

U.S.-Russia Cooperative Efforts for the Conservation of Wildlife and Wildlife Habitat



Activities for 2007-2008



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

Area V: Protection of Nature and the Organization of Reserves

“...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: polar bear and cubs on pack ice; photo by Steve Amstrup; source: <http://images.fws.gov>
Left bottom: Dahurian lily, Primorye Province, Russia; photo by Irina Milenina
Right top: red-legged kittiwakes; photo by Dean Kildaw; source: <http://images.fws.gov>
Right bottom: FWS visitors at Khingansky Nature Reserve, Khabarovsk Province, Russia.
FWS photo by David Pitkin, 2002

Area V Work Plan for 2007-2008

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 Washington, D.C. February 6-8, 2007 to review exchanges carried out in 2005-2006 and agree on activities for 2007-2008. 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.)

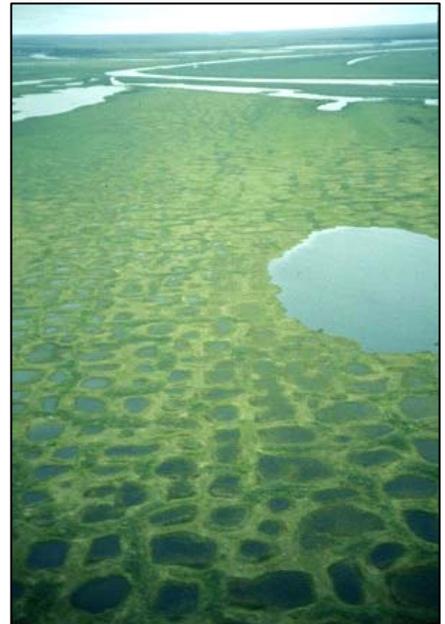
Project 02.05-11 Conservation of Wild Species of Fauna

The work of this Project is carried out under five 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.

1. As a follow-up to two earlier conferences held in the U.S., the 3rd International Conference on Migratory Birds of the North Pacific Region will be held August 8-11, 2007 in Yakutsk (Sakha Republic), Russia, with subsequent field trip. 5-6 American specialists will take part. (RAS/SIB; FWS, USGS, ICF)
2. The two sides will compile information to be used in preparing a dual-language joint statement reporting on implementation of the Convention for the Years 1999-2006. This publication will be the fourth in a series of periodic reports. (The first three covered: 1981-1986; 1987-1992; 1993-1998). (FWS; MNR, NBBL)
3. The two sides will continue to exchange bird banding and recovery data, as well as information on the ecology of diseases affecting migratory birds, including avian influenza. (IPEE; USGS-BRD, FWS)



Very important breeding area for Siberian crane and other endangered birds, Yakutiya, Russia.
Photo: U.S. Fish and Wildlife Service,
Mini Nagendran

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

PURPOSE: Achieve and maintain stable reproducing wild avian populations by encouraging conservation of critical habitat, scientific collaboration and educational outreach.

1. In the summer of 2007 Russian specialists will continue deployment of Platform Terminal Transmitters (PTTs) on juvenile Siberian cranes in nesting areas in Sakha to obtain information about migratory flyways and location of their wintering areas. (ICF; VNIIPrirody)
2. The two sides will conduct a five-year review of the results of Project Hope, initiated in 2002 to promote the recovery of the western population of Siberian cranes by teaching them to migrate between breeding grounds in the lower Ob River (Uvat) of Russia and wintering areas in southwestern Asia by following ultralight aircraft or hang gliders. (ICF; VNIIPrirody)
3. The two sides will continue to exchange information and experience on restoration of peregrine falcon populations in urban areas of the U.S. Midwest and City of Moscow. (Greg Septon/Wisconsin; VNIIPrirody)

Activity 02.05-1103 Study and Conservation of Polar Bears

PURPOSE: Promote research on the biology and seasonal movements of polar bears, and coordinate implementation of the U.S.-Russia Agreement on the Conservation and Management of the Alaska-Chukotka Polar Bear Population.

