



BioRegions Programs

BioRegions International Mission Statement

BioRegions International is a 501c3 nonprofit organization working to “empower the nomadic cultures of Mongolia to survive in a rapidly-changing world.” BioRegions uses a holistic, community-based approach to encourage whole community sustainability based on stewardship of natural and cultural resources. We work in the areas of education, environment, health, and traditional knowledge and skills. We have been working in the Darbad Valley in northern Mongolia since 1998. This high altitude, remote and isolated valley has high poverty levels, a severe climate, and a natural resource base that is suffering from poaching, over grazing and indiscriminant forest harvest.

Montana State University BioRegions Program

The Montana State University BioRegions faculty, staff and students collaborate with local citizens and communities in their bioregions to learn about the way of life and resource base. Resulting partnerships apply local knowledge, science, humanities and management to create proactive solutions to meet local needs. MSU BioRegions focuses in the Darbad Valley of Hovsgol Province in northern Mongolia, southwest of Lake Baikal in Russia.



BioRegions Program Director, Cliff Montagne, displays a Mongolian bridle and horsehair rope used to secure the outer covering of a ger.

Letter From the Director

BioRegions thrives on the learning of its participants as they experience, reflect, and then share our cultural differences. In 2009 MSU student Kaelin Kiesel worked with the Bayankhangai 23 Family User Group and then with several Montana ranchers. At the December 2010 board meeting, she commented on the happiness of country-side Mongolians compared to some Montana ranchers where life seems to be full of over commitment and stress. What are the cultural differences which could be leading to these perceptions? How can we become aware of these differences and learn from them? We continue to learn by being open to these questions.

-Cliff Montagne



Fall vaccinations

Summarizing the Year 2010

In April Mongolia Program Director Sunjidmaa (Sunjee) and Community Development Coordinator Badamgarav (Badmaa) traveled to the Darhad Valley to work with Darhad Valley Advisor and Coordinator Mishig on project follow-up while preparing for the upcoming summer work trip. The summer work trip in May and June found Sunjee, Badmaa, Mishig, and Maagi (our cook) hosting a group of nine American participants to work on environment, education, health, and traditional knowledge and skills. After the work trip concluded in late June, staffer Lora Soderquist led several health team participants back to the Darhad Valley to experience more extensive home stays while she worked with grazing practitioners. In October our Mongolian staff returned to the Darhad to offer English practice for Renchinlumbe school teachers and to service other projects. In December Sunjee and Badmaa traveled to Muren and Hatgal to participate in a workshop to develop environmental curricula for regional schools. Director Cliff Montagne spent three weeks in the Russian Altai Republic as part of a Montana State University-Gorno Altaisk State University team funded by the National Science Foundation. The objective was to learn how university and local teachers incorporate traditional knowledge into meaningful learning experiences for native children who often get lost in crossing the gap between their native village culture and the

mainstream Russian system. Our team included two Native American students from MSU. Our eyes were opened to the power of collaboration by the instant and deep interactions between our Native American students and our indigenous Altaian hosts.

Fall Work Trips

October trip to Renchinlumbe

During the summer trip, Baata, the new Renchinlumbe school director, told us of the need for English teachers to practice their skills. Sunjee and Badmaa spent two weeks in early October working two hours a day with the four school English teachers to help them improve their speaking and grammar. At the conclusion, the teachers requested more training in the future.

Badmaa and Sunjee gave a 'career talk' to the senior students to help them choose a college and prepare for the entrance exams. They also introduced 'ethno ecology' school books which BioRegions had brought from the Russian Altai Republic. The teachers expressed interest in changing their curricula to be more 'eco-centered'. Concurrently, Dr. Natsuko Hamamura and Jerry Dixon came from Japan to collect samples of human hair to analyze for effects of ingesting a local mineral precipitate, hujir. She is following-up on the work of Loren Barber which revealed potential health hazards of ingesting this mineral precipitate. Sunjee and Badmaa, who do not

drink hujir milk-tea regularly, donated hair for the non-hujir drinking control.

December trip to Hatgal

Sunjee and Badmaa visited Hatgal, at the south end of Lake Hovsgol, to participate in a regional teachers' workshop and write a school ecology curriculum (study plan) in concert with Ministry of Education guidelines. The workshop started with presentations by National University of Mongolia professors Dr. Boldgiv on modern ecology and climate change, and Dr. Batsaihan on biodiversity and conservation. Sunjee and Badmaa introduced BioRegions and our ecology curriculum along with the sample Russian textbooks produced for the Altai Republic schools. In Muren they visited a new school, Ireedui 21 Zuun (The future 21st Century). This school advises all Darhad Valley schools.

