

2000 Working Group Protocol 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 March 20-21, 2000 in Moscow to review exchanges carried out in 1999 and agree on activities for 2000. The following Work Plan was adopted (NOTE: Wherever possible, principal participating U.S. and Russian agencies/organizations are indicated for each item; see Key to Abbreviations on back 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

This Activity coordinates implementation of the bilateral Convention between the United States and U.S.S.R. (Russia) Concerning the Conservation of Migratory Birds and Their Environment (1976), and promotes the protection and study of the more than 200 species listed in the Appendix to the Convention.

1. In the 2nd half of 2000 the two sides will hold a consultative meeting (location to be determined) to review the list and nomenclature of bird species included in the Appendix to the Convention, discuss procedures for adopting changes to the Appendix, review information to be used in the next Joint Statement (covering the Years 1993-1998), and discuss plans to mark the 25th anniversary of the signing of the Convention in 2001. (MBM; VNIIPRIRODA)

2. One American specialist will visit the Bird Banding and Ringing Centers of Russia, Ukraine and Belarus in the 2nd half of 2000 for 2-3 weeks to continue coordination of banding techniques, recovery, processing and entry of information into computer databases (NBBL; BBRC).

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

This Activity seeks to maintain stable reproducing populations of rare and endangered species of birds in the wild by encouraging conservation of critical habitat, and through educational outreach and scientific collaboration.

I. Cranes:

In the 3rd quarter of 2000, the two sides will implement a special conservation project aimed at assisting the recovery of the western population of the Siberian crane. The effort will include three stages (ICF; VNIIPRIRODA):

- release of costume-reared Siberian cranes in the lower Ob River and Volga River delta;
- deployment of long-life satellite transmitters on wild Siberian crane chicks at Kunovat and Uvat breeding grounds to identify unknown summering areas for juveniles;
- deployment of satellite transmitters on adult Siberian cranes at the Uvat breeding grounds to identify alternate wintering areas in Iran.

II. Raptors:

1. A report will be prepared on the results of a September 1999 joint survey of birds of prey migrating past the southern tip (Cape Lopatka) of the Kamchatka Peninsula. Species observed included peregrine falcons, merlins, Eurasian kestrels, northern harriers, common buzzards, sparrowhawks, northern goshawks, as well as one gyrfalcon and one white-tailed sea eagle. (RRTAC)
2. Field monitoring of birds of prey on Kamchatka will continue in 2000, including breeding season raptor surveys in the 3rd quarter and Steller's sea eagle wintering studies in the 4th quarter. (MSU; RRTAC)
3. One Russian specialist will visit the U.S. for 2-3 weeks in the 2nd or 3rd quarter of 2000 to take part in surveys of nesting pairs of ospreys along the Willamette River in Oregon. (RRTAC)

Activity 02.05-1103, The Study and Conservation of Polar Bears

This Activity coordinates implementation of the U.S.-Russia Agreement on the Conservation and Management of the Alaska-Chukotka Polar Bear Population, and promotes research on the biology and seasonal movements of polar bears.

1. Three Russian specialists will visit the U.S. (Anchorage) for one week in January 2000 to finalize the proceedings of a workshop to design polar bear den survey methods as well as discuss population density assessment techniques with respect to aerial surveys in the Bering and Chukchi Seas. (MMM-7; VNIIPRIRODA)
2. Three Russian specialists will visit the U.S. (Anchorage) for one week in March 2000 to complete negotiation of a bilateral Agreement on the Conservation and Management of the Alaska-Chukotka Polar Bear Population. The Agreement will be signed by the two countries later in the year. (R7; GOSKOMEKOLOGIA)

3. Representatives of the Alaska Nanuuq Commission and Chukotka Union of Marine Mammal Hunters will meet in 2000 (location to be determined) to conclude a companion Native-to-Native subsistence use agreement to the U.S.-Russia Agreement on the Conservation and Management of the Alaska-Chukotka Polar Bear Population.

