FRIENDS OF ORNITHOLOGY Newsletter

Number 2 February 2005

From the Curator Kevin Winker

As the sun skims quickly across the southern sky for just a few hours each day, it is a good time to reflect on events that have occurred in the Department of Ornithology since our last newsletter. I took a sabbatical during the 2003-2004 academic year and used that time effectively to write papers and proposals and to do field work in Belize, the Philippines, and Panama —continuing to follow Alaska birds to important wintering and migratory stopover areas. This work was highly productive.

As a group, we continue to be very active. "We" are presently five graduate students, a postdoctoral research associate, numerous additional research associates not here in Fairbanks, volunteers, and of course Dan Gibson, Brina Kessel, and me. It is a dynamic group, and personally I find it fun to be part of it. The Friends continue to be an important part also, providing us with moral and financial support; both are always needed.

Our activities continue to include work in the field, the collection, our two laboratories (collection and genetics labs), and our scattered offices. We are adding a lot of important specimens to the collection, generating exciting data, and producing published products. It is a great time to be studying Alaska birds!

Construction and moving have been part of our lives recently, and neither is done yet. The West Ridge Research Building (WRRB) on the UAF campus was completed over the summer. Our molecular lab moved from Arctic Health to WRRB into a large new lab that we share with genetics colleagues in the Institute of Arctic Biology. The Museum expansion and renovation continues; we will move into a new collections lab in a month or so. The entire project is slated to be completed by late 2005; we will be moving large portions of the Grus, The Crane (Willughby & Ray 1678)

collection between now and then. A grant from the National Science Foundation for new specimen cases will make this move easier. We were out of cabinet space, and we look forward to being able to house all of our skin specimens properly and to have them in taxonomic order again once the move is complete.

U NIVERSITY OF

MÜŠEUM

ALASKA

The Bird Collection at the University of Alaska Museum

The UAM Bird Collection continues to grow as we work to document the diversity and distribution of Alaska birds. Presently, the collection includes more than 21,000 specimens. Its strengths are in the birds of northwesternmost North America, including taxa endemic to Beringia and the circumpolar North. The collection has 22 orders, 112 families, 521 genera, and over 1,060 species. Specimens are used here at UAF and are regularly loaned for scientific research.

The Department of Ornithology

Although our existence and many of our activities are centered around the Bird Collection, it is the people involved who make things happen:

Residents

Kevin Winker (Curator) Daniel Gibson (Collections Manager) Brina Kessel (Curator Emeritus)

Students

Thomas Braile (PhD student)Carrie Topp (MS student)James Maley (MS student)Matthew Miller (PhD student)David Shaw (MS student)

(cont.)

Students (continued) Michael Lelevier (undergraduate) Chris Barger (undergraduate)

Research Associates

Heinrich Springer Johannes Erritzoe Rose A. Z. Meier Kevin McCracken Christin Pruett Peggy Guitton Volunteers Robert Dickerman David Sonneborn Steven Heinl Robert Wilson P. J. McCracken Luke DeCicco Nicolas Hajdukovich Albert Canaris Rich MacIntosh

Synopses of our two most recent annual reports:

ANNUAL REPORT - ORNITHOLOGY FY 2003

This was another excellent year in the Department of Ornithology and the Bird Collection. Museum personnel and volunteers conducted 11 field expeditions this fiscal year. Five of these trips were made to sample Alaska localities ranging from St. Matthew Island, Haines, and Ketchikan, to Iliamna Lake and the Haul Road. Six other expeditions were made (to Belize, Panama, Peru, Mexico, and Singapore), mostly to sample migratory birds on their wintering grounds. Our collecting, salvaging, and preparation efforts resulted in our cataloguing 2,000 new specimens into the collection, representing growth of 11.8%. David Shaw joined us as a new graduate student. We hosted Olga Butorina from Russia as a Fulbright postdoctoral Fellow for six months. Olga conducted genetic studies of the Tetraonidae. Three of our graduate students received their degrees: Christin Pruett and Deborah Rocque successfully completed their doctoral programs, and Andrew Johnson completed his masters program. Nomination of our Research Associate Johannes Erritzoe from Denmark for an honorary doctorate from the University of Alaska resulted in a visit from Johannes in May to attend the award ceremonies. Congratulations to all!

