

A *Birding* Interview with **Donna Dittmann**

For Donna L. Dittmann, a childhood interest in museum science has blossomed into a distinguished career in preparing and managing bird specimens. Today, she serves as Collections Manager in the Section of Genetic Resources and as Museum Preparator at the Louisiana State University Museum of Natural Science, which holds the fourth-largest university-based bird collection in the world. Dittmann has participated in museum expeditions throughout the U.S., Central and South America, and Africa; she has contributed more than 9,000 prepared specimens to various museums; she has developed research interests in the genetics, distribution, identification, and molt of birds; and she works tirelessly to educate ornithologists and to promote field ornithology.

In this *Birding* interview, Dittmann enthuses about museum collections in general and trogon specimens in particular—and she makes a plea for all birders to contribute to science.

— Noah K. Strycker

***Birding*:** How did your early experiences at the California Academy of Sciences affect the rest of your life and career?

Donna Dittmann: While in junior high school, I was introduced to summer science classes at the California Academy of Sciences. Two classes included Ornithology and Taxidermy, and during that time I met Curator of Birds Dr. Laurence C. Binford. I was already interested in birds, and with Laurie's guidance I discovered that specimens contain a lot of information that can help one to become a better birder. During high school, I became a frequent visitor to the bird collection and spent a summer working in the collection as a volunteer. My summer job primarily involved cataloguing and labeling an egg collection—not very exciting, although I did get to help salvage and skeletonize a couple of cetaceans. I was hooked on the impor-

tance of museum collections, although as a career I didn't plan it. It just happened.

***Birding*:** What does your job as Collections Manager entail?

DD: As Collections Manager, I curate the Louisiana State University Museum of Natural Science (LSUMNS) Genetic Resources collection, which involves a little bit of everything: permit handling, tissue acquisition, collection organization, database maintenance, long-term collection storage, and loans. Because our collection consists primarily of frozen tissues, I also help safeguard a perishable collection from potential disaster. Our collection is active, with both incoming and outgoing material. In 2007, our section processed 87 loans to researchers at LSUMNS and at other institutions; these loans included more than 1,500 “sub-samples” of tissues from specimens.

***Birding*:** As Museum Preparator, what types of specimens do you handle and what are the steps in preparing a specimen?

DD: I work with birds, mammals, and herps, producing a variety of preparation types: study skins, skeletal and alcoholic preps, occasionally even taxidermy mounts, but mostly research (“round”) study skins of birds. Most important are collecting and archiving data. The preparation technique itself can almost be considered an art form. There are four steps: (1) skinning out the body and head; (2) autopsy to assess reproductive condition (for example, size and condition of gonads) and other biological attributes (for example, skull ossification, parasite load, condition of bursa); (3) putting the specimen back together by stuffing with cotton, then sewing, wrapping, and pinning; and (4) recording data on the specimen label and in my personal catalog. The most memorable specimens are those most challenging: necropsied zoo birds (like figuring out a jigsaw puzzle) or successfully skinning a rare but decomposing salvaged specimen. Some taxonomic groups are more difficult

than others, and I enjoy the challenge of trogons and goatsuckers, with their “tissue-paper” skin. Procellariiformes and Charadriiformes are my all-around favorites.

Birding: Why are bird specimens important?

DD: I like to think that a specimen represents a moment in time preserved for posterity. A specimen is tangible evidence. A specimen can provide answers to questions, and it represents a source that you can revisit. Although modern specimens contain more label data, new discoveries can be made from old specimens just as from recent specimens. Sadly, the way the world is changing, our collections will increasingly be the only physical historical representation of bird populations and habitats forever lost. For that reason, every specimen should be cherished because each is irreplaceable.

Birding: How do museums interface with birders and researchers? What techniques are being used to learn from specimens?

DD: Museums provide research material to professional and amateur ornithologists, but it is also in a museum’s best interests to play an educational role for birders. At LSUMNS, we strive to serve both groups. Most traditional research techniques are still used: studies of geographic variation through analysis of plumage, molt, morphometrics, and so forth. Our collection also offers access to stomach contents and tissue samples. DNA extracted from frozen tissues has revolutionized systematics research, and LSU has been at the forefront of new advances in systematics. “Destructive sampling” from study skins adds another dimension: In the case of species that can no longer be collected, genetic analyses can be done from DNA extracted from small shavings of toe pads, feathers, or skin. Stable isotope analysis (using feathers) can yield important information about a bird’s geographic origins. As destructive requests increase, museums must judge whether damage to the specimens is justified by what knowledge can be gained from these analyses.



Donna Dittmann. Photo by © Steven W. Cardiff.

Birding: Can you describe one of your museum expeditions, including the hairiest adventure and best discovery?

DD: My hairiest was our 1993 expedition to Bolivia. Our camp was on a steep mountainside and just before our departure *it rained!* Landslides destroyed miles of the road connecting us to La Paz. Temporarily abandoning our rented truck and most of our gear, we hiked out, crossing landslides, wading rivers, and eventually making our way to a small military base. We spent a few days there while Bolivian soldiers cleared the road to La Paz and helped retrieve most of our gear from our abandoned truck. It was there that we received the horrible news that Ted Parker had been killed in Ecuador. Finally on the road back to La Paz, our driver forded a stream in the wrong place, partially flooding the vehicle and getting water into the fuel tank. Nothing was lost and we were able to get the vehicle running, but had to stop many times to clean the fuel filter. On this trip we obtained specimens of a new species of flycatcher, but we didn’t even know it at the time. Something as immediately recognizable as a candy-colored undescribed barbet or fluffy Long-whiskered Owlet might have been more satisfying, but that new flycatcher was a good demonstration of the importance of obtaining voucher specimens from unexplored areas. By the way, the flycatcher’s status remains unresolved; we later discovered that specimens already existed but had been identified as another species.

Birding: Why are you fascinated by hummingbirds?

DD: My fascination was sparked when I started to look at plumage details to identify and keep track of individual fall-winter hummers in our yard. I noticed differences in molt progression between individuals by sex and age. Then I discovered that remarkably little had been published about their molt, so that inspired me to look more closely. My tips: patience, pay attention to detail, and take the time to record information and get photos.

Birding: What are you learning in your studies of molt?

DD: There are still many gaps in our basic knowledge of molt patterns from species to species. I am amazed at how little has been published for some species, even common species easily observable by birders. So there is ample opportunity to make contributions. One reason I chose *Birding* for my article on Calliope Hummingbirds (November/December 2006, pp. 32–40), besides showing off Dennis Demcheck's photos, was to point out to birders that they are in an excellent position to make these types of contributions. For the Calliope article, I didn't even have to leave my backyard.

Birding: As Secretary of the Louisiana Bird Records Committee, can you share your tips for documenting rare birds?

DD: Take the time to do the best job possible to document your sighting because you are making a contribution to a historical archive—it's not just about fame and glory, although that's nice too. Of course, taking time is easier said than done because, as we all know, writing notes or details is work—but worth your effort in the long run. I wish I could always be so conscientious. And photographs are worth a thousand words. With today's technology, there is no reason all birders can't carry a digital camera. If I can take photographs of birds, anyone can. And just like writing notes, photographing birds includes sacrifice because you have to focus on that instead of just enjoying the moment. But if you are in the field looking for rarities, then you should also be motivated to photographically document your find. Also, never get discouraged by "rejected" records. Working to build a solid track record of written and photographic documentation is the best way to establish a good reputation.