1. Eight Russian specialists will take part in a meeting of the five polar bear range states (U.S., Russia, Canada, Norway, Denmark/Greenland) to be held June 26-29, 2007 in Shepherdstown, West Virginia to exchange information on the status of polar bear populations, review research and management programs, and consider recommendations for additional national, bilateral or multilateral measures for conservation of this species. (FWS, MMM-7; MNR)



Polar bear on the North Slope of Alaska near bowhead whale remains. Barter Island, Alaska, autumn 2004
Photo: U.S. Fish and Wildlife Service, Scott Schliebe

2. Representatives of the Alaska Nanuuq Commission and Chukotka Association of Marine Mammal Hunters will continue talks on reaching a companion Native-to-Native subsistence use agreement to the 2000 intergovernmental Agreement.
3. In 2007 the two sides will exchange instruments of ratification for the 2000 U.S.-Russia Agreement, appoint one governmental and one native commissioner from each country, and schedule the first joint meeting to establish the administrative framework and procedures under which the Agreement will operate. (FWS, MMM-7; MNR)

Activity 02.05-1104 “Protected Natural Areas”: see 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. Long-term cooperation between the Moscow and Brookfield (Chicago) Zoos will continue. Information will be exchanged on captive animal management, breeding and veterinary care, and rodent species will be transferred between the two zoos.
2. Collaboration between the Moscow, Omaha and San Diego Zoos on the design and construction of exhibits will continue.
3. The Moscow Zoo will continue to participate with U.S. partners in the International Species Information System (ISIS), Zoological Information Management System (ZIMS), American Association of Reptilian and Amphibian Veterinarians (AARAV), and other international zoo organizations.

Activity 02.05-1106 Conservation and Management of Marine Birds



Red-legged kittiwake colony, St. George, Pribilof Islands, Alaska, summer 2005
Photo: Nikolai Konyukhov

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

1. One-two Russian specialists will visit the U.S. for three months in the summer of 2007 (mid-May to mid-August) for field studies of auklet productivity and molting in nesting colonies on the Pribilof Islands, Alaska. Field work will continue in the summer of 2008. (FWS-Refuges; BBRC)
2. The two sides will update and add new entries to 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. (MBM-7; RAS/FEB, IBPN)
3. The two sides will continue cooperation under the Important Bird Areas (IBA) Program for the Bering Sea region, which has identified 133 IBAs in Alaska (92) and Russia (41) as critical habitat for waterfowl, seabirds, shorebirds, songbirds and raptors. (MBM-7; MNR, RAS/FEB, IBPN)

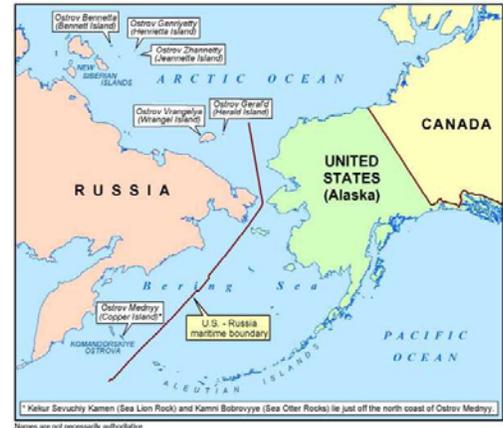
Project 02.05-21 **Beringia Conservation Forum**

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.

1. Alaska Maritime National Wildlife Refuge and Commander Islands Nature Reserve will move toward solidifying their relationship through a paired protected areas Agreement or Memorandum of Understanding. Topics for initial collaboration include seabird monitoring, invasive species management, and oil spill preparedness. (FWS-Refuges; Rosprirodnadzor)

2. Two Russian specialists will travel to the U.S. for one week in August 2007 to attend a brown bear workshop in Fairbanks, Alaska. The agenda will include biology and genetics, hunting policy (including import/export of trophies), poaching/law enforcement issues, threats to habitat quality, and preparation of educational and outreach materials. (Northern Forum, FWS; Siberia/Kamchatka conservation agencies)

3. Two Russian specialists will visit the U.S. for several days in early November 2007 to discuss topics of importance to Kamchatka and maritime Alaska. These include collection of bird eggs for contaminant sampling, prevention of rodent introduction, and integration of seabird data currently compiled separately. (MBM-7, FWS-Refuges; Rosprirodnadzor)



Source: U.S. Department of State

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.

1. 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 during which American and other foreign hunters may take and export trophies. (FWS-Law Enforcement; HOM-MinAg, RNAFEE)

2. The two sides will consider holding a U.S.-Russia Conservation Law Workshop in Moscow in 2008 or 2009. Its purpose will be, through a series of lectures and round-table discussions, to familiarize participants with principles of conservation law in the U.S. and Russia, including their genesis, significance and enforcement. The target audience will be attorneys, as well as non-attorney administrators in positions requiring extensive knowledge of wildlife conservation laws and their interpretation. (FWS; MNR)

Project 02.05-41 Ecosystem Biodiversity

The work of this Project is carried out under three 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.