4. During 2000 American and Russian polar bear specialists will collaborate to develop a habitat use/suitability model and stratify denning habitat as an aid to future surveys using an existing digital elevation model of Wrangel Island. (MMM-7; VNIIPRIRODA)

(Activity 02.05-1104, A Protected Natural Areas, @ has been redesignated as Project 02.05-51)

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

This Activity fosters cooperation among zoos of both countries to preserve genetic diversity of rare and endangered animals raised and maintained in captivity, seeks to educate the public on the role of zoos in species survival, and promotes the conservation of animal species in the wild, together with their habitats.

1. In 2000 the two sides will continue to exchange and disseminate information on research conducted in zoos of both countries. Animal transfers will be carried out in strict compliance with the provisions of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The species to be studied or exchanged and participating zoos are:

DHOLE: San Diego Zoo and Moscow Zoo

GORILLA: San Diego Zoo and Moscow Zoo

TAKIN: San Diego Zoo and Moscow Zoo

BUSH PIG: San Diego Zoo and Moscow Zoo

CALIFORNIA SEA LION: Moscow Zoo and American Zoos (as yet unspecified)

WALRUS: Brookfield Zoo (Chicago) and Moscow Zoo

PALLAS CAT: Brookfield Zoo, Exotic Feline Breeding Compound (CA) and Moscow Zoo

GALAPAGOS TORTOISE: Brookfield Zoo and Moscow Zoo

2. The Moscow Zoo will cooperate with two U.S. zoos in information and design technology:

MINNESOTA ZOO: ISIS/ARKS for Windows computer program

BALTIMORE AQUARIUM: design and construction of aquarium

Activity 02.05-1106, Conservation and Management of Marine Birds

This Activity is the means by which the U.S.-Russia Marine Bird Working Group coordinates joint seabird and shorebird studies.

1. One Russian specialist will visit Alaska for three months (May-August 2000) for field studies of parakeet auklets in the Pribilof Islands, including colony attendance patterns, monitoring of nests during the breeding season, measuring chick growth rates, and feeding assessment (MBM-7; BBRC).
2. Two American specialists will visit Sakhalin Island, Russia in the 3rd quarter of 2000 to conduct teacher workshops and coordinate classroom activities for schoolchildren on conservation of the island's seabirds and shorebirds. Educational materials (posters, videos, slide sets, puppets) on the Learn About Seabirds curriculum, Arctic-Nesting Shorebirds curriculum and Shorebird Sister Schools Program will be distributed in the Russian language. (MBM-7)
3. Two Russian specialists will visit Little Diomed Island, Alaska for three months (June-September 2000) for joint studies of seabird populations, productivity and diets in the largest colony complex in North America. (MBM-7; BBRC)
4. A census of seabird colonies on the Commander Islands, Russia will be conducted by a Russian specialist in the 3rd quarter of 2000. The results will be entered into the joint Beringian Seabird Colony Catalog database. (KIE; MBM-7)
5. American and Russian specialists will complete the overall structure of a database and atlas of Beringian shorebird distribution, to include a Geographic Information System (GIS) component, for Wrangel Island, the Chukotka Peninsula and North Slope of Alaska. A meeting of American and Russian participants in the project is planned for September 2000 in Anchorage. (MBM-7; GOSKOMEKOLOGIA)
6. In the summer of 2000 Russian biologists will conduct a survey of waterbirds in the area of Mechigmen Bay in eastern Chukotka. The results will be shared with U.S. colleagues and entered into the Beringian Seabird Colony and Shorebird databases. (IBPN; MBM-7)

Project 02.05-21, Aleutian Chain Biodiversity

This Project studies the natural features and fauna/flora species common to the national wildlife refuges of Southeastern Alaska, the Alaska Peninsula and the Aleutian Islands (U.S.), and the nature reserves of Northeastern Russia, the Kamchatka Peninsula and the Commander Islands (Russia). Many of the exchanges conducted under Activities 02.05-1101, -1102, -1106 and -7102 also promote the goals of Project 02.05-21.

