

# AAAS Divisions

AAAS engages its members through four geographic divisions and 24 sections reflecting a diverse range of scientific disciplines. In 2012, the four AAAS Divisions organized events on topics such as threats to health and way of life in the Arctic, lessons in sustainable design applied to science, research in criminal psychology and the struggling ecosystems of prairies.

## ARCTIC DIVISION: CIRCUMPOLAR HEALTH

The AAAS Arctic Division held its 2012 annual meeting with the 15th triennial International Congress on Circumpolar Health. Participants from nine Arctic nations—including scientists, doctors, policymakers, indigenous leaders, educators and students—gathered to discuss health issues such as nutrition, obesity, food security, climate change impacts on human health, suicide and public engagement in research. The AAAS Arctic Division has long been influential in health matters, but this was the first time the division's meeting was held jointly with the International Congress on Circumpolar Health.

The health of people living in the Far North is increasingly threatened by environmental damage and by toxic substances that ride air currents from lands to the south, speakers reported. Climate change is disrupting wildlife migration patterns and the water cycle. Processed foods and urban life have caused a rise in “civilization diseases,” and obesity, diabetes, suicide and substance abuse are surging. The traditional lifestyle of many indigenous people is in danger of vanishing.

There is a “growing recognition of the need to have ... diverse partnerships to study and work on circumpolar health,” said Rhonda M. Johnson, chair of the Department of Health Sciences and a professor of public health at the University of Alaska Anchorage. “An important part of this congress is the opportunity for networking across the northern regions.”

## CARIBBEAN DIVISION: SUSTAINABLE DESIGN

The AAAS Caribbean Division focused a September 2012 conference on sustainable design and the lessons that scientists can learn from architects and other designers.

“The principles of sustainability in the design of buildings, structures, molecules and even new life forms will require an ongoing conversation between designers, scientists and engineers,” said Caribbean Division President Abel Baerga-Ortiz. “With this dialogue in mind, we will seek to explore the application of concepts borrowed from sustainable design in science and engineering.”

Puerto Rican architect Fernando Abruña,



Puerto Rican architect and environmental advocate Fernando Abruña, a professor at the University of Puerto Rico, delivered a keynote address on science and sustainable design during the AAAS Caribbean Division's 2012 annual meeting.



Above left: Samuel Fuhlendorf of Oklahoma State University is shown initiating a controlled burn on a mixed prairie landscape to limit woody plant invasion and promote a healthy interaction between fire and grazing.

Above right: Laurence C. Smith of the University of California-Los Angeles discussed the forces shaping Earth's northern latitudes when the AAAS SWARM Division convened in Tulsa, Oklahoma.



sometimes called the father of green architecture in Puerto Rico, gave the keynote address. Because of the conservation, recycling and energy efficiency made possible by his designs, the Environmental Protection Agency named him in 2012 to its National Advisory Council for Environmental Policy and Technology.

At least one panel discussion at the conference took another approach to the topic, with scientists from the fields of zoology, ecology, chemistry and nanotechnology discussing how their research is influenced by concepts of shape, symmetry and aesthetics.

**PACIFIC DIVISION: CLIMATE, SPACE SCIENCE AND MORE**

Topics ranging from the effect of climate change on sagebrush-steppe ecosystems to the forensic psychology of female death-penalty cases headlined the AAAS Pacific Division's 2012 annual meeting. Held in Boise, Idaho, in conjunction with the Northwest Regional Meeting of the American Chemical Society, the event offered many opportunities for the public to have the experience of participating "in a major science meeting," said Pacific Division President Robert Chianese.

Students and scholars from the Pacific region made presentations at the meeting, and field trips took participants to the Snake River Birds of Prey National Conservation Area and the Bruneau Dunes and Observatory.

**SOUTHWEST/ROCKY MOUNTAINS: FROM ECOLOGY TO MEDICINE**

The lesser prairie chicken and the prairie mole cricket are just two of the species whose habitat has been destroyed by an invasion of junipers taking over the Great Plains from Texas to South Dakota. "Juniper invasion has emerged as a dominant threat to some of the most threatened ecosystems of North America," said Oklahoma State University Professor Samuel Fuhlendorf, who spoke at the 2012 AAAS Southwestern and Rocky Mountains Division meeting.

Introduced to the prairie as windbreaks, the junipers are just one example of how a natural ecosystem that endured for millennia has been thwarted, experts said at the meeting, which also offered sessions on stem cell research and new uses for magnetic resonance imaging (MRI), as well as a symposium on increasing regional bioscience research capacity through outreach, cooperation and internships.

"This is an important conference regionally, and it's important for students and young researchers," said David Nash, executive director of the Southwestern and Rocky Mountains Division, "so there's a real value in mixing local, national and international issues."

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