1. 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)
2. The two sides will consult on preparations for the Third World Biosphere Reserves Congress (Madrid, February 2008).

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. Two Russian specialists will visit the U.S. for three weeks in May 2007 to discuss plans for a spring 2008 workshop in Kalmykia, Russia on prevention, diagnosis and treatment of diseases affecting saiga antelopes. (IPEE; The Wilds, FWS)
2. A U.S.-Russia Workshop on prevention, diagnosis and treatment of diseases affecting saiga antelopes will be held in Kalmykia, Russia in May 2008. Topics to be covered include: identification of parasitic and other common diseases, clinical diagnostic testing, breeding management, preventive medicine, hoof care, nutrition, anesthesia, and record keeping. 5-6 American specialists will take part. (IPEE; The Wilds, FWS)
3. Two Russian specialists will visit the Southwestern U.S. for up to one month in 2008 for familiarization with applications of Geographic Information System (GIS) technology in remote sensing and landscape cartography. (IPEE)



Saiga
Photo: R. Reading

Activity 02.05-4103 Mountain Ecosystems

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

The two sides will continue working on a joint monograph titled, "Comparative Investigations of the Southern Appalachian and Southwest Caucasus Mountain Ecosystems." (IPEE; Colorado State University)

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. Three or four Russian specialists will visit the U.S. for ten days in late November-early December 2007 to take part in the “International Delta Roundtable” workshop, to be held in Lafayette, Louisiana. The purpose is to bring together American, Russian and other river and wetland scientists to discuss the role of delta ecosystems during floods and hurricanes, in preserving aquatic habitat, as energy sources, in navigation, and as bioindicators of pollution and climate change. (USGS, FWS; RAS, IPEE)
2. In 2008 a joint workshop “Achievements and Perspectives” dedicated to the 30th anniversary of cooperation between the Institute of the Biology of Inland Waters (Borok, Russia) and Columbia Environmental Research Center (Missouri, U.S.) will be convened in either Russia or the U.S. (IBIW; CERC)

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. Three American specialists will travel to Russia in August 2007 to take part in an environmental conference, “A Clean Amur for a Better Life,” to be held in Amursk (Khabarovskiy Krai), with subsequent visit to wetlands of Bolonskiy Nature Reserve. (FWS, EPA; Rosprirodnadzor)
2. The two sides will continue collaboration in the monitoring and management of wildlife refuges and nature reserves in both countries. Topics include habitat protection, fauna and flora surveys and inventories, biostatistics, law enforcement, policies for dealing with such natural phenomena as fires and floods, and application of new technologies, such as GIS, to land and resource management. In 2008, 5-6 American refuge personnel will visit reserves in Siberia and Far Eastern Russia for exchange of expertise on these topics. A similar visit to U.S. protected areas by Russian reserve staff will also be arranged. (FWS-Refuges; Rosprirodnadzor)



Bolonsky Federal Nature Reserve (*Zapovednik*);
Khabarovsk Province, Russia, August 2007
Photo: U.S. Fish and Wildlife Service, Charles Wooley

Activity 02.05-5102 Conservation Education



Elena Knizhnikova of the Russian non-governmental organization "EcoCentre Zapovedniks" and Kevin Godsea of J.N. "Ding" Darling National Wildlife Refuge. Sanibel, Florida; March 2007
Photo: U.S. Fish and Wildlife Service, Peter B. Ward

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

1. One Russian specialist will visit the U.S. for two weeks in March 2007 to attend the annual Refuge Friends workshop in Washington, D.C. and for familiarization with the organization and operation of volunteer programs at U.S. national wildlife refuges in Florida and Washington State. (FWS-Refuges; Zapovedniks)
2. Up to 12 Russian specialists will visit the U.S. for two weeks in 2008 to take part in a training workshop on the design, production and installation of interpretive exhibits at refuge and park visitor centers. (FWS-Refuges; Rosprirodnadzor, 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.

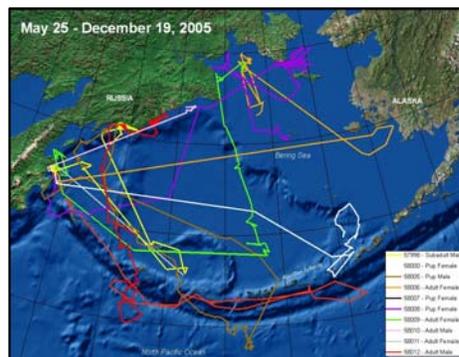
GENERAL

1. The 20th meeting of the U.S.-Russia Marine Mammal Working Group will be held in the U.S. in 2008, with the participation of 10-12 Russian specialists.
2. American specialists will take part in the implementation of a project called "Traditional Knowledge," whose goal is to involve native peoples of Magadan Oblast in observations of marine mammals inhabiting the northern Okhotsk Sea. (Russian Federal Agricultural Oversight Agency, Magadan Branch)
3. An analysis of native subsistence take of marine mammals in Chukotka and Alaska will be carried out jointly to provide scientific data necessary for making decisions on management of stocks common to both countries. (Chukotka Autonomous Region Fisheries Committee)

