG. 3

In the 1970-71 season 143 birds of the winter population were trapped and these included 43 known adults (i.e. birds ringed in previous winters). Fig. 4 illustrates the frequency distribution of the number of the bars on the large bastard wing feather of known adults. All had some degree of white as in group III.

Of the 100 birds caught for the first time in this season, 88 were without any trace of white on the large bastard wing feather. These could all be placed in groups I and II and and were judged to be 1st year birds. Fig. 5 shows the distribution of the number of bars on these 88 birds. The remaining 12 new birds all had some degree of white and could not be placed in groups I or II.

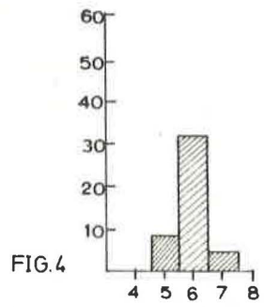


FIG. 4

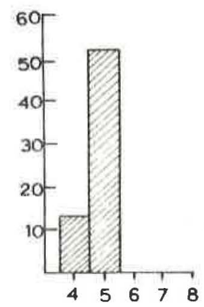


FIG. 5

FIG. 6

FIG. 7

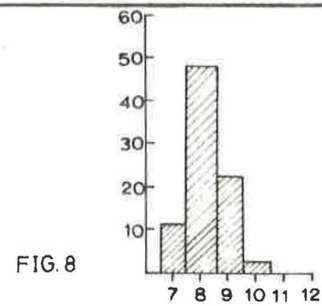


FIG. 8

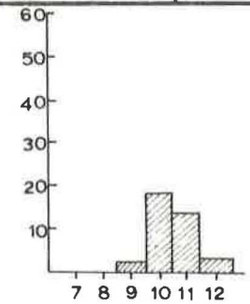


FIG. 9

Presumably the change from groups I and II to group III, takes place at the time of the first bastard wing moult, and the above birds in groups I and II retained their bastard wing feathers while undergoing post-juvenile moult. The percentage of juveniles renewing their bastard wing feathers at post-juvenile moult is not known, and as the above 12 intermediate birds had presumably renewed their bastard wings, further criteria are needed to identify adults. As the primaries are known not to be moulted at post-juvenile moult the 4th primary was arbitrarily chosen for comparison between the groups. Examination of primaries was not started until late in the season so that some birds were not included.

Differences of 4th Primaries

The barring on the 4th primary(counting from the outer edge inwards) falls into two groups. Fig. 6 shows group A with very broad light brown barring on the outer web, with 7-9 bars, very rarily 10. The three or four proximal bars are inclined to be very much broader than the others, usual-

ly reaching the shaft. Fig. 7 shows group B with narrow barring, not usually reaching the shaft with 10-12 bars, very seldom 9.
Note: The width of the bars and their distance from the shaft have many intermediate forms and are not safe for ageing. However the number of bars is a useful guide.

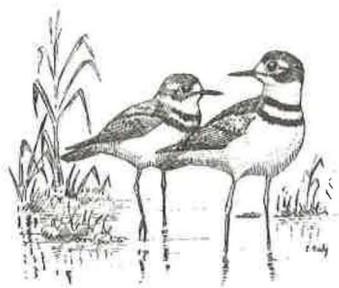
Fig. 8 shows the distribution of the number of bars on the 4th primary of those birds designated as 1st year by the bastard wing method(groups I and II). Fig. 9 shows the distribution of the number of bars on the 4th primary of the known adults.

Of the 12 indeterminate birds with white spots on the bastard wing; 6 had 10 to 12 bars on the 4th primary and were presumably adults. Two had 9 bars and could not be determined. Four had 7 or 8 bars. It seems that the four birds with 7 or 8 bars on the 4th primary should be 1st year birds which had replaced their bastard wing during post-juvenile moult.

SUMMARY

The majority of Wrens can be aged by using the following criteria. Juvenile/Post juv.: All wrens with uniform brown undertail coverts are juveniles. All wrens with a pattern of white spots on the undertail coverts are post-juvenile. First Year include any Wrens with: 1) Any definite contrast on greater coverts. 2) Poorly defined, horizontal light brown bar on the large feather of the bastard wing, or with 4 or 5 light brown bars without any trace of white or whitish brown at their leading edge. 3) A maximum of 8 bars on the outer web of the 4th primary(counted between tip of p.c. and the tip of 4th p.). Adult: Include any Wrens with 10 or more bars on the outer web of the 4th primary. (These will have some trace of white on the leading edge of the barring on the large bastard wing feather).

Many thanks to C. J. Mead for assistance in preparing this note, and to the fellow members of the Newbury Ringing Group, Ron Crockford, Reg Smith and Ian Weston, who cheerfully handed over all Wrens caught during this period.



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1-1/4"	2.00	2.50			4.10	4.55
2-1/2"					4.40	4.90
5"					2.60	3.00
	Nylon Tethered-top Fowling Nets					
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1-1/4"			3.65	4.15	4.50	5.00
1-1/4" x 2.6 m.					4.50	5.00
	Polyester Tethered-top Fowling Nets					
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1-1/4"			5.75	6.50	6.65	7.40

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