

# U.S.-Russia Cooperation in Conservation of Wildlife and Wildlife Habitat



*Activities for 2013-2014*



Agreement between the Government of the United States of America  
and the Government of the Russian Federation  
on Cooperation in the Field of Protection of the Environment  
and Natural Resources

***“...the Parties shall work together to develop mutually agreed-upon policies in the field of protection of the environment and natural resources on a bilateral, regional and global basis.”***

The **Agreement between the Government of the United States of America and the Government of the Russian Federation on Cooperation in the Field of Protection of the Environment and Natural Resources** was signed on 23 June 1994 and supersedes the Agreement between the United States of America and the Government of the Union of Soviet Socialist Republics on Cooperation in the Field of Environmental Protection of 23 May 1972.

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Cover photographs:

Left top: Spectacled Eider drake; FWS Alaska photo.  
Left bottom: Visitor services exchange at Lake Baikal, Russia; FWS photo by Steven Kohl.  
Right top: Pacific walrus bull; FWS photo by Joel Garlich-Miller.  
Right bottom: Kamchatka in winter; photo by Nikolai Pavlov.

### *Why do the United States and Russia cooperate on wildlife issues?*

As neighboring countries, the U.S. and Russia share certain populations of fish, marine mammals and migratory birds, many of which have economic, cultural and subsistence importance in addition to their ecosystem role and intrinsic value. To better manage and research wildlife, biologists engage in a number of cooperative conservation activities, including information sharing and joint scientific studies on the ground, in the air, on and below the sea, and using satellite technology. Russians and Americans have long maintained a dialogue on wildlife issues. Indeed, the first international treaty to address wildlife conservation was the North Pacific Fur Seal Convention of 1911. A more recent example: the U.S.-Russia Polar Bear Agreement Commission, which met for the fifth time in 2013, includes both Governmental and Native representatives.

### *What is the Environmental Agreement?*

The "Agreement between the Government of the United States of America and the Government of the Russian Federation on Cooperation in the Field of Protection of the Environment and Natural Resources," signed in 1994, is a mechanism for cooperation. The Agreement is between the U.S. and Russian governments, but the involvement of non-governmental organizations in conservation efforts is encouraged.

### *What does Area V refer to?*

The U.S.-U.S.S.R. Environmental Agreement, signed in 1972, listed twelve areas of cooperation, including air pollution and earthquake prediction. The fifth listed category was nature conservation, and the familiar term "Area V" has been used by long-time cooperators for decades. Though nature conservation is not the fifth listed category in the 1994 Agreement, the Agreement stipulates that "the Parties may agree that an institutional structure developed under [the 1972 Agreement] may continue without being reconstituted."

### *What is included in this list?*

This list of cooperative wildlife conservation activities occurring under the auspices of the Environmental Agreement has been prepared by the U.S. Fish and Wildlife Service in partnership with the Russian Ministry of Natural Resources and Environment. In June 2013, program leaders met in Moscow to review exchanges carried out in 2011-2012 and agree on activities for 2013-2014. This list is a result of those discussions and subsequent correspondence. Also included in the Work Plan are certain efforts by non-governmental organizations. This is not an exhaustive list of all U.S.-Russia nature conservation activities by governmental and non-governmental partners, many of which are agreed upon through direct correspondence or occur under different auspices.

## *What about tiger conservation?*

The United States welcomes the opportunity to partner with Russia in efforts to conserve the tiger, a species of global concern. Governmental and non-governmental partnerships with Russia for tiger conservation commenced in the 1990s. In 1994, the U.S. Congress established the [Rhinoceros and Tiger Conservation Fund](#). Funding from this program allows the U.S. Fish and Wildlife Service to provide support for the conservation of tigers throughout their range. More than \$2M in assistance for tiger conservation in Russia has been disbursed to date. Additionally, since 1995, Wildlife Without Borders has provided \$1.4M in grant support for Russia's nature reserves and parks.



# Area V Work Plan for 2013-2014

Area V, "Protection of Nature and the Organization of Reserves"  
of the U.S.-Russia Agreement on Cooperation  
in the Field of Protection of the Environment and Natural Resources

American and Russian Area V project leaders and participants met in Moscow June 3-4, 2013, to review exchanges carried out in 2011-2012 and agree on activities for 2013-2014. The following Work Plan was adopted:

(NOTE: Wherever possible, principal participating U.S. and Russian agencies are indicated; see Key to Abbreviations on last page.)

## **Project 02.05-11 Conservation of Wild Species of Fauna**

The work of this Project is carried out under six Activities:

### **Activity 02.05-1101 Implementation of the U.S.-Russia Convention Concerning the Conservation of Migratory Birds and Their Environment**

**PURPOSE:** Coordinate implementation of the 1976 bilateral Convention between the United States and U.S.S.R. (Russia) and promote the conservation and study of the more than 200 avian species listed in the Appendix to the Convention.



*Left:*  
*Trio of horned puffins*

*Right:*  
*Migrating spectacled eider*



1. American, Russian and Japanese specialists will meet in Tokyo in early December 2013 in the fifth of an ongoing series of periodic meetings to discuss migratory bird topics of mutual concern to the three countries. (FWS, ASC; MNRE, BBRC)

2. The two sides will continue to exchange banding and recovery data, as well as information on the ecology of diseases, including avian influenza, affecting shared populations of migratory birds in the Beringia region. (VNIIPrirody, IPEE; USGS, FWS)

### **Activity 02.05-1102 Study and Conservation of Cranes, Raptors and Other Rare Birds**



**PURPOSE:** Promote wild avian populations by encouraging conservation of critical habitat, scientific collaboration and educational outreach.

