

# Natural Resource News

UAF School of Natural Resources and Agricultural Sciences

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PHOTO BY JOHN YARIE

## International conference

# Boreal forest meeting set for late May at UAF

Interactions between climate change, disturbance dynamics, and species resilience will likely lead to rapid, important, and surprising changes in vegetation composition and the structure and function of boreal forests. These changes will be driven by alteration of the disturbance dynamics in combination with species' abilities to regenerate in a changing climatic regime.

This subject is the focus of an international science conference, Climate Change Impacts on Boreal Forest Disturbance Regimes, that will be held at UAF May 30 through June 2. The meeting, sponsored by the SNRAS Department of Forest Sciences and the Bonanza Creek Long Term Ecological Research Program, is the sixth boreal forest disturbance dynamics conference.

The fourth meeting, held in Prince George, British Columbia, Canada, focused on ecological consequences. Last year's meeting in Dubna, Russia, concentrated on large-scale disturbances, such as fire, and on forest management practices

involving clear-cutting, windfall, plant diversity, and tree recruitment. This year's conference builds on the previous ones.

To project and manage the future structure, diversity, and function of the boreal forest, it is important to comprehend how interactions of climate with disturbance, particularly fire, insects, and disease, currently drive stand and ecosystem dynamics. Conference objectives are to assess the state of our knowledge of the current and potential effects of climate change on circumboreal disturbance dynamics; assess future effects of climate change on the management of forested ecosystems across the circumboreal region; initiate the development of an integrated research framework to address climate change effects at a circumboreal scale; and, to facilitate exchange of ideas among circumboreal countries.

More information is available on the conference website at [www.icddbf.uaf.edu/](http://www.icddbf.uaf.edu/)

# Mitchell to retire June 30, Nakazawa joins Palmer group



Allen Mitchell

G. Allen Mitchell, associate director of the Agricultural and Forestry Experiment Station and professor of agronomy, has announced his plan to retire June 30, 2007. Mitchell is based in Palmer, where he administers AFES operations and directs Palmer Research and Extension Center activities.

"As associate director, Allen Mitchell has worked for many years to maintain our positive presence in the Matanuska Valley and the Anchorage Bowl, and has been very successful in

doing so," said SNRAS Dean Carol Lewis in response to the announcement. "I particularly appreciate his work with our education program."

In mid-January, Anthony 'Tony' Nakazawa joined the School of Natural Resources and Agricultural Sciences as professor of economics in the department of resources management. Nakazawa, former director of the UAF Cooperative Extension Service, is stationed in Palmer.

"When Dr. Mitchell retires, we'll be left without leadership

at Palmer," said Lewis, "so at that time, Dr. Nakazawa will assume the new position of administrator of the Palmer Research and Extension Center. The position of associate director of the Agricultural and Forestry Experiment Station will not be filled at this time."

Dr. Nakazawa brings to his new position a substantial background in resource economics and he has served the state of Alaska in the Department of Commerce and Economic Development. During his ten years at CES, Nakazawa worked on changing the Extension Service relationship with SNRAS/AFES, providing leadership in crafting the joint Plan of Work, working on associate degrees and one-year certificates that benefit the SNRAS and CES, encouraging joint appointments, and supporting joint research and outreach projects.

"I believe that Dr. Nakazawa is the right choice to continue and expand our research, outreach, and education efforts in the Valley and southcentral Alaska," Lewis said.



Anthony Nakazawa

# SAF grants reaccreditation to forest sciences

The SNRAS forestry program in the Forest Sciences Department has been reaccredited by the Society of American Foresters (SAF) after an extensive program review in 2006. The SAF is the national scientific and educational organization representing the forestry profession in the United States.

“Forest sciences at UAF fills a unique niche in circumpolar forestry education,” said SNRAS Dean Carol Lewis, “and I appreciate that the SAF has acknowledged the value of our forestry program.”

The forest sciences option of the bachelor of science program in natural resource management prepares students to work as professional foresters. During the review, the program was evaluated based on SAF standards for objectives, curriculum, faculty, students, administration, parent-institution support, and physical resources and facilities. The UAF program was first accredited in 1996, and the renewed accreditation of is valid through 2016.