Summer Work Trip Community Partnership Summaries

This group of nine American participants, two Mongolian medical students, and our Mongolian staff of Mishig, Maagi, Badmaa, and Sunjee (greatly assisted by the logistics coordination and driving by Sunjee's



Bayankhangai herder Zorigoo and Lora Soderquist post their grazing sign

husband, Turbat), conducted health screening and training and interacted with the Bayankhangai user group on grazing and artisans projects. Then the group traveled back to Muren for the Darhad Blue Valley Festival. Afterwards, some returned to the Darhad for a 'second trip'.

Environment

Lora Soderquist conducted grazing workshops with Bayankhangai families. Later, on the 'second trip', she returned to work intensively with one family on ways to improve pasture through animal management. With permission from the soum government, Lora and herder Zorigoo erected signs to inform other herders to refrain from grazing where Zorigoo would be herding his animals more intensively. BioRegions supported another demonstration planting of winter forage designed to help animals get through the winter and give healthy birth in the spring.

Education

In Renchinlumbe we met Baata, the new Renchinlumbe school director, who encouraged BioRegions to provide practice opportunities for his English teachers. BioRegions was recognized with a plaque: "...for its long time support of Darhad childrens' art, science and science cognitive development and making creative student minds. And we thank BioRegions Programs for traveling half way around the world and helping Renchinlumbe high school ...is something we will always remember and hope it will continue."

Health

The 2010 health team, led by Susan Gibson, included Dr. Megan Evans, resident from the Billings Clinic along with her husband Jeff; two medical students from the University of Washington International Health Opportunities Program, Ryan Wallace (MSU WWAMI program) and Scott White; and Battur and Bilguudei, two medical students from the Health Sciences University of Mongolia. Former medical student participant Odkoo, translated for the health team. For the second year we hosted Darhad Valley health practitioners (both bag and soum level doctors and nurses) in a 40-person, 3-day training held where we camped along the Hug River. The team visited the community at the confluence of the Tengis and Shisged Rivers and conducted health screenings in bag 5.

The Childrens' Emergency Medical Transportation Fund continues to provide transportation to medical facilities in Muren or Ulaanbaatar. Dr. Purevsuren suggested that we open this opportunity up to other Darhad soums. Consequently the fund provided assistance to seven children, including some from Bayansurkh and Ulaan Uul for the first time.



Bayankhangai User Group artisan and his furniture

Traditional Skills and Knowledge

The 5th annual Blue Valley Festival was held outside the Darhad Valley for the first time in a performance hall in Muren, the provincial center. It was held at the end of the Khovsgol government's first ever Celebration of Khovsgol Indigenous Culture. The BVF was held in this location to strive to showcase the Darhad culture to a larger audience, including the many Darhad people living in Muren. While the festival was well received and attracted many artisans, most people concluded that the Festival should be held in the Darhad Valley. BioRegions received a medal from the Governor for our supportive work in the Darhad Valley.

In Bayanzurkh, Badmaa introduced us to the caretaker of the local museum, where we found documentation of the traditional ecological knowledge along with remnants of the Soviet era. She showed us how the leaky roof and lack of maintenance were endangering the valuable contents. BioRegions will work with Bayanzurkh to improve this situation.

Community

National Geographic Conservation Trust grant: Enhancing Environmental and Cultural Stewardship in the Darhad Valley, Northern Mongolia. Bayankhangai (Rich Valley) User Group.

After Sunjee and Badmaa traveled to the Darhad Valley in April, they warned us of the effects the extremely snowy fall and winter “dzud” in which livestock are unable to find fodder through the snow cover, and large numbers of animals die due to starvation and the cold (<http://en.wikipedia.org/wiki/Zud>). It really hit us when we arrived in late May at the Bayankhangai user group to meet leader Nyamrenchin, who told how his family lost about 2/3 of their animals. The sleet storm ice from the previous November made much of the grass unavailable, and then their already weak animals faced heavy snow storms during the winter and spring. He shared the dilemma of feeding enough hay for his animals to make it through particular winter storms versus saving some hay to assist the animals during the birthing season. In Mongolian style, Nyamrenchin and his wife shared the facts with sorrow and moved on, living in the present without dwelling in the past.

In this final year of the grant, Sunjee and Badmaa spent a week interviewing user group members (random selection of interview participants according to gender and age) to assess progress of the user group in meeting member needs and to assess effectiveness of BioRegions partnership projects. We learned that the user group has made sporadic progress. The artisan equipment obtained with BioRegions support has helped members construct a headquarters cabin, make furniture, and produce wool felt products for sale. The winter forage demonstration planting had made herders aware of the benefit of this practice, which has been abandoned after the Socialist period. Herders are remembering some of the beneficial aspects of Socialist-era grazing practices when they herded animals more closely. They are considering how to reduce animal numbers and increase quality. The members are practicing more sustainable forest harvest after participating in the series of 2009 workshops led by Yale Forestry School BioRegions Program collaborator, Tom James. However, there is lack of clarity and confusion about how the user group is organized, how effective the leadership is, and how members get access to user group benefits. Even though the grant funding will end, BioRegions will continue to work with our Bayankhangai friends as they continue to explore the benefits of organizing into a natural resource user group.