1. A joint program to survey caribou and track their migration in Kronotskiy Reserve (Kamchatka) will be undertaken in collaboration with Izembek National Wildlife Refuge (Alaska). Following helicopter surveys to determine the distribution of the main Kronotskiy herd, satellite collars will be deployed on ten female caribou in the summer of 2000 or 2001, with weekly downlinks to pinpoint the animals' location over the ensuing three years. Data will then be loaded in an Arcview GIS for analysis and mapping. (REF; GOSKOMEKOLOGIA)

2. The Russian side will invite four American specialists to take part in the development of management plans for Kronotskiy and Commander Islands Nature Reserves (Kamchatka). The possibility of pairing these reserves with sister U.S. refuges in the Aleutian Islands will also be discussed. (REF; GOSKOMEKOLOGIA)

3. In the 1990s the Aleutian Canada goose was successfully reintroduced in its former range in the Kuril Islands, Russia. However all the current breeding stock is descended from the 19 geese originally transported from Alaska to Kamchatka in 1992. In order to ensure genetic diversity as the program continues, additional geese will be captured on Buldir Island, Alaska in August 2000 and flown to Russia. (REF)

Project 02.05-31, Cooperation in Wildlife Trade and Law Enforcement

This project assists enforcement officials in the U.S. and Russia to address the problems of international wildlife commerce, with particular attention to the Convention on International Trade in Endangered Species of Fauna and Flora, or CITES.

1. A six member American delegation will visit Russia for one week in May 2000 for consultations with the Russian State Fisheries Committee and Interagency Ichthyological Commission in Moscow, and to view caviar processing facilities in Astrakhan in connection with the April 1, 1998 listing of all the world's sturgeon species as threatened or endangered under the CITES Convention. (LE, OMA, OSA; GLAVRYBVOD)

2. The two sides will continue to share information and arrange for travel of specialists as necessary in connection with questions of international trade and shipments of Caspian Sea sturgeon caviar. (LE; GLAVRYBVOD)

Project 02.05-41, Ecosystem Biodiversity

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

Activity 02.05-4101, Biosphere Reserves

This Activity provides for monitoring of the natural processes in paired biosphere reserves of both countries, and facilitates exchange and sharing of data through the Man and the Biosphere information MABFlora, MABFauna, ACCESS and Biomass systems.

Seven of European Russia's eight biosphere reserves are included in the MABFlora database C only Pechoro-Ilychskiy is not. Accordingly, American specialists will work with Russian counterparts at the Komarov Botanical Institute (St. Petersburg) to collect and enter data on the vascular plants, native endemics, and rare and endangered species of Pechoro-Ilychskiy Reserve. (USGS; RAS)

Activity 02.05-4102, Arid Ecosystems

This Activity promotes the study and conservation of critical arid land areas, and develops strategies for combating desertification and loss of water resources.

1. The two sides will continue to exchange information on and monitor the status of the saiga antelope in Kalmykia, Russia. (IEE; USGS)

2. The sides have identified two additional topics to be considered for joint work in 2000:

- comparative assessment of so-called Adead zones@ in the Caspian Sea (Russia and Azerbaijan) and Mississippi River (U.S.);

- a survey of the watershed of the Selenga River (southern Siberia and Mongolia) to develop recommendations on establishment of a biosphere reserve there.

Activity 02.05-4103, Mountain Ecosystems

This Activity promotes the study and conservation of montane systems and their unique biodiversity.

1. In 2000 the two sides will complete a monograph on comparative studies of the southern Appalachian (U.S.) and SW Caucasus (Russia) Mountains. (USGS; IEE)

2. The U.S. and Russia have mountain ecosystems in which to assess and compare biodiversity trends on a large scale. The Rocky (U.S.) and Ural (Russia) Mountains lend themselves well to analysis of megatrends. Data on important biological groups (e.g., pollinators, amphibians, migratory birds) can be examined for responses to environmental stressors such as climate change, habitat fragmentation and pollution.

