

Tattooing nestlings for individual recognition.—We have tried several systems of identification marks for nestling birds too young to band with little satisfaction—numbering with nail polish or felt-tip marking pens, snipping off pieces of down, tying colored threads loosely around the legs and neck, etc. These methods are either ineffective or they are time consuming because markers must be replaced frequently. We have found, however, that an India ink tattoo mark on the abdomen can be applied easily at any age and is permanent.

We use a 1 cc disposable tuberculin syringe with a 26 gauge needle, filled with black India ink. The method is to grasp a small area of skin of the mid-ventral apterium with the thumb and forefinger and insert the tip of the needle directly under the skin to a depth of 2 or 3 mm, parallel to the surface of the abdomen. The needle should be inserted just enough that the hole at the end of the needle is under the skin. When the skin is released and the needle withdrawn, a small spot of India ink is left behind. If a little ink is ejected from the needle before inserting it under the skin, enough usually remains at the tip of the needle to produce a spot about 2 to 3 mm in diameter without injecting additional ink. The spot can be enlarged by injecting ink while the needle is under the skin, but we found this difficult to control. By varying the number of spots and their location on the abdomen, we have no difficulty producing unique combinations for up to six young in Starling (*Sturnus vulgaris*) broods.

It is not necessary to use a new needle for each young or brood marked, but one must be careful to avoid penetrating the abdominal cavity with the needle. None of the birds we have marked has shown any signs of discomfort or infection, and tattooing does not appear to affect growth or development in any way. Of more than 100 tattoo marks applied to nestling Starlings soon after hatching, few shifted position, disappeared, or faded before bands were placed on the birds at about two weeks of age. We did find, however, that day-old nestlings are more difficult to mark than older birds because their skin is stretched tightly over the abdomen, and tattoo marks applied at that age are sometimes very faint or small. In such cases, it is helpful to reinforce the mark after two or three days, when the skin becomes looser.

This method was originally suggested by John Cullen and developed in the field by Susan Peters, Susan Progoff, and Susan White.—ROBERT E. RICKLEFS, *Department of Biology, University of Pennsylvania, Philadelphia, Pa. 19104*. Received 28 November 1972, accepted 4 December 1972.

Postjuvinal molt in the White-eyed Vireo.—There are conflicting reports on the extent of the postjuvinal molt of the White-eyed Vireo (*Vireo griseus*). Dwight (*Ann. N. Y. Acad. Sci.*, **13**: 235, 1900) reported a complete postjuvinal molt with replacement of remiges and rectrices. On the other hand, Forbush (*Birds of Massachusetts and other New England States*, 3:188, 193, Boston, Mass. Dept. Agric., 1929) and Roberts (*The birds of Minnesota*, 2:663, Minneapolis, 1932, Univ. Minn. Press) included the species among those vireos having an incomplete molt. Bent (*U. S. Natl. Mus., Bull.* 197:231, 1950) supported this latter view when he could find no evidence of the replacement of flight feathers in a series of museum specimens. In light of these statements, the following observations seem noteworthy.

In 1968, 1969, and 1970 juvenile white-eyes (aged on the basis of a gray iris) were captured in mist nets placed in deciduous scrub of abandoned agricultural fields near Bloomington, Monroe County, Indiana; detailed descriptions of the vegetation and area are given by Nolan (*Auk*, **72**: 55-61, 1955; *Ecology*, **44**: 305-313, 1963). Each vireo was banded and notes were made on its plumage, with especial attention to birds in molt.

Table 1 summarizes the condition of the plumage of the juveniles undergoing a complete postjuvinal molt. All captures and recaptures are included in order to provide some information on the timing and sequence of feather loss and growth. Individuals are identified by the final three digits of their U. S. Fish and Wildlife Service aluminum band.