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.

Several sizes of unheparinized capillary tubes of commercial manufacture and hand-cut glass tubing were used to handle the sera; the tube sizes were varied with respect to the serum volume desired for a particular analytical technique. Glass screw-capped test tubes were used for storage containers for the serum-filled capillary tubes. A small piece of absorbent tissue saturated in a saline-sodium azide solution was included within the cap of each storage tube to provide for an indirect preservative effect and also to reduce serum dehydration.

Normally the handling of whole blood or its fractions presents little difficulty to the researcher, however such problems as sepsis, transfer loss, efficient storage, and lot separation do occur. These problems become acute when the sample volumes are small, but can be reduced significantly by using capillary tubes or larger glass tubing for storing and handling the blood fractions. The table below shows some of the capillary tube sizes being used in this laboratory and their applications to certain techniques.

The author gratefully acknowledges the assistance of Dr. Raymond D. Dillon, The University of South Dakota, and The Chapman Fund for Ornithological Research for their financial and personal help in this research.—Gerald M. Polcyn, Dept. of Biology, University of South Dakota, Vermillion, S. D. 57069.

First Harris's Sparrow banded in New Jersey. In recent years the Harris's Sparrow, *Zonotrichia querula*, has been reported with some frequency in the Eastern United States, especially during fall migration and in winter when they are seen at feeding stations. In a search of *Audubon Field Notes* and other literature the author has noted that although there are two or three sight records for New Jersey, there seem to be no previous records of this species being banded or collected in the state.

On 7 Oct. 1967, I was operating several mist nets at the Island Beach State Park, Ocean County, New Jersey, in connection with the Operation Recovery banding program. At 11:30 A. M. I netted a bird which was unquestionably a Harris's Sparrow. This individual was in full adult plumage with a complete black head; the age was further confirmed when the skull was examined and found to be completely ossified. The wing chord measured 92mm.; the bird weighed 33.7 g. and appeared moderately fat. It was seen, and identification verified, by Drs. Bertram G. Murray and Stephen T. Emlen of Cornell Univ. who were present at Island Beach that day. After being photographed in color, the bird was banded with # 59-115981 and released in good condition. This appears to be the first Harris's Sparrow banded in New Jersey.—Bruce Adams, 40 Summit Road, Riverside, Conn. 06878.

RECENT LITERATURE

BANDING AND LONGEVITY

(See also 4, 6, 7, 8, 11.)

1. Longevity of Dominican Gulls. W. J. Merilees. 1969. *Austra. Bird Bander,* **7** (3): 60-61.—Apparently there are no published longevity records for *Larus dominicanus.* The oldest listed here was still living just shy of 14 years after banding. "Of the 127 Dominican Gulls banded before the close of 1958, at least five (possibly seven if the sight records are included) have survived beyond seven years six months." (Longevity of more than 30 years has been reported in some gulls.) See review no. **6.**—Jack P. Hailman.

2. On skulling with a handlens. F. S. Schaeffer. 1969. *EBBA News,* **32** (6): 267-268.—You can't do it without one, and therein lies a warning for banders.—Jack P. Hailman.

MIGRATION, ORIENTATION AND HOMING

(See also 13, 26, 35, 36, 38.)