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News, Notes, Comments

Notes on Acetal Color Bands

During the last three years, I have been using acetal color bands in combination with darvic color bands to mark Black-capped Vireos. I use the smallest size, that with an inside diameter of 2.3 mm. As certain colors have become unavailable in darvic, I have switched to similar colors manufactured from acetal. Here, I wish to report on my experiences with acetal color bands.

The acetal color bands that are available currently are formed by injection molding. During manufacture, hot molten plastic flows through channels known as sprues where it diverts into smaller channels, known as runners, to fill the mold for each individual band. When the plastic cools and solidifies, it remains in the form of not only the bands, but also the attached sprues and runners. The bands come in sets of 10 bands attached to their 10 runners and one larger sprue.

The acetal bands need to be smoothed before use. For example, a small, rough projection remains if one simply breaks the thin runner to detach a band from the sprue. Other irregularities result when the two halves of the mold and, hence, the two sides of each individual band are not in perfect alignment. This leaves step-like irregularities on the ends and sides of the bands. The steps on the lower end of the band create a corner that would constantly rub against the top of the toes potentially leading to an injury. Another common irregularity is in the form of thin projecting fins where molten plastic leaked into the space between the two halves of the mold. I recommend that you cut away any irregularities

with a sharp hobby knife or file them smooth with a fingernail file. It is best to do this indoors with good light in advance of a banding session.

My colleague, Mike Heimbuch, and I assessed how well the color of acetal bands holds up against prolonged sun exposure. We tested only the ten colors that we currently use. We slid two bands of each color onto a wire approximately the diameter of a vireo's leg and then hung them on a chain link fence where they would be in direct sunlight all day. We left them for seven months. Eight of the colors fared well: red, yellow, light green, medium green, light blue, dark blue, orange, white. These bands showed little or no apparent fading. The two remaining colors we tested, hot pink and purple, did not perform as well. The hot pink had faded to a very pale pink. It was still recognizably pink, but a very different shade than the original. Purple faded to a color that was difficult to distinguish from that of the light blue bands. Furthermore, most of this fading occurred during the first two months. Our test likely exposed the bands to more sun than they would get if on the legs of birds and so fading probably was accelerated. However, the rapid fading of the purple bands remains a cause for concern.

Acetal bands can be sealed shut with a heat source such as a small soldering iron. However, I do not seal them and the vireos apparently are unable to open and remove them. I do attempt to close them as tightly as possible, ideally with the butt ends touching. I accomplish this by squeezing the bands in the smallest hole of European-style banding pliers (i.e., those with five holes). It usually requires

several firm squeezes to get each band fully closed. It is particularly effective to do this with the band's seam oriented 90° away from facing the tip of the pliers. I have examined about a dozen of these bands that had been on birds for a year and all were still tightly closed. However, two of my field assistants recaptured birds with light green bands that had opened slightly. The more extreme case was one that appeared to have a 0.5-mm gap along the seam (judging from a picture of the band). This gap is too small for the band to fall off a vireo's leg, but perhaps sufficient to catch on fibrous materials. A colleague who works with the Golden-cheeked Warbler observed that several birds banded last year returned without their light green bands this

year. This species has a smaller tarsus diameter than that of the vireo which may have been a contributing factor to the loss of bands.

In summary, acetal bands are not as precisely formed as darvic or celluloid color bands and they require a certain amount of smoothing before use. Nonetheless, they appear to work perfectly well on the legs of birds. The hot pink and especially the purple fade more rapidly than other colors and I would avoid using these on birds that inhabit sunny areas. The color retention of several available colors remains to be tested.

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Books

BIRDS OF THE ROSETOWN-BIGGAR DISTRICT. By Robert D. Wapple and Wayne E. Renaud. 2008. Nature Saskatchewan Special Publication No. 27, Regina, SK. 385 pp.

This 27th contribution to Nature Saskatchewan's book series is dedicated generally to all observers who contributed observations and specifically to the memories of Wayne Harris and William Jasper, two recently deceased major contributors. In the preface, the authors explain that this is essentially an update of the ninth, 120-page, contribution in the series (Renaud and Renaud 1975), but with its boundaries expanded to both the north and west, adding about 40% to the area covered. The book consists of a series of introductory sections, followed by species accounts, a bibliography (mostly of cited literature) and two appendices (listing scientific names of non-bird species mentioned in the text and a list of dead birds found under a telecommunications tower).

A lengthy acknowledgments section is followed by a detailed 50-page introduction, including a description of the location of the area within the province and map co-ordinates of numerous locations within the study area, archeological and cultural history, two sections on pre-European settlement explorers and expeditions (1691-1890),

a longer section on settlement (including surveying, the role of railway building and influences of these on habitat and wildlife) and a shorter account of more recent (starting in the 1950s) depopulation and effects on habitat and thus bird populations. A short account of climate and weather follows, then summaries of seven major landscape features, including their hydrological features, topographic notes and effects of human activities on their habitats, and a section on "Habitats and Birds," featuring 21 more specific habitat types and geographical features, including prominent vegetation, associated characteristic birds and other animals and changes in population of various species in response to farming practices, fire suppression, housing "development," other causes of habitat alterations, human uses of aquatic resources, differences among freshwater lakes, potholes and sloughs and marshes, influences of salinity and amounts of water on ecological significance of varying types of wetlands from season to season and year to year, and ecological effects of other human activities. Changes in the local seasonal occurrences of some species are also noted. This section ends with an account of artificial wetlands in the region, with a comparison of the different ecological influences of dugouts, borrow pits, various sizes and types of reservoirs and sewage lagoons.