1. The two sides will continue to implement Project Hope, a detailed five-year program developed in 2010 to strengthen conservation of the western population of Siberian cranes. (ICF; VNIIPrirody)
2. Biologists from the two countries will continue cooperation on field studies, satellite banding, and tracking and monitoring of the West Siberian population of Siberian cranes. Young birds will be released into the wild in nesting areas of western Siberia and along migratory routes. Outreach and education activities, aimed at raising public awareness of the importance of conserving this species, will continue. (ICF, USGS, FWS; IPEE, Crane Working Group of Eurasia)
3. Joint work on reintroducing peregrine falcons into urban areas, including Moscow, will continue, using young birds reared at breeding facilities. (VNIIPrirody; Septon/Sharptailpoint).
4. Further studies of genetic diversity, breeding and artificial insemination of gyrfalcons, with subsequent rearing of chicks in captive breeding facilities, will be carried out. (USGS, FWS; VNIIPrirody)

### **Activity 02.05-1103 Study and Conservation of Polar Bears**

**PURPOSE:** Promote research on the biology and ecology of polar bears, and coordinate implementation of the U.S.-Russia Agreement on the Conservation and Management of the Alaska-Chukotka Polar Bear Population (2000).



*Representatives of Russia, Canada, Greenland (Denmark), Norway, and the United States commemorate the 40<sup>th</sup> Anniversary of the 1973 Agreement on the Conservation of Polar Bears in Moscow.*

1. Thirteen American specialists will visit St. Petersburg June 5-7, 2013 to take part in the 5th meeting of the Commission established under the U.S.-Russia Polar Bear Agreement, to be immediately preceded by a meeting in Moscow of the Scientific Working Group established by the Commission. The agenda will include reports on governmental and Native-led research programs, the role of traditional knowledge, and establishment of subsistence harvest quotas for the coming year. Observers from non-governmental organizations of both countries will be invited at the discretion of the Commissioners. (FWS, MMM-7; MNRE)

2. In commemoration of the 40th anniversary of the five-country Agreement on the Conservation of Polar Bears (1973), American and Russian specialists will take part in the Fourth International Forum on Conservation of Polar Bears, to be held in Moscow December 4-6, 2013. The agenda will focus on: threats to polar bears, including climate change; combatting poaching and illegal trade; reduction of human-polar bear conflicts; exchange of scientific information; and engagement of Native peoples and use of traditional knowledge in conservation.

3. Cooperative field studies and surveys of polar bears in Alaska and Chukotka will continue in 2013-2014. These will include: determination of annual numbers of polar bears removed from the population through human activity; monitoring, both land-based and using aircraft, of seasonal movement patterns of polar bears for identification of areas needing special protection; and sampling of polar bear hair and tissues in Chukotka and on Wrangel Island for genetic analysis. (FWS, MMM-7; MNRE, Chukotka TINRO)

4. The 6th meeting of the U.S.-Russia Polar Bear Commission will be held June 5-6, 2014 in Shepherdstown, West Virginia. The Scientific Working Group will convene immediately preceding that meeting. (FWS, MMM-7; MNRE)

**Activity 02.05-1104      Protected Natural Areas: renumbered as Project 02.05-51**

**Activity 02.05-1105      Cooperation among Zoos in Captive Breeding  
of Rare and Endangered Animals**

PURPOSE: Foster cooperation among U.S. and Russian zoos to preserve genetic diversity of rare and endangered species maintained in captivity, sponsor public education and outreach activities, conduct scientific research, and promote conservation of wild animals and their habitats.

1. Russian specialists will visit U.S. zoos for periods of up to two weeks in 2013-2014 for consultations and participation in workshops on facilities design, captive maintenance of rare and endangered species, and veterinary services. (Moscow Zoo; Wildlife Conservation Society)

2. Long-term cooperation between the Moscow Zoo and American zoos will continue, and information will be exchanged on captive animal management, breeding, and diseases. In particular, the possibility of transfer to the Moscow Zoo from the U.S. of two pairs of trumpeter swans, several wild turkeys, and a pair of Andean condors, will be explored.

**Activity 02.05-1106      Conservation and Management of Marine Birds**

PURPOSE: Promote conservation of seabirds and shorebirds through exchange of information, field studies, and jointly formulated monitoring and management strategies.



*Crested auklet*

1. The two sides will update the U.S.-Russia Seabird Colony Catalog database, containing information on the location, species composition and breeding population size for most of the estimated 1,000 seabird colonies in the Russian Far East. Cooperation will also continue under the Important Bird Areas (IBA) Program for the Bering Sea region, identifying IBAs representing critical habitat in Alaska and Russia for waterfowl, seabirds, shorebirds, songbirds and raptors. (MBM-7; MNRE, RAS/FEB, Inst. of Biological Problems of the North)
2. In accordance with policy recommendations for Arctic biodiversity assessment adopted by the Arctic Council (CAFF) in 2013, joint research and monitoring of shorebird species of the North Pacific region, many of which are threatened or endangered, will be undertaken. Activities in 2014 may include exchanges of American and Russian specialists for participation in survey expeditions in Chukotka and Alaska. (FWS, USGS; BBRC)
3. One Russian specialist may be invited to the U.S. in the summer of 2014 for joint nesting studies of rhinoceros auklets on St. Lazaria Island, Alaska, in collaboration with biologists from Alaska Maritime National Wildlife Refuge. (BBRC; FWS-Refuges)

## **Project 02.05-21      Beringia Conservation Forum**

**PURPOSE:** Promote the study and conservation of ecosystems and fauna/flora species and their habitats common to the Aleutian (U.S.) and Commander (Russia) Islands and adjacent land areas of Alaska, Kamchatka and Chukotka. Work under this Project also furthers the goals of several other Area V projects and activities.

