

Final Report: Joint Fire Science Program Project ID: 11-S-2-2

In a Time of Change: The Art of Fire



Alaska Fire Science Consortium
Bonanza Creek Long Term Ecological Research Program

Start Date: 05/01/2011

End Date: 03/31/2013

Principal Investigator: Sarah F. Trainor
University of Alaska Fairbanks, Alaska Fire Science Consortium

Co-Principal Investigator: Mary Beth Leigh
University of Alaska Fairbanks, Institute of Arctic Biology

Karin Franzen, Curator

Jennifer Northway, Alaska Fire Science Consortium Coordinator

Participating Artists: Sarah DeGennaro, Amanda Ellis, Jesse Hedden, Yasunari Izaki,
Erinn Kathryn, Phil Marshall, Jennifer Moss, Ree Nancarrow, Hanna Stevenson

Artwork photos by Jim Barker

Note: underlined text indicates hyperlink to specific content on project website

Abstract

Successful fire management involves not only scientifically sound decision making and efficient operations, but also effective engagement and communication with the public. In *The Art of Fire* project, the Alaska Fire Science Consortium (AFSC) took a new approach to engaging the public in fire science and management issues. With support from JFSP, AFSC partnered with *In a Time of Change* (ITOC), an ongoing collaborative network of artists, writers, and scientists who have been working since 2007 to integrate scientific and artistic perspectives on social-ecological issues in Alaska and share the results through public performance and exhibits. The ITOC network is part of the Arts and Humanities Program at the Bonanza Creek Long-Term Ecological Research Program (BNZ LTER), supported by the National Science Foundation (NSF).

For *The Art of Fire* project, nine Alaskan artists were selected by a competitive process to learn about the scientific basis behind fire management practices in the context of Alaska's changing ecosystems through field workshops with fire scientists and fire managers. Four field trips were offered with in-kind support from BNZ LTER, Bureau of Land Management-Alaska Fire Service (BLM-AFS), and the National Park Service. Artists then created original works for a public art exhibit in August 2012, while offering public lectures and a studio tour about how their field experiences stimulated the creative process. The project facilitated a sense of place and helped promote public understanding of the functionality of fire in the ecosystems of Interior Alaska. Three additional exhibits and a series of presentations to professional audiences broadened this highly collaborative project's reach, relevance, and inclusiveness.

From an artist's statement:

As I was led through the nuances of forest patterns first-hand with scientists last August, I was inspired by the idea of capturing aerial views of an actual place and of gauging the proximity of this place to my home, my town, and my community. I was also turned on by the shapes and colors of topography, terrain, burn areas and other forest characteristics from aerial Landsat images the scientists shared. These larger maps made direct reference to specific regions during specific moments in time.

—Erinn Kathryn,
mixed-media artist

Inset: Visitors to the *Art of Fire* Exhibit viewing Erinn Kathryn's *Untitled (Rosie Creek Fire)*, *Free Shape I (Rosie Creek)*, and *Free Shape II (Moose Mountain)*, all mixed media. *Boundary* by Jennifer Moss in background. Photo by Jen Northway.



Background and Project Description

In Alaska's boreal forest, fire is an integral part of ecosystem function. Smoke often fills the summer skies, and extensive wildfires can pose risks to life, property, and subsistence livelihoods. The frequency and severity of wildfires in the interior and southcentral regions are increasing as Alaska's climate changes, as is the occurrence of tundra fires. Because fire managers operate at the interface between ecosystem function, land management policy, and the public, successful fire management lies not only in scientifically sound decision making and effective operations, but also in successfully engaging and communicating with Alaskan residents. The arts and humanities have a powerful capacity to create lines of communication between the public, policy, and scientific spheres, as well as to contribute directly to the discourse. Previous efforts to engage the arts and humanities with science, the public, and policymakers have successfully generated excitement, facilitated mutual understanding, and promoted meaningful dialogue on issues facing science and society.



In *The Art of Fire* project, the Alaska Fire Science Consortium (AFSC) engaged the arts and humanities with fire managers and scientists to promote public understanding and awareness of the scientific basis behind fire management practices in the context of Alaska's changing ecosystems. With support from JFSP, AFSC partnered with *In a Time of Change* (ITOC) to design a visual arts project that would generate excitement, facilitate mutual understanding, and promote meaningful dialogue on issues related to fire science and society. ITOC is an ongoing collaborative network of artists, writers, and scientists who have been working since 2007 to integrate scientific and artistic perspectives on social-ecological issues in Alaska and share the results through public performance and exhibits. The ITOC network is part of the Arts and Humanities Program at the Bonanza Creek Long-Term Ecological Research Program (BNZ LTER), supported by the National Science Foundation (NSF).

