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News, Notes, Comments

More Than Bird Banding

Besides my passion for bird banding, one of my interests over the years has been to prepare study skins for museums and an occasional live mount of birds and mammals for classrooms and nature centers. In the process, I teach my students how to prepare specimens in an informal weekly session called "specimen prep." I rely on the most complete and detailed reference on the subject (Winkler 2000).

I feel that the preparation of study skins is vital, as the addition of specimens to research museum collections have been diminished severely (Winkler 2000; Garrett pers. comm.) This has been due to two factors. One has been the general lack of training in this "art." Forty years ago at my institution (a community college), the preparation of a bird or a mammal as a study skin or a live mount was a "required" part of our introductory majors biology class. We no longer do this, and the preparation of study skins is barely taught in upper division ornithology and mammalogy courses. Another reason is that most biology students today would rather become molecular geneticists, and some are actually squeamish even to dissect a preserved frog. Third is that regulations and laws here in the United States and abroad, as well as the feelings of the general public, have changed over the years.

My specimens come from a variety of sources. Along with the occasional mortality from banding, I get specimens euthanized by rehab centers and zoos. I pick up road kills. Present and former students and colleagues are on the "lookout" for specimens for me as well as bringing me deceased pets. My college institution is considered an appropriate repository for such salvaged specimens, and I possess the necessary state and federal permits.

A while back, one of my banders brought in a group of eight Vaux's Swifts (*Chaetura vauxi*) that were found dead. As I was preparing them as study skins, I noted that one had an extra toe (polydactyly) asymmetrically located on each foot. This is not exactly a rare phenomenon, as it is normal in some breeds of chickens, occasionally found in humans, and unfortunately more common in amphibians (Sakai 2006). Yet, I could only find 10 other avian examples from the literature and from museums.

This brings me to the juxtaposition of preparing study skins and bird banding. I then asked myself whether I would have been observant enough to notice this oddity if I happened to be banding this bird. Since that incident, I have alerted my banders to be aware. A few years ago, the banders at Point Reyes Bird Observatory were observant enough to note that a House Wren *(Troglodytes aedon)* that they caught had an extra pair of rectrices (Humple 1999). This point is emphasized again in an accompanying note in this issue by the banders at Tortuguero in Costa Rica who noted a bifurcated rectrix (Burton and Froelich 2007). The lesson is: keep an eye out for such anomalies and be ready to document (photograph) and take copious notes on any such phenomenon.

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A Bifurcated Rectrix on a Swainson's Thrush: Potential Insights Into Developmental Processes of Feathers

On 4 Apr 2000, during constant-effort mist-netting at the Tortuguero Field Station on the Caribbean coast of Costa Rica (10°36' N, 83°33' W), Brandt Ryder and KMB caught and banded an adult Swainson's Thrush (*Catharus ustulatus*; band number 1541-50845) with a bifurcated right outer rectrix. The feather had a single calamus but two rachides (see figure). The proximal barbs were attached to both rachides, but about halfway out the vanes became discrete, forming two "feathers." The inner "feather" was poorly developed, with minimal vane development, and twisted such that it was entirely upside-down at the tip. The outer "feather" was more normal but slightly reduced in size, particularly on the inner vane. Both rachides were relatively thin and weak.

We have handled many thousands of birds and have never seen a similar feather. A query to the BIRDBAND listserve soliciting other examples or relevant references yielded only a few replies, most describing other abnormalities. Tom Erdman, a long-time bander and museum curator, replied that bifurcated feathers are very rare and reported having seen a similar rectrix on a single Northern Saw-whet Owl (*Aegolius acadicus*) among >10,000 banded. Morgan (1918) called such feathers "not uncommon" among F_2 and back-crossed individuals of selectively bred fantail pigeons (*Columba livia*), in which the number of rectrices is variable and hereditary. (The occurrence of a trait among F_2 and back-crossed individuals indicates that it is recessive and