To this end, two workshops will be convened in 2000 and 2001 in Denver (U.S.) and Ekaterinburg (Russia) to discuss already available data and develop a joint research strategy. (USGS; IEE)

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

This Activity provides for the comparative study of refuges and nature reserves and external factors affecting them, with emphasis on protection of rare and endangered species of fauna and flora.

1. The Proceedings of an October 1999 U.S.-Russia Workshop on Northern Protected Areas (held in Anchorage, Alaska) will be published and distributed in the English and Russian languages by the summer of 2000. (R7; GOSKOMEKOLOGIA)

2. Six Russian specialists from reserves in eastern Siberia will visit the U.S. for two weeks in June 2000 for familiarization with land use planning, public use, fire ecology and exotic species in analogous national wildlife refuges, parks and other federally managed areas. (REF; MINPRIRODY)

3. The 4th Call for Proposals under the U.S. Fish and Wildlife Service program of small grants to Russian reserves and parks will be conducted in the fall of 2000. Previous grants have supported the work of these protected areas through purchase of equipment and supplies, facilities repair and maintenance, and public outreach activities. Review panels in Russia and the U.S. will evaluate all applications, and winners will be announced in the spring of 2001. Awards will be a maximum of \$5,000 each. (FWS; GOSKOMEKOLOGIA; LESKHOZ)

Activity 02.05-5102, Conservation Education

This Activity promotes public awareness of and commitment to the need to conserve wild species of fauna and flora and their habitats.

Exchanges of individual specialists for familiarization with educational and public outreach activities in both countries, organization of special traveling photos exhibits, and joint development of educational materials, including websites, will continue in 2000. (REF; ZAPOVEDNIKS; GOSKOMEKOLOGIA; LESKHOZ)

Project 02.05-61, Marine Mammals

This Project carries out cooperative research on the biology, ecology and population dynamics of marine mammal species shared by both countries, leading to the development of methods for the management and protection of these animals.

I. PINNIPEDS

Harbor Seals

- 1. One Russian specialist will visit the U.S. for 2-3 weeks in August 2000 to take part in the capture and deployment of radio transmitters on harbor seals along the north coast of the Alaska Peninsula and Bristol Bay. Their movements and haulout patterns will subsequently be tracked, resulting in a correction factor to estimate how many seals are at sea, and therefore not counted during land-based surveys. (NMFS; Magadan TINRO)**
- 2. One American specialist will visit Russia for two weeks in September-October 2000 to conduct research in the Commander Islands on the population structure of harbor seals using biopsy sampling during the fall harvest period. (NMFS; GOSKOMEKOLOGIA)**

Northern Fur Seals

- 1. One Russian specialist will visit the National Marine Mammal Laboratory in Seattle for three weeks in May 2000 to analyze time-depth recorder and other telemetry data from fur seal population and ecological studies conducted in both countries. (NMML; Kamchatka TINRO)**
- 2. One Russian specialist will visit the U.S. for three weeks in August 2000 to take part in fur seal monitoring and foraging ecology studies on St. Paul Island, Alaska. (NMML; VNIRO)**
- 3. One or two American scientists will be invited to join ongoing studies of foraging ecology and diving behavior of northern fur seals (also Steller sea lions) in the Commander Islands, Russia for up to one month in the summer of 2000. (Kamchatka TINRO; NMML)**

Steller Sea Lions

1. Two Russian specialists will visit the U.S. for three weeks in June-July 2000 to take part in branding studies and evaluation of video images of remote monitoring of the Steller sea lion rookery on the Chiswell Islands, Alaska. (NMML; KIE)

2. One or two American specialists will visit Russia in July 2000 for three weeks to participate in a survey of adult Steller sea lions and branding of their pups on rookeries on Kamchatka, the Commander Islands and Kuril Islands. (KAMCHATRYBVOD; NMML)