Following a competitive application process overseen by a prominent local art curator, Karin Franzen, nine Alaskan artists were invited to embrace the inspiration of wildfire, fire science, and fire management through field workshops with fire scientists and fire managers. Four field trips were offered with in-kind support from BNZ LTER, Bureau of Land Management-Alaska Fire Service (BLM-AFS), and the National Park Service. These included two trips with scientists, one to the BNZ LTER site and one to Denali National Park, as well as observation of the annual interagency Wildfire Field Simulation Exercise and a tour of the BLM-AFS facilities (see attachment for additional information).

Right: Photos from the 2011 *Art of Fire* field workshops: paracargo drops during the Field Simulation Exercise (top; photo by Amanda Ellis) and National Park Service Fire Ecologist Jennifer Barnes discusses the 2002 Horseshoe Fire burn site in Denali National Park (bottom; photo by Sean Proctor).



The nine participating artists then created original works for a month-long public art exhibit and offered two evenings of free public lectures and a studio tour about how their field experiences and interactions with the fire community stimulated the creative process. The primary exhibit of 52 pieces of professional art in a variety of media, open free to the public at the Fairbanks Arts Association Bear Gallery in Fairbanks daily during August 2012, was attended by approximately 742 people. A notably high level of attendance (450) was recorded at the exhibit's opening reception (photos below).



Above: At least 450 visitors came to the Art of Fire exhibit opening reception. Photos by Jen Northway.

Simultaneously, an exhibit of community contributed art works was also presented at the Alaska Public Lands Information Center at the Morris Thompson Cultural Center in Fairbanks. This community arts component of the project was added in response to suggestions from the AFSC Advisory Board as a way to further engage members of the Alaska fire management and suppression community, many of whom are accomplished amateur photographers and artists. Six artists contributed 17 pieces in a variety of media, including paintings, photos, ceramics, drawings, and prints.

On the field trips:

It's been really interesting to go on the field trips and find out how our state fights fire and the incredible groups that make this all happen. Going out to the long-term ecological research station and working with scientists who are trying to figure out what's happening and to be able to give the world some idea of what might be next—they're taking on these really complex ideas and problems. All of that's been really exciting.

—Ree Nancarrow, fiber artist

Inset: During an *Art of Fire* field workshop, BNZ LTER Principal Investigator Roger Ruess points out effects of the 1983 Rosie Creek fire on vegetation. Photo by Jen Northway.



Local media outlets, including newspaper, radio, and television, featured the *Art of Fire* project prominently in their coverage, reaching countless more audience members. A video summarizing *The Art of Fire*, photos of the exhibits and artwork, audio/visual recordings of lectures by artists and scientists, and videos of local television news coverage are available on the project website: <http://www.frames.gov/afsc/artoffire>

The project had additional impact beyond Interior Alaska. Selected *Art of Fire* works (21 pieces by seven artists) were shown during a touring exhibit to Alaska Pacific University in Anchorage, AK (Jan 4-29, 2013), and nine pieces by eight artists are currently on display at the National Science Foundation headquarters in Virginia, as part of the Ecological Reflections – Sense of Place in Changing Places exhibit showcasing artist-scientist collaborations at LTER sites (Feb 28-Jun 15, 2013).

From the public lectures:

Black spruce have this semi-serotinous nature... the already mature cones, when they're burned, they open up, which releases the seeds. And of course, this is something that you can't see, but I wanted to try and figure out a way of making a composition where you could see it—you could actually see the seeds... I wanted magnified views of seeds on top of this burnt forest.

—Sarah DeGennaro, painter, on *Nursery Pyre (Semi-Serotinous)*, encaustic on board



From the community art show:

In permafrost-free upland forests, there is a pattern of vegetation changes after a fire:

- 1) herb-resprout stage,
- 2) shrub-sapling stage,
- 3) deciduous-forest stage, and
- 4) spruce stage.

The fireweed and blueberry bowls represent the first stage, the willow bowl the second, the birch forest with developing spruce understory the third stage, and the spruce bowls the last stage. The black bowl and “trees” have been fired with Raku technique, which is directly fire-related.