In mid-2014 Alaska Maritime National Wildlife Refuge and Commander Islands Nature Reserve will collaborate in shipboard and land-based studies of marine birds and marine mammals on and around Bering and Medny Islands. Specific work may include measuring physical oceanography parameters, conducting a census of red-legged kittiwakes, estimating rat distribution on Bering Island, surveying Steller sea lions and northern fur seals, and designing a future visitor center to be located at Nikolskoye (Bering Island). This work implements the intent and provisions of a Memorandum of Understanding signed in 2008 between the two protected areas, which form one continuous island chain. (FWS-Refuges; MNRE)



## **Project 02.05-31      Cooperation in Wildlife Trade and Law Enforcement**

**PURPOSE:** Encourage communication among law enforcement officials in both countries to address problems of international wildlife commerce, with particular attention to the (CITES) Convention on International Trade in Endangered Species of Wild Fauna and Flora.

The two sides will continue to exchange information on policy questions pertaining to shipment of Caspian sturgeon and caviar products to the U.S., and also on the dates and duration of hunting seasons in Russia for brown bears and other species which American and other foreign citizens may hunt with the goal of exporting trophies. (FWS-Law Enforcement; GlavOkhota, RNAFEE)



Photo by John + Karen Hollinsworth. FWS photo.

*The Amur tiger is also known  
as the Siberian tiger.*

## **Project 02.05-41      Ecosystem Biodiversity**

The work of this Project is carried out under four Activities:

### **Activity 02.05-4101      Biosphere Reserves**

**PURPOSE:** Monitor natural processes in biosphere reserves of both countries and share data through established MABFauna, MABFlora, ACCESS and Biomass systems.

Both sides will continue to exchange information on the role of biosphere reserves and other protected territories in the conservation of biodiversity, with special attention to questions of ensuring sustainable development in the basins of the Mississippi and Volga Rivers. The possibility of exchanges of specialists for field work on specific topics will be considered. (IPEE; FWS)

### **Activity 02.05-4102      Arid Ecosystems**

**PURPOSE:** Promote the study and conservation of critical arid land areas and their endemic fauna and flora; develop strategies for combating desertification and loss of water resources.

1. In 2013, FWS will contribute \$55,000 to a grants competition conducted by the Saiga Conservation Alliance for conservation of saiga antelope throughout its range. (FWS; Saiga Conservation Alliance)
2. In 2013 or 2014, one or two Russian specialists will visit the U.S. for two weeks to discuss satellite tagging of saigas in Astrakhan oblast and Kalmykia. Additionally, American specialists will visit Russia

to provide technical support on biomedical evaluation, diagnostics, preventative medicine, provision of neonatal survival, and organization of effective systems for compiling laboratory and medical records for saigas in Astrakhan oblast and Kalmykia. (IPEE; The Wilds, FWS)

### **Activity 02.05-4103 Mountain Ecosystems**

**PURPOSE:** Promote the study and conservation of alpine systems and their unique biodiversity.



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*Alpine ecosystem*

Work will continue on creation of a database on biodiversity and changes in ground cover in several Russian nature reserves and surrounding areas. Remote sensing, GIS and other contemporary technologies will be utilized in these studies. (IPEE; Univ. of Wisconsin)

### **Activity 02.05-4104 Wetland and River Ecosystems**

**PURPOSE:** Promote the study and conservation of wetland and delta ecosystems, recognizing their importance in flood prevention, as habitat for fish and migratory birds, and as filters of pollutants and other harmful substances.

1. American specialists will be invited to take part in the International Great Rivers Forum, to be held May 13-16, 2014 in Nizhny Novgorod, Russia. The focus is on management of riverine ecosystems to ensure optimal levels of water quality and quantity, restoration and management of riverine and riparian wetlands, enhancement of sustainable fishery stocks, and conservation of those internationally significant natural resources. (RAS; EPA, FWS)
2. In 2014 Russian and American specialists will exchange information and begin collaboration on studies of freshwater ecosystems, with the goal of identifying, studying and monitoring indicator species of water quality (ex.: taimen, caddisflies). An expedition is planned in Siberia and the Russian Far East in the summer of 2014, culminating in a joint seminar on contemporary freshwater monitoring technologies. Later in the year one Russian scientist will visit the U.S. for up to two months to compile together with American colleagues the results of the summer studies. (RAS/FEB; Univ. of Maryland, Univ. of Minnesota, Clemson Univ.)

3. In 2013-2014 a joint Russian-American research group will complete surveys begun in 2011 with the goal of producing baseline census data for wetland vegetation in the Selenga River Delta, Buryatia, Russia. (EPA; RAS/SIB, Irkutsk State University)



*River ecosystem*

## **Project 02.05-51      Protected Natural Areas**

The work of this Project is carried out under two Activities:

### **Activity 02.05-5101      Protected Areas Management**

**PURPOSE:** Provide for comparative studies of refuges and nature reserves and the external factors affecting them, with emphasis on rare and endangered species of fauna and flora and their habitats.

