

## GENERAL NOTES

**A tube for holding birds during examination of molt in the flight feathers.**—Some restraining device is required for holding a live bird while it is being examined. In order to investigate wing and tail molt in members of the crow family (Corvidae), I have used a rigid tube with a lengthwise slot (Fig. 1): the bird is placed both head-first and on its back into the cone but with one wing protruding through the slot, the wing being supported by a flange projecting from the cone (Fig. 2). The wing at the side of the cone and the tail at the rear are now ready for examination. The bird can be inserted and removed quickly but so long as the tube is inclined with the narrow end lowermost, the bird will remain steadfastly but lightly held. The cone-shaped form of the tube accommodates individuals and species of similar but differing body sizes. This device serves to protect the bird during examination, to protect the handler from pecking and scratching, to maintain uniformity of examination by consistently presenting in successive individuals only that wing on a given side of the body, and to allow calm and careful examination.

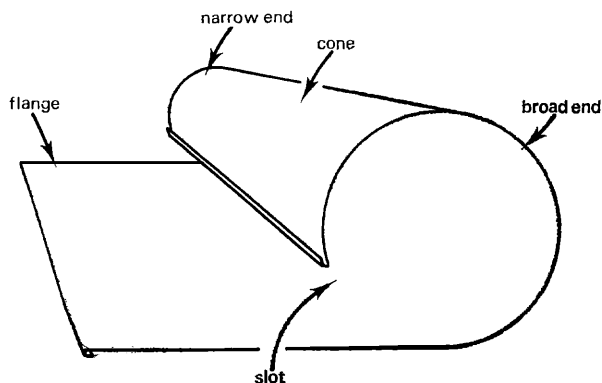


FIGURE 1. The holding tube.

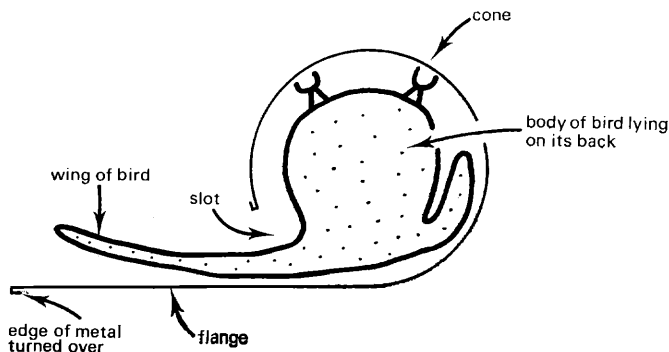


FIGURE 2. Transverse section of holding tube.

For tubes for holding crows I have used sheets of galvanized steel (0.82 mm thick, British standard wire gauge) obtainable from the British Steel Corporation, Shotton, Flintshire, U.K. (but for smaller bodied species polyvinylchloride sheet, 0.8 mm thick, could be used). The metal is cut to the shape indicated in Figure 3. (Both the relative proportions and absolute dimensions used will depend on the

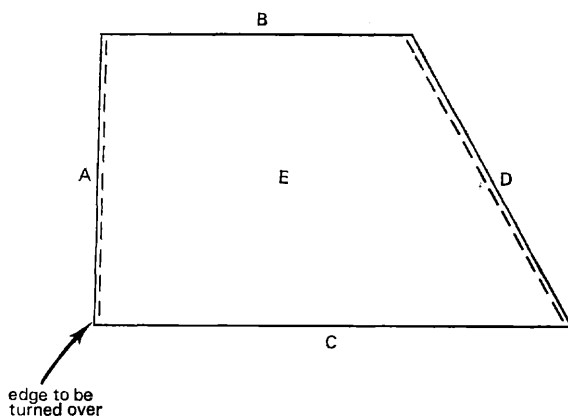


FIGURE 3. Shape of flat sheet of metal. A-E: see text and Table 1.

TABLE 1.  
Some examples of tube dimensions (in cm.) for selected corvids.

Species	Dimensions of flat sheet of metal			Diameter of cone		Width of slot
	A	B <sup>3</sup>	C <sup>3</sup>	Broad end	Narrow end	
<i>Corvus albus</i> <sup>2</sup>						
<i>Corvus brachyrhynchos</i> <sup>2</sup>						
<i>Corvus corone</i> <sup>1</sup>	33	37	46	11	5	2
<i>Corvus frugilegus</i> <sup>1</sup>						
<i>Corvus orru</i> <sup>2</sup>						
<i>Cissa chinensis</i> <sup>2</sup>						
<i>Corvus monedula</i> <sup>1</sup>						
<i>Cyanocitta stelleri</i> <sup>2</sup>						
<i>Cyanocorax violaceus</i> <sup>2</sup>	25	34	37	8	4	1.5
<i>Garrulus glandarius</i> <sup>1</sup>						
<i>Pica pica</i> <sup>1</sup>						

<sup>1</sup>Tubes of the given dimensions have been used by the author to examine these species.

<sup>2</sup>Species having similar body sizes, as shown by an examination of skins in the British Museum (Natural History).

<sup>3</sup>In the finished tube these dimensions become reduced by 2 cm by having 1 cm turned over along each of the edges A and D

shape and size of body of the species to be examined—see Table 1 for some examples). Edges A and D are first turned over and pressed down to protect both the bird and the handler and then edge D is rolled over by hand and brought down towards the center of the sheet (E) to make a cone and to leave a slot between D and E. (Polyvinylchloride sheet would need first to be heated in an oven to soften it before rolling and then allowed to cool while being held in the required form.) Depending on whether edge D is rolled towards or away from the observer when looking at Figure 2, the tube can be made to expose either right or left wing respectively. Some protective padding along the sharp edges of the metal, e.g. strips of adhesive tape, is desirable.—D. C. SEEL, *Institute of Terrestrial Ecology, Bangor Research Station, Penrhos Road, Bangor, LL57 2LQ, United Kingdom*. Received 9 August 1974, accepted 13 November 1974.