

94,218

total attendance

106,944

new database entries

68,609

new specimens

new accessions

Linda Anderson

MUSEUM PROFESSIONAL STAFF

Aldona Jonaitis, Museum Director

ADMINISTRATION

Barbara Ellanna, Fiscal Professional Emilie Nelson, Executive Assistant Linda Sheldon, Fiscal Technician

ALASKA CENTER FOR DOCUMENTARY FILM

Leonard Kamerling, Curator*

ARCHAEOLOGY

Joshua Reuther, Curator Scott Shirar, Collection Manager Sam Coffman, Research Archaeologist

COMMUNICATIONS & MARKETING

Theresa Bakker, Manager

EARTH SCIENCES

Patrick Druckenmiller, Curator* Julie Rousseau, Collection Manager

Jennifer Arseneau, Education & Public Programs Manager Peggy Hetman, School & Community Liaison Maite Agopian, Museum Educator Gabrielle Vance, Museum Educator

ENTOMOLOGY

Derek Sikes, Curator*

ETHNOLOGY AND HISTORY

Molly Lee, Curator Emerita * Angela Linn, Senior Collection Manager

EXHIBITS AND DIGITAL MEDIA

Roger Topp, Head of Production Steve Bouta, Exhibitions & Design Coordinator Tamara Martz, Exhibit & Graphic Designer Hannah Foss, Modeler/Animator Kelsey Gobroski, Digital Media Producer

GENOMIC RESOURCES

Kyndall Hildebrandt, Collection Manager

FINE ARTS

Mareca Guthrie, Curator*

HERBARIUM

Steffi Ickert-Bond, Curator* Jordan Metzgar, Collection Manager Dave F. Murray, Curator Emeritus Carolyn Parker, Research Professional

FISH & MARINE INVERTEBRATES

Andres Lopez, Curator*

MAMMALOGY

Link Olson, Curator* Aren Gunderson, Collection Manager Dusty McDonald, Programmer

OPERATIONS

Kevin May, Manager

ORNITHOLOGY

Kevin Winker, Curator* Jack Withrow, Collection Manager

VISITOR SERVICES

Daniel David, Manager & Retail Operations Janet Thompson, Tour Planning and Event Rentals Jake Sirevaag, Supervisor Marcus Avugiak, Supervisor

* UAF faculty holding joint appointment

MUSEUM ADVISORY COMMITTEE

Bill Bailey Mike Cook Jennifer Imus Jim Lund Drena McIntyre Sherry Modrow Jay Ramras Grace Schaible Renee Staley Nicole Stewart Joseph Usibelli Nadine Winters, Chair Kesler Woodward

FRIENDS OF THE UA MUSEUM

Board Members Helen Atkinson Mary Binkley DeLois Burggraf Phyllis Church Donna Dinsmore Ted Fathauer Jackie Goering Don Gray Ron Inouye David Norton Lee O'Hare Ellen Whitcher



MISSION

The University of Alaska Museum of the North, located on the Fairbanks campus, is the only museum in the state with a tripartite mission of research, teaching and collecting. The museum's botanical, geological, zoological, and cultural collections, primarily from Alaska and the Circumpolar North, form the basis for understanding the local as well as the global past, present and future. Through collection-based research, teaching and public programs, the museum shares its knowledge and collections with local, national and international audiences of all ages and backgrounds.

University of Alaska Museum of the North PO Box 756960 Fairbanks, Alaska 99775 Tel 907.474.7505 Fax 907.474.5469 museum@uaf.edu museum.uaf.edu www.facebook.com/alaskamuseum www.twitter.com/alaskamuseum

Museum Director: Aldona Jonaitis Editor: Theresa Bakker Designer: Tamara Martz Layout: Nathan Feemster Copyright @ 2015

FRONT COVER: The museum shines on a bright, sunny day.

FOLLOWING PAGE: Athletes in town for the Arctic Winter Games in March 2014 pose for a photo after visiting the museum.



The University of Alaska Fairbanks is accredited by the Northwest Commission on Colleges and Universities. UAF is an affirmative action/equal opportunity employer and educational institution.



The University of Alaska Museum of the North is accredited by the American Alliance of Museums.

Contents



FY14 Overview	Public Outreach	Research & Collections	Selected Publications	Development & Membership	Communications & Marketing	Gifts to the Collections	Donors of Record	Financial Summary	Grants & Contracts	
4	6	24	82	84	86	87	88	90	91	

Director's Report from Aldona Jonaitis

What I love about the University of Alaska Museum of the North is how something new is always happening. This fiscal year, the museum served as the temporary guarters for the Fairbanks Children's Museum which needed space to exhibit its hands-on displays. We offered them the Arnold Espe Auditorium from October through April to entertain the community's youngest children. Now the Children's Museum has its own space in downtown Fairbanks, and we wish them the best. It is my opinion that a community can never have too many museums!

Our special exhibit Arctic Odyssey: Voyages of the R/V Sikuliag developed from a new partnership with the UAF School of Fisheries and Ocean Sciences. For decades, the university worked to secure funding for a new research vessel capable of exploring ice-filled Arctic waters. To celebrate this new chapter in the history of oceanic exploration, we created an exhibit exploring the research made possible by the NSF-funded ship. What I enjoyed most about the exhibit was its blending of hard science and educational hands-on family activities.

The museum's curators are always engaging in new and interesting projects. Collections expand, courses are taught, students and faculty publish papers and give presentations at professional conferences, and grants are awarded. Some of the highlights this year include a newly-digitized version of the documentary film *Drums of Winter*; an exciting dinosaur discovery of thousands of tracks found along the Yukon River; and the re-installment in the Fairbanks International Airport of the newly-restored JN-4D Jenny aircraft acquired by pilot Ben Eielson in 1923. The department of fishes and marine invertebrates doubled when NOAA chose the museum as the repository for its Auke Bay collection. And new additions to the mammal collection will result from its participation in a \$1.7 million NSF grant studying Pacific walrus.

Much as I enjoy the new, it is important to remember that this museum is responsible for hundreds of thousands of specimens and artifacts, some of which are millions of years old. Just because we have old things in our collections, does

not mean we can't look at them in new and innovative ways. That is what the best of contemporary museums do,

including this one.

Museum Director Aldona Jonaitis in her office.



FY2014 Public Point of View

Overview

Educators' Night



Fairbanks Children's Museum opens

Halloween

Events





Exhibits

AUGUST

SEPTEMBER

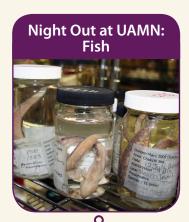
14,746

12,993

8,163

6,116







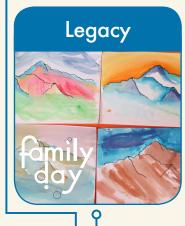














DENALI 100 Years On The **LEGACY** Mountain **ARCTIC ODYSSEY VOYAGES OF THE R/V SIKULIAQ**

NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY **JUNE** 4,206 6,201 4,721 12,070 6,014 4,697 9,634 4,657



CONNECTING YOU TO THE MUSEUM

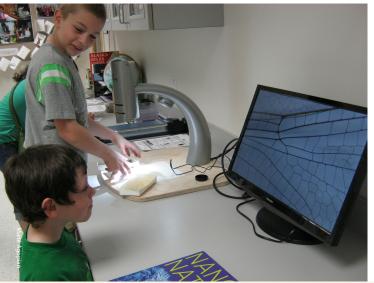
The education and public programs staff and volunteers develop programs, events, and resources to help children and adults engage with museum collections and research. During the 2013-14 school year, more than 4,500 students came to the museum for a field trip and nearly 400 children and parents attended our free Homeschool Day. Kit loans allowed museum objects to inspire many other students in their own classrooms.

LEFT TO RIGHT: NPS Volunteer Mark Gilbertson takes kids on a museum exploration during Family Day: Denali Mountain Science. Boys examine a magnified dragonfly wing during Family Day: DNA. A sketch by docent Jill O'Brien prepares students for a Museum Science Directed Discovery.

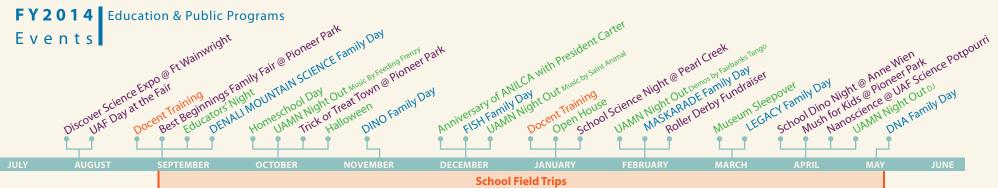
PREVIOUS PAGE: Educator Maïté Agopian introduces the Science Show crew at the Museum Sleepover in March 2014.

Throughout the year, many families explored our exhibits and Family Room. More than 1,700 people attended a themed Family Day, children for free. Workshops, new family programs, interactive special exhibits, and special events offered other ways to make connections with the museum. Sixty lucky individuals spent the night in the Gallery of Alaska during the Museum Sleepover. We also participated in ten community events to reach out to the public and connect with other community organizations. The Fairbanks Children's Museum made its first home in our auditorium from October through April. We worked closely with FCM staff on field trips and events and to serve and welcome families.









1,775 Volunteer Hours

Tayana Arakchaa **Charley Basham** Lynn Basham Maggie Billington Pat Cariati Judy Ferri Linda File **Barb Gorman** Marcella Hill Helyn Lefgren Jan Moser Takae Nakajima **Courtney Nichols** Jill O'Brien Ramona Oxendine Joan Parker-Webster Tish Perkins

Leslie Swenson

Janet Taylor



FY14 DOCENTS





CREATING EXPERIENCES – MUSEUM FIELD TRIPS

More than 4,500 students visited the museum as part of a school group during the 2013-14 academic year. Students explored both the Fairbanks Children's Museum and UAMN galleries. Nearly 1,800 students were granted free admission to a docent-guided Directed Discovery, thanks to support from Flint Hills Resources Alaska. Also, 379 homeschool children and their parent educators attended the museum's 6th annual Homeschool Day.

SHARING A PASSION FOR LEARNING

Museum docents are recognized for their service through the department's longevity awards. Names of awards are based on succession within the boreal forest. Three years of service earns the Fireweed Award; five years, the Willow Award; and eight years, the Birch award. The highest, for 10 years of service, is the Spruce Award. Three docents have earned a Spruce Award: Barbara Gorman, Marcella Hill, and Al Knapp. This year, Leslie Swenson was awarded the Birch, joining past recipients Maggie Billington and Pat Cariati.

1,797

students

Fall/Spring

DIRECTED DISCOVERY FIELD TRIPS

80 programs

Free thanks to Flint Hills Resources Alaska 2,705

students

Fall/Spring

EXHIBIT EXPLORATION FIELD TRIPS

91 groups

379

attendees

October 9, 2012

HOMESCHOOL DAY

Sponsored in part by Flint Hills Resources Alaska.

CLOCKWISE FROM TOP: A student journals while exploring the museum during Homeschool Day. Homeschoolers create crafts during their annual free day. Docent Leslie Swenson receives an award for her volunteer service from Peggy Hetman. Docents pose in front of an image of Denali.



EDUCATION RESOURCES

Partnering for after school program

The museum partnered with Alaska 4-H and the UAF Geophysical Institute to offer a new program for girls at Ryan Middle School. Perspectives: Science & Photography started with them building their own digital cameras and exploring science in their everyday lives. They took photographs to illustrate their definitions of science. Women scientists and artists served as role models and discussion leaders, engaging the girls as they formed their own perspectives on science and art. The group met at the museum for an exploration of the galleries with curator Mareca **Guthrie** and displayed their work on campus.

Serving teachers

Teachers and administrators from 29 schools and the district office attended our third annual Educators' Night in September. More than 70 teachers learned about museum kits, field trips, and resources while enjoying complimentary beverages and hors d'oeuvres. Other UAF outreach departments were invited to share materials and information. The event also served as an opportunity to connect local artists with teachers for artists-in-schools programs.

Museum kit loans soar

A rich diversity of objects have always been available for loan from the museum's teaching collection.

kit loans

Beginning in January 2012, new object-based kits were made available to teachers and homeschoolers. For the period of 2006-2011, object loans from the collection totaled about 11 per year. In 2012, loans leaped to a total of 47. During the 2013-14 school year, 67 loans were made. The pairing of museum objects with lesson ideas and supplemental materials is helping teachers inspire students in new ways.



items cataloged

2,146 total objects in database





LEFT TO RIGHT: Participants in the *Perspectives* afterschool program display their work. School & Community Liaison Peggy Hetman discusses museum resources with a teacher during Educators' Night.

COMMUNITY PROGRAMS

New Family Programs: Weekends @ UAMN

New programs for children and families were launched in November 2013. Baby Hour encouraged parents to bring their infants to the museum to look at art and exhibits together. It also provided an avenue for new parents to connect with each other. Early Explorers and Junior Curators were offered on Saturdays for preschoolers and older children to explore specimens and create artworks. Programming was free with museum admission. During the first six months of these programs (November 2013 - April 2014), 240 people participated.

BELOW, LEFT TO RIGHT: These Museum Sleepover guests were excited to get a spot near Blue Babe in the Gallery of Alaska. Girl Scout troop members posed for a photo after the Museum Sleepover. A child pieces together a dinosaur skeleton in the Family Room.

Museum Sleepover!

On March 7, 2014, a group of 60 parents, kids, and museum staff camped out together at our Museum Sleepover. Attendees created art, explored specimens, participated in science demos, and even tried morning yoga. As participants rolled up their sleeping bags and tidied up the floor in the Gallery of Alaska the next morning, one child stood in front of a case featuring a seal gut parka and seal skin boots. Turning to his mother, he suddenly exclaimed, "These are real things, not just pictures." The event was a great success and we look forward to offering it again.

Event Volunteers 122 hours volunteered

Event volunteers facilitate activities during family days and special events.

Exploring a Legacy

A series of art and science workshops were offered in conjunction with the museum's special exhibit, *Denali Legacy: 100 Years on the Mountain*. Children and caregivers learned about geology and worked together to create paintbrushes, prints, and mixed media art. Twenty-two people took part in one of three workshops held between October and December 2013.

A Place for Curiosity

The Family Room was updated this year, creating more ways for generations to be curious and explore together. New activity boxes and books were added and an observation corner was created with hands-on specimens, sorting trays, and a microscope.











PLAY AND LEARN TOGETHER

UAMN Family Days allow the whole family to connect with museum research and collections. Children and adults are invited to create crafts, try out science experiments and cultural activities, ask the experts, and explore galleries.

Kids 14 and under are admitted free for Family Days, sponsored by





DENALI – MOUNTAIN SCIENCE family day

September 28, 2013

Kids geared up to climb a summit, calculated the food they would need, explored mountain science, and made crafts.

In collaboration with UAMN Ethnology & History and the National Park Service.



DINO family day

November 16, 2013

Families watched a dino demonstration, made fossil prints, visited a summer "field site," and learned how dinosaur footprints left tracks for scientists to discover.

In collaboration with UAMN Earth Sciences.

FISH family day

December 12, 2013

Guests looked at specimens, learned about skate tagging, examined fish ears through microscopes, and made fish prints with real salmon.

In collaboration with UAMN Aquatics and UAF School of Fisheries and Ocean Science.



LEGACY family day

March 29, 2014

Guests met a direct descendant of the first man to stand on top of Denali, made their own historic journals, and explored the meaning of "Legacy" through art and the museum's special exhibit.

In collaboration with UAMN Ethnology & History and Interior Distance Education Association.

MASKARADE family day

February 22, 2014

Visitors discovered masks from the museum's collections, tried on masks from around the world, and made their own. They enjoyed a performance by the Iñu-Yupiaq Dance Group and watched an artist make wooden masks.

In collaboration with UAMN Ethnology & History and UAF Art department.





DNA family day

May 3, 2014

Guests investigated the science of DNA by extracting it from specimens and exploring the devices used in the museum's labs. They solved a museum mystery and learned how important DNA is to research.

In collaboration with UAMN Genomic Resources and UAF Biology & Wildlife.



Photos by Maïté Agopian









Annual Report FY2014

UAMN EDUCATORS IN THE COMMUNITY

The education and public programs team reached out to the community at a variety of events and venues this year. We once again presented certificates at the Interior Alaska Science Fair. Six awards were given along with museum passes. Museum family passes available for checkout at the Fairbanks North Star Borough libraries also continued to be popular. We offered activities at the following events:

Discover Science Expo @ Ft Wainwright. August 3, 2013

UAF Day @ the Tanana Valley State Fair. August 6, 2013

Best Beginnings Family Fair @ Pioneer Park. September 14, 2013

Trick or Treat Town @ Pioneer Park. October 26, 2013

Anniversary of ANILCA teleconference @ Butrovich Building.

December 2, 2013. Co-presented with National Park Service.

School Science Night @ Pearl Creek. January 31, 2014

Roller Derby Fundraiser & Outreach @ Carlson Center. February 22, 2014

School Dino Night @ Anne Wien. April 3, 2014

Mush for Kids @ Pioneer Park. April 5, 2014

Nanoscience @ UAF Science Potpourri. April 13, 2014 With nanoscientists from UAF's Advanced Materials Lab.

CLOCKWISE FROM TOP: Manager of Education & Public Programs Jennifer Arseneau accepts a check from the Fairbanks Rollergirls. A mother and daughter create an animal rubbing picture during Mush for Kids. Guests at the Discover Science Expo at Fort Wainwright test their scat identification skills. A young scientist examines a bear skull at Mush for Kids.

SPECIAL EXHIBITS

The education and public programs team assisted with the planning, fabrication, and review of these special exhibits.

Arctic Odyssey: Voyages of the R/V Sikuliaq Opened May 17, 2014

Department staff consulted on exhibit design and also developed ocean related activities for a "kids' corner" within the exhibit. Education staff also selected and prepared specimens for all ages to discover and enjoy at a microscope station. Gabrielle **Vance** was hired as a temporary educator to prepare a teacher's guide to the exhibit, student worksheets, and a new museum kit.

PROFESSIONAL DEVELOPMENT

Agopian M. October 2013. Association of Science and Technology Centers Annual Conference. Albuquerque, NM. *Registration covered by ASTC. Travel funding from EPSCOR.*

Agopian M. and **G. Vance.** March 2014. Alaska Resource Education course, Rock & Roll Around Alaska. Fairbanks, AK.

Agopian M. and **G. Vance.** April 2014. EarthScope Workshop. Anchorage, AK. Workshop and travel provided by *EarthScope* (*National Science Foundation funding*).

Hetman P. and M. Agopian. May 2014. American Alliance of Museums Annual Conference, Seattle, WA.

Funding awarded in FY14:

Fairbanks Rollergirls Bout Benefits UAMN

\$786: The Fairbanks Rollergirls select non-profit organizations to receive a portion of proceeds from game ticket sales.

Fred Meyer Community Connections

\$261: UAMN joined the Fred Meyer Community Rewards program so shoppers can link their rewards card and support education programs. This was the proceeds from the first quarter (April-June 2014).

