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Dyes for Color-Marking.—For the past eight years I have been operating a small bird banding station at my home in Bedford, New Hampshire. As I am a reasonably busy doctor subject to emergency call, this is definitely a small, part-time operation, and I have used almost exclusively pull traps, in which the birds feed and which I can operate by strings from the house when I have time to do banding. I have been particularly interested in studying my local Black-capped Chickadee *(Parus atricapillus)* population and have a steady population of sixty to seventy chickadees fall, winter, and spring in my feeders. Initially, I found that I would catch certain tamer individuals over and over and still be unable to band a large proportion of the birds.

I therefore decided to color-mark individuals and to concentrate on catching the uncolored birds. I found this gave a far better method of keeping track of the individuals.

Initially I tried vegetable dyes from a local grocery store ordinarily used for coloring cake frostings. In watery solution these rolled off the birds' feathers without staining. This was corrected by adding five drops of detergent (Trend) per ounce, which gave a good stain but which washed off in a few weeks. I then tried commercial wool dyes without marked success. I then had a dye chemist in a local textile mill try making me some special dyes, again without great success. The plain aqueous solutions did not stain. With detergents the dyes ran. During the fall of 1960 I stained a group of birds with commercial stamp pad ink, to which had been added detergent. This lasted six to eight weeks, but ran and blurred and also was difficult to apply without getting it all over one's hands, being rather messy.

In November, 1960, I started using Drimark. This is a commercial product made in Japan of a dye in a highly volatile organic solvent, which is supplied in small bottles with a plastic sponge in the cork which can be used almost like a broad fountain pen. The product dries instantly, makes a well-demarcated spot which does not run, and is the most satisfactory method I have so far used, particularly in the red color.

Three colors were used, red, orange, and green. The orange fades to a tanish color in four to eight weeks and is not easily seen in the field.

I have recorded the red and green Drimark in over fifty birds, scoring as follows: ++ equals bright colors, easily visible in the field. + equals definite colors visible in the field. ± equals definite color not easily seen in the field but visible with the bird in the hand. With Drimark green I have fourteen observations between five and seventeen weeks. Only one of these recorded ++ after six weeks. Seven showed + in six to eight weeks, one visible as ± at seventeen weeks. The Drimark orange faded to an orangey-tan at seven weeks. Drimark red was the most satisfactory, and observations are shown in the following table. Birds marked with this Drimark R show an easily visible discrete color marking lasting eight to ten weeks during the winter in this area, gradually fading after this.

Weeks	++	+	±
4	3	1	
5	4	1	
6	1	3	
7	4	5	
8	1	5	
9		2	
10			
11	1	1	
12		1	1
13			
14		1	
15		1	
16			1
19			1

Table Showing Visibility of Color, 38 Chickadees Stained With Drimark Red, By Weeks Interval between Marking and Second Observation.

Having tried several types of dye in search of one which will last at least two to three months, not run, and not apparently harm the bird, I have found that Drimark red is the best of these methods tried for temporary color-marking of birds such as chickadees in this area.—John H. Kennard, M.D., 182 Tarrytown Road, Manchester, N. H.

Abundance of English Sparrows.—The total number of English Sparrows *(Passer domesticus)* handled at a given banding station may be of interest for comparison with the numbers occurring at other stations, and at future times. Inasmuch as this is a species which is not normally banded, this offers a means of determining whether or not this species is rising or falling in numbers, or holding its own. At this location, Arcadia Wildlife Sanctuary, Northampton and Easthampton, Massachusetts, coordinates 4217-7238, it may be the species has a rising population. Certainly, as a species, it does take advantage of the artificial cavity nest sites that have been made available, nullifying considerable efforts to provide artificial nesting cavities with the hope of attracting such native species as the Bluebird and Tree Swallow. It also takes advantage of the artificial feeding program, especially in the winter months when foods for various bird species are readily available at all times. The manipulation of vegetation, which has been so beneficial in attracting other species of birds, apparently has no effect on *Passer domesticus*. This introduced bird form seems definitely tied to disruptions in natural environments made by man.

Records on the numbers of *Passer domesticus* handled from July 7, 1960 to June 15, 1961, show that 52 were identified as male; 43 as female, 110 as immature. These last cover a season of July 7 to September 24. Obviously immatures can be identified prior to July 7. Also, obviously, some species can be sexed prior to the last date indicated for immatures. The total number is 205.—Edwin A. Mason, Arcadia Sanctuary, Easthampton, Mass.

Identification of Empidonax by Recorded Calls.—Identification of the *Empidonax* flycatchers is always difficult for the bander. The bird in the hand doesn't sing to give a clue as to identity. On May 10, 1959 I caught an *Empidonax*, placed it in a wire cage in the house, then proceeded to play the recordings of the songs of flycatchers. There were no other sounds around, and the bird was placed where he was unable to see any disturbing motions. As I played each song he indicated no response until I played the song of the Traill's Flycatcher *(Empidonax trailii)*. He immediately emitted several notes much like that of the record. When repeating the records of all the flycatchers several times the reaction of the bird was always the same, showing a response only to the song of the Traill's. Later in the day I netted another *Empidonax* and repeated the experiment, and again attained the same results. Thus, I theorized these birds were the Traill's flycatcher and sent in my report with this identification, along with a footnote explaining my method of identification. — Mrs. John Lueshen, Wisner, Nebraska. *Ed. note:* This seems to be a promising approach for identification (at least in spring), where the record includes calls of all the species