“Having been an SAF member since 1973, I am particularly pleased with our reaccreditation. The SAF confirmed that we have a strong forestry program,” said UAF Chancellor Steve Jones.

The SAF grants accreditation only to specific educational curricula that lead to a first professional degree in forestry at the bachelor’s or master’s level. The society’s accreditation process is recognized by the Council for Higher Education Accreditation.

Founded in 1900 by Gifford Pinchot, the SAF aims to advance the science, education, technology, and practice of forestry; enhance member competency and professional excellence; and, promote the continued health and sustainable use of forest ecosystems and resources. SAF members include natural resource professionals in public and private settings, researchers, CEOs, administrators, educators, and students.



# Botanical garden wins display garden award



In late January, the All-America Selections (AAS) announced that the UAF Georgeson Botanical Garden was the AAS Display Garden Exemplary Education Category I Award winner. AAS is a nonprofit organization that tests new flowers and vegetables for home gardening and has over 180 cooperating display gardens in North America. These gardens grow AAS winners for the public to view, promote gardening, and provide educational programs or events.

GBG has been one of the display gardens for 33 years. Last summer visitors from 46 states and 14 countries enjoyed the garden from May through September. Because the 2006 season marked the 100th birthday of the Fairbanks Experiment Farm, the garden displayed historic facts and figures, historic photos, plant varieties bred at the experiment farm, and information on methods of gardening under the midnight sun with the challenge of cold soils and permafrost.

The AAS display garden highlighted more than 30 years of All-America Winners.

This is the fifth year the AAS Board has provided the opportunity for AAS Display Gardens to achieve national recognition for outstanding educational projects featuring the AAS program and AAS winners. Entries were judged on event substance, educational content, and quality of event publicity. Presentation style, originality, materials, and garden display were also considered. A list of AAS display gardens is available on the AAS website: [all-americanselections.org](http://all-americanselections.org).

*Above, Georgeson Botanical Garden volunteer Judy Weber and garden director Patricia Holloway with the All-America Selections award. Weber designed the award-winning garden shown at left.*



—GEORGESON BOTANICAL GARDEN PHOTOS

# Sustainability: 21 Recommendations for the 21st Century

**Note:** *copyright Joslyn Castle Institute for Sustainable Communities. Reprinted with permission. Written by W. Cecil Steward, FAIA, Joslyn Castle Institute.*

1. See yourself as an integral part of nature.
2. Act as if the worst estimate could come true (the precautionary principle).
3. Treat land, water, air, and natural materials as our most precious and threatened resources.
4. Act in every way possible to restore resources and life to the planet; practice “reduce, reuse, and recycle.”
5. Begin all assessments for action from environmental principles first; use systems analyses; look for the interconnections.
6. Reinvent civil public discourse in government, management, and policy making.
7. Respect and welcome all opinions; engage the stakeholders in decision-making.
8. Respect and enhance cultural distinctions, choice of lifestyles, and cultural heritages.
9. Teach holistic, systems, and circular thinking as a balance to the linear, “scientific method.”
10. Apply all available information, technologies, and media to the interests of public awareness about the principles of sustainability.
16. Encourage incentives for “green,” socially responsible investments, savings, and purchases.
17. Encourage incentives and benefits to local and regional cooperatives and micro-enterprises.
18. Question every public policy, at every level—municipal to global—for its impact on community sustainability.
19. Challenge public policies that subsidize or protect consumption at the expense of nonrenewable resources.
20. Promote public policies that will enhance local production for local consumption.
21. Seek coalitions for public policies and civic improvements that facilitate sustainable practices.
22. Begin again with #1.

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## *Visiting architects to present sustainable design concepts*

Sustainable design promotes human systems in balance with the natural environment. Interest in a collaborative northern design initiative and in developing an interdisciplinary, universitywide sustainable development curriculum has led to a planned consultation with two architects from the Joslyn Castle Institute for Sustainable Communities (JCI) at the University of Nebraska (UN) College of Architecture.

Professor and former dean W. Cecil Steward and professor Sharon Kuska will be in Fairbanks Tuesday through Friday, March 20–23. While here they will meet with engineering faculty and people from the UAF Cold Climate Housing Research Center, and will give a presentation to graduate students in the Regional Resilience and Adaptation Program. That talk, which is open to any interested person will be March 23, 11:30 a.m. through 1:30 p.m. in the Board of Regents Conference Room, 109 Butrovich Building on the West Ridge of the University of Alaska Fairbanks Campus.