STAFF LISTING

Education & Public Programs Manager Jennifer Arseneau 474 6948 j.arseneau@alaska.edu Maïté Agopian Museum Educator 474 5602 maite.agopian@alaska.edu

School & Community Liaison **Peggy Hetman** mahetman@alaska.edu 474 5360

Museum Educator **Gabrielle Vance** 474 5140 gtvance@alaska.edu

STUDENTS

Terry P. Dickey Education Intern Mallory Jones **Amanda Spencer** Terry P. Dickey Education Intern Katie Tasky Alaskans Intern

Funding for student positions in the education department is provided through two endowments. Donations to the Alaskans and Terry P. Dickey funds cover UAF student salaries. Student employees process kit loans, do object database work, and conduct programs. Our students are often the faces people see at outreach fairs and on weekends. We are grateful to have these talented and dedicated UAF students working with us.





RIGHT, TOP TO BOTTOM: Jennifer Arseneau, Peggy Hetman, and Dan David staff a museum table at the Tanana Valley State Fair. Intern Amanda Spencer helps a young explorer during Family Day: Maskarade.



Production Unit

Exhibits – Design – Media

POLAR VOICES AN EPIC AUDIO ADVENTURE

SEASON ONE: The museum's production team produced the first season of a new part-scripted, part-interview audio drama. PoLAR Voices educates the public on climate change science and community issues through an episodic story line.

This adventure-mystery is constructed of present day research spoken by those who study and those who are affected by change at the poles. These fully-produced programs include layers of multilingual voice acting, ambient sound, and a strong sense of place. Episodes 1-6 and companion interviews are now available at the polar hub.org and on iTunes.

PoLAR Voices is part of the Polar Learning and Responding Climate Change Education Partnership, led by Columbia University and funded through the National Science Foundation. The project is an exploration of new ways to talk about climate change.

On the eve of a climate change conference, a mysterious visitor arrives at the museum. She begins noticing the polar bears have all gone missing from the museum displays. Is Aurora detective, suspect, or just someone who likes opening a closed door?

A companion blog on the making of *PoLAR Voices* can be found at polaraudio.wordpress.com.

PREVIOUS PAGE: Visitors enjoy a summer day outside the museum. Banners visable for the Denali Legacy: 100 Years on the Mountain exhibit.



Columbia Climate Center

EARTH INSTITUTE | COLUMBIA UNIVERSITY









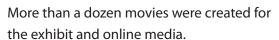
ARCTIC ODYSSEY VOYAGES OF THE R/V SIKULIAQ

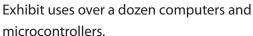
After years of planning, Arctic Odyssey opened in May 2014 in the Special Exhibits Gallery. The exhibit includes objects donated by the UAF School of Fisheries and Ocean Sciences and the Seward Marine Center; photography and video captured on board the vessel; interactives designed by the production team; and interpretation directed by Curator Andres Lopez. It also marks the beginning of the research journey of the R/V Sikuliag, which is operated by the university.

This state-of-the-art, ice-capable research vessel will aid scientists as they search for answers to our most pressing oceanographic questions. The exhibit explores the ship and the science, while taking a look at a history of innovative oceanographic instrumentation.



April Munson





First use of in-house 3D printed objects for an exhibit.

CLOCKWISE FROM TOP: Visitors explore the new special exhibit *Arctic Odyssey: Voyages of the* R/V Sikuliag at the opening. The exhibit's Science Control Room is modeled after the ship's. Kids (and grownups!) can explore arctic animals with the museum's video microscope. The view from the museum seen through the sculpture *Talauti* by Jon Bohning, created as part of the outdoor art show inspired by the exhibit.









SOLAR STORM: PLANETARIUM FILM

Solar Storm is a 12-minute film that explores the wonder of the northern lights. It is produced in a full-dome format for traveling and mid-sized planetariums. The film highlights Alaska Native stories, the science of the lights, and the experiences of photographers dedicated to capturing the lights on film. Solar Storm celebrates the wonder of searching for, experiencing, and coming to terms with this massive and surprising phenomenon.

The film was released in April of 2013.

BELOW: A still from the film Solar Storm with photography by Poul Jensen



NEW ONLINE MEDIA (You Tube and iTunes)

- Denali Legacy: The Installation (September 2013)
- Exploring Arctic Ecosystems (September 2013)
- Hibernation: The Installation (September 2013)
- Expanding Spaces (September 2013)
- Bird Specimen Preparation (September 2013)
- Behind the Scenes Tours (October 2013)
- Thalattosaur: Racing the Tide (October 2013)
- Arctic Currents: Teaser Trailer (March 2014)
- Arctic Odyssey (2014)

Trailer (April)

In the Making (May)

Stories of the Sea (May)

Working on Deck (May)

Ships of Opportunity (May)

Food Source (May)

Eye on the Arctic (June)

Flow (June)

Caught in the Mix (June)

Ice Capable (June)

Team Building (June)

Out to Sea (June)

The Installation (June)

PRESENTATIONS AND TRAVEL

Topp R. July 2013. Expedition Dinosaurs recording. Yukon River, AK.

Topp R. October 2013. Association of Science and Technology Centers Conference. Albuquerque, NM.

Topp R. October 2013. PoLAR Annual Meeting. New York, NY.

Topp R and T Martz. October 2013. GOA planning museum visits. San Francisco, CA. Monterrey, CA. Salt Lake City, UT.

Topp R. November 2013. Arctic Currents Presentation. Coastal Marine Institute. Fairbanks, AK.

Gobroski K. December 2013. PoLAR Voices recording. American Geophysical Union Conference. San Francisco, CA.

Topp R. January 2014. PoLAR Voices Interviews, New York, NY.

Topp R, T Martz and **S Bouta**. February 2014. GOA planning museum visits. New York, NY. Washington, D.C. Raleigh, NC.

Topp R. April 2014. PoLAR Voices recording. Arctic System Science Week / Arctic Observing Summit. Helsinki, Fl.

Foss H. May 2014. Research for Arctic Currents. Spring Whaling. Barrow, AK.

Martz T. June 2014. American Association of Museums Conference. Seattle, WA.

PUBLICATIONS AND GRAPHIC DESIGN PRODUCTS

With Senior Collections Manager **Angela Linn** developed a large interpretive panel to accompany the re-installation of the Curtiss JN-4D (Jenny) Biplane, at the Fairbanks International Airport.

With Education & Public Programs and Marketing & Communications, developed branding and promotional materials for the first Museum Sleepover. Continued annual redesign of promotional materials for Family Days and the School Program handout with inserts promoting Educators' Night, museum kits, and the docent program.

With Marketing & Communications Manager Theresa Bakker, developed promotional materials for the Behind-the-Scenes Tours and the Night Out at UAMN series of events.

Promotional graphics included ads for Where, the Alaska Railroad Panorama magazine, Bearfoot Guides, and the Fairbanks and Convention and Visitors Bureau, as well as ads for the museum's Military Appreciation Day and Open House, and UAF's Welcome Back Students campaign.

Along with UAMN Marketing & Communications and UA OIT, designed and launched the new website on April 7, 2014. Work began in June 2013.

The annual report followed the newly-designed format for the second year. With Marketing & Communications, designed the 86-page annual report for both online and print.

GRANTS AWARDED:

The North Pacific Research Board has made an award to the mammals collection and the museum's production team for marine mammal curation and education outreach in the form of a lab-work documentary and temporary collections exhibit display at UAMN in 2016-2017. (\$3,500 outreach component)

OTHER PROJECTS AND INSTALLATIONS

Worked with eight artists from the UAF community to install six outdoor art pieces inspired by the theme "arctic exploration" to coincide with the Arctic Odyssey exhibit.

Assisted the Fairbanks Children's Museum in setting up their interactives in the museum's auditorium during the winter of 2013-2014 and helped them dismantle the exhibit in the spring.

Installed an exhibit of dinosaur tracks from the earth sciences department's 2013 fieldwork on the Yukon River.

Installed interpretive panels for the museum's Kolmakovsky Blockhouse outdoor exhibit.

Continued work on the museum's 25-minute animated film Arctic Currents: A Year in the Life of the Bowhead Whale, which tells the story of bowhead whale annual migration in the Bering, Beaufort, and Chukchi Seas. Work on the film concludes in January of 2015.

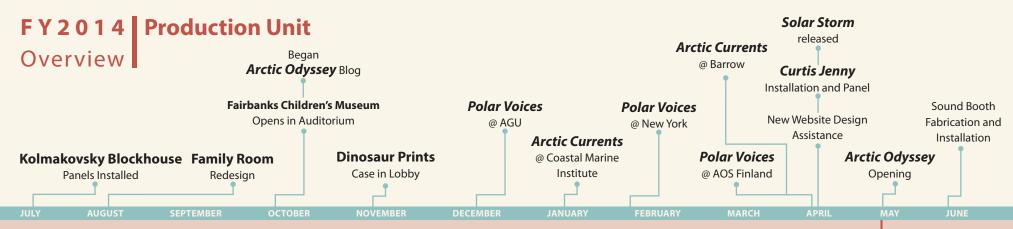
Arranged for carving of the museum's annual ice sculpture, a companion piece to the Denali Legacy exhibit by local artist Keven Laughlin.

Fabricated a portable sound booth to improve the audio quality of museum productions.

тор то воттом: Exhibit & Graphic Designer Tamara Martz and Student Assistant Nathan Feemster install a panel on an exhibit of dinosaur tracks collected during fieldwork on the Yukon River. Animator/Modeler Hannah Foss shows a model of the R/V Sikuliag created with the museum's 3-D printer during a demonstration with a class from Athens, GA over Skype.







DENALI LEGACY

100 Years on the Mountain

ARCTIC ODYSSEY
Voyages of the R/V Sikuliaq

STAFF LISTING

Roger Topp Head of Production rmtopp@alaska.edu 474 6985 Coordinator of Exhibitions & Design Steve Bouta 474 6953 sfbouta@alaska.edu **Tamara Martz Exhibit & Graphic Designer** tfmartz@alaska.edu 474 6951 **Hannah Foss** Modeler/Animator 474 1197 hrfoss@alaska.edu Digital Media Producer **Kelsey Gobroski**

kagobroski@alaska.edu

STUDENT ASSISTANTS

Nathan Feemster Jasmin Johnson

474 1197



CLOCKWISE FROM TOP LEFT: Animator/Modeler Hannah Foss stands with Kate Stafford during a trip to Barrow to scout out whales for the animated film *Arctic Currents*. Children explore a prototype of a trace elements interactive for the *Arctic Odyssey* exhibit during the museum's Open House. Exhibition & Design Coordinator Steve Bouta works on another interactive for the *Arctic Odyssey* exhibit.







Museum Store – Admission – Tours – Events

THE YEAR-IN-REVIEW

Operating the visitor services and retail operations department consists of overseeing the Museum Store, running the admission and information counter, scheduling and selling tickets for movies in the auditorium, event rentals, and gallery security. Over the last few years, our department has focused on employee training and customer service.

Our total department consisted of 29 people:

- 4 full time staff
- 25 university students and temporary employees

MUSEUM STORE RENOVATION

During the last quarter of FY14, the museum began an expansion and remodel of the Museum Store. We were able to remove one wall and increase the usable sales floor footprint by 120 square feet. Additional features include new carpet, freshly painted walls, and new glass shelving. The remodel will continue into FY15, with new free standing floor fixtures, lighting and wall displays. Ultimately, this remodel will allow us to offer an increased selection of Alaska-made products from artists around the state to museum visitors.





CLOCKWISE FROM TOP LEFT: Supervisor Marcus Avugiak puts the final touches on the Christmas tree at the museum during the 2013 holiday season. The Museum Store features a wide range of Alaska made products, including scarves and other items knitted from qivuit, the wool of the muskox. Members of the Fairbanks Summer Arts Festival at UAF performed an a capella arrangement during the summer of 2014. Children enjoyed a variety of displays in the museum's research labs during the annual Open House.





INCREASED VISITATION

Working closely with Explore Fairbanks and the Alaska Travel Industry Association, we hosted 222 visiting tour operators and travel writers during this fiscal year. Working with these operators and writers was a great way to gain valuable exposure. This year we almost doubled our visits from the previous fiscal year by hosting 125 familiarization tours.

The museum hosted 29 public events during the year. Three of these were free and open to the public. More than 2,500 people visited the museum at no cost.

Total visitation in FY14 grew to 94,218. In addition to a very busy summer season, we saw a dramatic increase in visitation during the winter months due to a strong tourism push which included the 2014 Arctic Winter Games. Additionally, the Fairbanks Children's Museum opened a special exhibit in the Museum Auditorium. The daily schedule increased visitation and we were able to offer two amazing museums in one.

The museum's total visitation income this year was \$1,446,245. After all expenses were accounted for, 42% of the department's total income, or \$601,807, was used to support museum programs for education, exhibits, collections, and research.





VISITATION

Summer months:

May, June, July, August, and September: 52,693 total visitors Increased over previous year

Winter months:

October, November, December, January, February, March, April: 41,525 total visitors. Increased over previous year



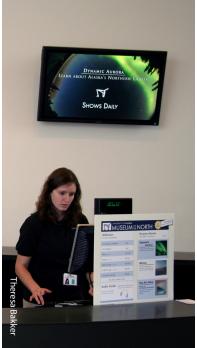
TOTAL MUSEUM REVENUE













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VISITOR SERVICES ATTENDANTS

Madeline Arima **Brittany Jacson** Claire Ashmead Chelsea Jackson Codi Burk **Ashley Jacobs** Sarah Day Saeko Kuwabara Georgia Durden **Ashley Paris Brandon Elkins** Morgan Simpson Lance Ellanna Sarita Spindler Cassandra Ellis **Baily Stevenson** Gabe Garcia **Tiffany Summers** Reid Goneau Amelia Tulim Eleanor Guthrie Jayce Williamson Mikayla Hamin Gage Wright **Madison Hoisington**

LEFT, CLOCKWISE FROM TOP LEFT: A fireworks display on the University of Alaska Fairbanks campus drew more than a thousand people to the musuem's warm-up booth. UAF students are a valuable part of the museum visitor's experience at the UA Museum of the North. Arctic Winter Games evening reception at the museum. Curious kids of all ages explored the museum's research labs during the annual Open House in January. A lunch break at the museum during the Fairbanks Convention and Visitors Bureau's China FAM (familiarization) tour.



Research and Collections

Alaska Center for Documentary Film



Alaska Center for Documentary Film





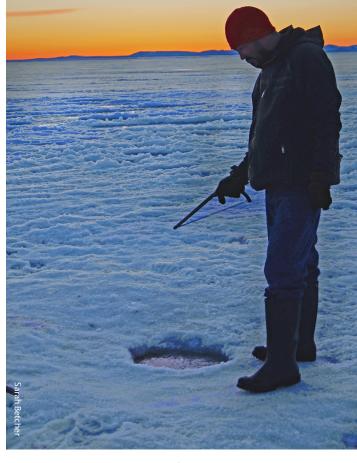
The past year has been a full and productive one at the Alaska Center for Documentary Film. Our major focus has been on film restoration, the completion of our Global Indigenous Migration research initiative in Tanzania, and the start of a new collaborative project with UAF Disabilities Services.

RESTORATION

The film center has recently completed the restoration of its award winning film, Uksuum Cauyai: The Drums of Winter. The naming of the film to the National Film Registry of the Library of Congress in 2006 means preserving the work for future generations. Thanks to generous grants from the National Film Preservation Foundation and the Rasmuson Foundation, the film center was able to undertake a full photochemical and digital restoration of the film.

Working in close collaboration with the preservation specialists at SummitDay Media in Anchorage, digital audio specialists at Chase Audio in Los Angeles, and film restoration experts at ColorLab in Rockville, Maryland, a preservation plan was developed that utilizes advanced photochemical and digital preservation technologies. The final products are 16mm preservation elements that will help ensure the survival of the film for many generations and a digital HD master that restores the work to its original cinema quality.

With the completion of the restoration project, Drums of Winter began a statewide and national tour to bring the film and its expression of Yup'ik values to a wider public. The first showing was held at the Library of Congress Packard Theater in Culpeper, Virginia. Screenings and discussions are planned for Anchorage, Bethel, Los Angeles, New York, and other cities.



ABOVE FROM LEFT TO RIGHT: Drums of Winter original negatives awaiting inspection at SummitDay Media in Anchorage. The restoration team, L to R, Mike B, Eric Poryles digital colorists, Len Kamerling, Chris Huges, film color timer, Sarah Elder, Drums co-director, and Bob Curtis-Johnson, restoration project coordinator. An image from Sarah Betcher's film.



Alaska Center for Documentary Film



KIBAYA CONVERSATIONS

Throughout the year, research and production continued on *Kibaya Conversations*, an intense, 60-minute film about a Maasai community coming to grips with its own precarious economic and health vulnerabilities. It is the last work in our "trigger film" series of culture-specific health intervention and HIV/AIDS education videos. This film is one of five produced as part of the Maasai Migrants Project, an initiative in applied visual anthropology to address the global crisis of urban indigenous migration.

We are currently working long-distance with our Maasai collaborators in Tanzania to refine the English translations, produce informational context, and complete the project. The completion of *Kibaya Conversations* brings the Tanzania field work aspect of this project to a close. With five completed films and years of

production and field testing, we are exploring the option of moving this applied intervention technique to the North.

INNOCENT EYE

In the fall of 2013, the film center presented an exhibition titled, *Innocent Eye: The Africa Photographs of Adrina Knutson*, curated by **Leonard Kamerling**. This exhibition presented 32 thematically-linked photographs of Maasai culture. It celebrated the work of the late UAF film student **Adrina Knutson** and her vision of the physical and emotional landscape of Maasai life. The project was funded by the UAF People's Endowment. *Innocent Eye* traveled to Kenny Lake, Alaska, Knutson's home town, where it was exhibited in December 2013. Other venues are being planned. A book based on the exhibition photographs and Knutson's journal is currently in production.

STRANGE AND SACRED NOISE

The film center, together with the Pulitzer Prize-winning composer John Luther Adams, co-published *Inuksuit*, a double CD/DVD album. *Inuksuit* presents the recording of Adams' original composition together with Len Kamerling's documentary, *Strange and Sacred Noise: John Luther Adams and the Music of Place*. The film documents the wilderness performance of Adam's monumental percussion cycle of the same title.

In Spring 2014, we began the production of a new film about a local Fairbanks artist who experiences Asperger's Syndrome. The film, *Ryan Matthews:*Basically Me, was produced in collaboration with UAF Disabilities Services as part of a UAF People's Endowment Award exhibition titled From *Thomas*

ABOVE: A panorama of the *Innocent Eye* exhibit, curated by Len Kamerling, on opening night in September 2013.



Alaska Center for Documentary Film

the Tank Engine to the White Pass: The Journey of an Artist Who Experiences Autism Spectrum Disorder, curated by Mary Mathews. The film, Ryan Matthews: Basically Me, will be shown in the UAF art gallery in October 2014.

COLLABORATIONS

Sarah Betcher, MA Cross Cultural Studies, UAF 2013 – Sarah Betcher is an emerging ethnographic filmmaker interested in the relationships between communities and their environment. A former graduate student who studied ethnographic film theory and production with curator Leonard Kamerling, she is currently working in collaboration with with the film center on a multi-part series on subsistence reliant communities impacted by climate change.

Hyeon Doc Cheong, visiting researcher from the Korean Broadcasting

Corporation – This year the film center welcomed Hyeon Doc Cheong, a visiting researcher from the Korean Broadcasting Corporation and an award winning television director / filmmaker who has made films on a variety of environmental subjects. Mr. Cheong will spend one year working at the film center researching the film collections and planning a multi-part documentary series on climate change and culture in the far north.

