DECEASED PARROTS:

LIFE AFTER LIFE AT THE SMITHSONIAN

BY EB CRAVENS

ne might think that with a collection of over 600,000 bird specimens, the Smithsonian Institution's National Museum of Natural History would not have a large demand for more such material.

Not so.

This period in worldwide aviculture, zoo activity, and private birdkeeping is somewhat of a "golden age" as far as potential fresh material needed by museum collections—an age that certainly cannot last for too many more years. Mortalities among captive birds can provide valuable research material for museum collections. These specimens augment a museum's inventory of study skins, skeletons, and more. Some can be prepared as taxidermy mounts for use in exhibits or educational programs. They also offer scientists access to tissue samples of rare species for a variety of molecular DNA studies.

It is critical that those scientific parties working with avian species, as well as we many private bird breeders and pet owners, realize how important to natural history collections may be some of the avian specimens that die while in our care.

The present article is the result of interviews with Mr. James Dean, Collections Manager, and Dr. Gary Graves, Curator, both of the Division of Birds, National Museum of Natural History, Smithsonian Institution, Washington, D.C. Our focus was on the family *Psittacidae* within the research collections...

The Smithsonian's Division of Birds has the third largest collection in the world, behind the British Museum and the American Museum of Natural History in New York. Within the parrot stores, the bulk of the specimens represent older material from early explorations. A fair



Three skins of the genus Aratinga. Photo courtesy of EB Cravens.

amount of Pacific and Asian skins follow W.L. Abbott from the early 1900s. Many other specimens were obtained in the period of World War II by personnel in the army medical corps who had specific disease concerns in which blood of birds was thought to be a vector.

COLLECTIONS RESEARCH USE

Each natural history museum around the world has its own set of research usage rules. The Smithsonian's Bird Division has one of the most heavily used research collections - 250 to 300 visitors a year from all over the world. It is staffed by Mr. Dean, two curators and three other staff members. Incorporating both the old Biological Service collections (from the U.S. Geological Survey) and the original Smithsonian collections, this department of the Natural History Museum has a very open policy towards researchers wishing to visit the row upon row of cabinets and drawers. I was there to study relative morphological physiques and record measurements on the 11 Yellow-fronted Amazon specimens. By the same token, heavy use eventually takes a toll on those specimens in the collection that receive regular handling.

Every year there seem to be more non-traditional research uses: Spectrographic studies of feather color for different bird ages or geographic location, archaeological studies of bone to determine cultural

use, anatomical and fossil work. The least invasive techniques are preferred in dealing with specimens.

In order to maintain the condition of the collection, the staff does routine visual inspection. Mothball-like substance may be used along with sticky bug traps to catch the stray insect bent upon damage!

Decades ago, much skin specimen preparation was done by painting arsenic material on the inner skin to kill off any invasion of bugs. This practice of preservation treatment was discontinued in the 1960s.

"We have very few bug problems, a couple of times since 1980 or so," Dean said. "But what we did have—moths or beetles—were mostly in the more recent specimens, from the last 20 years or so." He added that some specimens prepared with borax undergo change of the colors in the brown and red feathers. All plumage tends to fade some with age—especially the reds and yellows.

Today the Smithsonian has a staff of technicians for preparing new specimens. More material is gathered from each mortality. Boneless round skins are often now prepared. A colony of dermestid (Family *Dermestidae*) flesh-cleaning beetles is kept at an off site lab

for removing flesh and blood, tissue, sinew, tendons, etc. But if a really rare bird came in, it likely would be pickled to keep it whole. "Bugging" a specimen of a parrot the size of an Amazon or grey takes about three to four days with the dermestid beetles.

Dean stated that the captive parrots that come in all have more fat on the body than the wild ones. And there are other defects often seen in the bodies of former avicultural pets. Among these are: deformation of the skeletons, bone breaks, arthritis.

"THE OLDEST SPECIMEN ON RECORD DATES BACK TO 1821"

– Mr. James Dean

He explained that no one really knows how long avian skins may be preserved. This collection harbors birds from the early 1800s. Many early specimens were prepared "in the field," so if a scientist ran out of materials, the birds might end up stuffed with leaves or other organics. Today's state of the art methods will preserve as much of the specimen as possible including hundreds of skeletal bones. New techniques will theoretically allow specimens to endure 300-400 years or longer!