The JCI was created to focus on the built environment and promote sustainable development. Today JCI works independently from the UN in advocating and modeling sustainable design and development. Steward is currently JCI president and president of the North/North Network for Urban Sustainability and Leadership. The network’s primary mission is to promote urban sustainability by exchanging best practices information and supporting research and specific projects in urban jurisdictions above the 35th parallel.

The JCI promotes an integrated approach to sustainability issues. Its educational programs and pilot projects provide opportunities for exploring the broad concept of sustainable development and examining specific applications on a project-by-project basis. JCI projects range in scale from building design to regional planning. See JCI at [www.ecospheres.com/](http://www.ecospheres.com/).

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## *Five Domains of Sustainable Development*

- **economic** • **socio-cultural**
- **environmental**
- **technological** • **public policy**

- 
11. Promote the applications of solar related energy technologies (sun, wind, geothermal) for residential, commerce, industry, and community placemaking.
  12. Promote all available strategies and technologies for recycle, re-use, and preservation of places, materials, and systems.
  13. Do not overlook old, appropriate technologies, practices, and ideas for only the sake of the new.
  14. Promote economic practices and conservation policies that will discourage consumptive behavior; promote zero-waste products/industries and eco-industries that exchange wastes for products.
  15. Encourage economic incentives and benefits for local ownership, production, and marketing as a higher priority than absentee or global ownership.



# CELEBRATE



2007-2009

INTERNATIONAL POLAR YEAR  
ALASKA™

The 4th International Polar Year (IPY) begins in March of 2007 and runs through April 2009. This intense, internationally-coordinated research campaign aims to gain new knowledge about Earth's polar regions, study how those regions are changing, and investigate how such changes are impacting the health of our biosphere. IPY is also an opportunity to educate and excite the public and help train the next generation of scientists, leaders and educators.

During this time, there will be a series of events to celebrate IPY and encourage your participation in this historic event. Get interested. Get involved. It's about you.

## Visiting Author Series



**Tim Flannery**  
**The Weather Makers: The History and Future Impact of Climate Change**  
March 12, 2007  
7 PM, Davis Concert Hall



**Dava Sobel**  
**The Planets, Galileo's Daughter, and Longitude**  
March 19, 2007  
7 PM, Davis Concert Hall



**Tom Barnett**  
**The Pentagon's New Map**  
April 6, 2007  
7:30 PM, Davis Concert Hall

Learn more at  
[www.uaf.edu/ipy](http://www.uaf.edu/ipy)  
or 474-5IPY

## IT'S ABOUT US

## Museum Lecture Series

### International Polar Year: Past Present and Future

Professor Emeritus of Geophysics and Geology Carl Benson and colleagues talk about the history of IPY.

**March 6, 2007**

**7 PM, UA Museum of the North**

### Alaskan Climate Change in a Global Context

President's Professor of Global Climate Change John Walsh talks about climate changes in the North and about how human activities may influence the future climate.

**April 10, 2007**

**7 PM, UA Museum of the North**

Co-sponsored by the U.S. Arctic Research Commission and the Arctic Institute of North America.

## In the works...

### Undergraduate Research Symposium

March 29, 2007

### IPY Postdoctoral Science Symposium

June 7, 2007

Tim Flannery photo by Adam Bruzzone

# Some databases to check out

Anne Christie, librarian for the UAF BioSciences Library, would like people who use information in agriculture, fisheries, food, and forestry to examine the first three of the following databases and send your comments to her by May 1. Let Christie know if these database would support your learning, teaching, and research and if you find them user friendly; send your comments to: Anne Christie, BioSciences Librarian, [anne.christie@uaf.edu](mailto:anne.christie@uaf.edu) or 907-474-1177 by May 1, 2007.

## CAB Abstracts 1973–

<http://www.cabdirect.org/>

Abstracts and indexes international literature in all areas of agriculture, including horticulture, animal reproduction, animal and human nutrition, forestry, soil science, and veterinary medicine. Includes strong coverage of fisheries information and recreation and tourism. Indexes journal articles, book chapters, conference proceedings and technical reports. Much broader coverage than AGRICOLA, much deeper in these subjects than the Science Citation Index.