SIGNIFICANT ACQUISITIONS

As part of the *Drums of Winter* restoration project, the film center has acquired approximately 12,000 linear feet of new, archival quality film preservation elements. Two of the new 16mm copies acquired will go to the Library of Congress for storage in the nation's film vaults, in perpetuity. Other preservation materials will reside in the UAF film vault.

The film center also acquired approximately 20 hours of new original visual materials from the Kibaya Conversations project and from the in-progress film on art and autism.

STAFF LISTING

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Sarah Betcher Film Editor and Research Associate

Visiting Researcher **Heyon Doc Chong**

RESEARCH ASSOCIATES AND AFFILIATES

John Luther Adams

Sarah Betcher

Sarah Elder

Matthew Gilbert

Kathy Turco

CONFERENCE PRESENTATIONS

Kamerling, L. 2014. Keynote Address, Ethnograpic Film and the North: A History in Three Acts. Alaska Anthropological Association, Fairbanks, AK.





ABOVE, LEFT TO RIGHT: Visiting filmmaker Hyeon Doc Cheong in the Brooks Range. Sarah Betcher filming out on the sea ice.



Research and Collections

Archaeology



OVERVIEW

The archaeology staff saw many changes during the last fiscal year. Josh Reuther was hired as the new full-time curator of archaeology in 2013, taking over for **Jeff Rasic**, who served as the acting curator of archaeology for five years (2008 – 2013). **Scott Shirar** was named the new archaeology collection manager. **James Whitney** was the previous collection manager, a position he held for 13 years (2000 – 2013). **Sam Coffman** was hired as the new research archaeologist, taking over for Shirar, who was the research archaeologist for five years (2009 – 2014).

Archaeology curatorial assistant **Fawn Carter** finished her MA at UAF in biological anthropology, graduating during the 2014 spring semester. Fawn has worked in the archaeology department since 2007, when she was an undergraduate student, and will continue her curatorial position in the department on a full-time basis.

CLOCKWISE FROM TOP: Curator Josh Reuther at a site on the Beaufort Sea Coast. Collection Manager Scott Shirar and the ASRA archaeology module field crew backfilling their excavation at the Simpson Site near

Fairbanks, Alaska. Research Archaeologist Sam Coffman shows off artifacts from the archaeology collection during the museum's 2014 Open House.

PREVIOUS PAGE: UAMN archaeologist Fawn Carter (foreground) excavating at a historic gold rush era cabin site near Chicken, Alaska.

RESEARCH AND FIELDWORK

During the past year, the archaeology department continued ongoing studies while also starting several new collaborative research efforts. The ongoing work included lab analysis and reporting for a multi-year research grant through the National Park Service that looked at three late prehistoric sites in the central-western Brooks Range with collaborators Jeff Rasic (National Park Service) and Eric Carlson (Historical Research Associates). Analysis was also carried out with the Chiqnik-Meshik Rivers Region Archaeological Reconnaissance Project, another multi-year research grant through the National Park Service with cooperation from the US Fish and Wildlife Service and the State of Alaska in collaboration with Loukas Barton (University of Pittsburgh) and James Jordan (Antioch University).







In July, the team led an archaeology module for UAF's Alaska Summer Research Academy (ASRA) for the fourth time in the last five years. Ten high school students joined the archaeology department on an excavation at the Simpson Site, located on private land close to Fairbanks. Museum staff assisted with two excavations led by the Bureau of Land Management, one at a gold rush-era log cabin near Chicken, Alaska and the other at a late prehistoric site on Point Spencer on the Seward Peninsula.

Sam Coffman completed work in the upper Teklanika River Valley in Denali National Park, documenting and collecting rhyolite samples. Initial geochemical results suggest this raw material was utilized by some of the earliest people living in Alaska. Museum staff also assisted with archaeological reconnaissance work within the Matanuska-Susitna Borough. The department entered into a new agreement with the National Park Service to carryout fieldwork and research in Katmai National Park during FY15.

Josh Reuther continued his geoarchaeological and paleoecological research on the Upward Sun

LEFT TO RIGHT: ASRA archaeology student Taylor Holman holds a 2000-year-old stone tool she excavated at the Simpson Site near Fairbanks, Alaska. Students take turn digging for clues and taking notes during the ASRA archaeology module at the Simpson Site near Fairbanks.

River Project, directed by Ben Potter from the Department of Anthropology at UAF, and along the Middle Kuskokwim River region with Jason Rogers and Robert Bowman (Northern Land Use Research Alaska), Chris Wooley (Chumis Cultural Resource Services), Patrick Druckenmiller and Kevin May (Earth Sciences, UAMN), and Thomas Bundtzen (Pacific Rim Geological Consulting). Reuther also continued work on the potential effects of volcanic ashfalls to local ecosystems and human land use in Interior Alaska, including a new collaborative effort in the Upper Susitna River region with Nancy Bigelow, Matthew Wooller, and Katherine Mulliken (UAF), Justin Hays (Northern Land Use Research Alaska), and Kristi Wallace (USGS). The archaeology department cherishes these collaborations and looks forward to another fruitful year of research.

CARING FOR COLLECTIONS

Work this year included overhauling the department's collections database while also incorporating several newly-deposited accessions into the museum's collections range. A grant through the Institute of Museum and Library Service's Museums for America program provided funding to improve the databases for both the archaeology and ethnology & history collections. Both departments began to transition collections information into Arctos, a powerful database that will make collection information available online. This represents a major upgrade for both departments. New archaeological collections from Army lands in Alaska were incorporated into the collection with funding provided to the archaeology department during FY13. Two important collections owned by





Archaeology

the Bureau of Land Management were deposited during FY14. Artifacts from the Mesa Site, a Late Pleistocene/Early Holocene occupation on the North Slope excavated in the late 1970s and early 1980s, were deposited in December 2013. In May 2014, the Bureau of Land Management deposited approximately 300 cubic feet of collections made by Edwin S. Hall Jr. from sites in the central-western Brooks Range during the 1960s and 1970s. These collections had been stored in Dr. Hall's laboratory in upstate New York for years and are mainly artifacts and fauna from the Late Prehistoric Site of Sikoruk at Tukuto Lake. Work is ongoing to upgrade and integrate these collections and will continue into FY15.



To the Museum

UAMN Research Assistant Sam Coffman and his colleagues discussed the Alaska Summer Research Academy (ASRA) archaeology module at the Alaska Anthropological Association's annual meeting in Fairbanks in March 2014.

This popular ASRA module lets high school-aged kids get their hands dirty digging for artifacts while learning the techniques and principles of archaeology. They also get a taste of local history. In 2013, students explored the prehistoric Simpson site, located along the Tanana River near the Rosie Creek subdivision outside Fairbanks. The site was discovered in the 1990s when the previous land owner turned up some chipped stone flakes while digging post holes for a woodshed.

The family called the university to report the discovery and reached a professor in the UAF anthropology department who did some tests and confirmed that it was an archaeological find. It was recorded by the state, which keeps a database of sites across Alaska.

The ASRA crew returned to the site in July 2013 to open up more ground, said UAMN Archaeology Collection Manager Scott Shirar. "We want to get a bigger artifact assemblage to give us a better idea of what's going on out here. We're also hoping to find some organic material and get some radio carbon dates for this site."



The students found maybe a hundred artifacts, including a bi-facially flaked knife, which got everybody fired up to do some more digging.

The presentation was part of a session called "Community-based Archaeological Heritage Management: Exploring Pathways for Effective Collaboration." The session examined the challenges and opportunities of delivering community cultural resource management and archaeology projects.

RIGHT: A student holds up a tiny artifact collected during the ASRA archaeology module field crew excavation at the Simpson Site during the summer of 2013.

The archaeology department also received a partial payment of the curation fees due from the U.S. Navy for the Carter Collections, which includes an estimated 26,000 artifacts from the Birnik, Nuwuk, and South Nunavak sites near Barrow, Alaska. The Carter Collection was initially deposited during FY12, and this funding will be used in the coming years to upgrade storage and finalize the permanent integration of these artifacts.

During FY14, archaeology department staff made efforts to initiate consultation with several Alaska Native communities as it pertains to the Native American Graves Protection and Repatriation Act (NAGPRA). These efforts led to drafting a Notice of Inventory Completion with the village of Barrow, which is currently under review at the National NAGPRA office in Washington D.C. and should lead to a successful repatriation during FY15.

RESEARCH ASSOCIATES

Claire Alix Erica Hill

Christopher Houlette Jenya Anichenko

Jeff Rasic Julie Esdale

Brian Hemphill **Howard Smith**

LEFT TO RIGHT: Gomez Coutouly holds an artifact from the museum's archaeology collections that he is making sketches of for research into the microblades left behind by prehistoric people when they made stone tools. Yan Axel Gomez Coutouly studies the prehistory of the North Pacific. He was studying microblade artifacts in the archaeology collections at the UA Museum of the North in the fall of 2013.

What the microblades revealed

Yan Axel Gomez Coutouly studies the prehistory of the North Pacific. One way to better understand how people lived before written records is to examine the tools they used, such as the clues left behind by artifacts unearthed in various excavations documented in the archaeology collections at the UA Museum of the North.

Gomez Coutouly, a member of the Prehistory and Technology Laboratory from the Paris West University Nanterre La Défense in France, worked with microblade collections at the museum in the fall of 2013. He was focusing on areas like Anangula, Hidden Falls, and Ground Hog Bay to compare with other materials he has studied in Siberia and Alaska. "The museum has lots of collections that are of interest to me since I'm presently working on Alaskan material and planning to do excavations around the Tanana Valley."

One compelling piece of evidence in the quest to understand ancient societies is the microblade core left behind in the manufacturing of stone tools. These barrel-shaped stones, the nucleus of the original rock, usually have flat tops and one or more fluted surfaces left behind during the creation of the microblades.

In the museum's archaeology lab, Gomez Coutouly traced the ridges on the cores, sketches he'll use to create detailed drawings back in his own lab. This isn't the first time Gomez Coutouly has looked for clues in the museum. He spent a few months in Fairbanks in 2006 working with the collections as part of his doctoral thesis.







ARCHAEOLOGY STAFF

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Sam Coffman Research Archaeologist 474 6819 sccoffman@alaska.edu

Fawn Carter Curatorial Assistant **Curatorial Assistant** Lori Hansen **Ryan Nordstrom** Curatorial Assistant

CONFERENCE PRESENTATIONS

Coffman, S, S Shirar, and C Houlette. 2014. From the Field to the Museum: Results from the 2013 ASRA Archaeology Module. Oral presentation, Annual Meeting of the Alaska Anthropological Association, Fairbanks, AK.

Coffman, S and JS Adams. 2014. When is Small too Small? Microblade Core Discard. Poster presentation, Annual Meeting of the Alaska Anthropological Association, Fairbanks, AK.

Olmedo, K, JS Rogers, J Baxter-McIntosh, JD Reuther, CB Wooley, and RC Bowman. 2014. Upland Archaeology: Newly Identified Prehistoric Sites Across the Alaska Range Divide. Oral presentation, Annual Meeting of the Alaska Anthropological Association, Fairbanks, AK.

Druckenmiller, PS, KC May, JD Reuther, TK

Bundtzen, and JS Rogers. 2014. Paleontological **Resources and Cultural Resources Management:** A Case Study form the Kuskokwim River, Alaska. Oral presentation, Annual Meeting of the Alaska Anthropological Association, Fairbanks, AK.

Reuther, JD, RC Bowman, M Gutoski, PM Bowers, T Cole, J Whitney, and B Witte. 2014. The Community at the Chena Townsite: A Perspective from Historical Archaeology. Oral presentation, Annual Meeting of the Alaska Anthropological Association, Fairbanks, AK.

Reuther, JD, JS Rogers, TK Bundtzen, RC Bowman, KC May, PS Druckenmiller, K Wallace, and CB Wooley. 2014. Late Quaternary Landscapes Along the Central Kuskokwim River. Oral presentation, Annual Meeting of the Alaska Anthropological Association, Fairbanks, AK.

Wooley, CB, JS Rogers, and **JD Reuther**. 2014. Integrating Community, Culture and Research into CRM: Alaskan Examples. Oral presentation, Annual Meeting of the Alaska Anthropological Association, Fairbanks, AK.

Coffman, S and JT Rasic. 2013. Rhyolite Sourcing in Eastern Beringia. Oral presentation, Paleoamerican Odyssey Conference, Santa Fe, NM.

REPORTS

King, R, **S Shirar**, and W Hedman. 2014. Progress Report on tasks identified in Section I.C. of the Trans-Alaska Pipeline System (TAPS) Programmatic Agreement.

Reuther, JD, PS Druckenmiller, JS Rogers, TK Bundtzen, **KC May**, and RC Bowman 2014. Results of the 2013 Paleontological Resources Survey of the Proposed Donlin Gold Lease Boundary Area and Adjacent Sections of the Kuskokwim River, Alaska. Report prepared by the University of Alaska Museum of the North and Northern Land Use Research Alaska, LLC, Fairbanks, under contract to Donlin Gold LLC.

Reuther, JD, RO Stern, JB Coltrain, PM Bowers, D O'Rourke, and J Tackney. 2014. Radiocarbon Dating, Molecular Genetics and Stable Isotopes Results on Late Holocene Skeletal Remains from Kivalina, Northwestern Alaska. Report prepared by the University of Alaska Museum of the North and Northern Land Use Research Alaska, LLC, Fairbanks, for the Kivalina City Council and the Kivalina IRA Council, Kivalina, Alaska.

Shirar, S. 2013. FY2013 Report on Curation of Archaeological Collections under the Cooperative Agreement between the Bureau of Land Management and the University of Alaska Museum, Agreement #L09AC15380.



Research and Collections

Earth Sciences



Earth Sciences

ALASKAN DISCOVERIES

In July 2013, a team from the earth sciences department, led by Curator Pat Druckenmiller and Operations Manager Kevin May, made a major new discovery of Alaska dinosaurs along the lower Yukon River. The team traveled by boat, beginning their expedition in Fairbanks and travelling 500 miles along the Tanana and Yukon Rivers to Kaltag. All told, thousands of dinosaur tracks were found, along with beautifully preserved plant fossils. Approximately one ton were collected and shipped back to the museum.

A small exhibit highlighting some of the finds is now on display in the museum lobby. This exciting discovery represents one of the three most significant dinosaur sites known in Alaska (along with the Colville River on the North Slope and Denali National Park and Preserve). The earth science department is planning many more years of field work to document the different types of dinosaurs and the ancient environment in which they lived.

Curator Druckenmiller is also working with Florida State University paleontologist Gregory Erickson on a NSF-funded project to study arctic dinosaur paleobiology. In a paper published this year, they reported on the occurrence of a new

type of dinosaurs in Alaska – ornithomimosaurs - a group of mostly toothless, medium-sized meat-eating dinosaurs (theropods) that bear a strong resemblance to living ostriches.

In August 2013, Druckenmiller and Erickson returned to the Colville River with Earth Sciences Collection Manager Julie Rousseau and May. The most significant result of the trip was the discovery of a new dinosaur bone bed. The site was partially excavated and produced the remains of several rare species of dinosaurs that help to better reveal the faunal composition of this area about 70 million years ago.

In March, graduate student **Hiro Mori** successfully defended his PhD dissertation titled "Osteology, Relationships and Paleoecology of a New Arctic Hadrosaurid (Dinosauria: Ornithopoda) From The Prince Creek Formation of Northern Alaska".



Hiro has been with the earth sciences department for five years and has since returned to Japan and is affiliated with Kagoshima University.

Fossil preparation expert J.P. Cavigelli from the Tate Museum in Casper, Wyoming traveled to Fairbanks for a second time to continue his work on the exceptional thalattosaur specimen found in Southeast Alaska in 2011. Cavigelli made good progress during his two-week visit and will be able to complete the preparation of this skeleton in the coming year.

ABOVE, LEFT TO RIGHT: Greg Erickson poses with fossilized tree trunks along the Colville River. Curator Pat Druckenmiller and Collection Manager Julie Rousseau load the "dinobarge" along the Yukon River.



Earth Sciences

Yukon River dinosaur discovery

An earth sciences crew of researchers found a major new site for dinosaur fossils in Alaska along the Yukon River in the summer of 2013.

The trip netted a ton of dinosaur footprints for the museum's collection.

"There aren't many places left in the world where paleontologists can just go out and find thousands of dinosaur footprints," Curator **Pat Druckenmiller** said.

"This is the kind of discovery you would have expected in the Lower 48 a hundred years ago."

On a sunny day in late July, an unusual entourage of four inflatable boats arrived at the landing in Kaltag, a community of about 200 people on Alaska's lower Yukon River. The flotilla's arrival marked the end of a 500-mile journey that began two weeks earlier in Fairbanks. The University of Alaska Museum of the North team, led by Druckenmiller and Operations Manager **Kevin May**, had just successfully completed a river expedition first conceived many years earlier when May imagined exploring parts of the middle and lower Yukon River by boat.

"We have worked in numerous dinosaur track-bearing formations in Alaska and Canada, but now we know the lower Yukon River area is by far the most productive that we have seen to date," May said.

They found much more than they expected – dinosaur footprints big and small, from both meat- and plant-eaters. "A great diversity of dinosaur types," Druckenmiller

said, "evidence of an extinct ecosystem we never knew existed."

The dinosaur footprintbearing rocks along the Yukon River are

probably about 25-30 million years older than what's been found in Denali Park. In contrast, the tracks along the Yukon River are so abundant, the team collected as many as 50 specimens in as little as ten minutes.

One of the reasons the Yukon River dinosaur tracks may have gone undiscovered for so long is their mode of preservation – they are natural casts formed when sand filled in the actual footprint made originally in mud.

"These are not negative impressions,"
Druckenmiller said. "Rather they stick out from

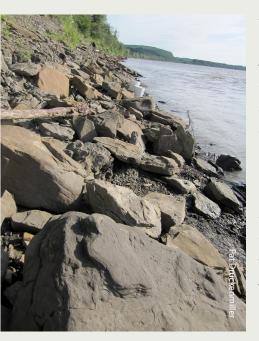








Earth Sciences



the rock and sometimes look like blobs with toes."

The discovery is significant in that the Yukon River fossils are geologically older than other major sites in the state and that they preserve a record of dinosaurs previously unknown in the state. The museum is working with villages and Native corporations along the Yukon River to share information about the discovery with local communities and to coordinate future exploration.

The research team also included Jørn Hurum, from the University of Oslo Natural History Museum, UAMN Earth Sciences

Collection Manager Julie Rousseau, and UAF students Meghan Shay, Katherine Anderson, and Williams College student Meg O'Connor.

Head of Production Roger Topp filmed the expedition for a film and exhibit the museum is planning for the summer of 2015, Expedition Alaska: Dinosaurs.

CLOCKWISE FROM TOP LEFT: Meat eating dinosaur footprint from the Yukon River. A dinosaur track exposed along the rocky shoreline of Yukon River. Hind foot print of an herbivorous dinosaur. The crew found many dozens of dinosaur tracks along just this one beach. From left: Paul McCarthy, Julie Rousseau, Meghan Shay, Katherine Anderson, Meg O'Connor, Pat Druckenmiller, and Jørn Hurum.

SHARING THE PASSION

The earth sciences department participated in many outreach activities this year. Staff and students shared their knowledge of paleontology with more than 350 kids during the Dinosaur Family Day and with hundreds of grown-ups during the first edition of Night Out at the UAMN.