3. One American specialist will visit Russia for two weeks in July 2000 to take part in tagging of sea lion pups for migration studies in the Yamskiy Islands (Okhotsk Sea). (NMML)

4. One or two American scientists will be invited to join ongoing studies of foraging ecology and diving behavior of Steller sea lions (also northern fur seals) in the Commander Islands, Russia for up to one month in the summer of 2000. (Kamchatka TINRO; NMML)

Walrus

1. Three Russian specialists will visit the U.S. for one week in March 2000 to attend a joint workshop in Anchorage, Alaska on walrus survey methodology. Topics will include: census methodology, survey design, and development of new aerial and satellite photography techniques. (MMM; Chukotka TINRO)

2. Two Russian specialists will visit the U.S. for one week in March 2000 for training in estimating the age of harvested walruses. (MMM; Chukotka TINRO)

3. The two sides will continue a program of monitoring subsistence harvesting of walrus in local areas of Chukotka and the Providenya Region. Participating villages include: Lorino, Uelen, Inchoun, Enurmino, Novoye Chaplino, Siriniki, Enmelen and Yanrakynnot. The program will involve local hunters in management programs and promote rural employment; data obtained will enable human impact on the Pacific walrus population to be assessed. (MMM; Chukotka TINRO)

4. One American specialist will visit Russia for up to one month in July-August 2000 to take part in boat-based surveys of walruses on haulouts in northeast Kamchatka. (KAMCHATRYBVOD; MMM)

5. Between July and September 2000 the two sides will jointly survey four walrus haulouts off Chukotka, Russia (Meechkyn, Ruder, Arakamchechen, Inchoun) and collect data on abundance, age/sex composition, and

environmental factors affecting behavior. The information will be entered into a database for eventual analysis of trends in interannual haulout use. (ASC; Chukotka TINRO)

Sea Otters

1. Between April and July 2000 the two sides will conduct a range-wide survey of sea otters (both aerial and boat-based) in the mid-Aleutian, Near Island groups and Commander Islands. Anticipated results will include determination of the extent of decline of sea otter abundance noted in some island groups. (ASC; KIE)

2. The Seventh Joint Sea Otter Workshop will be held for one week in September-October 2000 in Arkhangelsk, Russia. Recent survey results and declines in sea otter abundance will be examined, and future research needs identified. Up to six American specialists will attend. (MMM; ASC; KIE; KAMCHATRYBVOD)

II. CETACEANS

Whales

1. One Russian specialist will visit the U.S. for 2-3 weeks in the 2nd quarter of 2000 to take part in a shore-based survey of northward-migrating gray whale females and calves off central California. (SWFC; TINRO)

2. During the period May-October 2000-2001 the two sides will collaborate on studies of the population structure of beluga whales off the Chukotka Peninsula using biopsy sampling. (TINRO)

3. During the period June-October 2000 Russian and (3-4) American specialists will continue monitoring and studying the Okhotsk-Korean population of gray whales in connection with oil and gas exploration and development activities off northeastern Sakhalin Island, Russia. (KIE; Kamchatka TINRO; SWFC)

4. Russian and (3-4) American specialists will in the 3rd quarter of 2000 continue joint studies of the Okhotsk population of bowhead whales in the region of the Shantar Islands, Russia. (KIE; TINRO; SWFC)

5. Three Russian specialists will visit the U.S. for one week in the 4th quarter to attend a workshop to design a project to attach satellite-linked tags to beluga whales in the western Chukchi Sea for the purpose of tracking their movements during the fall and winter. (ADF&G; NMML; VNIIPRORODA; Chukotka TINRO)