1. One American specialist will take part in a meeting of Russia's nature reserve and national park directors in Khakasia, Siberia in August 2013. To be discussed are programmatic priorities for the coming year, and development of ecotourism in Russia's protected areas. (MNRE; FWS)
2. Six Russian specialists will visit the U.S. for three weeks in December 2013 under the U.S. State Department's International Visitor Leadership Program for familiarization with law enforcement activities in U.S. national wildlife refuges and other protected areas. A combination of training workshops and field exercises will be organized in the following topics: law enforcement policy development and implementation; standard operational techniques for protecting wildlife resources and the public from harm; and dealing with illegal activities (e.g., poaching, contraband, border crossing). (FWS-Refuges; MNRE)
3. As a follow-up to workshops held in the U.S. in 2003 and 2004 on use of the Geographic Information System (GIS) as a decision-making tool in protected area management, the two sides will consider organizing a 3rd GIS workshop in the summer of 2014 at Wilkes University in Pennsylvania. 12-15 Russian specialists will be invited to participate. (FWS; MNRE)

## **Activity 02.05-5102      Conservation Education**

**PURPOSE:** Promote public awareness of and commitment to the need to conserve wild species of fauna and flora and their habitats.

1. Exchanges of information between American and Russia protected areas will continue. General subject areas may include: dissemination of information about the protected areas of the other country, increasing contact among young people and school groups in both countries, and collaboration on publications. (MNRE; FWS-Refuges)
2. Cooperation begun in 2012 in the design and outfitting of visitor facilities and trails in Russian nature reserves will continue. In 2014, American specialists will travel to Russia for periods of 2-3 weeks to work with Russian colleagues in the following reserves: Stolby, Khakassky, Sayano-Shushensky, Polistovsky and Sikhote-Alin. (FWS-Refuges; MNRE)
3. The two sides will consider holding in 2014 or 2015 a Fourth joint training workshop on the design, production and installation of interpretive exhibits at refuge and park visitor centers. (FWS-Refuges; MNRE, Zapovedniks)

## **Project 02.05-61      Marine Mammals**

**PURPOSE:** Carry out cooperative studies and exchange scientific information to better manage and conserve marine mammal species shared by both countries.

### **GENERAL**

The 22nd meeting of the U.S.-Russia Marine Mammal Working Group was held March 4-8, 2013 in Seattle, USA with the participation of 8 Russian and 38 American specialists. The next (23rd) meeting will take place in Russia in September 2014.



Russ Andrews/Alaska SeaLife Center

*Members of the U.S.-Russia Marine Mammal Working Group in Seattle, Washington*



## I. PINNIPEDS

### True Seals

1. Giprorybflot Institute and ChukotTINRO invite American specialists to collaborate in developing unified methods for instrument-conducted aerial surveys of true seals to assess their transboundary abundance and to organize in April-June 2013 and 2014 coordinated and synchronized censuses of ice-associated pinnipeds in the Chukchi and Bering Seas, with each country surveying its own side.
2. American scientists will visit Russia sometime during the period April-October 2013 and possibly in 2014 to participate in aerial surveys, analyses of satellite tagging, and ecological research on true seals in the Bering and Okhotsk Seas. (IPEE; NMML, AFSC)
3. Up to 8 Russian specialists will participate in workshops to be held in the U.S. in the spring of 2013 and also in 2014 to analyze the results of the Bering-Okhotsk Seal Survey (BOSS) project and plan future surveys of seals in the Chukchi Sea. (NMML, AFSC; IPEE, KBPIG, Kamchatka NIRO)
4. At the invitation of the Giprorybflot Institute, 5-7 American specialists will visit Russia in September 2014 to take part in a seminar on use of instrument photography in aerial surveys of true seals.

### Eared Seals



*Measuring a sea lion pup in the Kuril Islands*

1. Two Russian scientists will visit Alaska in the summer of 2013 to assist with Steller sea lion pup branding and blood sampling in the Aleutian Islands. (NMML, AFSC; KBPIG, Kamchatka NIRO)
2. One Russian scientist will visit the Alaska SeaLife Center and University of Alaska in 2013 and again in 2014 to participate in collaborative research on Steller sea lions and northern fur seals, and to receive training in the use of biotelemetry instruments. (ASLC, U of AK-Fairbanks; KBPIG, Kamchatka NIRO)
3. Two Russian scientists will visit the U.S. for 2-3 months in October-December 2013 to participate in statistical analysis of Steller sea lion demographic data collected range-wide over the last two decades. (NMML, AFSC; KBPIG, Kamchatka NIRO)
4. Two or three American scientists will take part in a 2014 cruise to survey rookeries and tag newborn pups of Steller sea lions and Northern fur seals in the Russian part of their ranges. (KBPIG; NMML, AFSC)
5. One or two Russian scientists will visit Alaska in the summer of 2014 to assist with northern fur seal abundance counts on the Pribilof Islands. (NMML, AFSC; KBPIG, Kamchatka NIRO)



## **Pacific Walrus**



*Pacific walrus on an ice floe*

1. Two to four American scientists will take part in a scientific research cruise studying walrus in Russian waters of the Bering and Chukchi Seas in May-July 2013 and/or 2014 . (KBPIG, IPEE, Chukotka TINRO; FWS, MMM-7)
2. Up to two Russian scientists will join a research cruise to collect skin biopsy samples from Pacific walrus in the Bering and Chukchi Seas in June and/or July 2013 and 2014. This joint effort is intended to be conducted within the Exclusive Economic Zones of both the U.S. and Russia. (FWS, MMM-7; Chukotka TINRO)
3. Four to six American scientists will visit Anadyr, Russia in March-April 2014 to take part in a seminar whose goals are to exchange information on monitoring of walrus in coastal haulout areas of Russia and the U.S., develop common methodological approaches to conducting censuses, study walrus herd structure and disturbance factors, and discuss other related topics. (Chukotka TINRO; FWS, MMM-7)