As part of her NSF Changing Alaska Science Education GK-12 fellowship, graduate student **Katherine Anderson** journeyed to Nuigsut in February to meet and work with teachers of the North Slope Borough School District to develop lesson plans about polar dinosaurs that incorporate aspects of the Iñupiag Learning Framework. In April 2014, Druckenmiller and Anderson put these lesson plans to use during an outreach visit to Barrow, AK. They worked with 226 students at Hopson Middle School and Barrow High School. The outreach work will continue in the next year on the North Slope with a planned visit to Native village of Nuigsut, on the Colville River.







RIGHT, TOP TO BOTTOM: Curator Pat Druckenmiller is seen through the teeth of a tyrannosaur talking to visitors during the museum's Family Day: Dinos. A young visitor touches the teeth of a skull in the earth sciences research lab during the museum's 2014 Open House. Curator Pat Druckenmiller demonstrates how footprints are preserved as fossils in the Education Center during Family Day: Dinos



Earth Sciences

Bon anniversaire, Blue Babe

It's been 30 years since the UA Museum of the North unveiled a startling display in the Gallery of Alaska. Blue Babe, an exceptional mummified steppe bison, had been reserved in Interior permafrost since the Ice Age. Gold miners discovered the specimen in 1979 and donated it to the museum.

Collagen from the animal's well-preserved skin was originally dated to 36,000 years old when first radiocarbon-dated in the 1980s. But that number will soon be a much more precise understanding of this celebrated specimen. The UAMN earth sciences and archaeology departments are collaborating with the Center for Applied Isotope Studies at the University of Georgia to radiocarbon date new samples from Blue Babe. CAIS is analyzing hide, hair and bone collagen from those samples with state-of-the-art techniques. Accelerator Mass Spectrometer (AMS) radiocarbon dating provides more precise estimates than earlier methods in use during the 1980s. Initial results indicate that Blue Babe may have lived more than 50,000 years ago.

The animal gets its name from the mineral vivianite that formed on the skin when the body reacted with the minerals in the ground during its long burial. The nickname is also a tongue-in-cheek reference to Paul Bunyan's giant blue ox.

The gold miners were using a hydraulic hose to melt the frozen muck when they uncovered the bison's skull. They immediately contacted the university, where scientists were able to piece together the story of what happened to Blue Babe, thanks to the clues found along with the body in melting permafrost.

Claw marks on the rear of the carcass and tooth punctures in the skin indicate that the bison was killed by an American lion. The bison appears to have died during the fall or winter, when it was relatively cold. The carcass probably cooled rapidly and soon froze, which made it difficult for scavengers to eat.

Several years after the bison was discovered, a taxidermist from Finland arrived in Fairbanks to restore the specimen for exhibit. After treating and tanning the skin, he constructed a foundation to mount it on. The skull and bones have been preserved as part of the museum's earth sciences collection.

Even 30 years later, the bison is a rare specimen. Blue Babe is the only known display in the world of a steppe bison recovered from permafrost.



ABOVE: From the caption of the photo above, printed in the April 27, 1984 edition of the Fairbanks Daily News-Miner: VERY OLD BISON - Eirik Granqvist, chief head taxidermist for the Zoological Museum, University of Helsinski, Finland, works to restore the remains of a bison which died 36,000 years ago. The bison was preserved in permafrost until discovered three years ago. The specimen will soon be on display at the University of Alaska's museum.

The museum recently received an additional steppe bison specimen, known as Bison Bob. It was discovered in the summer of 2012 in the thawing bank of a river on the North Slope. Earth Sciences Curator Pat Druckenmiller says it is probably the most complete specimen of any Ice Age mammal ever found in Alaska. It is only missing a single shoulder blade.



Earth Sciences

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Julie Rousseau **Collection Manager** jirousseau@alaska.edu 474 6946

RESEARCH ASSOCIATES

Gregory M. Erickson, Florida State University Jørn Hurum, Natural History Museum Oslo, Norway. Josh Miller, University of Cincinnati

CONFERENCE PRESENTATIONS

Anderson, K, PS Druckenmiller, and J Baichtal. 2013. New material of *Toretocnemus* from the Late Triassic (Norian) of Southeast Alaska. Poster presentation, Annual Meeting of the Society of Vertebrate Paleontology, Los Angeles, CA.

Druckenmiller, PS, GM Erickson, D Brinkman, C Brown, and **H Mori**. 2013. Evidence for a distinct Early Maastrichtian polar dinosaur fauna from the Prince Creek Formation of Northern Alaska. Oral presentation, Annual Meeting of the Society of Vertebrate Paleontology, Los Angeles, CA.

Mori, H, PS Druckenmiller, GM Erickson, and A Prieto-Márquez. 2013. Cranial ontogeny of Edmontosaurus: Implications for the taxonomic status of the Prince Creek Formation species (Lower Maastrichtian, northern Alaska). Poster presentation, Annual Meeting of the Society of Vertebrate Paleontology, Los Angeles, CA.

Serratos, DJ and PS Druckenmiller. 2013.

Osteology of a new specimen of an elasmosaurid plesiosaur (Reptilia: Sauropterygia) from the Upper Cretaceous Bearpaw Shale, Montana. Poster presentation, Annual Meeting of the Society of Vertebrate Paleontology, Los Angeles, CA.

Rousseau, J and PS Druckenmiller, 2013.

Arctos for paleontology collections: Examples from the University of Alaska Museum Earth Sciences collection digitization project. Oral presentation, iDigBio Paleo Digitization Workshop, New Haven, CT.

Rousseau, J. 2014. Alaskan paleontology data in Arctos: Digital data from the University of Alaska Museum Earth Sciences collection. Oral presentation, Alaska Heritage Resources Survey Advisory Board annual meeting, Fairbanks, AK.







Research and Collections

Entomology



MILESTONE YEAR

This was another exciting year for the entomology department. Our dedicated team of lab technicians -- Marisol Bastiani, Samantha Burd, Megan McHugh, Sarah Meierotto, Nolan Rappa, Jayce Williamson, and Mary Wyatt -reached a databasing milestone of over 200,000 records. This accomplishment makes our online collection database the fourth largest for entomology in the United States.

We have also reached a milestone in now having museum specimen representatives of one-third of the arthropod species in Alaska (up from our last milestone of one-quarter). We've sent more specimens on loan this year (41 loans totalling 16,478 specimens) than ever before. Funds from the Alaska Department of Fish and Game, the Alaska Division of Agriculture, the U.S. Forest Service, and the U.S. Fish and Wildlife Service enabled these accomplishments.

Our efforts to produce DNA barcodes for approximately 1,500 species represented in our collection continues. We have submitted tissues to the Canadian Centre for DNA Barcoding from 2,280 specimens, of which 1,793 produced DNA barcodes. These represent 1,074 species, so we are nearing our goal.

PREVIOUS PAGE: UAF entomology class crossing Quartz Lake for weekend collecting trip: Logan Mullen (front left), Megan McHugh (mid left), Nolan Rappa (back, standing), boat pilot (back), Nina Sikes (right).

16,478 loaned

56,268 databased

1,074 **DNA** Barcodes

Other highlights include the publication of an exciting new species of snow scorpionfly (Caurinus tlagu) with graduate student **Jill Stockbridge**. This story was picked up by news agencies and a Google search on this species name yields 130,000 hits at press time. A major update to the checklist of one of the largest groups of insects in Alaska, the beetles, was published as a hardback book covering all beetle species of Canada and Alaska (8,237 species). We also added a new graduate student this year. **Logan Mullen**, is focusing his research on a taxonomic revision of *Phlaeopterus*, a genus of rove beetles.



RIGHT, TOP TO BOTTOM: Vials holding alcohol-preserved UAMN Insect specimens bearing matrix barcodes. Insect collection lab technicians Sarah Meierotto (back left), Samantha Burd (front left), Megan McHugh (front), Jayce Williamson (back right). New UAMN insect graduate student Logan Mullen collecting insects from a black light at Quartz Lake, Alaska. Images by Derek Sikes





The Legacy of Kenelm Philip



Ken Philip with his butterfly net, August 2006.

Before scientists began systematically collecting and cataloging specimens at the University of Alaska Museum of the North in 2000, not much was known about the state's smallest residents. Except for the butterflies.

For decades, Kenelm Philip had been collecting them in Alaska. Every year he returned to his favorite spots along the highways and in the boreal forests of Alaska, driving a yellow pickup with an "INSECT" license plate. He founded the Alaska Lepidoptera Survey and amassed the largest private collection of arctic butterflies in the world – more than 78,000 specimens.

By the time Entomology Curator **Derek Sikes** met Philip in 2005, the collector had been studying butterflies for forty years, searching the vast arctic for the tiny insects. "Before I met him, I'd heard that he was eccentric,' Sikes said. "To have that many butterflies in your house, you'd have to be a little different. But he had a great sense of humor and was interested in so many things, from fractals to microscopes."

Before Sikes accepted the curator job, he went into the field with Philip. "I collected my first Alaska specimens with him."

When Philip passed away in March 2013, it was unexpected. He was in excellent health for an 82-year-old. He'd spent the winter working on his collections, maintaining his correspondence, and planning a robust field season. His passing was mourned by many, but equally important was the need to take care of his legacy - the collection.







In his will, Ken Philip left 90% of the collection to the Smithsonian. The collection is a national treasure. Philip filled a huge void in our biological knowledge of the butterflies and moths of the North. They were poorly documented until he started working on the survey.

Even though he hadn't yet donated any butterflies to the UA Museum of the North, Philip was already well represented in the collection. When Sikes checked the online database Arctos, he quickly found 1,232 Philip specimens bumblebees, wasps, flies, and more.

In the meantime, he kept all the butterflies with him. Sikes says he did what every entomologist dreams of doing. "The collection was a part of his life. It was all about efficiency. All the data and information was right there with him."

After Ken's death, a team of helpers mobilized. The mission, to get the specimens to the museum in the best shape possible. While Sikes was working to pack up the collections, he found the vial of wasps and tiny insects labeled in his own handwriting, the first specimens he had collected in Alaska on that summer day with Philip in 2005. "It was just sitting there, on a shelf."

ABOVE, LEFT TO RIGHT: These blues (Celastrina lucia) are some of the more than 78,000 specimens collected by Ken Philip and volunteers during his tenure as founder of the Alaska Lepidoptera Survey, Old World swallowtails (Papilio machaon) with well-preserved wings and antennae in perfect v's, part of the butterfly collection donated by Ken Philip to the UA Museum of the North and the Smithsonian Institutions. A vial containing the first insects collected in Alaska by Curator Derek Sikes on a field trip with Ken Philip. Sikes found this among Philip's extensive collection.



IN MEMORIUM

Sadly, in March of 2014, **Kenelm Philip**, long time Research Associate of the UAMN insect collection passed away. He was an expert on Alaskan butterflies and had built an enormously valuable collection since 1966 of over 83,000 specimens. The bulk of this collection will eventually go to the Smithsonian but in the meantime it is being cared for and studied in UAMN. His family has established an endowment to honor Ken's legacy via the University of Alaska Foundation: "The Kenelm Winslow Philip Entomology Fund" which will help support entomological research in Alaska and the UAMN insect collection.

CONFERENCE PRESENTATIONS

Sikes, DS and ML Bowser. 2013. Alaskan Arthropods: Documenting a growing fauna. Alaska Invasives Species Conference, Fairbanks, AK.

Sikes, DS and C Venables. 2014. Molecular phylogeny of the burying beetles (Coleoptera: Silphidae: Nicrophorinae). Alaska Entomological Society Annual Meeting, Anchorage, AK.

Sikes, DS and **C Bickford**. 2014. Building a DNA Barcode library of Alaska's nonmarine arthropods. Alaska Entomological Society Annual Meeting, Anchorage, AK.

Sikes, DS and **C Bickford**. 2013. Building a DNA Barcode library of Alaska's nonmarine arthropods. Entomological Collections Network Annual Meeting, Austin, TX.

Sikes, DS and C Venables. 2013. Molecular phylogeny of the burying beetles (Coleoptera: Silphidae: Nicrophorinae). Entomological Society of America Annual Meeting, Austin, TX.

STAFF LISTING

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RESEARCH ASSOCIATES

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Steve Peek (flies)
Ken Philip (butterflies)
Robert Progar (forest insects)
Jozef Slowik (spiders)
Susan Wise-Eagle (spiders)

RIGHT, TOP TO BOTTOM: UAMN Insect Collection curator, Derek Sikes, collecting insects on Kasatochi volcano. A species of bark louse new to science discovered in Valdez. Predatory shore mites on Kasatochi volcano. Images by Derek Sikes









Research and Collections

Ethnology & History



PROJECT COMPLETION

Over the course of FY14, the ethnology & history department saw the completion of some long-term projects and the initiation of others that are sure to engage us for years to come.

In the fall of 2013, the team officially completed the Kolmakovsky Redoubt Conservation Project, which was funded through a Save America's Treasures grant from the Institute of Museum and Library Services. Final touches on the blockhouse roof and the logs to enhance the long-term preservation will continue to be monitored by staff, while the website will be modified to document the entire project. The museum's exhibits & digital media unit is working to fine-tune a short film about the project, with a goal of adding it to the museum's YouTube channel with links from the project website.

On October 23, 2013, Ben Eielson's Curtiss JN-4D (Jenny) took to the air again. It was re-installed in the Fairbanks International Airport, thanks to the long-term commitment of the Fairbanks Experimental Aircraft Association. Led by UAF Assistant Professor of Aviation Maintenance Technology Roger Weggel, dozens of EAA volunteers devoted thousands of hours to research and craft by hand new wings based on the plane's original production drawings.

PREVIOUS PAGE: The Kolmakovsky blockhouse wears a frosty winter hat in January 2014.

Starting in 1981, the Jenny hung at FAI – with wings from a Swallow, another type of biplane. In 2007, the plane was removed to accommodate the airport renovation plans. In April of 2014, a new interpretive panel was installed to give visitors a sense of the history of the plane. Plans are underway to improve and expand on this signage in coming years.

DIGITIZATION

A new major project started in October of 2013 with the help of a \$149,999 grant from the Institute of Museum and Library Services. Stable Data is a collaboration between the ethnology & history and archaeology departments to move collections data from an outdated, in-house database to Arctos, a fully-online, multi-disciplinary

collection management information system developed and operated by UAMN and currently used by six of the other eight departments at the museum. After one year of work, primarily by our Curatorial Assistant **Della Hall** and Arctos programmer **Dusty McDonald**, over 14,000 Ethnology & History catalog records have been imported and are accessible to the public at http://arctos.database.museum. The next year will see the archaeology department adding its records; plans are already underway to expand the variety and depth of information that can be integrated into this online resource.

14,000+ records publicly accessible





ABOVE, LEFT TO RIGHT: Curatorial assistant, Della Hall, working on the Arctos migration project. Gene and Ken Karstens, members of the Harry Karstens family who loaned several items to the museum for the Denali Legacy exhibit, arrived in May 2014 to recover the artifacts.



Ongoing projects related to the department include the completed run of the *Denali Legacy: 100 Years on the Mountain* exhibition. More than 90,000 visitors learned about the men who first reached the top of North America's highest peak in 1913. MFA graduate student assistant **Kirsten Olson** and BA undergraduate student assistant **Mahriena Ellanna** continued to work with the collections to enhance their preservation through stabilization and preventive conservation measures. They developed innovative and space-saving techniques to house our delicate artifacts and took hundreds of photographs both in the lab and the studio. They also continued to share stories of the collection through guest blog posts to AkEthnoGirl, Senior Collections Manager **Angela Linn's** blog about working in the collections. Department staff also served as guides for the second year of the Behind-the-Scenes tours offered during the summer.

NEW ADDITIONS

The department accepted eighteen new collections in FY14, for a total of nearly 200 individual artifacts. Two of those collections required a great deal of time and effort to process and a measure of creativity to catalog. In March of 2013, Virginia "Ginny" Wood passed away at the age of 95. Her home in Fairbanks contained hundreds of objects that she collected during her life in the north. Wood's daughter Romany generously allowed staff from the ethnology & history department to select from those items to preserve her memory at the Museum. This selection resulted in 81 items ranging from one of her iconic Nordic sweaters to cameras she used for photographing the many images of Alaska's wild lands she sought to protect through her work establishing the Alaska Conservation Society.

The second significant collection accepted in FY14 came from an alumnus of UAF, Edward Ruckstuhl (1963). It contained nineteen Russian lacquer boxes along with an elaborate Russian Orthodox Bible. The majority of the boxes were collected while Ruckstuhl worked in the Republic of Georgia.

They are representative of Russian-made items that many traveling in Alaska can find in high-end gift shops, connecting people to Alaska's Russian past. A total of 71 boxes will be donated by Ruckstuhl over the next three years. Angela Linn continued to serve in her role as President of Museums Alaska, presenting at the annual meeting in Haines with Communications & Marketing Manager **Theresa Bakker**. In May 2014, Linn was appointed to the Fairbanks North Star Borough Historic Preservation Commission to help implement the borough's historic preservation plan and consult on projects that impact historic sites in the borough.

STAFF LISTING

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Kirsten Olson Graduate Student Assistant

Mahriena Ellanna Student Assistant

Della Hall Curatorial Assistant





ABOVE: Kirsten Olson has developed new and creative ways to house fragile historical objects with custom-made archival enclosures using trays of acid-free cardboard and archival foam. Here a set of boxes for Kodak Seed Dry Plates are carefully stacked into a single box she made by hand.



THE JOURNEY OF AN ARTIFACT

For several months, a miniature umiak sat in the back hall of the museum, waiting for space to open up in the collections range. Museum staff and personnel passed by it daily hardly noticing the artifact. But the boat attracted lots of attention and questions during the first summer of the museum's daily Behind-the-Scenes Tours through the research and collections spaces. That's what museums do best! Collect as many stories and details about the objects we are taking care of.

This particular skin boat was made in Point Hope by an Inupiaq man, Lenny Lane, in 1955. It was used as a seal-retrieval boat and donated by Dr. Robert ("Bob") and Margaret ("Petey") Lathrop.

Bob was a dentist along the western coast of Alaska and spent a number of years in Point Hope and Kotzebue, primarily, in the '50s and '60s. The Lanes informally adopted the Lathrops. Lenny taught Bob how to hunt and his wife Daisy showed Petey how to sew skins into beautiful garments and boots.

The bow and stern pieces of this boat are made from bent spruce tree trunk pieces collected in the Noatak Flats along the Noatak River, which flows entirely above the Arctic Circle from the Brooks Range to the Chukchi Sea.

The museum's ethnology & history crew, along with Exhibitions & Design Coordinator Steve Bouta, returned the boat to the collections range in October 2013 after completing an assessment report. The boat had been on long-term loan to the Alaska Sea Life Center in Seward.

Theresa Bakker



RIGHT, TOP TO BOTTOM: Exhibition & Design Coordinator Steve Bouta oversees the final push to move a miniature umiak back onto the top shelf of the collections range.

Kirsten Olson and Della Hall help Angela Linn move the boat back into the collections range. ${\tt UA97-025-0060}$



JENNY FLIES AGAIN AT FAIRBANKS AIRPORT

One of the largest items in the history collections at the University of Alaska Museum of the North is once again soaring over the Fairbanks International Airport terminal, thanks to a large-scale community effort to restore the plane.