I. PINNIPEDS

True Seals

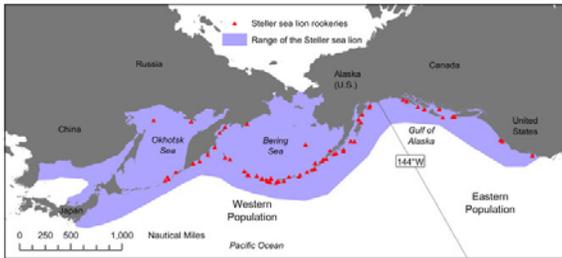
1. Two-three American specialists will visit Russia to study the migration and feeding behavior of true seals in Kamchatka in the spring of 2007 and fall of 2008. (NMML; KBPIG)
2. One-two Russian scientists will visit the U.S. in 2007 and 2008 to take part in ice seal studies, which may include research cruises along the ice edge in the Bering Sea as well as work in coastal areas of Alaska. (NMML; SevVostRybVod)



Ribbon seal migration studies, June 2005
Graphic: Vladimir Burkanov

3. One-two American scientists will take part in bearded seal migration studies in the Okhotsk Sea using satellite tagging in 2007-2008. (KamchatNIRO)
4. Two-three American scientists will visit Russia in April-May or August-September 2007-2008 to assess the genetic status of Commander Islands groups of spotted and harbor seals. (Rosprirodnadzor)
5. One American specialist will visit Russia for 3-4 weeks in March-April 2008 for monitoring and telemetry studies of ice seals on a shore haulout on Utashud Island off southern Kamchatka. (NMML; SevVostRybVod)

Eared Seals



Source: U.S. National Oceanic and Atmospheric Administration

1. Three-four American specialists will take part in a cruise to study Steller sea lion haulouts and tag newborn pups in the Kuril Islands and Kamchatka in June-July 2007-2008. (NMML; KBPIG)
2. One Russian scientist will participate in branding of Steller sea lion pups off Alaska in the summer of 2007 and 2008. (NMML; KBPIG)
3. Two-three American scientists will take part in a new cycle of northern fur seal behavior studies in the Commander Islands using telemetry in the summer of 2007-2008. (NMML; KamchatNIRO)
4. Two Russian scientists will conduct Steller sea lion studies at the Alaska SeaLife Center in 2007 and 2008. (ASLC; KBPIG)
5. 5-8 American specialists will visit Russia during the summer of 2007-2008 for studies of energy expenditure and feeding behavior of Steller sea lions in the Kuril Islands. (NMML, ASLC; KBPIG)
6. 5-8 American specialists will visit the Kuril and Commander Islands in the fall of 2007-2008 for studies of the feeding behavior of northern fur seals. (NMML; KBPIG)
7. One-two Russian scientists will take part in northern fur seal population monitoring and foraging ecology studies in the Pribilof Islands, Alaska for 3-4 weeks in 2008. (NMML; KBPIG)

Pacific Walrus

1. Five Russian specialists will visit Alaska for one week in early May 2007 to continue the analysis of data from the 2006 Pacific walrus surveys and discuss future research needs relative to tracking population status and trends. (MMM-7; GiproRybFlot, Chukotka TINRO)
2. In the summer-fall of 2007 the Russian side will deploy radio tags on walrus in the vicinity of Vankarem on the north coast of the Chukotka Peninsula. (FWS; Chukotka TINRO)



Survey of Pacific walrus in the Bering Sea, March 2006
Photo: U.S. Fish and Wildlife Service, Suzann Speckman

3. Four American specialists will visit St. Petersburg, Russia for one week in the spring of 2008 to complete processing of data collected during the joint aerial surveys of Pacific walrus conducted in 2005-2006. (MMM-7; GiproybFlot, PINRO, Chukotka TINRO)

Sea Otters



Sea otter
Photo: U.S. Fish and Wildlife Service,
David Menke

1. Two Russian specialists will travel to the U.S. to take part in an International Sea Otter Workshop, to be held March 16-18, 2007 in Seattle, and for sea otter population assessment consultations in California and Washington. (Kamchatka TINRO, VNIRO)