## Forest Science Database 1939–

<http://www.forestscience/info>

The Forestry subset of CAB Abstracts encompasses the three individual indexing publications, *Forestry Abstracts*, *Forest Products Abstracts*, and *Agroforestry*; coverage back to 1939.

## Forestry Compendium

<http://www.cabicompendium.org/fc>

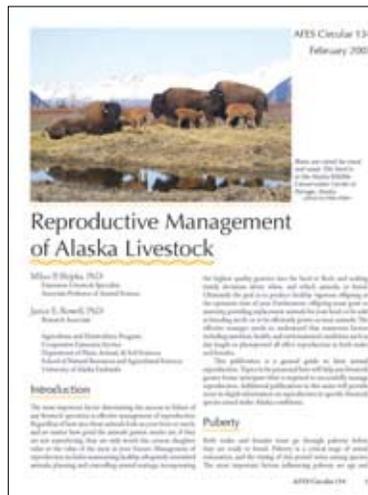
This multimedia tool was prepared by hundreds of specialists worldwide, providing over 2200 datasheets within the woody species and the pests that affect them. A useful teaching tool and reference source, it complements the Forest Science Database of CABB Abstracts.

## International Polar Year (IPY) Publications

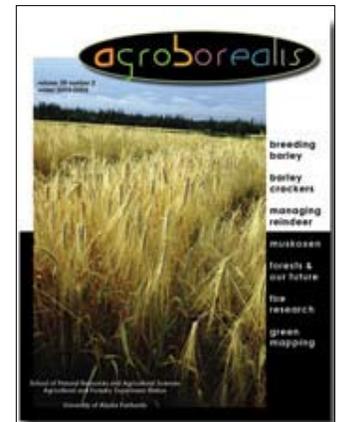
<http://www.nisc.com/ipy>

New on line, the IPY Publications Database contains bibliographic records for publications about or resulting from the IPY 2007-2008 and the three previous IPYs. It currently contains 60 records, with growth to about 20,000 expected during the next decade. The IPYPD will be updated four times a year. The records feature citations, detailed subject and geographic indexing terms, abstracts, and, in most cases, links to full-text online copies of the publications. The database is part of the IPY Data and Information Service; researchers, educators, and communicators are requested to report their publications for inclusion. IPYPD was created by the Arctic Science and Technology Information System, Cold Regions Bibliography Project, Scott Polar Research Institute Library, the Discovery and Access of Historic Literature of the IPYs project, and National Information Services Corporation. Other polar bibliographic databases and libraries are invited to contribute.

For instructions on reporting publications to the database, please go to the website. For more information, contact: Ross Goodwin, Arctic Institute of North America E-mail: [rgoodwin@ucalgary.ca](mailto:rgoodwin@ucalgary.ca)



At left, Circular 134, Reproductive Management in Alaska livestock by Milan Shipka and Janice Rowell. The most recent *Agroborealis* is shown below.



# Recent AFES Publications

The following publications are now available on line at [www.uaf.edu/snras/afes/pubs/index.html](http://www.uaf.edu/snras/afes/pubs/index.html)

*Agroborealis* 39.1, winter 2006-2007 is now on line; print distribution scheduled for March. Covers community Green Maps, commentary on American forests, wildland fire and climate change, fuel breaks for fire mitigation, muskox, current reindeer management, new barley variety, Wooding, testing a barley food product, and seminar on *Omnivore's Dilemma*.

Faculty directory, School of Natural Resources and Agricultural Sciences, March 2007.

Bulletin 115, Aboveground Biomass Equations for the Trees of Interior Alaska by John Yarie, Evan Kane, and Michelle Mack. Available on line.

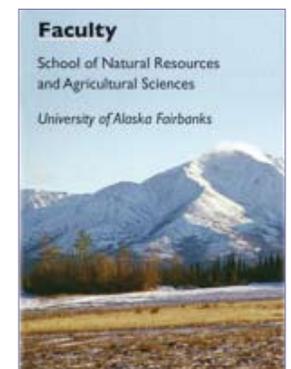
2006 Variety trial reports for interior Alaska are now available. The new variety trial series is numbered VT and has its on page on the website:

- VT 2007-01, Flowers
- VT 2007-02, Vegetables
- VT 2007-03, Herbs

The Annual Report 2005 (published in 2006) covers SNRAS/AFES and research through 2005 and is found on the publications web page for annual reports.