Visitors new to Fairbanks may not have noticed the empty space above the baggage terminal at the Fairbanks International Airport. But locals sure did. Even with the facility's expansion completed in 2009, something was missing.

"People asked me all the time," Pete Haggland said. "Where is the Jenny?"

As the Director of the Pioneer Air Museum, Haggland has been instrumental in keeping the stories of Fairbanks' aviation history alive. He's the one who raised \$25,000 in 2007 to begin the project that would restore the historic Curtiss JN-4D, an aircraft known as the Jenny, to its original profile. "Not only the wings were wrong, the rest of the aircraft needed work to bring it up to standard," he said.

It took the combined effort of dozens of volunteers and thousands of hours of work to finish the project. Headed by Roger Weggel, an instructor in the University of Alaska Fairbanks' aviation department and member of the local chapter of the Experimental Aircraft Association, the Jenny was returned to airworthy condition for the first time in more than 70 years when it was hung in the airport at the end of October.

RIGHT: The newly-restored Jenny soars again over travelers in the baggage terminal of the Fairbanks International Airport. The Department of Transportation, along with officials from the Fairbanks International Airport, EAA volunteers and Davis Construction, the original contractor for the recent expansion at FAI, completed the installation in October 2013.

Weighing almost 1,500 pounds, with new bright yellow wings spanning 44 feet, the airplane is a symbol of a community that has long been proud of its role in aviation history.

In 1923, pilot Carl Ben Eielson persuaded a group of Fairbanks businessmen to purchase the Curtiss JN-4D "Jenny" Aircraft. The war-surplus airplane cost \$2,400. Eielson turned a profit within the week by giving demonstration flights over Fairbanks. Eielson and his backers started the Farthest North Airplane Co., which flew goods, people and, eventually, the first airmail routes to communities around Fairbanks.

The artifact connects people to many portions of Fairbanks' roots, and the museum has long wanted to display it for the public, said senior ethnology and history collections manager Angela Linn. "With an object of this size, our options have been limited. We're fortunate that the Department of Transportation and the staff at the Fairbanks International Airport have been so supportive of the project.





"Not just once, but twice, they've gone out of their way to accommodate this 1,450 pound plane, suspending it from the ceiling so that it can fly above passengers as they arrive and depart Fairbanks. It's a reminder of the aviation history of this community."

One of the biggest mysteries about this particular aircraft has been how the UA Museum of the North came to possess it. After hours combing through the museum's records and talking to people about the Jenny, Linn discovered a photo from the George King collection in the archives. "I recognized the nose of that plane right away!" Linn said. "The Jenny has this distinctive shape to the fuselage and the image just jumped out at me."

It turns out that one of Eielson's business partners had visited the Jenny on the university campus in 1958. A photo of the reunion is included in the Alaska and Polar Regions Collections and Archives at the Rasmuson Library, along with a University of Alaska press release noting the plane had been donated to the museum by the Fairbanks Airplane Corporation.

With a bit more digging, Linn found a July 1, 1934, article about the fundraising and construction efforts surrounding the building of the Eielson Memorial on the campus of the Alaska Agricultural College and School of Mines, which later became UAF.

According to that article, "The first airplane used by Colonel Eielson in Alaska has been donated to the College. The Committee can well afford to see that this pioneer plane is permanently placed in a room reserved for that purpose on the main floor (of the newly constructed Eielson Memorial building)."

The plane-sized room in the Eielson Building never materialized, and the Jenny was placed in a warehouse, the only building on campus that could harbor such a large item. The return of the plane to the Fairbanks airport was the perfect way to finish the centennial year of aviation in Alaska. It was in July 1913 that the first flight launched from where the Noel Wien Public Library sits today. But it won't be the last time we benefit from a moment in history.



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Frica Hill

Lawrence Kaplan

Michael Koskey

Molly Lee (Curator Emeritus)

Jason Rogers

Glen Simpson

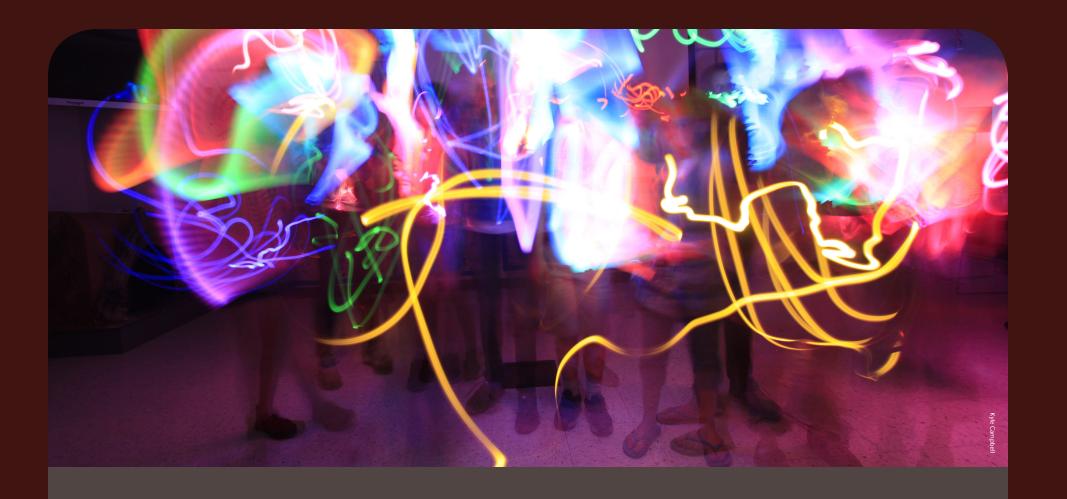
Chris Wooley

CONFERENCE PRESENTATIONS

Linn, AJ and TA Bakker. 2013. Technology & Social Media 2.0: Using them to get your work done. Oral presentation, Museums Alaska. Haines, AK.

Shirar, SJ, AJ Linn, JD Reuther, and LE Olson. 2013. University of Alaska Museum Discussion Group. Oral presentation, Alaska Anthropological Association. Fairbanks, AK.

LEFT: Della Hall, Kristen Olson, and Mahriena Ellanna help out in the ethnology & history lab at the 2013 Halloween at the



Research and Collections

Fine Arts



VOGEL DONATION

An exhibit of 50 works of art from the collection of Dorothy and Herbert Vogel will be exhibited in November of 2014 at the museum. The couple lived frugally in New York, using Dorothy's income as a librarian to cover their living expenses and Herb's income as a night-shift postal clerk to purchase artwork.

In 40 years of collecting only things they liked and what they could take home in the taxi or subway, they had amassed one of the most important post-1960s art collections in the United States.

Even though they could have been multimillionaires by selling their collection, the couple astounded the art world by donating everything to the National Gallery of Art because they wanted to share their art with the public. They worked with the National Gallery to give 50 works from the collection to one museum in each of the 50 states. The University of Alaska Museum of the North was lucky enough to be one such museum.



ABOVE: Untitled by Lori Taschler. Photo by Mareca Guthrie

to UAF researchers.

PREVIOUS PAGE: "Painting" with light at the 2014 Colors of Nature Summer Academy using long exposure.

MOVING THE STATE MUSEUM

Curator Mareca Guthrie and graduate student **Karinna Gomez** spent several weeks helping pack and transport the art collections of the Alaska State Museum from their old collections space to the new State Library Archives and Museum (SLAM) building. This project was part of a IMLS grant for professional development which allowed museum professionals across the state the ability to gain new skills while assisting the State Museum with such a large project.

COLORS OF NATURE

This was the second year of the Colors of Nature Summer Academy. Over two weeks in July, 30 girls engaged in art-infused science activities such as investigating the physics of iridescence, exploring UV coloration in birds and flowers, learning about variation in color vision, and discovering the chemistry behind pigments and dyes.

The Colors of Nature project is funded by the National Science Foundation and is part of a collaboration among the University of Alaska Fairbanks, the National Optical and Astronomy Observatory, and the University of Washington-Bothell. The four-year project aims to illustrate science as a creative endeavor that overlaps with art. Principal Investigator Laura Conner (UAF College of Natural Sciences and Mathematics) worked with Curator Guthrie and UAF graduate students Kyle Campbell, Gabrielle Vance, and Perrin **Teal-Sullivan** to teach the two-week academy, culminating in a final project and presentation



Fine Arts







DIGITIZATION OF COLLECTIONS

Ryota "Kaji" Kajita, a recent MFA photography graduate of UAF is beginning the process of taking high resolution photographs of the fine arts collection by starting with the photography, prints, and drawings. This is the first step in getting the collection online and fully accessible to the public.

ROCKEWELL KENT RESEARCH

Recent UAF graduate Lisa Duffy began researching the art of Rockwell Kent several years ago as part of an assignment for one of her classes. The project led to a grant through URSA which funded travel to several museum archives and visits with collectors of Rockwell Kent's paintings. Her current research project focuses on one of his most famous paintings in the UA museum's collection, Voyagers, and the presence of a blue thread woven into the canvas it was

painted on that might lead to more information about the history of the painting.

FLORENCE NUPAK DRAWINGS

Curator Mareca Guthrie exhibited a collection of drawings by Florence Nupok Malewotkuk at the Alaskan Anthropological Association conference. The drawings were created in the late 1920s in the Siberian Yupik village of Gambell, on St. Lawrence Island and depicted everyday scenes in the community.

NEW ACOUISITIONS

Copper Totem by Preston Singletary (purchase)

Reliquarium: Castor Canadensis by Margo Klass (donation by from the artist)

Whale Hunt by Rusty Heurlin (donation from Peter Britell)

FINE ARTS STAFF

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ABOVE, LEFT TO RIGHT: Ryota "Kaji" Kajita prepares to photograph artwork. A landscape painting prepared for storage at the Alaska State Museum. Reliquarium: Castor Canadensis by artist Margo Klass.



Conservation project brings valuable benefits

Curator **Mareca Guthrie** received a \$4000 conservation grant from the American Institute for Conservation for the conservation and framing of two seal skin drawings by Siberian Yupik artist Florence Malewotkuk.

Malewotkuk (1906-1971) is one of the only female Yupik artists of her generation to sell drawings in a market dominated by her male peers. Malewotkuk's work is an invaluable artistic documentary of everyday life on the isolated village of Gambell on Saint Lawrence Island. This project was a high priority, not only





because of their historic and artistic value of the drawings, but also because of the brittle and fragile nature of these particular works and the history of neglect before being purchased by museum donor Craig Dorman.

The conservation was completed by Linda Nieuwenhuizen of GMAB Conservation Services, Inc. Linda stabilized the skins for long term preservation, reduced the number of creases, and conducted a gentle cleaning to reduce the mold and yellow staining. Nieuwenhuizen also attached hinges for framing and outlined guidelines for the museum to follow regarding proper framing (including humidity and temperature monitors).

Alex Chudyk, owner of Frameworks, was hired to custom build the shadow-box frames from locally-milled maple. As per Niewenhuizen's instructions, the frame was constructed to create a sealed environment. The framing included a sheet of Art Sorb (rh 50%), an embedded rh gauge, and Coroplast backing.



clockwise from upper Left: The smaller of the two ink drawings by Florence Malewotkuk after the mold and staining was removed. Framer Alex Chudyk and Curator Mareca Guthrie stand with the other framed drawing. Conservator Linda Nieuwenhuizen carefully removes the discoloration from one of the ink drawings before it was framed.



Research and Collections

Fishes and Marine Invertebrates



Fishes and Marine Invertebrates

THE YEAR IN REVIEW

The most significant development in the fishes and marine invertebrates department over the past year was the integration of all the holdings from the Auke Bay Laboratories research collection. These collections were developed and maintained by NOAA's Alaska Fisheries Science Center in Juneau until 2013.

The UA Museum of the North was selected by NOAA as the repository for these materials to ensure their long-term preservation and availability. Over the past year, a team of students, staff, and the curator has been incorporating these specimens and their records into the museum's database. The process will be complete in 2015. At that point the fishes and marine invertebrate collections will have doubled in size.

Students working in the lab also had successes. Matthew Campbell completed a Ph.D. in biological sciences, while **Thaddaeus Buser** and **Veronica Padula** completed M.S. degrees in fisheries. All three students conducted research on fish diversity and evolution and contributed to the growth and development of the fish collection.

STAFF LISTING

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RESEARCH ASSOCIATES

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PREVIOUS PAGE: Curator of Fishes Andrés López shares some of the museum's collection with visitors to the museum's Open House.





ABOVE: Aquatics Collection Technician Robert Marcotte shows some of the specimens transferred to the UA Museum of the North from from the Auke Bay Laboratories in Juneau. Specimens in the fishes and marine invertebrates collection are often preserved in jars.



Fishes and Marine Invertebrates





AUKE BAY LABORATORIES ACCESSION

In the fall of 2013, the museum acquired more than 150,000 and marine invertebrate specimens from the National Marine Fisheries Service, doubling the collection's size.

Andrés López, the curator of fishes and marine invertebrates, said the collection has always been relatively small in comparison to other museums, but the transfer has greatly expanded its representation of northern species.

"The more specimens you have representing the region you're interested in, the more value a researcher that comes to visit or that loans material from us will get from those collections," he said. "They can get samples from more locations, more occurrences of that species are represented in our database."

The transfer added tens-of-thousands of fish and marine invertebrates, all of them caught in Alaska's waters. It was the result of a closure of collections space at the Alaska Fisheries Science Center at Auke Bay near Juneau. The collection includes about 8,000 lots of marine invertebrates and 6,000 lots of fishes.

UAMN Collections Technicians **Robert Marcotte** and **Angela Gastaldi** have been working to add the specimens to the museum's online database. At least two other large research collections in the country include fish from the Far North, but the collection at the UA Museum of the North is the largest in the world that focuses specifically on the species found in Alaska.

ABOVE: Fish and marine invertebrate specimens in the museum's aquatics collection are stored in glass jars to protect them in perpetuity.

ARCTIC ODYSSEY VOYAGES OF THE R/V SIKULIAQ

Andrés López worked with the exhibits and digital media department to curate a special exhibit focused on the start of operations of the R/V Sikuliaq. The exhibit opened in May of 2014 and ran until May of 2015.

To design the exhibit, UAMN worked with staff and faculty at the UAF School of Fisheries and Ocean Sciences to include information on their ongoing oceanographic research.





Fishes and Marine Invertebrates

Guest Curator Andrés López worked with Marketing & Communications Manager Theresa Bakker to solicit art for a juried outdoor exhibition.

The contributions explored the theme of arctic exploration in conjunction with the special exhibit Arctic Odyssey: Voyages of the R/V Sikuliag.

CLOCKWISE FROM TOP LEFT:

Day Lights by Christina Drumhiller; polished steel; This sculptural reference to the aurora borealis is made of polished mild steel, baked at various temperatures to achieve the colors of the aurora.

Walrus, Momma Polar Bear, Young Polar Bear, and Ringed Seal by Todd Sherman; plywood, paint; For these works, I have selected creatures that the Sikuliag might encounter while sailing the Bering and Chukchi Seas.

Talauti by Jon Bohning; bronze, copper, wood, steel; In Inupiag, *Talauti* means "to bring ashore," which to me is the main goal of the Sikuliaq's journey. In an age of technology and what it is capable of, I hope to evoke an admiration for what was possible in an age deprived of all we take for granted.

Left Behind by Terrie Berrie; bronze, cast iron, cement, steel; This piece shows that normal objects, when left behind in the ocean, can create a different kind of beauty.

Transparent Ecosystems by Wendy Croskrey, Dinah Jelinek, and Heather Brice; cast and fabricated aluminum, acrylic, and resin; This sculpture is a representation of the different habitats that could be studied in the Arctic, ranging from the sea ice surface to thousands of meters below on the seafloor.

MK-18 by Scott Holladay; steel, bronze, cast iron; This sculpture is an underwater seascape depicting a small diversity of Arctic fishes and other sea life being researched by scientists at UAF.

Photos by Theresa Bakker













Annual Report FY2014



Research and Collections

Genomic Resources



Genomic Resources

A GROWING RESOURCE

The museum added more than 8,000 new tissue

8,000+new tissue samples

samples to genomic resources in FY14.

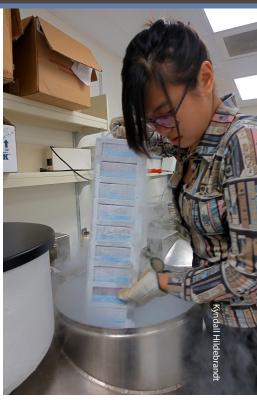
The majority of these are from modern organisms. A notable exception is tissue from a bison that is dated to more than 43,500 years old discovered in Northern Alaska along the Ikpikpuk River. Earth Sciences Curator Pat Druckenmiller, Earth Sciences Collection Manager Julie Rousseau, and Genomic Resources Manager **Kyndall Hildebrandt** were able to sample hair, tissue, skin, and even vegetation from between the bison's teeth, thanks to its long-term preservation in permafrost. These remarkable samples were installed in one of our liquid nitrogen cryovats for safe and permanent archival.

Undergraduate student volunteers Joan Baek (University of California-Berkeley), Kristen Scholten (UAF), and Samuel George (UAF) helped process new tissue samples while gaining hands-on experience in one of the largest collections of its kind in the world.

PREVIOUS PAGE: Mammals Curator Link Olson, Tara Fulton from the University of Alberta, and Genomic Resources Collection Manager Kyndall Hildebrandt take a break from extracting DNA from walrus bone to pose for a selfie.









CLOCKWISE FROM UPPER LEFT: Earth Sciences Collection Manager Julie Rousseau samples plant material found in between the teeth of a prehistoric bison. Joan Baek, a student volunteer, removes tissue samples from a liquid nitrogen cryovat. Vials used to store frozen tissues. Liquid nitrogen cryovats and transfer dewars used to maintain the museum's genomic resources.



Genomic Resources

Check out that DNA

Did you know that every living thing is made of cells and that DNA tells those cells what to do?

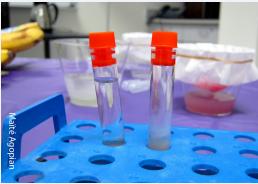
Kids young and old explored the science of DNA at the University of Alaska Museum of the North on May 3, 2014. They learned how the museum creates its own liquid nitrogen to store tissue samples for future research, samples full of DNA.

They also learned that UAMN's Ancient DNA Laboratory is uniquely positioned to generate genetic analyses on material that was not specifically collected for this purpose— such as study skins, skeletons, fluid-preserved specimens, or even permafrost-preserved materials. And that curators, staff, students, and other UAF scientists, and visiting researchers use our labs to work with fresh and frozen tissue.

We dig DNA at UAMN. We also database it, analyze it, study it, share it and preserve it for future generations to explore.







CLOCKWISE FROM TOP: Photos from Family Day: DNA, where visitors learned how to use lab equipment and other tools used to care for the museum's genomic resources.





Genomic Resources





In addition to managing the frozen tissue collection, Hildebrandt also oversees two molecular research labs in the museum. One is used for the extraction of DNA from fresh and modern tissues and the second—UAMN's Ancient DNA (aDNA) Laboratory—was built to allow researchers to obtain highly fragmented DNA from ancient or highly degraded material. This is the only such facility in Alaska. In April, Tara Fulton from the University of Alberta worked with Hildebrandt to extract DNA from walrus bones as part of a study funded by the National Science Foundation. This five-year, \$1.7M project will rely heavily on the Ancient DNA Lab and historical walrus samples archived at UAMN.