2. Two-three American veterinary/pathology specialists will visit the Commander Islands in March-April 2008 to study the causes of winter mortality in sea otters. (Rosprirodnadzor; UCSC)

3. One Russian scientist will visit California in February 2007 for training on radio tagging procedures and monitoring of sea otters to standardize methods of data collection. (ASLC; UCSC)

4. Seven American scientists will participate in trapping of sea otters with implanted time-depth recorders and study their food base in the Commander Islands for six weeks in June-July 2007. (KBPIG; USGS-BRD, MMM-7, UCSC)

5. One-two American scientists will participate in a sea otter census in the Kuril Islands in the summer of 2008. (MMM-7; KamchatNIRO)

6. Two American specialists will join Russian colleagues in field research on sea otters on Medniy and Bering Islands (Commanders) in 2008. (NMML, ASLC, MMM-7, Monterey Bay Aquarium; KBPIG, VNIRO, Rosprirodnadzor)

II. CETACEANS

1. Two-three American specialists will visit Russia for 4-6 weeks in 2007-2008 for joint satellite tagging of beluga whales in coastal waters off Chukotka. (NMML; Chukotka TINRO)

2. Two-three American specialists will visit Russia for observations, photo identification, biopsy sampling and radio tagging of cetaceans in the waters off eastern Kamchatka and the Kuril Islands in the summer of 2007-2008. (NMML; KBPIG)

3. Three-four American specialists will visit Russia to conduct western gray whale population studies off Sakhalin Island in 2007-2008. (SWFC, NMML; KBPIG)

4. Four-five American specialists will take part in a cetacean research cruise in the Okhotsk Sea in 2007-2008. (SWFC, NMML; KBPIG)

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



U.S.-Russia Botanical Conference "New Roots for the 21st Century" was held in Chambersburg, Pennsylvania, September 20-23, 2005 and was organized jointly by the U.S. National Arboretum and the U.S. Fish and Wildlife Service.

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.

1. A report of the results of the 2005 U.S.-Russia Botanical Conference, "New Roots for the 21st Century," will be issued and broadly distributed in English and Russian in early 2007. (USDA-Nat. Arb., FWS; Main Bot. Garden, RAS)
2. Three Russian specialists will visit the U.S. for two weeks in late June 2007 to present papers and serve on an international panel at the annual meeting of the American Public Gardens Association in Washington, D.C. (Minnesota Landscape Arboretum; RAS)
3. Three American specialists will join Russian colleagues for three weeks in the summer of 2007 in a plant collecting expedition in the Altai Mountains in southern Siberia. (Longwood Gardens; CSBG)
4. In August 2007 the two sides will launch a bilingual website (www.usrubep.org) highlighting U.S.-Russia botanical cooperation under the Environmental Agreement. Information will be available on scientific developments, recent publications, and upcoming conferences and expeditions. (USDA-Nat. Arb.; Main Bot. Garden, RAS).
5. In 2008 the U.S. National Arboretum and Botanical Garden and Institute in Vladivostok will develop a five-year cooperative agreement to study plants in their native habitats, increase herbarium collections and identify species for potential introduction into commercial cultivation in the Northeast U.S. and Russian Far East. (USDA Nat. Arb.; RAS/FEB)
6. A workshop to train volunteers to work with visitors to botanical gardens in Russia, provide educational and outreach services to the public, and identify sources of financial and logistical support for those activities will be held in April-May 2008 in St. Petersburg, Russia. Four or five American specialists will assist in training the approximately 25 Russian participants. (USDA-Nat. Arb., FWS-Refuges; Komarov)

7. One Russian specialist will visit the U.S. for up to one month in 2008 to collaborate with American colleagues in field studies of the impact of bird colonies on the vegetation of Coronation Island in the Alexander Archipelago of Alaska. (USFS; Komarov)
8. In 2008 American and Russian specialists will collaborate on a translation into English of R. V. Kamelin's *Materials about the History of Asian Flora (Altai Mountain Country)* and organize a collecting expedition in the Altai Mountains for comparison of endemic plant species of that region with those of the U.S. Rocky Mountains. (Rocky Mountain College; Komarov)
9. In 2008 a five-year collaborative project will be undertaken to clarify – through field work, transplant gardens and molecular studies -- the proper taxonomic treatment for many plant species in northern North America and the Russian Far East. (Utah State Univ., Univ. of Alaska; RAS/RFE)