Vegetable Variety Trials and the new SNRAS/AFES Faculty Directory



# Climate experts meet



Climate researchers from four countries met February 19–20 for the Seventh International Conference on Global Change: Connection to the Arctic (GCCA). Several SNRAS faculty participated in the event, which was jointly organized by the UAF International Arctic Research Center and the members of the University Consortium for GCCA in Japan.

The conference brought together some of the top climate change scientists for two days of detailed presentations and discussions. Sessions focused on synthesizing diverse research activities to arrive at a holistic understanding of climate change, explaining the role of the Arctic in global climate change, and initiating collaborative research projects to be conducted during the International Polar Year (IPY), 2007–2009, which officially got underway in March 2007.

The conference followed the Feb. 2 release of the first volume of “Climate Change 2007,” the fourth assessment report from the Intergovernmental Panel on Climate Change, which highlights the human influence on global change and reinforces the scientific community’s findings that the global climate system is warming. The effects of that warming are amplified in the Arctic. Evidence of that includes thawing permafrost and the shrinking arctic sea ice and Greenland ice sheet. The second volume of the Intergovernmental Panel on Climate Change report, “Impacts, Adaptation and Vulnerability,” slated for release in April.

During the conference, Walsh led a plenary session focused on developing an arctic system model that can simulate all of the important climatic processes in the Arctic. It would allow scientists to simulate how changes in one part of the system, such as sea ice, might affect others, such as terrestrial vegetation.

Craig Dorman, UA statewide IPY coordinator, and Hiroshi Kanda of the National Institute of Polar Research in Japan led a plenary session that highlighted several IPY-related projects, including work by several of UAF’s IPY postdoctoral fellows. Other conference session topics were: atmospheric circulation, dynamics and chemistry; ocean circulation and sea ice; middle atmosphere and space/weather geodynamics; hydrology and permafrost; ice sheets, glaciers, and paleoclimate; arctic ecosystem and fire impacts; and remote sensing of environmental change.

For more information, visit the website of the International Panel on Climate Change: <http://www.ipcc.ch/>.

## Arctic website news



### Research Mapping Application

[www.armac.org](http://www.armac.org)

The Arctic Research Mapping Application Program (ARMAP) is an interactive, online mapping application for field-based arctic research. Users can navigate to areas of interest, view a variety of map layers, and query and explore research projects by location, year, funding program, investigator, discipline, IPY designation,

keywords, and other variables. Project information is displayed within the mapping application, with links to external websites for more information.

This service is for science planners, scientists, educators, and the public. ARMAP goes beyond map display to analysis, synthesis, and coordination of arctic research. It is funded by the National Science Foundation Office of Polar Programs, and is a collaborative development effort of the Systems Ecology Laboratory at the University of Texas at El Paso, Nuna Technologies, the INSTAAR QGIS Laboratory, and VECO Polar Resources. Contact Robbie Score, e-mail: [info@armac.org](mailto:info@armac.org).

### Arctic: a Friend Acting Strangely

Smithsonian National Museum of Natural History



[forces.si.edu/arctic](http://forces.si.edu/arctic)

The museum puts a human face on arctic warming by exploring changes observed and documented by scientists and polar residents alike. The website includes compelling photography, scientific research findings, polar resident and community stories, a documentary video, and two interactive activities on climate and caribou in the Arctic. The Eyewitness to Change section features stories of Arctic researchers, residents, and communities, and will be updated throughout the upcoming International Polar Year (IPY) 2007-2008.

The education section includes standards-based science activities developed for teachers and families. It incorporates content from the museum’s 2006 exhibition of the same name. Exhibition and website content curators are Igor Krupnik and William Fitzhugh, both of the Smithsonian Arctic Studies Center. For more information contact: Siobhan Starrs, National Museum of Natural History, e-mail: [starrss@si.edu](mailto:starrss@si.edu).