In Spring 2014, Hildebrandt spent two weeks with UAF graduate student Katie Everson at UCLA, learning how to generate large-scale genomic data using a new class of genetic markers called ultraconserved elements (UCEs). UCEs show great promise in comparative evolutionary studies and are being used by several museum curators and their students.

In May, genomic resources staff collaborated with the museum's education and public programs department to host a DNA-themed Family Day. Hildebrandt worked alongside graduate students Michelle Cason and Katie Everson to showcase the museum's genomic facilities and current research.



In addition, the public got hands-on experience using lab equipment such as pipettes to measure minute volumes of liquid and a magnetic stir plate to create miniature tornadoes!

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RESEARCH ASSOCIATE

Tara Fulton

ABOVE, LEFT TO RIGHT: Kyndall Hildebrandt works in the Ancient DNA Lab. Graduate student Michelle Cason talks with visitors at DNA Day about genomic resources and her genetic research done at UAMN. Genomic Resources Manager Kyndall Hildebrandt and her husband Shane Powers as Vanellope von Schweetz and Wreck-it Ralph during the 2013 Halloween at the Museum.



Research and Collections

Herbarium



Herbarium

OVERVIEW

The herbarium (ALA) at the University of Alaska Museum of the North shares its data broadly through a web presence in ARCTOS, iDigBio, GBIF, and various national webportals dedicated to providing online access to plant specimen records for research and public education. With continued support from the National Science Foundation, the herbarium is bringing its more than 260,000 holdings online, making 207,372 high resolution images and 243,450 database entries database entries easily accessible. Download statistics recorded by the Global Biodiversity Information

Facility (GBIF) for the last year totaled 62,794,720 records.

database entries

The herbarium continues to form strong ties with educators to promote the use of specimen data in education. Efforts from the NSF-funded Research Coordination Network AIM-UP! (Advancing Integration of Museum into Undergraduate Program) has resulted in a recent publication, *Natural History Collections as Emerging Resources* for Innovative Education, in the journal BioScience. Curator Steffi Ickert-Bond presented at the second Life Discovery – Doing Science Education conference at San José State University on the

PREVIOUS PAGE: Gathering sour dock (*Rumex articus*) at a slough of the Noatak River, as part of the Introduction to Ethnobotany course held in Kotzebue.



teaching modules that AIM-UP! has developed to engage students in experiential learning activities and address core competencies in the process of science, quantitative reasoning, and statistical analysis in an interdisciplinary context using museum collections.

USING DATA TO ANSWER OUESTIONS

The herbarium has now received funding in two of the three rounds of grants with NSF's Advancing Digitization of Biodiversity Collections (ADBC) program. The first TCN award to ALA, North American Lichens and Bryophytes: Sensitive Indicators of Environmental Quality and Change, was made in 2011. Under the leadership of Corinna Gries, this project will image about 2.3 million North American lichen and bryophyte specimens from more than 60 collections to address questions of how species distribution



TOP TO BOTTOM: Harvesting leaves from fireweed for use in teas and infusions. The attendees of the All Hands Gathering held in Sitka in May 2014. These elders, students, faculty, and colleagues came together to help celebrate the first five years of the Ethnobotony Certificate's existence as a UAF program and to help plan for the next five. (www.uaf.edu/drumbeats/ethnobotany)

Herbarium

changes after major environmental events. Lichens are symbiotic organisms that are highly sensitive to environmental change and have been used for decades as bioindicators to monitor air pollution.

The herbarium also received funding from the Division of Polar Programs (PLB) for the proposal Toward Documenting Biodiversity Change in Arctic Lichens: Databasing the Principal Collections, Establishing a Baseline, and Developing a Virtual Flora, along with Ken Cameron, Corinna Gries, and Thomas Nash at the University of Wisconsin.

The two largest collections of Arctic lichens are housed at the UA Museum of the North and the University of Wisconsin State Herbarium in Madison, WI. These digital images are being integrated using the Symbiota software package to generate a virtual library called *Flora of Arctic Lichens*. The creation of what promises to be a comprehensive Flora will share the discipline of lichenology to a larger community and help to advance an appreciation of ecological complexity within the Arctic biome.

Funds to support taxonomic experts to visit the herbarium were also included in these grants. Curator Alan Fryday of Michigan State University recently visited the herbarium to look at 368 collections of lichens. He identified 609 species, including three new to North America, *Trimmatothele perquisita*, a genus new to North America, and ten taxa recorded in Alaska for the

first time. He also identified at least one possible new species. Prior to his visit, Karen Dillman of the U.S. Forest Service in Petersburg, Alaska visited the museum to prepare and presort many backlogged lichen specimens, which helped make Fryday's visit so productive.

In 2013, the herbarium was included in a second TCN award, The Macroalgal Herbarium Consortium: Accessing 150 Years of Specimen Data to Understand Changes in the Marine/Aquatic Environment. This award will support investigators from a consortium of 50 herbaria at universities, botanical gardens, and natural history museums (led by the New York Botanical Garden Herbarium)

CLOCKWISE FROM TOP RIGHT: Cyanobacteria-associated lichens commonly seen in old growth, coastal rainforests of Southern Alaska. Lobaria oregana (light green) and Lobaria linita (bright green), along with the hanging moss Isothecium myosuroides. Placopsis sp, an early colonizer of recently deglaciated rocks and soils. The primary photobiont is chloroccocoid, but the dark areas are cyanobacteria. Research boat in Glacier Bay National Park. Southeast Alaska has a remarkably diverse lichen biota with many apparently undescribed species endemic to the area.







Herbarium







across the United States to digitize their collections of macroalgae, the foundation of marine, estuarine and freshwater benthic ecosystems which provide food, substrata, and protection for a myriad of other aquatic organisms.

Many macroalgal species are sensitive to environmental change. The data provided through this portal will allow researchers and the public to determine how macroalgal biodiversity and aguatic ecosystems have changed over the past 150 years. The herbarium is collaborating with the University of Washington Herbarium to digitize about 6,000 algae specimens at ALA. The museum's undergraduate curatorial assistants have already imaged more than 50% of these specimens.

SHARING RESEARCH STORIES

Herbarium staff and students, along with taxonomic experts have been busy collecting, processing, and identifying specimens, attending workshops, and supporting botanical endeavors across the state, the nation and abroad.

Graduate student **Stephany Jeffers** attended the Geometric Morphometrics workshop at the Scottish Center for Ecology and the Natural Environment (SCENE, University of Glasgow) in May 2014, using a travel award granted by the Graduate School at UAF.

This course was instructed by Chris Klingenberg and used his program, MorphoJ, as well as other popular morphological analysis programs to instruct attendees how to best use digital images for morphometric studies. During the week of classes participants learned about ways to digitize specimens, how to collect landmarks for morphological analysis, and how to use MorphoJ to run both simple and complex shape analyses.

ABOVE LEFT TO RIGHT: Alan Fryday from Michigan State University works to identify specimens of saxicolous and terricolous crustose lichens. Participants from the Geometric Morphometrics workshop in Scotland, relaxing after a long day of workshops. SCENE (Scottish Centre for Ecology and the Natural Environment) hosts a number of workshops throughout the year to keep scientists up-to-date on the latest bioinformatics software.

The workshop consisted of about 20 researchers in a range of fields from archaeology to zoology. The instructor led participants in a discussion about what is meant by shape, how to select landmarks for a given specimen, how to classify data to be informative on many levels, and how to run a broad spectrum of analyses. Participants ran through examples using both 2D and 3D data, learned how to acquire images and how to combine data sets.



MORE THAN VINE GRAPES

Curator **Steffi Ickert-Bond** continues her collaboration with Smithsonian Institution Research Botanist and Curator Jun Wen on disentangling recent divergences and reticulate evolution and monographic studies in the grape genus *Vitis*.

Together they embarked on the third "Grape Escape," driving 4,000 miles in eight days to traverse the Southeastern United States from Washington, D.C. to Oklahoma and Western Texas, along the Louisiana coast, and back to D.C. They collected more than 90% of the known species of *Vitis* in North America, as well as bringing back live plants of each taxon to the Smithsonian Institution's greenhouse for ongoing research on leaf anatomy and inflorescence development of this economically-important genus.

A highlight of the trip was the (re)discovery of the very elusive *Vitis palmata* Vahl, a wild grape described originally from Virginia in 1794. The occurrence in Virginia was later discussed by Engelmann in 1883 as "erroneous, but not more so than many other American localities published in those, geographically, dark ages."

Wen has been hunting this wild grape for several years, but it has remained elusive. The search came to an end when she and Ickert-Bond located it along the banks of the Mississippi River at the Stump Lake Fish and Wildlife Management Area in Illinois. This gorgeous, slender climber with red young branches and petioles led Michaux to describe specimens from Illinois as *Vitis rubra*, a synonym of *V. palmata*. The researchers are investigating its position within the larger phylogeny of grapes and grape relatives in the *Vitis-Ampelocissus* clade.

CLOCKWISE FROM TOP: Jun Wen, research scientist and curator in the Botany Department at the Smithsonian Institution, National Museum of Natural History, examining a specimen of the mysterious *V. palmata* found after a long elusive search. Farmers near the Red River at the Texas-Oklahoma border help Curator Steffi Ickert-Bond cut a large rhizome of Doan's grape (*Vitis doaniana*). The farmers initially thought she and Wen were broken down by the side of the road and wanted to help with a flat. They were very surprised to find two ladies from D.C. digging up a grape vine in the sandy hills on their farm. The mysterious *V. palmata* found after a long elusive search, formerly known as *V. rubra*.









"Being able to use digital images and landmark data can revolutionize how we do research using museum specimens," Jeffers said. "This type of analysis has applications in all sorts of biology as well as archeological studies. I think it will be especially useful when dealing with fragile specimens that are supposed to be preserved."

Herbarium Research Professional Carolyn Parker has been involved in teaching and developing the Introduction to Ethnobotany (EBOT 100) class since the certification program at the UAF Kuskokwim Campus in 2008. The class, which combines lectures, fieldwork, and the gathering and processing of food and medicinal plants, has been offered at several locations in Alaska including Sitka, Bethel, Nunivak Island, Hooper Bay, Quinhagak, Nome, and Kotzebue.

Curator Steffi Ickert-Bond and graduate student Lisa Strecker are also involved with activities associated with the Ethnobotany program's steering committee. Currently, the herbarium group is discussing efforts to aid the ethnobotany program to prepare voucher specimens, digitize them, and make them available for access in rural villages through Arctos.

CLOCKWISE FROM TOP: Students in the Introduction to Ethnobotany class duq up spruce roots (*Picea glauca*), peeled the outer layer off and split them to make the spruce "threads" used in birch basketry. Examples of the different spruce threads after preparation. Modeling a cloudberry crown (Rubus chamaemorus) and Aster bracelet.

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CONFERENCE PRESENTATIONS

Ickert-Bond, SM, JM Gerrath, and J Wen. 2013. Gynoecium structure of Vitaceae and Leeaceae and implications for placentation evolution in the rosids. Symposium: Diversity and Development in the Vitaceae - More than Wine Grapes. Oral Presentation, Botany 2013, New Orleans, LA.

Metzgar, JM and **SM Ickert-Bond**. 2013. Using next-generation DNA sequencing to explore the phylogeography of two species of parsley fern (*Cryptogramma*). Oral Presentation, Botany 2013, New Orleans, LA.

Cameron, K, **SM Ickert-Bond,** T Nash, C Gries, B Murray and A Doucette. 2013. Toward Documenting Biodiversity Change in Arctic Lichens: Databasing the Principal Collections, Establishing a Baseline, & Developing a Virtual Flora. Oral Presentation, Botany 2013, New Orleans, LA.

Rothwell, G, D Stevenson, I Escapa, G Mapes, R Stockey, **SM Ickert-Bond,** C Campbell, D Gernandt, G Holman, D Kelch, D Little, and S Mathews. 2013. The gymnosperm AToL: Results of analysis of morphological characters. Oral Presentation, Botany 2013, New Orleans, LA.

Ickert-Bond, SM and **JS Metzgar**. 2014. ALA updates. Oral Presentation, Alaska Botany Forum, University of Alaska Fairbanks.

Oliver, M, JS Metzgar, and SM Ickert-Bond. 2014.

The evolutionary history of three closely related species of *Therorhodion* (Ericaceae): preliminary data from literature searches, a review of specimens, and molecular sequence data. Oral Presentation, Alaska Botany Forum, University of Alaska Fairbanks.

Metzgar, JS and **SM Ickert-Bond**. 2013. Temporal and geographic patterns of diversification in the fern genus *Cryptogramma*. Oral Presentation, Alaska Botany Forum, University of Alaska Fairbanks.

Stamey, M, JS Metzgar, and **SM Ickert-Bond**. 2013. How was the octaploid Turkish parsley fern (*Cryptogramma bithynica*) formed? Oral Presentation, Alaska Botany Forum, University of Alaska Fairbanks.

TOP TO BOTTOM: Displaying original wooden print blocks used to produce plates for J.P. Anderson's Flora of Alaska in the herbarium at the museum's Open House. Visitors make their own slime in the herbarium during the 2013 Halloween at the Museum. Herbarium Collection Manager Jordan Metzgar and his family show off their Halloween costumes.









CHINA FIELD WORK by Jordan Metzgar

In July 2013, I travelled to southwestern China and spent two weeks collecting parsley ferns with UAF undergraduate biology student **Mackenzie Stamey** supported by a National Science Foundation Doctoral Dissertation Improvement Grant. We met Tingshuang Yi, a botanist at the Kunming Institute of Botany, and together visited remote mountain sites near the Tibetan border in Yunnan and Sichuan Provinces.

Most of these areas were rocky forests, high on the slopes of perpetually snow-covered mountains. We needed to ride horses to reach some of the locations that were more than 13,000 feet above sea level.

Our trip allowed us to collect samples of the rare Radde's parsley fern (*Cryptogramma raddeana*), a cold-loving fern found in mountainous regions of Eastern Asia. I am researching the recent history and climate tolerance of a hybrid complex of parsley ferns that span Asia, the Bering Strait, and Alaska.

The samples we collected will allow us to decipher how Radde's parsley fern reacted to a rapidly warming climate following the Last Glacial Maximum (20,000 years ago) and predict how boreal plants will react to present-day climate change.

CLOCKWISE FROM TOP: Cryptogramma raddeana, Haba Snow Mountain, Yunnan Province. A horse used to transport field supplies, Haba Snow Mountain, Yunnan Province.

Dr. Tingshuang Yi, Jordan Metzgar, and Mackenzie Stamey at the Kunming Institute of Botany, Chinese Academy of Sciences, Yunnan Province. Photos by Jordan Metzgar









Research and Collections

Mammalogy



GRANT SUCCESS

A grant from the North Pacific Research Board will fund the curation of over 20,000 backlogged marine mammal specimens over the next two years, making them far more accessible to the scientific community. A \$1.7 million grant from the National Science Foundation was awarded to several researchers at UAF (including Mammal Curator **Link Olson**) to study population trends in the Pacific walrus and improve the museum's world-class collection of walrus material. A Research Experience for Undergraduates supplement will support two undergraduates working in the collection in the coming year. Funding from the Alaska Department of Fish and Game and the National Park Service continues to support activities in the field and in the collection.

BEYOND THE MUSEUM

Personnel from the mammal collection conducted field work throughout Alaska as part of various research projects, traveling to Juneau and Douglas Island to study marmots and voles; Skagway and Ketchikan to mist net bats; Denali National Park and Preserve to conduct a resurvey of small mammals: and Kotzebue to obtain specimens of the elusive Alaska hare (Lepus othus). Staff and students also gave presentations at the annual meetings of the Western Alaska Interdisciplinary Science Conference and Forum in Kotzebue and the American Society of Mammalogists in Oklahoma City.







CLOCKWISE FROM UPPER LEFT: Mammal Curator Link Olson and NPS employee Kari Rain untangle a Keen's Myotis bat from a mist net near Skagway, Alaska. UAF PhD student Katie Everson and undergraduate Jon Nations trap tree-climbing voles on Douglas Island for Jon's honors thesis. Master's student Michelle Cason prepares the partial skeleton of a beluga whale for transport to the museum from the Turnagain Arm of Cook Inlet near Anchorage.

PREVIOUS PAGE: National Park Service technician Jaime Welfelt and UAMN undergraduate student assistant Mallory Jones remove a bat from a mist net in Southeast Alaska.



Mammalogy

UNDERSTANDING MARINE MAMMALS

The mammal collection at UAMN has been awarded a \$100,000 grant from the North Pacific Research Board, which supports peer-reviewed scientific research in the Gulf of Alaska, Bering Sea, Aleutian Islands and Arctic Ocean to inform effective management decisions and support the sustainable use of marine resources.

The money will be used to rehouse and curate 20,000 marine mammal specimens at the museum. It includes support for one graduate and one undergraduate student to work in the collection. The grant will also allow the museum to purchase several new specimen cases.

The work will help researchers study the museum's world-class collection of marine mammals, including specimens like this crabeater seal skull from Antarctica.

With over 21,000 specimens, UAMN's marine mammal collection is larger than those of the next three largest U.S. museum collections combined.

Curator Link Olson says it is an important resource for research and growing quickly. "Due to Alaska's vast coastline and the close working relationship among the museum, subsistence users, and both state and federal agencies, our marine mammal collection continues to grow at a rapid pace.

"This grant will enable us to properly house a backlog of specimens so that they're more readily available to researchers."

In the past decade alone, UAMN's mammal collection has loaned material from more than 4,000 marine mammal specimens to scientists around the world.



ABOVE, LEFT TO RIGHT: Images of some of the 20,000 marine mammal specimens in the museum's collection that will be curated thanks to a grant from the North Pacific Research Board. Photos by Michelle Cason





Mammalogy

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Thomas McDonough

Nicole Misarti

Lori Ouakenbush

Eric Sargis

Gay Sheffield

Dominique Watts

Neal Woodman

CLOCKWISE FROM UPPER RIGHT: UAF undergraduate Jon Nations inspects a northern red-backed vole while training high school students in field mammalogy in Denali National Park and Preserve. Tara Fulton of the University of Alberta extracting DNA from ancient walrus samples in the museum's Ancient DNA Lab. Members of the UAMN department of mammalogy participating in the Adopt-a-Highway litter removal program near Fairbanks.

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Catherine Rubin Technician









Mammalogy

USING THE PAST TO SEE THE FUTURE OF PACIFIC WALRUSES

Hundreds of specimens housed at the University of Alaska Museum of the North will be used as part of a \$1.7 million grant to study population trends in Pacific walrus. Curator of Mammals **Link Olson** likens the collection to a "vast library." The books are the specimens themselves—some thousands of years old—collected over the past century by naturalists, archaeologists, biologists and subsistence hunters.

Olson, together with **Tara Fulton** from the University of Alberta, will use cutting-edge technology in the museum's Ancient DNA Lab to extract minute quantities of DNA from walrus specimens dating back two millennia, providing insight into the overall genetic health of the species.

The **Ancient DNA Lab**, built as part of the museum's expansion, is the only dedicated lab of its kind in the state of Alaska and one of the only ancient DNA labs in a museum in which the polymerase chain reaction (PCR) has never been conducted, allowing for a facility that's uncontaminated by DNA from other sources.