On June 14th the user group gathered at their cabin for a Demonstration Day. We were impressed by the quality

and variety of wool felt products and the accomplishments of the woodworkers. They are adept at producing clothing and furniture items they need, and this now provides some cash or barter income for the makers. Maagi has given user group women food preparation and cooking lessons over several years, and we were impressed by the vegetable dishes produced by this group of people who traditionally eat meat and dairy.

In spite of these advances, the user group struggles to meet its financial obligations. The energetic and charismatic leader reminds us that many of his group lack initiative, and that the young people about to leave the nest have no idea what to do. Many are attracted by urban life, but lack the education and skills to succeed in the city. In this changing society, the challenge may be for the user group structure to be able to replace the old style Soviet 'boss', which people are still used to. In contrast with the weather, which is difficult to influence, people can change decision-making and management practices. BioRegions continues to learn from and with these user group members about how decision-making and management can facilitate the positive way forward.

NEWS

BioRegions staffer and former graduate student, Loren Barber, continues her professional career pathway as first author of this publication: *Economic Cost Analysis of West Nile Virus Outbreak, Sacramento County, California, USA, 2005 Emerging Infectious Diseases* • *www.cdc.gov/eid* • Vol. 16, No. 3, March 2010. Loren M. Barber, Jerome J. Schleier III, and Robert K.D. Peterson

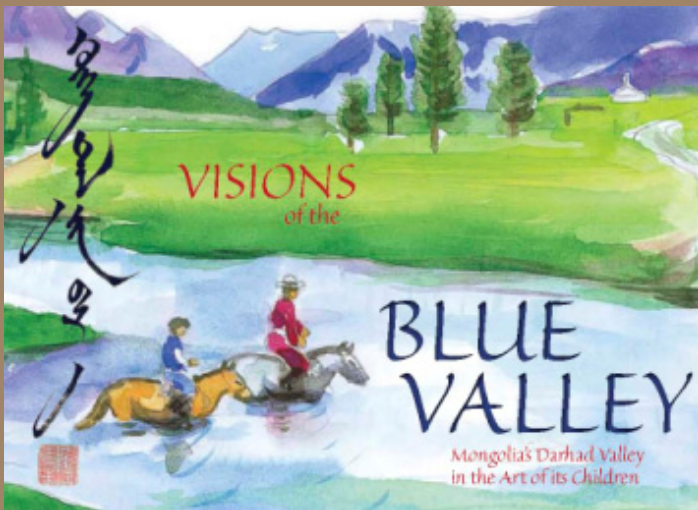
Kaelin Kiesel, 2010 NCAA All American in Cross Country skiing. "I think I definitely owe a large portion of my success to running with Marc, cheese, yogurt and mutton... and seeing a new level of toughness in Mongolia."

Marc Shapiro, 2009 participant, is now an engineering graduate student studying the small scale interaction of electric fields and fluids at Brown University. Marc represented BioRegions by presenting a poster at the 2010 annual meeting of the American Center for Mongolian Studies in Pittsburg. He commented that people he met "really supported the holistic management model and the goal of sustainable community development."

Former BioRegions Artisans Program coordinator and musician Amka (Amarjargal) entered a two year chef training program in Ulaanbaatar. BioRegions is helping her with tuition.



Bayankhangai User Group demonstration day at their cabin



Visions of the the Blue Valley - Mongolia's Darhad Valley In the Art of its Children

A compilation of children's artwork from the Renchinlumbe school in the Darhad Valley, Mongolia which displays visions of their surrounding environment. The artwork is promoted by an annual student art and music contest sponsored by BioRegions International.

It is a 76 page soft-covered book published by People's Press, LCC of Aspen, CO. The cost is \$15 plus shipping and handling (if needed).

www.bioregions.org or by mail at P.O. Box 6451, Bozeman, MT 59771

Montana State University
BioRegions Program

Research, Education, and Service Learning within and between BIOREGIONS. A "Bioregion" is a geographic region with similar landscape and environmental conditions, such as the Greater Yellowstone Ecosystem or northern Hovsgol Province in Mongolia.

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Will Swearingen - Geography
Jerry Nielsen - Soil Science
Rick Lawrence - Remote Sensing
Lynn Paul - Nutrition
Susan Gibson - Anatomy & Physiology



The next generation

BioRegions International

BioRegions International works to empower the nomadic cultures of Mongolia to survive in a rapidly-changing world. We support holistic, locally-based projects promoting public health, education, environmental preservation, and sustainable economic development.

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