—Marty Baldrige, ceramicist, on *Successional Vegetation Changes in Upland Forests*, stoneware pottery and Raku “trees”

The project was shared with professional audiences as well. *Art of Fire* investigators (BNZ ITOC Director MB Leigh and AFSC Director Sarah Trainor) have given several invited platform presentations on *ITOC: The Art of Fire*, including:

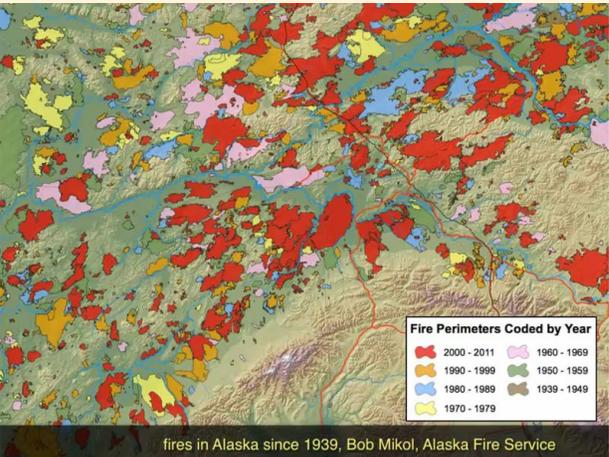
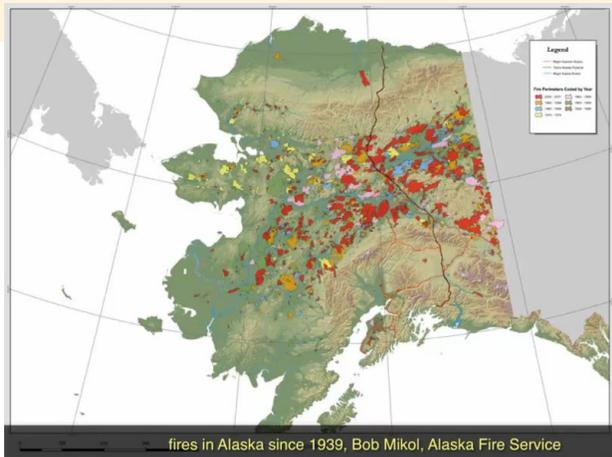
- Presentations by Leigh and Trainor at *Words on Fire: Toward a New Language of Wildland Fire* in Corvallis, OR (Nov 2012),
- Presentations by Trainor et al at the Alaska Fire Science Consortium Annual Workshops (Oct 2011 and 2012) in Fairbanks, AK,
- Presentation by Leigh and Trainor at the Association for Fire Ecology 5th International Fire Ecology and Management Congress in Portland, OR (Dec 2012),
- *The Art of Fire* project has also been featured in several workshops and presentations by Leigh as part of LTER Network-wide activities.

From the public lectures:

Zooming in on the map, the fires just become this montage of interesting shapes and textures for me, but they're also limited by boundaries that occur on the landscape... The idea of a boundary, and what that boundary might be, such as a stream, influenced me directly...The shapes and textures just really were captivating, but also had some surprising elements to them, like property lines. I never really thought about the whole coordination effort and having to coordinate the management around all kinds of different property lines and different sections of the state that you would have to get permission to go on to manage those fires.



—Jennifer Moss, painter, on *Boundary* (inset; acrylic on wood) and its sources in maps of Alaska fire perimeters (below; Bob Mikol, BLM-AFS)



From the public lectures:

I spent months generating fabrics in order to be able to talk about this idea of fire... My intent is to go on and elaborate, have more pieces that would get way more into the succession that will follow. I feel like I am just getting started on this idea of depicting what goes on with fire. I look forward to be able to produce some more of these images.

—Ree Nancarrow, fiber artist. Inset: *Spruce Wasteland (Hope)*, fabric.



Evaluation findings

We administered a project evaluation survey to exhibit attendees and artists (n=142); 54.7% of respondents identified as members of the general public, 20.9% as artists, 13.7% as scientists, and 10.8% as members of the fire management community. The survey data was quite positive. For example, 71% of 141 respondents agreed or strongly agreed with the following: “After viewing the *Art of Fire* show, I am motivated to learn more about fire science, fire management, and wildfire protection in Alaska,” and 96% of 131 respondents agreed or strongly agreed with the following: “I believe that art can be an effective mechanism for building public awareness and understanding of important issues.”

The 11-member AFSC Advisory Board also provided feedback on the *Art of Fire* project from their perspective as members of the fire management community (7 members) and scientists (4 members). Although some Advisory Board members and others in the Alaska fire management community were initially skeptical of the project’s relevance, post-project responses were generally supportive. More than 90% reported that they had talked with others in their agency about the *Art of Fire* project, 70% reported that those conversations were mostly positive, and 73% agreed or strongly agreed that “art can be an effective mechanism for building public awareness and understanding about important issues.” The board was supportive of AFSC involvement in similar projects in the future, provided it did not distract too much from the AFSC’s primary mission to serve the fire science and management communities.