Another advantage of new specimens is the chance to get tissue samples—something that early mortalities did not have. Samples of the heart, liver, muscle, brain, etc. now can be saved. They are ultra-cool frozen and then transferred to liquid nitrogen storage.

Dean indicated that out of the 600,000+ specimens, there are only circa 7350 parrots, counting all types of preparation. The Division of Birds takes in about 2500 new specimens each year. Of these, usually less than 50 are *Psittacidae*. Incoming material is kept for 10 days at between minus 10 and minus 20 degrees Celsius to kill organisms.

"A parrot of any kind is a big investment of time," Dean noted. "Just getting the skull out of the skin, for example; the neck is smaller than the head, so it has to be slit behind the neck. It amounts to about four times as much work as, say, a starling. A macaw takes about three hours of preparation; an African Grey, two hours." "These are really tough birds!" he added, then in jest: "I swear you could tan the skin and make shoes!"

NEW BIRD ARRIVALS

Mortalities should be individually stored in tightly sealed plastic bags and thoroughly frozen soon after death. Wrapping the specimen in paper towel will help keep feathers from being ruffled. If necessary, tails can be curled, as it is easier to deal with a curled tail rather than plucked feathers.

The Smithsonian Institution, Museum of Natural History, Division of Birds should be contacted before sending any mortality. "Of course, there are many other museums, both in the U.S. and abroad that are also interested in acquiring captive parrot specimens," Dean emphasized. "This will allow us to decline an offer or to recommend another museum to contact. We are most interested in parrots and pheasants, but other groups of birds are also needed. In the parrot group, macaw, other South American and Australian specimens are all desirable."

Include with each specimen all available data: common and scientific name, date of death; hatch date, sex, and family history if known. Also please note if the bird died of a

disease or virus in order to alert the museum. If the specimen is to be necropsied, the veterinarian should be encouraged to do as "cosmetic" a postmortem as possible—taking care to preserve the sternum and skull, and to not pluck feathers.

Specimens should be packed in an ice chest. Each bird can be wrapped in newspaper for extra insulation, placed in a plastic bag, and then packed with dry ice. As little as five pounds can last two days if not broken into small pieces. Packets of blue ice can also be used. Seal all container seams. Most airlines and shippers will only allow 10 pounds or less of dry ice in a package.

Please include your full name and address with shipment so that the donation may be properly acknowledged. Mark the outside of the chest "perishable." FedEx will not ship animal carcasses, so specimens should be labeled as "research material."

Perishable shipments must be sent overnight delivery. The museum can generally pay shipping charges when Federal Express is used but they must be contacted prior to shipment to arrange for the shipping funds. Try to send shipments Monday or Tuesday so they arrive before the weekend. Contact



Mr. James Dean, collection manager at the Smithsonian, with a specimen drawer of blue macaws.



Mr. Dean with a drawer of Poicephalus specimens.
Photo courtesy of EB Cravens

us concerning shipment at the Division of Birds, National Museum of Natural History, Telephone 202-633-0786 (collections manager), fax #202-633-8084.

During our discussions of captive aviculture, Dr. Graves emphasized that the most important aspect of having birds is to keep proper records. "If you cannot keep records it is an incredible waste of information and money," he said. "Data base is the pillar of any simple biological study.

In conclusion, one can see that the Smithsonian's Museum of Natural History is all about scientific research. And they are still in need of many top quality parrot specimens. I urge everyone to consider contacting them. They have, for example, only six or seven study skins of Hyacinthine Macaws; seven Noble Macaws, some in poor shape, and lesser numbers of many other psittacine species.

If you get a chance to go there in person, be sure to take a moment to inspect the Carolina Parakeets, perhaps even the Cuban Macaws, the Passenger Pigeon or the Great Auk. 'Twas a moving experience for me to see first hand the color and size of avian species no longer flying on earth.