FY03 statistics:

Volunteer hours	2,440
Acquisitions	2,000
Grants	3
Publications	3

Loans 17	
Data requests 161	
Professional visitors 48	
Student visitors 41	
Public contacts 300-	+

Students working with collections

PhD	10
MS	7
Undergraduates	2

ANNUAL REPORT - ORNITHOLOGY FY 2004

During this year Department personnel and volunteers conducted 11 field expeditions. Five of these trips were made to sample Alaska localities ranging from the Near Islands in the Aleutians to Unlaska and Goodnews Bay. Other expeditions were made to Belize, Panama, the Philippines, Mexico, and Singapore, mostly to sample migratory birds on their wintering grounds. Much of this work is in collaboration with the U.S. Department of Agriculture to screen birds for avian influenza and to determine pathways of migratory transport of this emerging disease. Curator of Birds Kevin Winker spent his academic sabbatical this year furthering this research, both in Alaska and abroad. Our collecting, salvaging, and preparation efforts resulted in the cataloguing of 1,125 new specimens into the collection.

FY04 statistics:	
Volunteer hours	2,250
Acquisitions	1,125
Grants	5
Publications	5
Reports	9
Loans	20
Data requests	171
Professional visitors	33
Student visitors	42
Public contacts	200+

Students working with collections

PhD	10
MS	4
Undergraduates	2

FROM STAFF & STUDENTS

Christin Pruett

This fall I returned to Fairbanks to work as a Postdoctoral Research Associate with Kevin Winker. I did my Ph.D. at UAF (1998-2002), where I studied the population and community genetics of Aleutian Island landbirds. I had such a great experience as a graduate student that I was easily lured back to the Museum to do further work on the genetics of Alaska birds.

As part of my PhD research, I went on many sampling trips, including the birding hotspots of Attu and Adak islands in the Aleutians and Nome on the Seward Peninsula. I was lucky to see Alaska rarities such as Siberian Rubythroat, Black-backed Wagtail, Hawfinch, Terek Sandpiper, Far Eastern Curlew, Smew, and Bean Goose. Hopefully I will be involved in future field opportunities.

While I was away from Alaska, I worked as a postdoctoral researcher at Texas A&M University studying the population genetics of some very tasty marine fish, including red snapper and red drum. Although this was an exciting learning and culinary opportunity, I missed the birds and needed a break from academia. So last winter I decided to fulfill a longtime dream of hiking the Pacific Crest Trail. It is a 2,650 mile trek from Mexico to Canada through California, Oregon, and Washington. I set out in May and hiked from the Mexico-California border following the central mountain ranges (e.g. San Bernardino, High Sierra) to Oregon, a trip of 1,720 miles. It was a great wilderness and birding

experience. I saw over 200 species, many that were new to me, including Hermit Warbler, Mountain



Quail, and Juniper Titmouse.

Christin Pruett

But the birds I enjoyed watching most were old friends. On top of Mount Whitney (~14,500ft) were a profusion of very friendly Gray-crowned Rosy-Finches—the same species I studied in the Aleutians—but thousands of miles southward and thousands of feet upward in elevation. I also witnessed a Great Blue Heron flying over a 10,000 foot pass in the northern Sierra mountains; this same pass was used by Rufous Hummingbirds. My favorite birds of the trip were Rock Wrens. They popped up in a variety of rocky habitats, from the blazing hot Mojave Desert to the high elevations and cool temperatures of the Sierra. This trip gave me a fresh realization that studying natural populations of birds is what I am interested in doing now and in the future.

Currently, I am working on the genetics of birds as vectors of disease. This research involves both field and laboratory work. In the field, birds are sampled for infectious diseases such as avian influenza. In the laboratory, genetic samples from the same birds are analyzed to help identify the populations that the birds are from. This should aid in the identification of areas of disease concentration and in a better understanding of how migratory birds are agents of disease transport.

Matthew Miller

Saludos desde Panama! Almost everyone that I tell about my Ph.D. experience gives me a very puzzled look—it is hard to explain that I study at the University of Alaska Fairbanks, but that I live in the Republic of Panama.

Alaska is perhaps the best natural laboratory for the study of avian migration. Birds from Africa, Argentina, and even Antarctica migrate to their Alaska breeding grounds. Many Alaska birds spend the majority of every year outside Alaska, including Central America. Right now, it is the eve of the winter's solstice, and I am writing this looking out my living room window at a small patch of lowland rainforest. The sun is setting, and the mosquitoes are coming out. Hopping outside my window are some familiar Alaskan feathered friends: Northern Waterthrush, Swainson's Thrush. Yesterday I saw Spotted Sandpipers and Greater Yellowlegs in a nearby estuary.

Most days, however, I find myself looking out the windows of the Smithsonian Institution's Tropical Molecular Lab, located in the former canal zone. I use population genetics as a bridge between the ecology and the evolutionary history of Neotropical bird communities (including those that every year fly thousands of miles away to breed).