Since the lab's completion, Olson and colleagues have been able to leverage several NSF grants to study, among other things, the genetics of Southeast Asian treeshrews, South American primates, and now walruses—all using material tens, hundreds, and even thousands of years old.

The Pacific walrus project brings together scientists from the U.S. and Canada with expertise in genetics, archeology, chemistry, ecology, and ethnohistory to study the marine mammals, whose sea ice habitat has been markedly receding in recent years. Pacific walruses are critical to the economies of many coastal villages in Alaska.

Other researchers named in the grant, including principal investigator Nicole Misarti and co-investigator Lara Horstman, both of UAF, will obtain stable isotope, trace element, and hormone data from the same specimens to look for shifts in feeding ecology and foraging location as well as any associated stress responses.







Mammalogy

Anne Jensen, an archaeologist and senior scientist at UIC Science LLC in Barrow, will collect additional walrus samples from archaeological repositories and help the team interpret their findings in a broader cultural and historical context, as will the numerous Alaska Native organizations participating in the study.

In addition, a translator will search through hundreds of interviews archived at the UAF Rasmuson Library that contain traditional ecological knowledge of Pacific walruses. Even high school students will have a chance to participate in the project through the Rural Alaska Honors Institute program at UAF and in Barrow.

PREVIOUS PAGE: From Left: Nicole Misarti of the UAF Institute of Northern Engineering, Lara Horstmann, assistant professor in the UAF School of Fisheries and Ocean Sciences, and UAMN Curator of Mammals Link Olson. Students and scientists are conducting ongoing research in the museum's mammal collection.

BELOW: Curator of Mammals Link Olson likens the museum's mammal collection to a "vast library."The books are the specimens themselves—some thousands of years old—collected over the past century by naturalists, archaeologists, biologists, and subsistence hunters. Photos by Theresa Bakker



PRESENTATIONS

Nations, JA and LE Olson. 2014. Is climbing behavior reflected in the morphology of scansorial voles? Oral presentation, Annual Meeting of the American Society of Mammalogists, Oklahoma City, OK.

Jones, M and LE Olson. 2014. Northern range extension of Keen's Myotis and other bats in Alaska. Oral presentation, Annual Meeting of the American Society of Mammalogists, Oklahoma City, OK.

Everson, K, SA Jansa, SM Goodman, and LE Olson. 2014. The tangled evolutionary histories of Madagascar's small mammals. Oral presentation, Evolution meeting, Raleigh, NC.

Everson, K, SA Jansa, SM Goodman, and LE Olson. 2014. Colonization, adaptive radiation, and evolutionary constraint: The natural history of Madagascar's small mammals. Oral presentation, Annual Meeting of the American Society of Mammalogists, Oklahoma City, OK.

Olson, LE, K Scholten, N Woodman & E Sargis. 2014. "The" treeshrew in biomedical research: An evolutionary reality check. Oral presentation, Annual Meeting of the American Society of Mammalogists, Oklahoma City, OK.

Cason, MM, T Booms and LE Olson. 2014. Updating the distribution of the Alaskan Hare, Lepus othus. Oral presentation, Annual Meeting of the Western Alaska Interdisciplinary Science Conference and Forum, Kotzebue, AK.



Research and Collections

Ornithology



YEAR IN REVIEW

We've had another productive year. The collection grew by 1,500 specimens, and department staff, students, and research associates produced 16 publications. Kyle Campbell completed his Master of Science degree. Fieldwork took staff to Kodiak, Chirikof Island in the Gulf of Alaska, Middleton Island south of Cordova, and Interior Alaska. A great group of students and volunteers worked with us throughout the year. Our proposal to the National Science Foundation for new specimen cabinets was accepted, and we look forward to undertaking that large project next year. As always, we thank our students, volunteers, and the Friends of Ornithology for their ongoing support, which helps enormously in being able to sustain these important activities.

publications

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LEFT TO RIGHT: Curator of Birds Kevin Winker pauses in the hallway during the 2014 Halloween at the Museum to pose for a picture. Students prepare specimens in the bird lab during the museum's Halloween event.

PREVIOUS PAGE: Ornithology Collection Manager Jack Withrow demonstrates bird preparation techniques during the museum's Open House.







In defense of Scientific Collections

The curator of birds at the University of Alaska Museum of the North has joined more than 120 colleagues to rebut a criticism of scientific collecting published in the journal Science in April 2014.

Kevin Winker said the reaction to the critique was extremely fast. "Email connects scientists around the world, enabling rapid communication, and the museum community is made up of people eager to work together to advance science."

The response is published in the May 23 issue of Science, the academic journal of the American Association for the Advancement of Science and one of the world's top scientific journals. Science is published weekly.

The authors of the original piece concluded that collecting voucher specimens, the scientific practice of preserving a complete animal that serves as a basis of study and is retained as a reference, is potentially harmful to many species. The authors also stated that technological alternatives now exist in the form of photographs, audio recordings and non-lethal tissue sampling.

Winker and his colleagues asserted that none of the extinction events in the original paper could be attributed to scientific collecting. They explained that the suggested alternatives to specimens are individually problematic and cannot be used to identify the majority of the plants and animals that make up the planet's biodiversity.

"Outside of traditional uses in biodiversity science, we benefit from the uses of specimens in diverse ways, from the study of zoonotic diseases and pathogens, to environmental contaminants, to important shifts in ecosystems and food chains," Winker said. "As the environments we live in change, these benefits are only going to grow in frequency and importance — as long as we have the specimens to study, sampled through time."

Luiz Rocha with the California Academy of Sciences, the lead author of the Science piece titled "Specimen collection: An essential tool," said "photographs and audio recordings can't tell you anything about a species' diet, how and where it breeds, how quickly it grows, or its lifespan — information that's critical to assessing extinction risk, and vital for IUCN Red List designation."

The International Union for Conservation of Nature is tasked with keeping the most comprehensive register of names and threat categories for the world's plant and animal species. The categories range from Not Evaluated (NE) to Endangered (EN) and, ultimately, Extinct (EX).

Winker wrote a blog post over the weekend following the Science publication and was surprised by its reception. "That post received over 2,500 views in its first 24 hours. That's a lot for our quiet corner of the world. As of today, the share buttons indicate 938 on Facebook and 154 on Twitter. Other blog sites are now linking to it, too."

Winker also received scores of emails in support of the museum response. "Social media clearly make us and our work more accessible, and we'll continue to use it. It's easy for scientists to hold conversations among ourselves, but this platform provides a window into those conversations that makes them much more accessible to an interested public."

RIGHT: Several specimens of the same species in the museum's bird collection. Comparing animals of the same species allows scientists to study morphological diversity and evolution.



University Instruction

UAF COURSES

The museum's curators serve joint appointments as faculty members at the University of Alaska Fairbanks. During FY14, museum curators and other staff taught the following courses:

ART 200XH - Honors Art Appreciation

ART 490/690 – Special Topics: Economics of Art

ASRA – Alaska Summer Research Academy

BIOL 195 - Field Entomology

BIOL 406 - Entomology

BIOL 426 - Ornithology

BIOL 644 Advanced Topics in Evolution

EBOT 100 Introduction to Ethnobotany

ED F595P Week in the Woods

ENGL 488 - Dramatic Writing

FISH 427 – Ichthyology

FISH/BIO 490 – Experimental Learning: Fisheries Internship

FISH/BIO 497 - Independent Studies

FLM / ANTHRO 460 – Cross-Cultural Filmmaking:

Anthropology and Film

GEOS 106 - Life in the Age of Dinosaurs

GEOS 317 – Paleontological Research and Laboratory Methods

MRAP 288/488 – Museums Research Apprenticeship Program

STUDENTS

Archaeology

Student Employees:

Fawn Carter

Evie Combs

Stormy Fields

Tvler Graham

Cassidy Phillips

Student Researchers:

John Blong (PhD, Texas A&M)

Fawn Carter (MA, UAF)

Patrick Charapata (MS, UAF)

Eileen Colligan (PhD, City University of New York)

Aimee Ely (MA, UAF)

Angela Gore (PhD, Texas A&M)

Patrick Hall (MA, UAF)

Joseph Keeney (MA, UAF)

Remi Mereuze (MA, Universite Paris 1 Pantheon-Sorbonne)

Katherine Mulliken (MA, UAF)

Angelique Neffe (PhD, Universite Paris 1 Pantheon-Sorbonne)

Camille Viot (MA, Universite Paris 1 Pantheon-Sorbonne)

Anna Sloan (PhD, University of Oregon) Angela Younie (PhD, Texas A&M)

Earth Sciences

Bobby Ebelhar Hiro Mori **Danielle Serratos** Meghan Shay Michelle Sutton

Education

Mallory Jones Amanda Spencer Katie Taskey

Entomology Undergraduate:

Marisol Bastiani Lacev Broskev Samantha Burd Jennifer MacDougall Megan McHugh Sarah Meierotto Nolan Rappa Javce Williamson Mary Wyatt Graduate: Casey Bickford Brandi Fleshman Logan Mullen Jill Stockbridge

Film

Megan Bush Makenzie Demmert

Fine Arts

Karina Gomez Kajita Royota

Fishes

Robert Marcotte

Herbarium

Adam Bentele **Stephany Jeffers** Jordan Metzgar **Zachary Meyers** Kvle Moehlin Margaret Oliver Sydney Rosenbalm Lisa Strecker Maura Sullivan Teagan Siekawitch Mark Winterstein

Mammalogy

Takae Nakaiima Jonathan Nations Shelby Surdyk Ornithology Kyle Campbell

Production

Nathan Feemster Jasmin Johnson

STAFF PROFESSIONAL SERVICE

Alaska Checklist Committee

Alaska Entomological Society, vice president

American Ornithologists Union (AOU), council member

CINE National Film Festival, jury chair (documentary and fiction)

Conservation of Arctic Flora and Fauna Expert Group, member

Fairbanks North Star Borough Historic Preservation Commissioner

Flora of North America, board member

The Folk School Fairbanks, board member

Geist Fund, chair

Journal of Vertebrate Paleontology, Editorial Board member

Museums Alaska Board of Directors President

Jack Withrow

Derek Sikes

Kevin Winker

Len Kamerling

Steffi Ickert-Bond

Angela Linn

Steffi Ickert-Bond

Len Kamerling

Pat Druckenmiller

Pat Druckenmiller

Angela Linn



ABOVE: Entomology lab technician Sayde Ridling (far right) shows members of the Museum Advisory Council, Renee Staley and Bill Bailey, insect specimens as part of their behind-the-scenes tour of the museum's labs and collections.

Field Research



Field Research

ARCHAEOLOGY

Denali National Park and Preserve Franklin Creek, Interior AK Port Spencer, NW AK Quartz Lake-Shaw Creek Flats, Interior AK Simpson Site, Interior AK Susitna River Valley, Interior AK

EARTH SCIENCES

Colville River, North Slope, National Petroleum Reserve – Alaska Kuskokwim River, Crooked Creek Yukon River, Ruby to Kaltag

ENTOMOLOGY

Aleutians / Bering Sea: Adak, Kasatochi volcano Fairbanks: UAF Campus, Quartz Lake Southcentral Alaska: Valdez

FILM

Kibaya, Tanzania

CHINA: Yunnan and Sichuan Provinces Alabama, Dade Co., DeKalb Co., Jefferson Co., Sumter Co. Illinois, Jefferson Co., Jersey Co., Washington Co.
Indiana, Carwford Co., Kentucky, Carter Cp., Shelby Co.
Louisiana, Lafayette Co., Liberty Co., Livingston Co., St. Tammany
Co., West Baton Rouge Co. Maryland, Montgomery Co., Prince Georges Co.

Massachusetts, Middelsex Co. Mississippi, Forrest Co. Missouri, Phelps Co.

Oklahoma, Canadian Co., Craig Co., Creek Co., Custer Co., Jackson Co., Washita Co.

Texas, Blanco Co., Bastrop Co., Brazos Co., Edwards Co., Gillespie Co., Grimes Co., Kerr Co., Kimble Co., Liberty Co., Montgomery Co., Sutton Co., Taylor Co., Wilbargar Co.
Virginia, Bland Co., Dickenson Co., Giles Co., Grayson Co., Fairfax Co., Montgomery Co., Rockbridge Co., Wythe Co.

MAMMALOGY

Anchorage/Cook Inlet, AK Denali National Park, AK Ester Dome, AK Fairbanks, AK Hugh Smith Lake/Ketchikan, AK Juneau, AK Kotzebue, AK Portage, AK Skagway, AK Wickersham Dome, AK

ORNITHOLOGY

Chirikof Island Interior Alaska Kodiak Middleton Island



Publications by UAMN faculty and students

AOU Committee on Classification and Nomenclature (K Winker and 11 other members). 2013. Fifty-fourth supplement to the American Ornithologists' Union Check-list of North American Birds. Auk 130:558-571.

Boria, RA, **LE Olson**, SM Goodman, and RP Anderson. 2014. Spatial filtering to reduce sampling bias can improve the performance of ecological niche models. Ecological Modelling 275:73-77.

Bousquet Y, P Bouchard, AE Davies, and **DS Sikes**. 2013. Checklist of Beetles (Coleoptera) of Canada and Alaska, Second Edition. ZooKeys 360: 1-44. doi: 10.3897/zookeys.360.4742 [data paper] (BOOK): Pensoft Series Faunistica No 109, Sofia-Moscow, 402 pp. ISSN 1312-0174, ISBN 978-954-642-704-5.

Braile TM and K Winker. 2013. New distributional records of Philippine birds from Bohol, Mactan, Olango, Busuanga and Luzon islands. Forktail 29:140-141.

Bryson RW Jr, J Chaves, BT Smith, MJ Miller, K Winker, JL Pérez-Emán, and J Klicka. 2013. Diversification across the New World within the "blue" cardinalids (Aves: Cardinalidae). Journal of Biogeography 41:587-599. doi: 10.1111/jbi.12218.

Campbell JA, CJ Schröder-Adams, JW Haggart, PS Druckenmiller, MJ Ryan, and GD Zazula. 2013. First records of a plesiosaurian (Reptilia: Sauropterygia) and an ichthyosaur (Reptilia: Ichthyosauria) from Yukon, Canada. Canadian Field-Naturalist 127:234-239.

Coffman S. 2013. Teklanika West: A Late Pleistocene multi-component archaeological site in Denali National Park and Preserve. Alaska Park Science 12:26-31.

Druckenmiller PS and EE Maxwell. 2013. A Middle Jurassic (Bajocian) ophthalmosaurid (Reptilia, Ichthyosauria) from the Tuxedni Formation, Alaska and the early diversification of the clade. Geological Magazine 1-8 DOI: 10.1017/ S0016756813000125.

Druckenmiller PS, GM Erickson, and JM Chase. 2013. Age of the Arctic dinosaur. The Explorers Journal 91:16-21.

Gibson DD, LH DeCicco, RE Gill Jr, SC Heinl, AJ Lang, TG Tobish, and JJ Withrow. 2013. Third report of the Alaska Checklist Committee, 2008-2013. Western Birds 44:183-195.

Gibson DD, LH DeCicco, RE Gill Jr, SC Heinl, AJ Lang, TG Tobish, Jr. and JJ Withrow. 2014. Checklist of Alaska birds. 20th edition.

Kamerling L. 2014. A magic window to the past: preservation of cultural media for future generations, chapter. The Anthropology of Exhibits.

Linn, AJ. 2013. An American treasure in Fairbanks: The rehabilitation of the Kolmakovsky Blockhouse. Alaska Journal of Anthropology 11: 93-100.

McCracken KG, RE Wilson, JL Peters, K Winker, and AR Martin. 2013. Late Pleistocene colonization of South Georgia by yellow-billed pintails pre-dates the Last Glacial Maximum. Journal of Biogeography 40:2348-2360.

Nalawade-Chavan SG, F Zazula, J Brock, R Southon, R MacPhee, and PS Druckenmiller. 2014. New single amino acid hydroxyproline radiocarbon dates for two problematic American Mastodon fossils from Alaska. Quaternary Geochronology 20:23-28.

Pantoja A, **DS Sikes**, AM Hagerty, SY Emmert, and S Rondon. 2014. Ground beetle (Coleoptera: Carabidae) assemblages in the Conservation Reserve Program crop rotation systems in Interior Alaska. Journal of the Entomological Society of British Columbia 110:6-18.

Peters JL, K Winker, KC Millam, P Lavretsky, I Kulikova, RE Wilson, YN Zhuravlev, and KG McCracken. 2014. Mito-nuclear discord in six congeneric lineages of Holarctic ducks (genus Anas). Molecular Ecology 23:2961-2974.

Pranty B, JL Dunn, KL Garrett, **DD Gibson**, MJ Iliff, MW Lockwood, R Pittaway, and DA Sibley. 2013. 24th report of the ABA Checklist Committee, 2013. Birding 45:30–37, 75–79.

Pruett CL, C Whelan, A Ricono, SL Lance, T Glenn, B Faircloth, and K Winker. 2014. Development and characterization of microsatellite loci for two species of Beringian birds, rock sandpiper (Calidris ptilocnemis) and Pacific wren (Troglodytes hyemalis). Conservation Genetics Resources 6:175-177. doi:10.1007/s12686-013-0040-4.

Pruett CL, CM Topp, JM Maley, KG McCracken, S Rohwer, S Birks, SG Sealy, and K Winker. 2013. Evidence from the genetics of landbirds for a forested Pleistocene glacial refugium in the Haida Gwaii area. Condor 115:725-737.

Ridling SK, GGE Scudder, DS Sikes, and K LaBounty. 2014. Sitka Bioblitz discovery produces first *Notonecta* (Hemiptera: Notonectidae) recorded in Alaska. Proceedings of the Entomological Society of Washington 116:195-196.

Rocha L, K Winker, et al (121 more authors). 2014. Specimen collection: An essential tool. Science 344:814-815.

Publications by UAMN faculty and students

Sargis EJ, KK Campbell, and **LE Olson**. 2014. Taxonomic boundaries and craniometric variation in the treeshrews (Scandentia, Tupaiidae) from the Palawan faunal region. Journal of Mammalian Evolution 21:111-123.

Sargis EJ, N Woodman, NC Morningstar, AT Reese, and LE **Olson**. 2013. Morphological distinctiveness of Javan *Tupaia* hypochrysa (Scandentia, Tupaiidae). Journal of Mammalogy 94:938-947.

Sargis EJ, N Woodman, NC Morningstar, AT Reese, and LE **Olson**. 2014. Island history affects faunal composition: the treeshrews (Mammalia, Scandentia, Tupaiidae) from the Mentawai and Batu Islands, Indonesia. Biological Journal of the Linnean Society 111:290-304.

Scudder GGE and **DS Sikes**. 2014. Alaskan Heteroptera (Hemiptera): new records, associated data, and deletions. Zootaxa 3852: 373-381. http://dx.doi.org/10.11646/zootaxa.3852.3.6.

Shaw DW, P Escalante, JH Rappole, MA Ramos, RJ Oehlenschlager, DW Warner, and K Winker. 2013. Decadal changes and delayed avian species losses due to deforestation in the Northern Neotropics. PeerJ 1:e179 http://dx.doi. org/10.7717/peerj.179.

Sikes DS and C Venables. 2013. Molecular phylogeny of the burying beetles (Coleoptera: Silphidae: Nicrophorinae). Molecular Phylogenetics and Evolution. 69: 552-565. http:// dx.doi.org/10.1016/j.ympev.2013.07.022.