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

This Activity promotes 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. One Russian botanist will visit the U.S. for two weeks in June-July 2000 to attend the World Botanic Gardens Congress (Asheville, North Carolina) and for project consultations with the National Arboretum in Washington, D.C. (U.S. National Arboretum; Moscow Botanical Garden)**
- 2. One American scientist will visit Russia for two weeks in August 2000 to present a paper on the floristic biodiversity of North America at a NATO-sponsored conference on ABiodiversity and Dynamics of Ecosystems in Northern Eurasia@ in Novosibirsk. (U.S. National Arboretum; RAS)**

Activity 02.05-7102, Northern Migratory Waterfowl

This Activity determines the nesting areas, migratory routes, wintering grounds, productivity and adaptation to environmental changes of geese, ducks and other waterfowl species, with particular emphasis on areas subject to human disturbance.

- 1. Under a bilateral Cooperative Agreement the Russian side will continue to monitor the status of and deploy metal leg bands on Wrangel Island snow geese. In preparation for this work, one Russian specialist will visit the U.S. for two weeks in March 2000 for consultations in Oregon on reproductive success, harvest mortality and survival rates of this species. (R1; GOSKOMEKOLOGIA)**
- 2. The two sides will complete a joint report on the results of aerial surveys of waterfowl conducted by Russian and American biologists in Chukotka between 1992 and 1995. (MBM-7; BBRC)**
- 3. One American specialist from the U.S. National Bird Banding Laboratory (Laurel, Maryland) will visit Russia for up to two weeks in the 4th quarter of 2000 to continue development with colleagues at the Bird Banding and Ringing Center Moscow of a joint computer database for banded waterfowl and songbirds. (PWRC; BBRC)**

Activity 02.05-7103, Holarctic Mammals

This Activity studies the systematics and zoogeography of mammals of the holarctic, examines problems of gene pool conservation in those species, and evaluates genetic variability in populations.

1. Specialists from both countries will continue work on standardization of American and Russian computer habitat mapping techniques and prepare portions of the joint Atlas of Holarctic Mammals for publication on laser discs. (NMNH; IEE)

2. One Russian specialist will visit the U.S. for 3-4 weeks in the 4th quarter of 2000 to work in museum collections of argali sheep for multivariant analyses of skulls and horns. (IEE; NMNH)

3. American and Russian specialists will establish contact to develop joint studies of the demographics, diseases and parasites of mustelids in the Kamchatka and Chukotka regions.

(BARC; RAS; IBPN)

Activity 02.05-7104, Chemical Senses and Communication in Animals

This Activity investigates the functions and mechanisms of taste and smell. Areas of research include general ecology, physiology, immunology, endocrinology, biochemistry, carbohydrate chemistry, nutrition, behavior and genetics.

1. One Russian specialist will visit the U.S. for three weeks in March-April 2000 to deliver a paper at the annual meeting of the Association for Chemoreception Sciences (Sarasota, Florida) and continue joint behavioral and neuroanatomical studies of animal sensitivity to environmental chemicals at Monell Chemical Senses Center in Philadelphia. (Monell; IEE)

2. Two American specialists will visit Russia for two weeks in the 4th quarter of 2000 to present a seminar on results of recent research in chemical communications and discuss future joint work. (Monell; IEE)

3. Two Russian specialists will visit the U.S. for up to three months in 2000 for work on rodents under the following topics: non-toxic methods of population control based on natural predator excretions; isolation of active substances from predator scents causing reduction of litter sizes; reproductive disrupters; mechanisms of ductility of chemical communications; genetics of sensitivity to mammal pheromones. (Monell; IEE)

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

This Activity develops joint methods for the collection and processing of remotely-sensed data in radar deposition, integrated processing of satellite data from telemetry and multi-deposition environmental remote sensing, and creation of data base structures and models for ecological studies of large mammals in arctic environments.

Two Russian specialists will visit the U.S. (Alaska) for two months (September-November 2000) to assess sea ice habitat parameters and their effect on movements and behavior of polar bears and walrus in a changing global climate. (ASC; IEE)

Activity 02.05-7106, Wildlife Health and Disease

Wildlife in the U.S. and Russia share many common diseases of microbial, parasitic, and chemical origin. Migrations and translocations of certain species create conditions for the transfer of diseases between the two countries. This Activity provides for cooperation in wildlife health research and disease prevention.