Having a more southern base has allowed me much easier access to the varied collecting locations needed for this project. Along with Kevin Winker and UAM ornithology volunteers, I've collected from the Darien jungle near the Colombian border all the way to the western Chiriqui highlands. Taking advantage of our



expertise in monitoring disease in wild bird populations, I've also been able to make a contribution to local public health needs. Just last week the Panamanian public health ministry consulted with us about a potential outbreak of avian encephalitis in two children in a nearby coastal community. From our Panama base, I've also made two collecting trips to Peru.

Matthew Miller, Panama.

Just a couple weeks ago, Kevin Winker, Peggy Guitton (my wife and ex-Alaska Bird Observatory intern), and I returned from our collecting efforts along an altitudinal transect in east-central Peru. Our trip took us all the way from the barren highland *puno* above 15,000 feet above sea level down to the muggy jungles of the western Amazon basin...there, our most commonly collected bird: Swainson's Thrush.

Along with the Arctic Terns and the Yellow Warblers, I hope to make my way back to Fairbanks by early May, to finish my dissertation and hopefully to enjoy a bit of the great Alaskan summer. One billion birds can't be wrong.

David Shaw

Ever since I was a kid tromping through the hardwood forests of Pennsylvania I've had a fascination with birds. At first my interest was limited to raptors. My first field guide was "*Peterson's Field Guide to Hawks*", which still has a place on my shelf at home. It wasn't until later, sometime in high school, when I was living in northern Oklahoma, that I got more serious about other birds. I started carrying binoculars and spending time along the banks of prairie ponds and in the woods of scrub oak that surrounded my house. I began to realize there was something fascinating about birds, and I couldn't get enough. In 1994 I graduated from high school and was accepted at The Evergreen State College in Olympia Washington. It was there, surrounded by the forests, bays, and mountains of the Pacific Northwest that my fascination with birds really took off. I was introduced to the science of bird study early in my college career, and it has stuck with me since. Evergreen, with its atypical educational style, allowed me the chance to experience field studies directly. I learned to band birds and how to study them in the field. Also during my time at Evergreen I was given the opportunity to study birds for three months in upper Amazonian Peru. In the rainforest my love for birds took a new turn toward the tropics.



Ironically, the following summer I came to Alaska as an intern with the Alaska Bird Observatory (ABO). I fell in love with Alaska and moved up full time the following summer. I continued my work with ABO during the summer and dreamt of tropical birds in the winter.

Eliut Hurtado & David Shaw, Mexico.

It was in 2001 that I first met Dr. Winker. I had been thinking of graduate school for some time, and Kevin, with his interests in tropical ornithology, seemed like a great match. It took a year, but in the fall of 2002 I started as a full-time grad student. Dr. Winker and I began to piece together a research project, and in the spring of 2003 I flew to Mexico to spend three months working with songbirds in the rainforests of southern Veracruz. I returned again the following spring to finish collecting data. Somewhere in between I finished my class work, and now I'm left with the task of interpreting the data I collected and writing a thesis. Recently I've been looking at my data on resource use by spring migrants and discovering that acquiring the energy to migrate is not as clear cut as it sounds. It seems that many species have different strategies. It is a balancing act, with timing, energy, food, molt, and weather all taken into account. I find putting these pieces together intriguing, and vitally important to the preservation of the birds I love.

The amount I've learned through my work here at the museum and at UAF extends far beyond what I anticipated. As expected, I've learned a lot about birds, but also about other cultures, how better to relate to people, and even Spanish.

I never would have thought that museum work would have suited me. The process of acquiring and preparing specimens seemed uninteresting, even gruesome, but after experiencing the process firsthand I've changed my mind. This work provides vital information on the ecology, taxonomy, and distribution of birds. Without this information our knowledge of how to protect these species would be sorely lacking.

FRIENDS OF ORNITHOLOGY

Founders Brina Kessel David & Alexandra Sonneborn Robert W. Dickerman

Benefactors

Kevin Winker

Patrons

James G. King Frederick & Patricia Winker

Donors

Warren David and Glenda Sue Cummings Dr. & Mrs. Ronald M. Finch Langdon R. Stevenson (In memory of Tim Schantz) Ronald M. & Mary Kay Teel

Contributors

Stephen K. Carroll Ed Clark & Judith E. Dearborn

Terry J. Doyle Alfred Driscoll Daniel Guthrie Steve Heinl Harold F. John William E. Krueger Deanna MacPhail Cynthia R. Meyers W. Mike Ord Catherine Pannell GeraldRosenband Michael T. Schwitters Stanley E. & Patricia K. Senner Dr. & Mrs. Walter M. Sonneborn Richard D. Spight Gus van Vliet Ward/Tedin Partnership