I recently made the decision to send my beloved Sun Conure, Kiwani, who passed away last year, to the collections along with a Princess Parakeet and a fledgling Yellow-fronted that died of an accident. Having visited the museum's collections several times, it kind of makes me proud for Kiwani, Gracie and Baby to be able to have a sort of "life after life" in such hallowed company.

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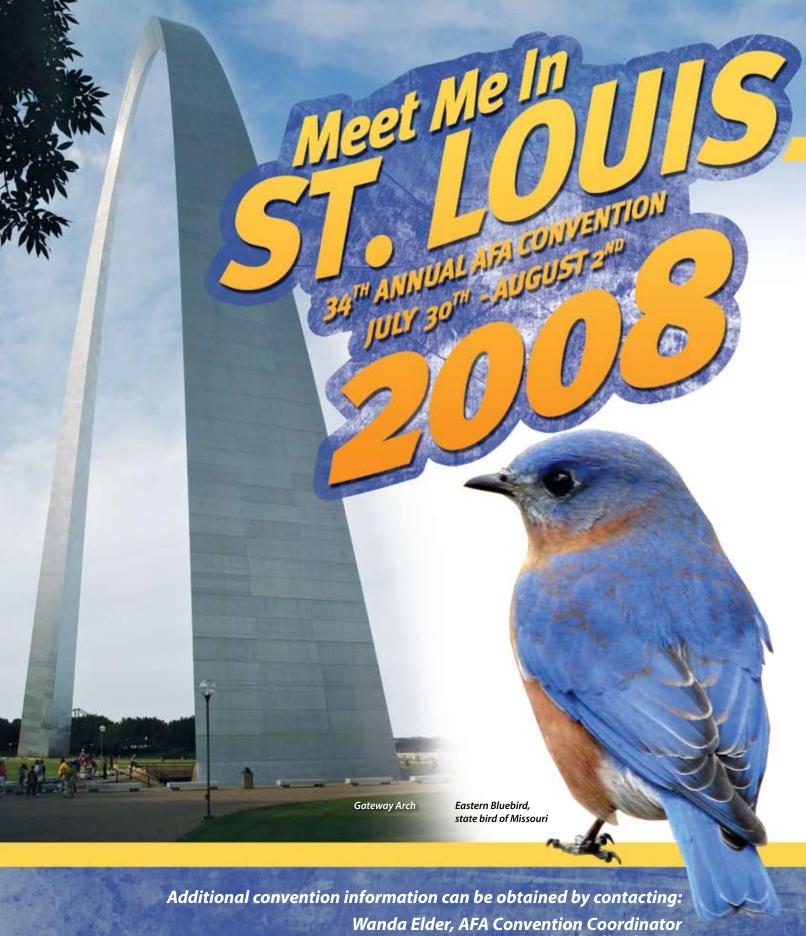




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BY WANDA ELDER

s the song says, "Meet me in St. Louis, Louis, Meet me at the fair, Don't tell me the lights are shining any place but there." We may not do the Hoochee Koochee and you may not find your tootsie wootsie but we will certainly be having fun. The American Federation of Aviculture is going to light up the lights in St. Louis, Missouri with their 34th annual convention.

St Louis is a city of many nicknames, among them is The Gateway City, and is steeped in history. It was the first leg of the Oregon Trail when people started moving west; hence it was called The Gateway City. It was named for a French King, King Louis IX and part of the Louisiana Purchase. It was the site of the first U.S. World's Fair as well as the Olympic games in 1904. The list goes on and on.

We are going to the zoo. The zoo is located in Forrest Park, the site of the 1904 World's Fair and one of the largest urban parks in the world, out sizing Central Park in New York City by 500 acres. The St Louis Zoological Park is one of the oldest and largest in the country, ranking as one of the top five most visited zoos across America.

Another must see for tourists is the Gateway Arch, one of the world's most recognizable landmarks. For those brave souls who would like a real bird's eye view of St. Louis, there is an internal observation platform at the top of the arch. For a small fee you can enjoy a spectacular view and/or be scared out of your wits. I did it once and being claustrophobic did not help. It is definitely one of the things you may want to add to your list of things to do.

Other points of interest include Union Station, Grants Farm, Six Flags and for you baseball fans there is Busch Stadium and the St. Louis Cardinals. Unfortunately, they will be playing out of town while we are there but you can still see their home field.