Activity 02.05-7102 Northern Migratory Waterfowl



Snow geese in flight
Photo: U.S. Fish and Wildlife Service

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

1. One Russian specialist will visit the U.S. for three weeks in February-March 2007 to present the results of studies of Wrangel Island snow geese at the annual meeting of the Pacific Flyway Study Committee (La Conner, Washington) and take part in neckband observations and sampling of hunter-killed snow geese in the Skagit Bay area. That specialist will also attend the Pacific Flyway Study Committee meeting to take place in early 2008. (FWS; Rosprirodnadzor)
2. In the summer of 2007 specialists from both countries will continue collaboration on spectacled eider field studies in the Chaun Bay area of western Chukotka, Russia. Work will include monitoring of nesting chronology and productivity, capture and marking of adult females to estimate annual survival, and collection of blood samples for lead contaminant analyses. (FWS; Rosprirodnadzor)
3. The two sides will continue collaboration on captive rearing in Kamchatka and release in the spring of 2008 of Aleutian Cackling geese to repopulate the Asian portion of their historic range. (MBM-7, FWS-Refuges; RAS/FEB)
4. One Russian specialist will visit the U.S. in 2008 to discuss waterfowl data with colleagues in Alaska and Washington, D.C., and for consultations on undertaking a comprehensive conservation biology program in Russia. (FWS; IPEE)

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.

1. An information retrieval system and website, containing information, maps and a database on the fauna and flora of Russia's nature reserves, will be launched in 2007. (IPEE)
2. In 2007-2008 work will continue on the reintroduction of free-ranging populations of European bison in the regions of Orel and Vologda. 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. American participants in the project will visit Russia in 2008 as necessary for work to progress. (USGS-BRD; IPEE, Rosprirodnadzor)
3. The Russian side will hold an international symposium in late November 2007, to which American specialists will be invited, on the molecular and genetic bases for biodiversity conservation in animals. Topics include: evolution of intraspecies taxonomic and population structures; genome databases for rare and endangered species; and processes of species formation, including hybrids. (IPEE; FWS, USGS-BRD)
4. One-two Russian specialists will visit the U.S. for up to one month in 2008 for familiarization with molecular and genetic methods used in species identification at the National Fish and Wildlife Forensic Laboratory in Oregon. (FWS; IPEE)
5. Two-three Russian specialists will visit the U.S. for periods of up to one month in 2008 to work in collections of wild sheep and small carnivorous mammals at the Smithsonian Museum of Natural History (Washington, D.C.) and other locations. (IPEE; NMNH)
6. Ongoing comparative studies of the impact of beaver activity on fish abundance and aquatic habitat quality will continue. An exchange of American and Russian scientists will be scheduled for the 2008 field season. (University of North Dakota; IPEE).
7. Work will continue on developing an electronic database in support of a joint U.S.-Russia Atlas of Mammals of the Holarctic. (IPEE; NMNH)

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.

1. Two Russian specialists will visit the U.S. for one month in April-May 2007 to attend the annual meeting of the Association for Chemoreceptor Sciences (Sarasota, Florida) and continue studies of animal sensitivity to biological substances at Monell Chemical Senses Center in Philadelphia. (IPEE; Monell)
2. Two American specialists will visit Russia for two weeks in 2008 for work with colleagues on genetically-based methods of mapping quantitative indicators of aggressive behavior in chemo-deficient animals. (Monell; IPEE)
3. The two sides will undertake new studies of secretions in closely related species of the genus *Mesocricetus* (e.g., Golden and Ciscaucasian hamsters) to determine the universality of their sex pheromones and create a natural pheromone by testing the chemical components of vaginal secretions. To implement this project one Russian specialist will visit the U.S. for up to one month in 2008, and one American specialist will visit Russia for two weeks. (IPEE; Cornell University)

4. Two Russian specialists will visit the U.S. for up to three months each in 2008 to continue research on animal sensitivity to biological substances and take part in studies to determine non-toxic regulators of reproductive functions in voles. (IPEE; Monell, USDA).

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.

In 2007 and 2008 collaborative research will focus on the behavior and adaptive mechanisms of Arctic marine mammals when their habitats are transformed under conditions of global climate change. Specific topics will include: (1) Arctic marine ice cover modeling at various times of the year, (2) key ice cover parameters affecting climate, (3) shore-fast ice variability and its effect on pinnipeds; (4) compare beginning dates of shore-fast ice melt over several decades and assess effect on ringed seal reproduction, (5) evaluate physical properties of ice cover: thickness, distribution, rate of melting, (6) effect of Arctic economic development on climate change.