## **Sea Otters**

1. During the summer of 2013 or 2014 American and Russian sea otter scientists will continue to collaborate on boat-based sea otter surveys in the Commander Islands, Russia. The surveys will provide information on sea otter abundance and distribution, habitat, population trends, and rates and causes of mortality. (MNRE, Kamchatka NIRO, KBPIG; FWS, MMM-7)
2. One or two Russian scientists will participate in field work in Prince William Sound, Alaska, in 2013 or 2014 as part of a long-term monitoring study of northern sea otters. (Kamchatka NIRO, KBPIG; FWS, MMM-7)
3. Two to four Russian sea otter biologists will participate in the 6th Sea Otter Conservation Workshop, to be held in Seattle, Washington in March 2015. The workshop will include a small roundtable discussion of population dynamics of Bering Sea sea otters and spatial differences in killer whale predation on sea otters, with the goal of developing research and management strategies for promoting sea otter population recovery in the Aleutian Islands. (FWS; VNIRO, Kamchatka NIRO, Sevvostrybvod, KBPIG)

## **II. CETACEANS**

1. In 2014 American and Russian scientists will collaborate in studies and population assessments of bowhead whales in the Sea of Okhotsk and killer whales in the western part of the Sea of Okhotsk. Exchanges for planning, participation in surveys and discussion of the results will be arranged as appropriate. (IPEE, RAS/FEB Institute of Marine Biology; NMML)
2. One or two American scientists will visit Russia for 1-3 months during March-November 2014 to participate in joint research on census, analysis of historical data, and collection and analysis of genetic samples from large cetaceans, killer whales, and seals in the Sea of Okhotsk. (IPEE; AFSC, SWFC)
3. One or two American scientists will take part in a cruise to study the distribution and abundance, and to photo-ID large cetaceans in coastal waters of Kamchatka, the Commander and Kuril Islands during May-September 2014. (KBPIG; SWFC)
4. Three or four American scientists will visit Russia for 1-3 months in the summer of 2014 to take part in joint stationary coastal observations, toxicology and acoustical studies, satellite tagging and health assessments of beluga whales and other marine mammal species in the Sea of Okhotsk and Bering Sea. (IPEE; AFSC, SWFC)
5. One or two Russian scientists will visit the Alaska SeaLife Center sometime in 2014 to participate in collaborative research on cetaceans, primarily killer whale and beluga whales, and receive training in the use of biotelemetry instruments. (ASLC; KBPIG)
6. One or two American specialists will be invited to work on species diversity and distribution of cetaceans in the waters off the Commander Islands, Russia for 3-4 weeks in September 2014. (MNRE; SWFC, AFSC)
7. Two Russian biologists will visit the U.S. in the winter of 2014 to analyze results of aerial surveys of beluga whales conducted by both countries and to produce data on their abundance and distribution. (IPEE, Chukotka TINRO; NMML, AFSC)
8. Two Russian scientists will visit the U.S. for two weeks in 2014 for consultations with American colleagues on methods of determining numbers of beluga whales which can be removed from Russian waters for scientific and educational purposes without detriment to the overall population. (AFSC; IPEE)

## **Project 02.05-71      Animal and Plant Ecology**

The work of this Project is carried out under seven Activities:

### **Activity 02.05-7101      Conservation of Rare and Endangered Species of Plants and Comparative Studies of North American and Eurasian Flora**

**PURPOSE:** Promote cooperation among botanical gardens and arboreta in both countries, including exchanges of seeds and other plant materials endemic to each country for propagation and growing, and organization of joint botanical research and collecting expeditions.



*Russian botanists at Bitter Lake National Wildlife Refuge learn about threatened and endangered plants in arid ecosystems of the Southwest United States.*

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1. Three American specialists will visit Belarus for two weeks in July-August 2013 to study conservation of rare and endangered plants and assess the abundance and distribution of invasive species in several of the country's nature reserves and natural park areas. (Belarus Central Bot. Garden; Missouri Bot. Garden, Longwood Gardens)
2. Three American specialists will take part in the 3rd international conference, "Living in Harmony: Botanic Gardens and Society," to be held in Tver, Russia in September 2013. (Tver Univ. Bot. Garden; Missouri Bot. Garden, Minnesota Landscape Arboretum)
3. Four Russian specialists will visit the Southwest U.S. for two weeks in October-November 2013 for familiarization with conservation and management of threatened and endangered plant species in arid lands. The itinerary will focus on national wildlife refuges and botanical gardens in New Mexico and Arizona. (Missouri Bot. Garden, FWS-Refuges; RAS Main Bot. Garden, CSBG)
4. Joint botanical expeditions of 2-3 weeks' duration to collect plant materials and analyze floristic ties between Eurasia and North America will be conducted in 2014. Tentative areas to be surveyed are the southern Ural Mountains (Russia) and Appalachians (U.S.). There may also be an opportunity for field work in Tajikistan. (Nat. Arb.-USDA, Missouri Bot. Garden; Main Bot. Garden-RAS)