There are so many things to see and do in St. Louis you will need at least an extra week to capture them all. In light of this, arrangements have been made with the hotel to extend our special rate to include three days prior to the convention and three days after the convention. Check our web site, www.AFABirds.org for updates and highlights. First, we give you detailed information on the zoo but if you can't wait, Goggle St. Louis and be prepared to sit back, relax and read.

CALL FOR PAPERS

We invite you to submit an abstract to present a paper during the convention. Please consider submitting multiple abstracts as you may be asked to give more than one presentation. Proposals should be submitted in the form of an abstract, not to exceed 250 words, accompanied by a brief biographical sketch identifying the author's experience with the topic to be presented and other relevant information.

- 1. Abstracts may be submitted through March 1, 2008.
- 2. All applicants will be notified by the speaker committee upon receiving the abstract and kept aware of their status.
- 3. If accepted as a speaker, you will be required to sign a speaker's contract and provide the AFA with a short bio, a current high resolution photograph and submit a paper to be published in the convention proceedings and in the Watchbird, the official publication of the AFA. In return, the AFA will provide you with a complimentary convention

- registration and a banquet ticket. All other arrangements. including transportation and hotel accommodations are the responsibility of the speaker.
- 4. A contract will be sent by March 28, 2008.
- 5. Final papers must arrive no later than May 1, 2008, to be included in the convention proceedings.

Abstracts

Abstracts are short summaries of the paper you wish to present and should be no more than 250 words. They must include the name of the authors(s), mailing addresses, Email and all phone contact information for the author(s). If there is more than one author, please indicate which one will present.

Presentations

Presentations will typically be 40 minutes in length plus a brief period for questions.

Equipment

AV equipment will be provided and will be specified in the contract.

Submission

We prefer to have abstract, biographies and final papers submitted in electronic format to b1arryw@pacbell.net. Please send as an Email or as an attachment in MS Word. Abstracts may also be faxed to 530.676-8506. Please identify it as "AFA Convention Abstract."

Publication Rights

The convention requires non-exclusive publication rights to submitted papers including the publication of proceedings and in the Watchbird, the official publication of AFA.

Contact Information

For questions specifically regarding speaker topics and issues, contact Speaker Co-Chair Barry Wold, 530-676-8506 or b1arryw@ pacbell.net. For general information or questions regarding the convention please visit our website at www.AFABirds.org or contact the AFA Office:

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Topics that will be presented include avian diseases and conservation; the impact of diseases in avian populations; updates on avian influenza, West Nile, and avian tuberculosis; the role of birds as biosentinels; avian zoonoses, including psittacosis; molecular diagnosis of avian diseases; lead poisoning impacts on birds; and nutritional and genetic disorders in Californian Condors. The conference includes intensive didactic lectures along with interactive avian necropsy/ sample collection hands-on laboratory sessions. In addition, an oiled sea-bird rehabilitation laboratory will be offered. A certificate of completion and CE credits will be awarded participants successfully completing this 2-day conference

Additional activities include a Welcome Dinner, a visit and dinner at the San Bernardino County Museum, which holds one of the largest egg collections in the world, and a visit to San Pedro's International Bird Rescue Center.

Western University of Health Sciences is located in Pomona, 30 minutes east of Los Angeles and is surrounded by mountains. Los Angeles and Ontario airports are conveniently located close to the conference venue. This will be a great opportunity to spend some time enjoying Southern California, its exceptional birding opportunities, visits to the world famous Californian beaches and seacoast as well some of the most beautiful North American National Parks such as Sequoia, Joshua Tree and Channel Islands

The registration fee for the course is \$200 if made before April 31st. After this date, the conference fee will be \$250. Student fee is \$150. Registration forms, conference program and additional information can be found at: www.westernu.edu.

Lodging: A block of rooms are reserved at the Shilo Suites Hotel in Pomona (800) 320-6291 or (909) 598-7666. When making a reservation, please mention that you are with the "Avian Diseases and Conservation Conference".

For more information, please, contact Dr. Miguel Saggese at 909-706-3532 or by email at: avianconference@westernu.edu.



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