material that had been dropped on the ground during the operation and storing these in crevices in nearby trees. After that they resumed their normal schedule of feeding the young and looking after nest sanitation.

The nestlings showed no inclination to leave the carton but by 22 April they were moving about actively within it and occasionally hopping up on the edge and even to nearby branches. At this age they do a lot of preening and vigorous wing-flapping. On 24 April they were not in the carton, but as I was examining it they flew from where they had been perched three or four feet above it. They flew out across an adjacent beaver meadow, one veering left and the other right. The one on the left lost elevation rapidly but managed to reach the base of a spruce at the edge of the meadow, where it landed and at once began to climb upward among the branches. The other described an arc of about 75 yards, bringing it back to the border of spruces from which it had taken off and there it disappeared.

The adults were seen frequently in the meantime but the young were not seen again until 14 May, when they were together and about 100 yards from the nest. On 27 May they were seen with the adults but seemed to be largely feeding themselves. On 5 June the four birds were again seen together, but on 8 June RR had disappeared. BR remained with the adults through the summer and was still with them in October. Since early August its plumage has been indistinguishable from that of an adult.—Russell J. Rutter, Huntsville, Ontario, Canada.

Slate-colored Junco wintering dates at Baltimore.—From 1941 through 1968 I banded 1,004 Slate-colored Juncos (*Junco hyemalis*) in northwestern suburbs of Baltimore. Here my extreme dates for sighting the species have been 24 September and 13 May, with the period of common occurrence about 21 October to about 24 April. My banding has shown, however, that the individuals which spend the winter arrive chiefly from about 10 November on and leave chiefly by 14 April.

My earliest banding of a junco that apparently wintered was 27 October; the bird was seen to 1 January. (I once trapped on 26 October one I had banded the previous winter, but then never caught it again and so can not be sure that it wintered again.) My next-earliest banding dates for winterers are 10, 12, 14, 16 and 17 November. Three winterers that returned and wintered again were first seen in their second seasons on 3, 11 and 27 November. The latest spring date on which I recorded a marked winterer was 19 April; the next-latest were 14, 12, 11, 10 (three times) and 9 April.

Middleton (*Bird-Banding*, **15:** 15, 1944) has reported very similarly that at Norristown, Pa., about 90 miles northeast of Baltimore, "the general winter group" of juncos is present between mid-November and 1 April, and that he trapped his earliest return birds in November but the largest number in December.

Of my 1,004 birds, 15 (1.49 percent) showed stays of more than 100 days. The longest stay I recorded was 151 days, the next-longest were 129 and two of 128. These figures, too, are very similar to Middleton's (*loc. cit.*). Of 1,560 juncos he banded at Norristown, 19 (1.22 percent) showed stays of more than 100 days; the longest were two of 148 days.—Hervey Brackbill, 2620 Poplar Drive, Baltimore, Maryland, 21207.

Hybrid Warbler collected in South Florida. I netted a hybrid warbler on October 8, 1960, at my banding station in Homestead, Florida. The bird was an immature female showing characteristics of the Golden-wing, Blue-wing and Brewster's. It was photographed and examined alive by Dr. Wm. B. Robertson, Jr., and John C. Ogden as well as by myself, before dying in the hand. The skin was prepared by Ogden, and sent to Dr. Lester L. Short of The American Museum of Natural History for further examination. Since 1950 records of hybrid warblers in South Florida have included only one sight reporting, at W. Palm Beach.

The accuracy of sight records can be judged by the following remarks about this hybrid by Dr. Short:

"It is unique in its characters . . . probably a back-cross product of a hybrid and a Golden-wing. It could almost equally be an "introgressant" Golden-wing, that is, a bird produced by Golden-wing parents which both had some Blue-wing genes as a result of past hybridization in the area where the bird was produced. The specimen clearly shows too much yellow below and too much yellow-green above to be considered a variant Golden-wing. Also, the wing bars, while yellow,

are narrow and tend to be separate—a Blue-wing tendency. But for a single gene which produced the throat patch, the bird would be a "Brewster's" Warbler tending well toward the Blue-wing! . . . I would be most curious to know what a field observer would call this bird! I bet it would pass at one glance as a Golden-wing, in 5-6 long looks as a "Lawrence's."

"Thus I designate it as "*Vermivora chrysoptera x pinus*, tending somewhat more toward *chrysoptera* (that is, in wing-bar color, color of belly, presence of throat patch). It is intermediate in separation of wing bars, and rump color, and it tends strongly toward *pinus* in back color."

Persons banding these warblers, and field observers generally may care to note further the problem in field identification posed by such hybrids, discussed by Short (1963, Proc. XIII Intern. Ornith. Congress, pp 147-160; and 1969, *Evolution*, **23:** 355-356).

The skin is now in the collection of the American Museum where "over 30 hybrids of diverse phenotypes" are available.—Erma J. Fisk, 17101 S. W. 284 Street, Homestead, Florida 33030.

The Capillary Tube in Avian Blood Studies. The use of glass tubing in blood research is not new for as early as 1953 Luoto (*J. Immunol.*, **71:** 226) had used capillary tubes to store sera taken from cattle suffering from bovine Q fever. Later, Andujar and Mazurek (*Am. J. Clin. Path.*, **31:** 197, 1959) added the use of heparinized capillary tubes to the "rapid plasma reagin" test for human syphilis (Portnoy *et al.*, *Pub. Hlth. Rpt.*, **72:** 761, 1957). Bennett (*Canad. J. Zool.*, **40:** 124, 1962) was the first to use capillary tubes to improve the results of blood parasite surveys of wild birds. He was able to double the parasite incidence by centrifuging the blood samples in heparinized capillary tubes and making smears from layers of the packed blood cells. Similarly, Worth (*Am. J. Hyg.*, **80**(1): 70 1964) improved the results of screening tests for human vivax malaria (100x) and microfilaria (10x).

In our studies of avian haematozoa we have found capillary tubes of various diameters to be indispensable tools for handling whole blood, sera, or serum fractions. This was especially true here as the blood samples were being taken from small birds having total available blood volumes of less than several ml. The birds were captured alive and were bled immediately by decapitation into press-cap plastic vials stored in a shoulder-carried, styro-foam, field box. The blood samples were allowed to clot for several hours at the prevailing environmental temperature, or for the period necessary to return them to the laboratory. The samples were then stored overnight at 10° C for further clot retraction and the following day centrifuged at 2000 rpm for 20 minutes and the serum withdrawn. It would have been impossible in most cases to separate the sera from the centrifuged clot by gravity pouring alone without losing much of the sera, however by utilizing capillary suction and tilting the sample container to near the horizontal it was possible to obtain sera from clotted samples in drop amounts.

TABLE 1. CAPILLARY TUBE APPLICATIONS

Tube Size	Application
0.8 - 1.0 x 75 mm.	Cellulose acetate electrophoresis. *FA Test (Ag and Ab storage). Pre-pooling storage.
1.3 - 1.5 x 75 mm.	Immunoelectrophoresis (Ag and Ab storage). Pre-pooling storage.
1.6 - 1.8 x 100 mm.	Immunoelectrophresis (Ag and Ab storage). Pre-pooling storage.
4.8 - 5.0 x 100 mm.	Protein Quantitation (Lowry Test). *Anti-Ig preparations. Salting out precipitation tubes. FA conjugates storage. Pre-pooling storage.

*FA - Fluorescent Antibody Test. Ab - Antibody.
Ag - Antigen Anti-Ig - Anti-immunoglobulins.