## **Activity 02.05-7102 Northern Migratory Waterfowl**

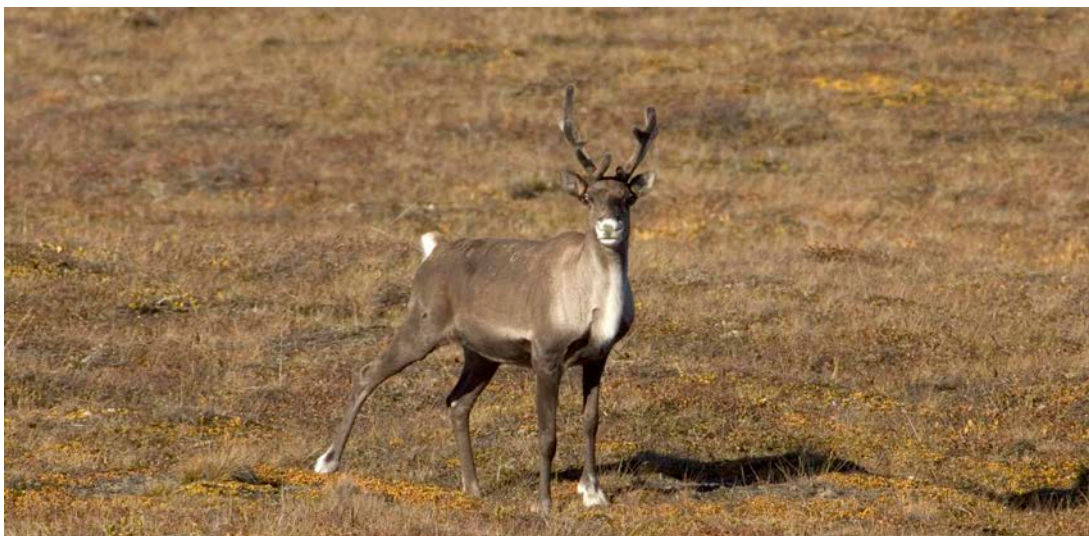
**PURPOSE:** Determine nesting grounds, migratory routes, wintering areas, adaptation to environmental change, and productivity of geese, ducks and other waterfowl species.

1. In 2013-2014 American and Russian specialists will meet to discuss reduction in accidental mortality of cranes resulting from hunting of waterfowl in Siberia and the Russian Far East. Exchanges of information and personnel will be planned, with the goal of better educating hunters on their legal and ethical responsibilities. (IPEE; ICF)

2. One Russian specialist from the Institute of the Biological Problems of the North (Magadan) will attend the 5th International Swan Symposium in Easton, Maryland, in February 2014 and present a paper on nest density and breeding biology of Bewick's swans in the Chaun River delta of eastern Russia.
3. American and Russian specialists will host a joint session on conservation of threatened and endangered migratory species at the conference: "Waterfowl of Northern Eurasia: Current Population Status, Conservation and Management," to be held in the fall of 2014 in Salekhard, Russia. (VNIIPrirody; FWS, USGS)

### **Activity 02.05-7103      Holarctic Mammals**

**PURPOSE:** Investigate the systematics, zoogeography and genetic variability of mammals of the Holarctic, with the goal of conserving gene pools of those species.



*Young caribou in Alaska*

1. Two Russian biologists will visit the U.S. for two weeks in March 2013 for research on the systematics and habitat ranges of small Central Asian mammals in the collections of natural history museums in New York and Washington, D.C. (IPEE)
2. In 2013-2014 Russian and American scientists will continue to collaborate on joint research to study the distribution of genetic diversity of Russian brown bears, with the goal of identifying and protecting significant subpopulations in the Russian Far East, Siberia, and Beringia. (FWS, ASC, USGS; RAS, IBIW)
3. Russian specialists will visit the U.S. in 2013-2014 to work on evaluating and mapping the most productive reindeer (caribou) calving locations in the Northern Hemisphere for determining where protected territories might be established. American specialists will be invited to travel to Russia to take part in reindeer field work, and the two sides will collaborate on publications focusing on protection of reindeer as economic development of the North continues. (IPEE; Univ. of Wisconsin)
4. In 2013-2014 work will continue on the reintroduction of free-ranging populations of European bison in the regions of Orel and Vologda, Russia. Russian and American biologists will collaborate to ensure that the animals selected are genetically representative of the species, and will jointly monitor their



numbers, distribution and genetic diversity. Exchanges of personnel will be scheduled as necessary for work to progress. (USGS-BRD; IPEE, Rospirodnadzor)

5. Comprehensive studies of the Holarctic examine the region's topography, climate, hydrology, and flora and fauna distribution, overlaid by the impact of human economic activity (e.g., farming, livestock grazing, road building, mineral extraction). The Institute of Ecology and Evolution invites American colleagues to join ongoing work on evaluating and mapping these and other factors affecting Holarctic ecosystems so that predictive models can be constructed and put to practical use. (IPEE; FWS, USGS)



USFWS

*Alaskan brown bear*

### **Activity 02.05-7104      Chemical Senses and Communication in Animals**

**PURPOSE:** Investigate the functions and mechanisms of taste and smell as related to the disciplines of physiology, biochemistry, endocrinology, immunology, nutrition, behavior and genetics.

One Russian specialist will visit the U.S. for one month in June-July 2013 to attend the annual meeting of the Society for Behavioral Neuroendocrinology in Atlanta and continue studies of chemosensory biology and genotyping at Monell Chemical Senses Center in Philadelphia. Joint work and participation in professional association meetings will continue in 2014. (IPEE; Monell)

### **Activity 02.05-7105      Application of Contemporary Technology in Ecological Studies of Large Mammals**

**PURPOSE:** Develop joint methods to collect and process remotely-sensed microwave and optical data, integrate analyses of satellite data from telemetry and environmental remote sensing, and create database structures and models for ecological studies of large mammals in Arctic environments.

Collaborative research will continue on the effects of climate change and shrinking ice cover on the spatial and temporal distributions and physical characteristics of habitats used by Arctic marine and terrestrial mammals. Specific topics for 2013-2014 will include: (1) rates of surface ice formation and melting; (2) meteorological and oceanological factors; (3) movements of satellite-tagged animals, with



analysis of trajectories; (4) Arctic marine ice cover modeling at various times of the year; and (5) key sea ice habitat parameters affected by climate.