Friends

Paul J. Baicich Robert Berman & Cynthia Lippincott Jim Blackburn Nancy and Albert Boggess Frank C. Buhl Dona Coates Kermit Cummings Phil Davis William L. Foster Elizabeth F. Hardesty Ms Elizabeth Hardesty Victorie Heart Jennifer Johnson-Culver Warren R. Jones Calvin E. Keppler Sherry Lewis & James Logan Lenore McCullagh Lawrence Modesitt Sid O. & Erna F. Morgan Harvey & Marion Mudd Candace A. Myers, Ph.D. Pat Pourchot Robert Roadcap Robert & Susan Spahn Grace L. Steurer Mark M. Stevenson, M.D. William R. Stott, Jr. Gordon Tans

Friends (cont.) Richard Tetrault Jeff Walters Steven T. Zimmerman

If you know of someone else who might like to become a member, please pass along a copy of the enclosed membership materials or point them to our web page at <u>www.uaf.edu/museum/bird</u>



Tom Braile

RECENT PUBLICATIONS

Winker, K., D. D. Gibson, B. Lawhead, A. Sowls, P. Martin, and E. Hoberg. 2002. The birds of St. Matthew Island, Bering Sea. Wilson Bulletin 114:491-509. Isolated in the northern Bering Sea, remote St. Matthew Island and its satellites Hall Island and Pinnacle Rock have a deep Bering Land Bridge history. An interdigitation of the New World, Old World, and Beringian avifaunas occurs here, as does a striking level of endemism for a high-latitude island: a mammal, a plant, and a breeding bird are restricted to these islands (these are the breeding grounds of McKay's Bunting, Plectrophenax hyperboreus). We discuss more than 125 species and highlight several profound changes that have occurred over the past century. A breeding range shift in Glaucous-winged Gulls (Larus glaucescens) appears to be due to climatic warming.

Klicka, J. T., R. M. Zink, and K. Winker. 2003.
Longspurs and snow buntings: Phylogeny and biogeography of a high-latitude clade (*Calcarius*).
Molecular Phylogenetics and Evolution 26:165-175.
Sequence-based phylogenetic reconstruction using mtDNA shows that the genus Calcarius properly includes the genus
Plectrophenax, the Snow Bunting and McKay's Bunting (P. nivalis and P. hyperboreus). This expanded Calcarius clade is not closely allied to either Calamospiza or Emberiza, as previously thought. Instead, its affinities seem to lie outside of the sparrow tribe Emberizini. The group seems to have its origins at relatively high latitudes in the New World.

Winker, K. 2003. [Review of] Handbook of the birds of the world, Vol. 7: Jacamars to woodpeckers. Loon 75:114-115.

Gibson, D. D., S. C. Heinl, and T. G. Tobish, Jr. 2003. Report of the Alaska Checklist Committee, 1997-2003. West. Birds 34:122-132.

Winker, K. 2004. [Review of] Why Museums Matter: Avian Archives in an Age of Extinction. Wilson Bulletin 116:313-314.

Puebla, F., and K. Winker. 2004. Dieta y dispersión de semillas de dos especies de tangara (*Habia*) en dos tipos de vegetación en Los Tuxtlas, Veracruz,

México. Ornitologia Neotropical 15:53-64. The diets of Habia rubica and Habia fuscicauda at a site of syntopy (in primary and secondary rainforest) showed broad overlap. About a quarter of the diet was insectivorous and about twothirds frugivorous. These bird species are important seed dispersers of pioneer rainforest plants.

Rocque*, D. A., and K. Winker. 2004. Biomonitoring of contaminants in birds from two trophic levels in the North Pacific. Environmental Toxicology and Chemistry 23:759-766. Contaminants in cormorants (Phalacrocorax spp.) and Rock Sandpipers (Calidris ptilocnemis) from across the longitudinal transect of the Aleutian Islands show evidence of long range transport and point source origins. The importance of this region for major fisheries and as a unique high-latitude ecosystem suggests that continued biomonitoring is warranted.

Winker, K. 2004. Natural history museums in a post-biodiversity era. BioScience 54:455-459.

Pruett*, C. L., D. D. Gibson, and K. Winker. 2004. Amak Island Song Sparrows (*Melospiza melodia amaka*) are not evolutionarily significant. Ornithological Science 3:133-138. *Morphological and*

genetic evidence shows that this taxon is not sufficiently distinct to warrant recognition; instead, it appears to be a sink colonized by other regional populations.

(* Asterisks denote our students)

University of Alaska Museum's Friends of Ornithology

The birds of Alaska have never been in better hands.