Survey of Pacific walrus in the Bering Sea,
April 2006
Photo: U.S. Fish and Wildlife Service,
Brad Benter

For this work three Russian specialists will visit the U.S. for up to two months in the winter of 2008, and two American specialists will visit Russia in the summer of 2008 for up to two months. (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. The Second U.S.-Russia Conference on Wildlife Diseases, with the participation of 60-70 Russian and 17 American specialists, will be held March 12-15, 2007 in Moscow. Topics to be addressed are: diseases of terrestrial mammals and reptiles, diseases of amphibians, diseases of aquatic and marine ecosystems, West Nile virus, avian influenza, and other avian diseases. (NWHC, FWS; VNIIPrirody, MNR)
2. Two-three Russian specialists will be invited to attend a January 2008 U.S.-China meeting in the U.S. (West Virginia) to discuss the prevention, transmission and treatment of avian influenza. (USGS-BRD; VNIIPrirody, BBRC)
3. Four-five Russian specialists will visit the U.S. for one week in November 2008 to take part in a symposium on the ecology and effects of plague on wildlife, to be held in Fort Collins, Colorado. Agenda topics include environmental factors affecting the occurrence, spread and persistence of plague; role of rodents and other vector species in transmission of plague; diagnostic technologies; maintenance of plague between epizootics; management and control of plague; and future research needs. (USGS-BRD; IPEE, VNIIPrirody)

4. Throughout 2007 and 2008 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; VNIIPrirody, MNR, BBRC)

Activity 02.05-7107 Invasive Species of Fauna and Flora

PURPOSE: Mitigate the environmental damage caused by invasive species.

1. In 2007-2008 the two sides will expand cooperation on invasive species in freshwater bodies (lakes and rivers) of both countries. Topics to be investigated include: (1) risk assessment and management of invaders, (2) modeling and predicting the end results of invasive processes, (3) comparative ecology of the Eurasian ruffe in the Rybinsk Reservoir (Russia) and North American Great Lakes. (IBIW, IPEE; FWS, USGS-BRD)
2. One American specialist will visit Moscow in 2008 to collaborate on preparation of a manuscript comparing the ecology of *Tamarix spp.* in its native range in Central Asia and introduced range in western North America. (USGS-BRD; RAS)
3. The two sides will consider undertaking comparative joint studies of the impact of introduction of the Northern pike on native Altai osman in Lake Terekhol in Tuva southern Siberia. One-two American specialists will be invited to take part in field work in Russia. (IPEE; University of Kansas)

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.

1. A technical workshop to evaluate tools which could be used for assessing the degree of contamination/pollution in the Amur River Basin and its effect on fisheries will be held in Russia in 2008, with the participation of three-four American specialists. Potential tools include gene expression, other molecular biomarkers, and contemporary methods for modeling differences in growth rates among fish populations. (USGS-BRD; Khabarovsk TINRO)
2. As a follow-up to symposia held in 1998 and 2003, the two sides will discuss plans to hold a third U.S.-Russia symposium on aquaculture and fish health. (USGS-BRD; 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.)

Exchanges of information, samples and sturgeon specialists will take place in 2007-2008 as the need arises. The two sides will consider arranging a one-month visit to the U.S. by one Russian specialist in 2008 for research on green and white sturgeon. (IPEE, RNAFEE; FWS, CERC)

Activity 02.05-8103 Study and Conservation of Salmon

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



Pink salmon
Artwork: Timothy Knepp; published
by U.S. Fish and Wildlife Service

1. Under an ongoing project to study and conserve steelhead salmon and other native fish species and their habitats on the Kamchatka Peninsula, up to eight specialists from the Wild Salmon Center (Oregon), Flathead Lake Biological Station of the University of Montana, Moscow State University and other organizations in both countries will continue expeditionary field work in Kamchatka during the summer and fall of 2007-2008 to collect samples and analyze data. The possibility of creating a network of high priority salmon rivers to conserve biodiversity and maintain abundance for sustainable use of North Pacific wild salmon populations will be considered. (WSC; IPEE, MSU)

2. Russian and American scientists will collaborate in research to clarify the genetic diversity and evolutionary history of Dolly Varden trout (*Salvelinus malma*) inhabiting Kamchatka and the Kuril Islands. Data obtained will provide an essential genetic baseline for conservation and management of this species in the Russian Far East. (USGS-BRD; MSU)

3. Specialists from both countries will continue comparative joint studies of Sakhalin and Siberian taimen through sampling to determine their abundance, distribution and population status. (WSC, USGS-BRD; IPEE, other Russian partners)

Activity 02.05-8104 Comparative Studies of Fisheries in Large Lakes 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 systems of both countries, with emphasis on comparative parasitology.

