

NEW AND MODIFIED METHODS FOR COLOR-MARKING HUMMINGBIRDS

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INTRODUCTION

In the past, the primary methods for color-marking hummingbirds were those described by Stiles and Wolf (1973), but Waser and Calder (1975) reported that the acetate tags used in this method might impair nest building. In search for an alternative, consideration was given to using paint on the backs of the birds, even though Stiles and Wolf suggested that paint was sometimes preened out. For this reason, I devised a solid but flexible back-tag which was not easily preened out. In addition, I employed a new method for holding hummingbirds during the banding procedure.

PRELIMINARY PROCEDURES

Back-tags are made using plastic-coated nylon fabric (Trade-mark "Saflag" Safety Flag Co., P.O. Box 1005, Pawtucket, Rhode Island) which has been cut and glued into bicolored strips using Dupont "Duco" cement. After these strips have dried, circular tags are cut out using standard cork-boring tools. Three different diameter tags were used: small (4.0 mm), medium (5.6 mm), and large (6.8 mm). If more tags were needed, this procedure could be repeated using scissors to cut similar sized tags into other geometrical shapes (squares or triangles) that are readily distinguishable from round tags.

Although Wells' (1972) method for holding hummingbirds using nylon netting bags is satisfactory, it does not free one's hands for the actual banding as much as the holding tube that I developed. The development of my hummingbird holding tube resulted from a paper by Seel (1974) that described a tube for holding birds during examination of molt in flight feathers. This new holding tube that I used required very little preparation provided one used the pre-made outside cardboard tube which holds Tampax tampons having the following dimensions: length 70 mm, diameter 15 mm. To prepare the tube for use, cut it lengthwise and gently open it so that when it is released a gap of about 7 mm occurs between the two edges. Care should be taken not to "spring" the cardboard too much because this little tension holds the hummingbird in place.

ACTUAL BANDING PROCEDURES

Birds can be placed in the holding tube either prior to weighing or after, depending on the bander's own preference. I found that if I had two or more birds in a net at once it was quicker to weigh the birds immediately in the small 10-11 gram cotton gathering bags that I use. After weighing, each bird was placed in a holding tube so that the right wing and tarsus protruded over the lengthwise edge of the tube (Fig.

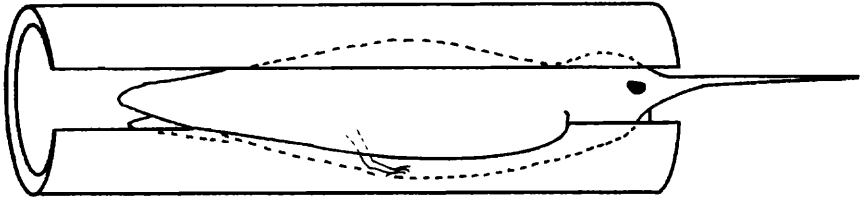


FIGURE 1. Relative position of hummingbird in holding tube.

1). In this position, the bill and the wing, which is held firmly against the lower lengthwise edge of the tube, were easily measured using vernier calipers. While the bird was in this position, it was aged based on methods described by Ortiz-Crespo (1972) and a U.S. Fish and Wildlife Service leg band was placed on the right tarsus. Leg bands were formed by a combination of methods described by Lloyd and Clench (1969) and the Bleitz Wildlife Foundation. Once this was done, the bird was drawn out of the tube just far enough to expose the area just behind the scapulae where the colored back-tag was placed (Fig. 2). The back-tag was affixed by means of a small amount of Duco cement placed on the back feathers. After the glue had dried, the bird was immediately released.

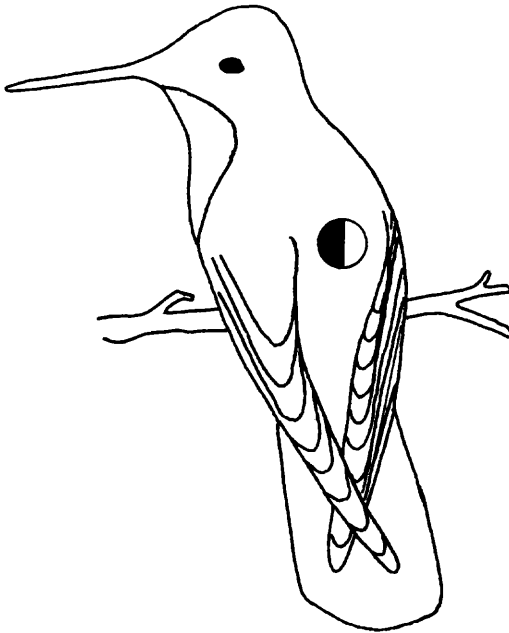


FIGURE 2. Color-marked hummingbird showing positioning of back-tag.

DISCUSSION

The colored back-tags are not permanent because they are lost when molting occurs. However, most birds I worked with were banded in late May and retained their tags well into July. Birds banded earlier in the season probably would have retained their tags longer.

Although back-tags are small they are readily visible at considerable distances provided the bird has its back towards the observer. However, this is not a serious drawback because hummingbirds frequently turn their backs toward the observer while feeding at flowers as well as when feeding young at the nest. When using tags with the same color combinations but different geometric shapes, one should place these combinations on different species or sexes so as not to confuse birds. Also, color combinations such as red-pink, black-purple, and orange-pink should be avoided because in the field these colors are not readily distinct from one another.

Black-chinned, Broad-tailed, Broad-billed, Costa's, and Rivoli's hummingbirds were all successfully banded using these methods. A larger holding tube might be more desirable for the Rivoli's Hummingbird although the tube described herein was used successfully for this species.

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