From the exhibit surveys:

- Loved it. Informative yet great for all ages.
- Seeing this adds new dimension and perspective within a concept that is already very familiar.
- As a participating artist, I can say that this exhibit expanded my personal understanding of fire ecology and started conversations among friends & patrons about fire ecology.

In conclusion, the *Art of Fire* project successfully reached the primary objective outlined in the project proposal: to bring the cultural and environmental issues related to forest fires and fire management in Alaska to a wider public through art that is based on communication and collaboration between artists, scientists, and members of the fire management community. In addition, as the project developed, partnerships and collaboration with a range of individuals and organizations led to supplementary activities that broadened the project's impacts (see Deliverables Table).

In-kind support

The Art of Fire project would not have been possible, let alone successful, without substantial in-kind support from many collaborating agencies and organizations, listed in the Deliverables Table as Key Organizational Collaborators. The project also relied heavily on AFSC's ability to leverage the contributions of AFSC Coordinator Jennifer Northway. Her percent effort for the project period, which can be conservatively estimated at approximately 4 months, included:

- assisting with calls for participation,
- coordinating among project collaborators,
- organizing publicity for all project activities,
- organizing, coordinating, and following up on all field trips, lectures, and tours,
- developing, recording, and archiving project presentations and other web content,
- coordinating logistics for 4 public exhibits.

Attachments

- Posters: 3 explanatory posters displayed during exhibits to provide more information about the project to exhibit attendees.
- Project Brochure: available to visitors at all project events.

Deliverables Table: *The Art of Fire*

Proposed	Delivered	Status	Key Organizational Collaborators
Solicit proposals from artists	Call for proposals distributed spring 2011	Completed	Fairbanks Arts Association, ITOC Steering Committee
Competitively select artists	9 artists selected	Completed	ITOC Steering Committee, Curator
Encourage participation by amateur artists in fire community	Call for participation distributed spring 2011; 6 artists participated	Completed	Alaska Public Lands Information Center
Involve artists in summer field trips	4 field trips completed; see Field Trip poster for details	Completed	Bonanza Creek LTER, BLM-Alaska Fire Service, National Park Service, Denali National Park, Alaska Division of Forestry
Work with scientists and managers to explore art in their public communication strategies	Field trips designed with input from collaborating scientists and agencies	Completed	Bonanza Creek LTER, BLM-Alaska Fire Service, National Park Service, Denali National Park, Alaska Division of Forestry
Present project at AFSC 2011 and 2012 workshops	Presentations by Trainor et al 10/7/11 and 10/12/12	Completed/ archived on AFSC website	AFSC
Present visual art exhibit	<i>The Art of Fire</i> exhibit at Bear Gallery, Fairbanks, August 2012	Completed/ archived on AFSC website	Fairbanks Arts Association
Present traveling exhibit	<i>The Art of Fire</i> exhibit at Leah J. Peterson Gallery, Anchorage, January 2013	Completed	Alaska Pacific University
Use AFSC web page to publicize and archive project	Materials, images, lectures, presentations available	Completed	http://www.frames.gov/afsc/artoffire

Note: Our proposal also included small grants for art supplies and a graphic artist competition for education publications. These were not completed because the artists did not require additional funding for supplies and the competition for education publications was not feasible to coordinate with the Alaska Wildland Fire Coordinating Group Education Committee during the project period.

Additional deliverables			
Community art show	6 artists displayed work in August 2012	Completed/ archived on AFSC website	Alaska Public Lands Information Center
Public lecture series	5 artists and 1 fire scientist presented their work and discussed its origins in 2 evening events in August 2012	Completed/ archived on AFSC website	Alaska Public Lands Information Center
Public studio tour	Public tour of Phil Marshall's Polhavn Woodfabrik studio August 2012	Completed	Polhavn Woodfabrik
Exhibit at National Science Foundation	<i>Art of Fire</i> works shown as part of Ecological Reflections – Sense of Place in Changing Places exhibit showcasing artist-scientist collaborations at LTER sites.	Ongoing (Feb 28-Jun 15, 2013)	National Science Foundation, Long Term Ecological Research program
Professional presentations	--Presentations by Leigh and Trainor at <i>Words on Fire: Toward a New Language of Wildland Fire</i> in Corvallis, OR (Nov 1-2, 2012), --Presentation by Leigh and Trainor at the Association for Fire Ecology 5 th International Fire Ecology and Management Congress in Portland, Oregon, (Dec 3-7, 2012)	Completed	Spring Creek Project, Oregon State University Association for Fire Ecology