1. The Proceedings of the September 2006 U.S.-Russia-China Symposium on Ecology and Fishery Biodiversity in Large Rivers of East Asia and North America (Harbin) will be issued in the fall of 2007. (FWS, EPA, USGS-BRD; Khabarovsk TINRO, Rosprirodnadzor)

2. American and Russian specialists will work together to develop a computer model, based on similar models for age composition and amount of catch for lake whitefish and lake trout in the Great Lakes, for predicting sustainable harvest levels and developing a long-range management plan for omul in Lake Baikal. (FWS; RAS/SIB)

3. Up to 20 Russian specialists will be invited to attend the Third U.S.-Russia-China Symposium on Ecology and Fishery Biodiversity in Large Rivers of East Asia and North America, to be held in the fall of 2009 in Memphis, Tennessee, U.S. (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.

1. To mark the 30th anniversary of the first U.S.-Soviet expedition to the Bering Sea (1977), the two sides will consider holding a symposium to review multi-year data and agree on research priorities for the coming five years. (RAS; FWS)
2. In early 2008 the American side will publish the English language edition of a joint monograph presenting the long-range scientific results of the September 1993 BERPAC expedition. (FWS, USGS)

List of Acronyms and Abbreviations

ASC	USGS Alaska Science Center, Anchorage
ASLC	Alaska SeaLife Center, Seward
BBRC	Russian Bird Banding and Ringing Center, Academy of Sciences, Moscow
CERC	USGS Columbia Environmental Research Center, Missouri
Chukotka TINRO	Chukotka Federal Fisheries Research Institute, Anadyr
CSBG	Central Siberian Botanical Garden, Academy of Sciences, Novosibirsk
EPA	U.S. Environmental Protection Agency
FWS	U.S. Fish and Wildlife Service
FWS-Refuges	FWS Division of Refuges
GiproRybFlot	Federal Fleet Development and Research Institute, St. Petersburg
HOM-MinAg	Department of Hunting Oversight and Management, Russian Min. of Agriculture
IBIW	Institute of the Biology of Inland Waters, Russian Academy of Sciences, Borok
IBPN	Institute of the Biological Problems of the North, Rus. Acad. of Sciences, Magadan
ICF	International Crane Foundation, Baraboo, Wisconsin
IPEE	Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow
Kamchatka TINRO	Kamchatka Federal Fisheries Research Institute
KBPIG	Kamchatka Branch, Pacific Institute of Geography
Khabarovsk TINRO	Khabarovsk Federal Fisheries Research Institute
Komarov	Komarov Botanical Institute/Garden, Russian Academy of Sciences, St. Petersburg
Main Bot. Garden	Main Botanical Garden, Russian Academy of Sciences, Moscow
MBM-7	Region 7 FWS Migratory Bird Management (Alaska)
MMM-7	Region 7 FWS Marine Mammals Management (Alaska)
MNR	Russian Ministry of Natural Resources
Monell	Monell Chemical Senses Center, Philadelphia
MSU	Moscow State University
NBBL	USGS National Bird Banding Laboratory, Laurel, MD
NMML	NMFS National Marine Mammal Laboratory, Seattle
NMNH	Smithsonian National Museum of Natural History, Washington, DC
NWHC	USGS National Wildlife Health Center, Madison, WI
PINRO	Polar Research Institute of Marine Fisheries & Oceanography, Murmansk
RAS	Russian Academy of Sciences
RAS/FEB	Far East Branch of Russian Academy of Sciences
RAS/SIB	Siberian Branch of Russian Academy of Sciences
RNAFEE	Russian National Association of Fisheries Enterprises and Exporters
Rosprirodnadzor	Russian Federal Natural Resources Oversight Agency
SevVostRybVod	Kamchatka Fisheries Agency
SWFC	NMFS Southwest Fisheries Center, La Jolla
TINRO	Russian Pacific Federal Fisheries Research Institute, Vladivostok
UCSC	University of California – Santa Cruz
USDA-Nat. Arb.	U.S. National Arboretum, Department of Agriculture
USFS	U.S. Forest Service
USGS-BRD	Biological Resources Division of U.S. Geological Survey
VNIIPrirody	Russian Federal Wildlife Research Institute, Moscow
VNIRO	Russian Federal Fisheries Research Institute, Moscow
WSC	Wild Salmon Center (Portland, OR)
Zapovedniks	Zapovedniks Environmental Education Center, Moscow