Sikes DS and J Stockbridge. 2013. Description of *Caurinus* tlagu, new species, from Prince of Wales Island, Alaska (Mecoptera, Boreidae, Caurininae). ZooKeys 316:35-53. (doi: 10.3897/zookeys.316.5400).

Sikes DS, L Mullen, and C Bickford. 2014. Regional inventory of terrestrial arthropods: comparison of two Malaise trap samples from Kanuti National Wildlife Refuge, Alaska, processed by the University of Alaska Museum Insect Collection. Newsletter of the Alaska Entomological Society 7: 6-17. http://www.akentsoc.org/doc/AKES_newsletter_2014_l.pdf

Sikes DS and T Mousseau. 2013. Description of *Nicrophorus* efferens, new species, from Bougainville Island (Coleoptera, Silphidae, Nicrophorinae). ZooKeys 311:83-93. (http://dx.doi.org/10.3897/zookeys.311.5141)

Slowik J and **DS Sikes**. 2013. Synonymy of four *Pardosa* species (Araneae: Lycosidae) undiagnosable without geography. Journal of the Arachnological Society 41:327-334.

Slowik J and **DS Sikes**. In press. Molecular systematics of the Pardosa groenlandica species complex (Araneae: Lycosidae): Large sample sizes fail to find monophyletic species. The Canadian Entomologist.

Topp, CM, CL Pruett, KG McCracken, and **K Winker**. 2013. How thrushes conquered North America: a comparative phylogeography approach. PeerJ 1:e206. http://dx.doi. org/10.7717/peerj.206.

Walker LR, **DS Sikes**, AR DeGange, SC Jewett, G Michaelson, SL Talbot, SS Talbot, B Wang, and JC Williams. 2013. Biological legacies direct early ecosystem recovery and food web reorganization after the eruption of Kasatochi Volcano, Alaska. Ecoscience 20:1-12.

Watanabe A, GM Erickson, and **PS Druckenmiller**. 2013. An ornithomimosaurian from the Upper Cretaceous Prince Creek Formation of Alaska. Journal of Vertebrate Paleontology 33:1169-1175.

Winker K. In press. [Review of] Handbook of the Birds of the World: Special Volume. Loon.

Winker K, KG McCracken, DD Gibson, and JL Peters. 2013. Heteropatric speciation in a duck, Anas crecca. Molecular Ecology 22:5922-5935. doi: 10.1111/mec.12525.

Withrow J, SG Sealy, and K Winker. 2014. The genetics of divergence in the Northern Saw-whet Owl (Aegolius acadicus). Auk 131:73-85.

Yoo IS, **DS Sikes**, and KJ Ahn. 2013. A redescripton of Lyrosoma pallidum (Eschscholtz) and distributional range extension of Lyrosoma Mannerheim (Coleoptera: Agyrtidae). ZooKeys 329:23-32. doi: 10.3897/zookeys.329.4957.

BELOW: Pops of color make the museum stand out from its wintry setting.



Development

FAIRBANKS CHILDREN'S MUSEUM

The Fairbanks Children's Museum was open in the auditorium of the University of Alaska Museum of the North from October 2013 through April 2014. The long-term exhibit was designed to encourage curiosity and discovery through play and creativity.

Director Aldona Jonaitis says it was a chance to welcome the community to the museum in a new way. "This partnership with the incredibly dynamic group that has developed the Fairbanks Children's Museum brought new visitors to the UA Museum of the North.

The installation featured several new interactive exhibits that let children explore through the very serious business of play. Monthly Creativity Center themes ranged from fiber arts and simple machines to artistic math. The children's museum also featured bi-weekly Super Sundays, featuring resources from across the community to teach core concepts to kids. Another exhibit called the "Airmaze" provided an interactive opportunity to explore and play.

ABOVE, LEFT TO RIGHT: Museum families gather to celebrate the opening of the Fairbanks Children's Museum at UAMN. Museum Director Aldona Jonaitis receives a check from the Wells Fargo team to support the museum's military appreciation program.

FCM director Brenda Riley said this was an opportunity to achieve another goal in the community-supported institution's long term plan. "As an emerging museum, we were thrilled to have the support of the UA Museum of the North. This was the perfect opportunity for the FCM to evolve beyond offering monthly events and to further our mission of bringing a permanent home for play-based exploration to the community of Fairbanks."

Jonaitis said the museum staff enjoyed the patter of little feet with this new partnership. "This was an way for us to be responsive to the needs of the Fairbanks community."

MILITARY APPRECIATION PROGRAM

In January, thanks to Wells Fargo, we launched a new program at the museum for Alaska military families. During the second half of FY14 we welcomed 2,997 Alaska active duty military personnel and their families to the museum.

With the generous support of Wells Fargo, those visit were free of charge. Thank you Wells Fargo for your ongoing commitment to Alaska military families. With this new program in place, all active duty military personnel and their families stationed in Alaska receive free admission to the UA Museum of the North.







Daily News - Miner

The voice of Interior Alaska since 1903





Development





CLOCKWISE FROM UPPER LEFT: Curator Steffi Ickert-Bond and graduate student Stephany Jeffers work the herbarium table at the museum's Valentine's Night Out. Oosiks from the mammal collection. Visitors examine bees and other specimens from the insect collection. Mammal Collection Manager Aren Gunderson talks to visitors at the museum's Night Out that was all about the birds and the bees, the mammals and the trees on Valentine's Day.







The education, marketing, and visitor services department worked together to launch a series of events for adults. Night Out at UAMN was designed to highlight museum collections and galleries while providing an opportunity to have an evening out in a new setting. Events featured music, food, and drink. The events were also designed as a fundraising avenue for the museum. Four events were held:

October 18, 2013

The unOctoberfest featuring the earth sciences collection. Music by Feeding Frenzy

December 13, 2013

Featurng the fish collection.

Music by Saint Animal

February 14, 2014

All About the Birds & the Bees, Mammals & Trees featuring the collections. Demonstrations by Fairbanks Tango

April 18, 2014

The Museum + After Hours = A Good Time featuring hares from the mammal collection. DJ music and dancing

Marketing & Communications

TELLING THE MUSEUM'S STORIES

Through collaborations with museum departments, UAF programs, and community partners, Marketing & Communications Manager Theresa Bakker provides a variety of resources ranging from advertising and promotion to media relations and photography. She writes two newsletters a month for the museum, maintains its social media sites, oversees the website, and produces the annual report and other publications.

Bakker creates communication plans to share the museum's mission with broad audiences and collaborates with UAF to market the museum as part of the university's branding campaign. She wrote a story for the Fall 2013 issue of Aurora magazine about the Denali exhibit and also participated in a virtual tour of Arctic Odyssey to celebrate the launch of the new research vessel, the R/V Sikuliag.



NEW WEBSITE

As one of the premiere sites built on the Roxen platform through the university's Office of Information Technology, the museum's website had become outdated and unable to respond to a variety of mobile devices. Bakker coordinated a year-long effort to update and re-design the museum's website along with graphic designer Tamara Martz and OIT website designer Aida de l'Isle. The new website features a horizontal menu system, new banner images that are easily updated, and a simple clean design. In the first year alone, traffic increased from about 90,000 page views a year to more than 130,000 in FY14. Almost 30% of those online visitors accessed the website on a tablet or mobile device, an audience that would not have been able to interact correctly with the previous page.

SOCIAL MEDIA

The museum is featured on a wide variety of social media sites, including a long-standing presence on Twitter (3,300 followers) and Facebook 5,000 followers), along with newer accounts on YouTube and the popular website Tumblr. One particular post attracted more than 800 interactions after it was shared by the Field Museum's social media site, Brain Scoop. New this fiscal year is a page on Instagram, a simple sharing platform featuring photographs. In just a few months, the platform has attracted almost 300 followers from all over the world.











MEDIA RELATIONS

Bakker worked to publicize the collections, research, events, and exhibits created by the museum. She maintains a close working relationship with local and statewide reporters, and works to position the museum's stories in their publications.

In the fall of 2013, Bakker was featured in an episode of the Travel Channel program Mysteries at the Museum. She worked with the producers to identify a story centering around a tiny fungi that helped put an end to a 1950s-era project that would have used nuclear devices to build a harbor near Point Hope. Bakker also wrote stories for the Fairbanks Daily News-Miner about a new acquisition to the fine arts collection with roots in Alaska Native culture and the discovery of dinosaur footprints along the Yukon River.

BELOW: KUAC reporter Dan Bross followed up on a conversation with Marketing & Communications Manager Theresa Bakker and filed a story about scientists from Idaho State University making 3D scans of the museum's natural history specimens for an online database known as the Virtual Zooarchaeology of the Arctic Project or VZAP.



Gifts to the Collections

The museum's collections have grown through decades of fieldwork and research, careful cultivation and the generosity of people whose passion for science, culture and education leads them to support the museum's mission. We are grateful to our donors for their contributions during FY14.

GIFTS TO ARCHAEOLOGY

Edward J. Ruckstuhl Mary Taylor

GIFTS TO EARTH SCIENCES

Harold Dunham Curvin Metzler

GIFTS TO EDUCATION

Richard M. Kellogg: Bola with walrus tooth weights

GIFTS TO ENTOMOLOGY

The following individuals donated a total of 8,070 specimens/lots in 14 differing accessions to the entomology collection during FY14.

Robert Armstrong: Bat bug (Cimicidae) from Juneau

Matt Ballinger: Chaoborus cf. trivittatus voucher specimens

Kimberlee Beckman: Ticks from various locations/hosts in Alaska

Karen Blejwas: Bat ectoparasites / symbionts from bat trapping study

Matt Bowser: Specimens from KNWR transferred to the UA Museum of the North

La'ona DeWilde: Caterpillars from Chalkyitsik for identification

Jon Gregg: Psocoptera from indoors

Lisa Shon Jodwalis: One Dytiscus specimen for identification

Ryan L. Klimstra: Mites, collected from a lemming in Barrow for identification

Link E. Olson: 6.697 ectoparasites from the UA Museum of the North mammal collection

Jessica J. Rykken: Denali National Park specimens from pollinator project

Todd A. Steinlage: European red mite (Panonychus ulmi Koch) from a Wasilla

apple orchard

GIFTS TO ETHNOLOGY & HISTORY

Theresa Bakker: Sheet of 2014 "Inverted Jenny" stamps and eighteen items associated with the 2014 Arctic Winter Games in Fairbanks

Bill English: Collection of footwear (5 pair) and one pair of mittens used by

English while working as a pilot for Wien Airlines in the 1940s and '50s

Mark S. Johnson: Three skin and textile hats worn by Russian reindeer herders

from the early 1990s

Aldona Jonaitis: Pen used by Alaska Governor Sean Parnell, following the signing of HB154

Richard M. Kellogg: Frank E. Kellogg collection of souvenir spoons and

ethnological items from the early 20th century

Brina Kessel: Sixteen souvenir and Alaska Native art items

Michael Krauss: Wooden miniature Milepost sign used as a trophy

Linda LaFleur: Doll made by Dora Tobuk of Evansville and Bettles

James Moody: Blouse that formerly belonged to Mattie "Tootsie" Crosby

Northern Land Use Research Alaska: Two historic NEHI soda cans Russell Redick: Handmade saw from Rampart Village area

Susan Riggs: David Howard Blackburn collection of eight pieces of Alaskan

jewelry and souvenirs from the mid-20th century

Ed Ruckstuhl: One Russian Orthodox Bible and nineteen Russian lacquer boxes UAF Alaska and Polar Regions Collections and Archives: Sixteen items related

to Lola Tilly and Louis M. Applegate

Candy Waugaman: Sealskin pillow with embroidered beadwork and a moose-

hide wall hanging with drawn scene

Romany Wood: 81 historical and ethnological items collected and used by

Virginia "Ginny" Wood

Chris Wooley: Three pieces of clothing issued to members of the Exxon Valdez

Oil Spill "Shoreline Cleanup Advisory Team" (SCAT)

GIFTS TO FILM COLLECTION

Chase Audio (a division of Delux) – provided discounted audio services

Donnelly Gold, Inc. – gifts of \$6,000 to tour the newly-restored *Drums of Winter*

film

KYUK-TV - \$1,000 worth of advertising

SummitDay Media - contributed time on Drums project

GIFTS TO HERBARIUM

Ron Abbott: 60 vascular plant specimens from Colorado

Al Batten: 10 specimens from Nancy Lake SRA

Bruce Bennett: 60 Yukon Territory specimens

Raul Guitierrez (EPA, Texas): 13 specimens of Ephedra

Oregon State University Herbarium: 53 vascular plant specimens

Kai Koshow Rains: 15 specimens from Sheep Creek Valley

Seeds of Success program: 200 voucher specimens

Stacy Studebaker: 95 specimens from Kodiak Island

University of California Riverside Herbarium: 8 Ephedra specimens

USFS: 14 specimens from Southeast Alaska

Yunnan and Sichuan Provinces, China: 48 specimens

GIFTS TO MAMMALOGY

The mammal collection would like to thank these groups and individuals for their donations.

Alaska Department of Fish and Game (Kimberlee Beckmen, Stephen Bethune,

Karen Blejwas, Travis Booms, Anna Bryan, and C. Tom Seaton)

Alaska Sea Life Center

Alaska Veterinary and Pathology Services (Kathy Burek)

Brian Barnes

Steve Bouta

Roy Churchill

John Fish

Tom Green

Aldona Jonaitis

Gary McCracken

Sherrill Pearson Gary Powers

Harry Reynolds

Gabriela Serra-Valente

Ken Severin

Gay Sheffield Jack J. Withrow

Allison York

National Marine Fisheries Service (Barbara Mahoney)

National Park Service (Melanie Flamme and Jaime Welfelt)

U.S. Fish and Wildlife Service (Tim Craig, Jonathan Snyder, Dom Watts, Nicole

Wells, Kristin Worman)

USDA Wildlife Services (Michael Stevens)

GIFTS TO ORNITHOLOGY

Specimens from Heinrich Springer and Johannes Erritzoe



FY14 Donors and Members

\$10,000 AND ABOVE Koch Companies Public Sector, LLC Dr. Lund and Mr. Lund Grace Berg Schaible Dr. and Mrs. Sonneborn Wells Fargo Bank Alaska, N.A.

\$1,000 - \$9,999 Craig and Cynthia Dorman Donlin Gold James and Sandra Haselberger William K Hoeg Revocable Trust Harold F. John **Kiewit Companies Foundation Kodiak Island Medical Associates** Niilo Emil Koponen Estate Mary Ann Nickles Link Olson and Mary Leigh Ron and Kathie Olson Joseph E. Usibelli and Peggy Shumaker Kevin Winker and Rose Meier

\$250 - \$999 Marcel S. Colp Robert Dickerman Carl and Judy Divinyi Hajo Eicken and Angela Dirks-Eicken Fairbanks Rollergirls Charles and Charlotte Faulkner Charles Kennel and Ellen Lehman Juan and Ellen Lopez Carol McIntyre and Raymond Hander Dorli McWayne and Kesler Woodward Donna and Michael Patrick Brian Rogers and Sherry Modrow Heinrich and Ok Springer

Up to \$250 Duwain D. Aamodt Nurtay and Nazira Abdubek Richard and Roberta Ackley Nick and Courtney Adkins Kimberly and Milo Adkison Aelin J. Allegood Amber Allen Tonya and Eric Amaral **Douglas Anderson** Thomas and Sheila Anderson Wendy and Daniel Anderson Lisa Appugliese Jennifer Arseneau and Tumi Traustason Melanie M. Arthur Diane Atkins **Emmon Bach**

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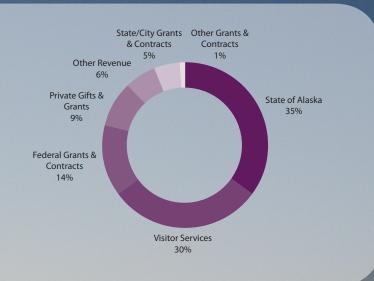
Financial Summary

INCOME

Visitor Services	\$1,446,24
State of Alaska	\$1,695,90
Federal Grants and Contracts	\$701,029
Private Gifts & Grants	\$430,811
Other Grants & Contracts	\$66,949
State/City Grants & Contracts	\$260,456
Other Revenue	\$270,502

Total income \$4,871,893

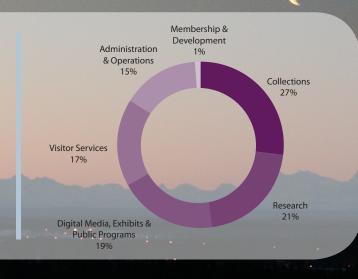
^{*} Note: Revenue from museum memberships, bequests, and other private donations are held and managed by the University of Alaska Foundation and only appear in the museum's financial summary as those funds are transferred to the museum's spending accounts.



EXPENSES

Research	\$1,021,089
Collections	\$1,301,871
Digital Media, Exhibits & Public Programs	\$943,842
Visitor Services	\$844,438
Administration & Operations	\$735,532
Membership & Development	\$25,518

Total expenses \$4,872,292



\$62,500

Holocene Landscape and Paleoenvironment in the Middle and Upper Susitna River (Shirar)	\$49,000
iDigBio	
Conference participation travel grant, University of Texas Austin (Druckenmiller)	\$1,218.30
Conference participation travel grant, Yale Peabody Museum (Druckenmiller)	\$1,011.60
INSTITUTE OF MUSEUM AND LIBRARY SERVICES	
Stable Data: Migrating the University of Alaska Museum of the North Cultural Collections Inforr	mation into Arcto
(Linn & Shirar)	\$149,999
NOAA/NMFS	
Transfer of Auke Bay Lab Fish & Marine Invertebrate Research Collection (Lopez)	\$106,286
NATIONAL PARK SERVICE	
Katmai Coast Archaeology: Human Settlement, Seasonality, and Sea-Level Change on the Pacif	ic Coast of the
Alaska Peninsula, ca. 8,0004,000 Years Ago (Shirar)	\$78,250
NATIONAL SCIENCE FOUNDATION	
WALRUS – Walrus Adaptability & Long-term responses (Olson)	\$431,281
OTTO GEIST WILLIAM GEIST FUND	
Archaeological and Geological Investigations at Quartz Lake and Shaw Creek Flats: Tanana Valle	ey, Interior Alaska
(Shirar)	\$5,000
RASMUSON FOUNDATION	
Rasmuson Art Acquisition Fund (Linn)	\$1,800
UA FOUNDATION	
Art Collection Maintenance (Guthrie)	\$60,000
Uksuum Cauyai: The Drums of Winter (Kamerling)	\$23,082
Expedition Alaska: Dinosaurs digital media (Topp)	\$11,000
Entomology Support (Sikes)	\$10,000
Bowhead Whales Film (Topp)	\$7,500
General Mammalogy Collection support (Olson)	\$2,600
U.S. BUREAU OF LAND MANAGEMENT	
Archaeology Collection Support (Reuther)	\$58,000
Collections Management (Shirar)	\$12,000
Paleontology Collections Management	\$40,000
U.S. FISH & WILDLIFE SERVICE	
U.S. FISH & WILDLIFE SERVICE Seal Stone Analysis and Exhibition (Reuther)	\$2,500

Curating the Carter Collection (Shirar)



^{*} This list reflects grants and contracts awarded during the FY14 fiscal year only. It does not include multi-year grants or contracts awarded in previous years



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