Two Russian specialists will visit the U.S. (Alaska) for up to two months in the winter of 2013-2014, and one American specialist will visit Russia in the summer of 2014, if funding permits. (IPEE; USGS)

### **Activity 02.05-7106 Wildlife Health and Disease**

**PURPOSE:** Cooperate in the study, prevention, and treatment of wildlife diseases of microbial, parasitic and chemical origin common to both countries.

1. Throughout 2013 and 2014 the two sides will closely monitor outbreaks of avian influenza and exchange the latest information about its prevention, diagnosis, spread, pathology and threats to humans. Clinical samples may also be jointly analyzed. (NWHC, FWS; BBRC, RAS/SIB)
2. American and Russian biologists will collaborate in development of methods of monitoring physiological indicators (hair, blood, urine, excrement) in *Felidae* to determine stresses to which these threatened species are subjected, with the goal of strengthening conservation efforts. (Smithsonian; IPEE)
3. American and Russian biologists will initiate a study of causes, spread and effects of infectious diseases in Amur tigers and Far Eastern leopards, in the context of the poor genetic diversity of these highly endangered species. Exchanges of personnel will be planned as work progresses. (RAS/FEB; U.S. National Institutes of Health)

### **Activity 02.05-7107 Invasive Species of Fauna and Flora**

**PURPOSE:** Mitigate the environmental damage caused by invasive species.

1. Two American specialists will attend the 4th International Symposium on Invasive Species of the Holarctic in Borok, Russia in October 2013. (IBIW; Univ. of Arkansas)
2. In 2014 the two sides will continue studies of penetration of Amur sleepers (*Perccottus glehni*) westward from Russia into Europe, and measures to prevent its further spread. New work will be initiated on rehabilitation of aquatic ecosystem communities which have suffered from the effects of human-caused degradation. Web conferences and exchange visits of Russian and American specialists will be arranged as determined through mutual correspondence. (IPEE, IBIW; USGS)

## **Project 02.05-81 Ichthyology and Aquaculture**

The work of this project is carried out under four Activities:

### **Activity 02.05-8101 Fish Culture, Nutrition and Disease**

**PURPOSE:** Improve fisheries management, increase productivity through fish culture, restore fishery resources, and exchange information on the physiology, nutrition, diseases, genetics and reproductive biology of species of mutual interest.

In 2013, planning will get underway for the Fourth U.S.-Russia Conference on Aquatic Animal Health, to be held in 2014 or 2015 in Russia. Up to 20 American specialists will attend the conference, whose major

topics will include: effects of human activities, pollutants/contaminants and climate change on fish health; impact of disease within aquatic and marine ecosystems; and interactions among wild and captive fish. (USGS, FWS; IFF)

### **Activity 02.05-8102 Study and Conservation of Sturgeon**

**PURPOSE:** Promote sound management of sturgeon populations in both countries. (Questions relating to international trade of caviar and other sturgeon products are addressed under Project 02.05-31.)



*Lake sturgeon*

Exchanges of information, samples and sturgeon specialists in 2013-2014 will be arranged as the need arises. (IPEE, RNAFEE; FWS, USGS)

### **Activity 02.05-8103 Study and Conservation of Salmon**

**PURPOSE:** Promote sound management of salmon populations in both countries.

1. Work on assessment of the status of and development of measures for the conservation of salmon populations in protected areas of Sakhalin, Khabarovsk Krai, and Kamchatka, including Kronotsky, South Kamchatka, Kol River, Vostochny, and Koppi River Reserves, as well as others, will continue. In 2013 and 2014, expeditions are planned to the Kol River Biological Station with the participation of instructors and students of Kamchatka State Technical University. Work on establishment of exclusive fishery zones will also continue. (IPEE RAS, VNIRO, KamchatNIRO, SakhNIRO, SSI, MSU, KSTU, WSC, Kronotsky SNR, Russian Salmon Fund, Khabarovsk Wildlife Foundation; WSC)
2. Joint field research will be conducted to assess the status of salmonids listed in the Russian Federation Red Data Book of threatened and endangered species (Kamchatka steelhead, Sakhalin taimen). To that end, expeditions to the Kvachina and Utkholok Rivers of Kamchatka will be organized in 2013 and 2014. (IPEE RAS, MSU, SakhNIRO, SSI; WSC)
3. Participation in international meetings and exchange of experience on conservation and sustainable use of wild salmon populations will continue in 2013 and 2014. (IPEE, RAS, MSU, MNRE, KamchatkaNIRO, KSTU, SSI, MagadanNIRO, other Russian partners; WSC)
4. Specialists from both countries will collaborate on a study of the abundance and distribution of Sakhalin taimen. DNA markers and ecological parameters will be used to determine their population status. (WSC, USGS-BRD; Institute of General Genetics, SakhNIRO, SSI)



*Sockeye salmon swimming upstream*

**Activity 02.05-8104      Comparative Studies of Fisheries in Large Lakes and Rivers of the U.S. and Russia**

**PURPOSE:** Study the ecology of endemic fishes of the Great Lakes (U.S.), Lake Baikal (Russia) and other important lake and river systems of both countries, with emphasis on comparative parasitology.

Planning will get underway for the Fourth U.S.-Russia-China Symposium on Ecology and Fishery Biodiversity in Large Rivers of East Asia and North America. Discussion of the venue, agenda and logistical arrangements will take place in 2014. (FWS, USGS-BRD, EPA; TINRO, Khabarovsk TINRO, MNR, RAS/FEB)

**Project 02.05-91      Ecology and Dynamics of Arctic Marine Ecosystems (BERPAC)**

**PURPOSE:** Study the status and dynamics of the Bering and Chukchi Seas, including their assimilative capacity, bioindicators of ocean pollution, and effects of human-caused disturbances, to establish a scientific basis for predicting major ecological, geochemical and geophysical trends and processes.