### Powering Polar Research

[polarpower.org](http://polarpower.org)

The PolarPower website was developed by VECO Polar Resources for the National Science Foundation



Office of Polar Programs. It is a working resource for those who choose, design, implement, and maintain remote power systems in polar environments. It establishes a place for people to share experiences, and stay current on technological developments. Designing power systems that function well in remote polar environments under hostile weather conditions can be complicated. Engineers often use creative approaches to fulfill requirements. Learning from the successes and research of others can help avoid problems with inadequate or faulty systems that may result in data loss or personal safety issues.

PolarPower.org offers an “examples” section describing successfully deployed systems, “links” to facilitate information searches, and an “events” page with announcements of upcoming conferences, symposia, and other meetings. Contributors can share their deployment experiences, alert others of new technology, and ask questions.

Contributions to the website are solicited and welcomed. For more information contact: Roy Stehle by e-mail at: [info@polarpower.org](mailto:info@polarpower.org).



Greg Finstad, director of the Reindeer Research Program, on his way from Nome to Koyuk for reindeer feeding trials related to a project that aims to help herders maintain corralled herds when roaming caribou are present. For more on this subject see the winter 2006-2007 issue of *Agroborealis*, on line at <http://www.uaf.edu/snras/afes/pubs/agro/Agro%2038-2.pdf>.

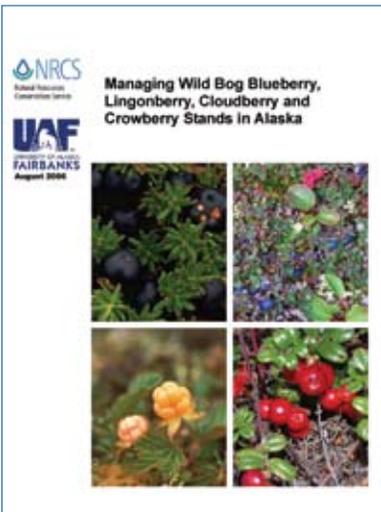
## Seed identification database now on line

<http://nt.ars-grin.gov/sbmlweb/OnlineResources/frsdfam/Index.cfm>

Scientists with the Agricultural Research Service (ARS) in Beltsville, Maryland, have created a special online database, the "Family Guide for Fruits and Seeds." While it can be downloaded or used on line by anyone, it is expected to be a critical tool in the effort to combat invasive species. The guide was developed by Joseph Kirkbride, an ARS botanist who works at the Systematic Botany and Mycology Laboratory (SBML) in Beltsville. Kirkbride, who manages the U.S. National Seed Herbarium housed within SBML, relied heavily on this collection and its more than 120,000 dried specimens when developing the interactive database. ARS is the U.S. Department of Agriculture's chief scientific research agency. If you're interested in plants, you also might like to check out the Internet Guide to Botany website at:

<http://www.botany.net/IDB/>

## Now available: advice on the wild Alaska berries



Growing interest in the qualities of wild berries among individuals, and the commercial harvest of wild berries in Alaska raises questions about how to preserve the health and productivity of these stands. Although in Alaska this has not been extensively researched, horticulture professor Patricia Holloway put together a publication on what we do know. *Managing Wild Bog Blueberry, Lingonberry, Cloudberry and Crowberry Stands in Alaska*, which was published by the Natural Resources Conservation Service (NRCS) in 2006. It is available on line at the AFES publications website under miscellaneous publications (MP-2007-01 NRCS: <http://www.uaf.edu/snras/afes/pubs/misc/MP%202007-01%20NRCS.pdf>).

A hard copy can be obtained from your local NRCS office, from the AFES publications office (see AFES contact information at right).

## Notes

**STAFF CHANGES:** After the retirement of Allison Fields last summer, Sue Royston temporarily filled in as the dean's administrative assistant. Replacing Fields permanently in the Dean's office is **Marilyn Childress**, who formerly was a manager at Radio Fairbanks and Personal Page.

**Laura Snyder** has replaced Teri Langton as the business office travel technician.

**Carla Welty** has replaced Hillary Huffman as the Cooperative Extension human resources technician.

Graduate student **Michelle St. Martin** is working with the Reindeer Research Program at the Fairbanks Experiment Farm.

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