Distribution of the English language edition of a joint monograph presenting the long-range scientific results of the September 1993 BERPAC expedition will continue. (FWS, USGS; RAS)

## List of Acronyms and Abbreviations

|                  |   |
|------------------|---|
| ADF&G            | <a href="#">Alaska Department of Fish and Game</a>  |
| AFSC             | <a href="#">Alaska Fisheries Science Center</a>   |
| ASC              | <a href="#">Alaska Science Center</a> , USGS, Anchorage   |
| ASLC             | <a href="#">Alaska SeaLife Center</a> , Seward  |
| BBRC             | <a href="#">Bird Banding and Ringing Center</a> , Russian Academy of Sciences, Moscow                           |
| Chukotka TINRO   | <a href="#">Chukotka Branch, Pacific Research and Fisheries Center</a>  |
| CSBG             | <a href="#">Central Siberian Botanical Garden</a> , Russian Academy of Sciences, Novosibirsk                    |
| EPA              | <a href="#">U.S. Environmental Protection Agency</a>  |
| FWS              | <a href="#">U.S. Fish and Wildlife Service</a>  |
| FWS-Refuges      | FWS <a href="#">Division of Refuges</a>   |
| Giprorybflot     | <a href="#">Federal Fleet Development and Research Institute</a> , St. Petersburg                               |
| GlavOkhota       | Department of State Policy and Regulation of Hunting and Conservation of Hunting Resources, MNRE                |
| IBIW             | <a href="#">Institute of the Biology of Inland Waters</a> , Russian Academy of Sciences, Borok                  |
| ICF              | <a href="#">International Crane Foundation</a> , Baraboo, Wisconsin   |
| IFF              | <a href="#">All-Russian Federal Research Institute of Freshwater Fisheries</a> , Dmitrov                        |
| IPEE             | <a href="#">Institute of Ecology and Evolution</a> , Russian Academy of Sciences, Moscow                        |
| Kamchatka NIRO   | <a href="#">Kamchatka Research Institute of Fisheries and Oceanography</a>                                      |
| KBPIG            | <a href="#">Kamchatka Branch, Pacific Institute of Geography</a> , Academy of Sciences                          |
| Khabarovsk TINRO | <a href="#">Khabarovsk Branch</a> , Pacific Research and Fisheries Center                                       |
| Komarov          | <a href="#">Komarov Botanical Institute/Garden</a> , Russian Academy of Sciences, St. Petersburg                |
| KSTU             | <a href="#">Kamchatka State Technical University</a>  |
| Main Bot. Garden | <a href="#">Main Botanical Garden</a> , Russian Academy of Sciences, Moscow                                     |
| Magadan NIRO     | <a href="#">Magadan Research Institute of Fisheries and Oceanography</a>  |
| MBM-7            | <a href="#">Migratory Bird Management</a> , FWS, Alaska   |
| MMM-7            | <a href="#">Marine Mammals Management</a> , FWS, Alaska   |
| MNRE             | <a href="#">Russian Ministry of Natural Resources and Environment</a>   |
| Monell           | <a href="#">Monell Chemical Senses Center</a> , Philadelphia  |
| MSU              | <a href="#">Moscow State University</a>   |
| Nat. Arb.-USDA   | <a href="#">National Arboretum</a> , <a href="#">Department of Agriculture</a>                                  |
| NBBL             | <a href="#">National Bird Banding Laboratory</a> , USGS, Laurel, Maryland                                       |
| NMML             | <a href="#">National Marine Mammal Laboratory</a> , NOAA/NMFS, Seattle  |
| NMNH             | <a href="#">National Museum of Natural History</a> , <a href="#">Smithsonian Institution</a> , Washington, D.C. |
| NOAA             | <a href="#">National Oceanic and Atmospheric Administration</a>   |
| NPS              | <a href="#">U.S. National Park Service</a>  |
| NWHC             | <a href="#">National Wildlife Health Center</a> , USGS, Madison, Wisconsin                                      |
| RAS              | <a href="#">Russian Academy of Sciences</a>   |
| RAS/FEB          | <a href="#">Far East Branch of Russian Academy of Sciences</a>  |
| RAS/SIB          | <a href="#">Siberian Branch of Russian Academy of Sciences</a>  |
| RNAFEE           | <a href="#">Russian National Association of Fishery Enterprises, Entrepreneurs and Exporters</a>                |
| Sevvostrybvod    | <a href="#">Northeast Fisheries Agency</a> , Kamchatka  |
| SSI              | <a href="#">Sakhalin Salmon Initiative</a>  |
| SWFC             | <a href="#">Southwest Fisheries Science Center</a> , NOAA/NMFS, La Jolla, California                            |
| TINRO            | <a href="#">Pacific Research and Fisheries Center</a> , Vladivostok   |
| USFS             | <a href="#">U.S. Forest Service</a>   |
| USGS             | <a href="#">U.S. Geological Survey</a>  |
| VNIIPrirody      | Russian Federal Research Institute for Nature Protection, Moscow  |
| VNIRO            | <a href="#">Russian Federal Research Institute of Fisheries and Oceanography</a>                                |
| WSC              | <a href="#">Wild Salmon Center</a> , Portland, Oregon   |
| Zapovedniks      | <a href="#">Zapovedniks Environmental Education Center</a> , Moscow   |