One American veterinarian will visit Russia (Moscow) for one week in March 2000 for consultations with Russian colleagues on exotic diseases of wildlife, including: rabies, distemper, anthrax, brucellosis, botulism, avian cholera and lead poisoning. (NWHC; VNIIPRIRODA)

Activity 02.05-7107, Invasive Species of Fauna and Flora

Invasive species are animals or plants which have been introduced into areas outside their native habitats, often resulting in environmental or economic damage. This Activity studies the impact of such species on ecosystems in both countries.

- 1. One American specialist will visit Russia for one week in June 2000 for work in botanical library collections in Moscow on tamarisk and Russian olive.**
- 2. Russian and American specialists will continue collaboration on a MABFlora database for biosphere reserves east of the Ural Mountains, with the goal of testing Geographic Information System (GIS) software to predict potential habitats and ranges for selected invasive species. (USGS; IEE)**
- 3. Russian and American scientists will establish contact to clarify the status of the common reed (*Phragmites australis*) in Russia, discuss possible collection of reed samples in Russia in both dormant and growing**

seasons, and cooperate on methods of biological control of this species, which has displaced native plant communities in the Northeast U.S. (RAS; R5)

4. Four American specialists will visit Russia for ten days in September 2000 to discuss plans for a bilateral symposium in Russia in 2001 on invasive species. (USGS; IEE)

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

The purposes of this Activity are to improve fisheries management, increase productivity through intensive fish culture, restore fishery resources, and study and exchange information on the physiology, nutrition, diseases, genetics, and reproductive biotechnology of fish of mutual interest.

The two sides will begin planning for the 2nd U.S.-Russia Symposium on Aquaculture and Fish Health, to be held in the United States in 2001.

Activity 02.05-8102, The Study and Conservation of Sturgeon

This Activity seeks to promote the sound management of sturgeon populations in both countries. (Issues related to the 1998 listing of all sturgeon species in Appendix II of the CITES Convention are covered under Project 02.05-31)

1. Coordinated sampling and tagging of green sturgeon will be conducted in the Rogue River (Oregon). The results will be compared with DNA analyses of sturgeon from Sakhalin Island, Russia to establish the taxonomic relationship between the two populations. Three American specialists will travel to Sakhalin in the 2nd half of 2000 to discuss the findings with Russian colleagues. (ODFW; R1; SAKHALINRYBVOD)

2. Four American specialists will visit Russia for ten days in September 2000 to discuss plans for a bilateral workshop on acquiring and synthesizing existing information on key sturgeon species, to be held in the U.S. in 2001. (USGS; FWS; IEE; GLAVRYBVOD)

Activity 02.05-8103, The Study and Conservation of Salmon

This Activity seeks to promote the sound management of salmon populations in both countries.

1. The Proceedings of a bilateral Workshop on Interaction of Wild and Hatchery-Produced Salmon, held in Khabarovsk, Russia in October 1999, will be published in 2000 in English and Russian. (FWS; Khabarovsk TINRO)

2. Six Russian specialists will visit the U.S. for one week in September or October 1999 to take part in a meeting in Olympia, Washington of the bilateral Pacific Salmon Working Group established in Khabarovsk in October 1999. Salmon management issues will be examined, and a program of exchanges on specific species adopted. (FWS, ODFW, WDFW, ADF&G, Wild Salmon Center; GLAVRYBVOD, KAMCHATRYBVOD, SAKHALINRYBVOD, OKHOTSKRYBVOD, TINRO, Kamchatka TINRO, Magadan TINRO)

3. The two sides will consider initiating a series of exchanges of information and specialists on Atlantic salmon. The possibility of a visit by 3-4 Russian specialists to the Northeast U.S. in the 2nd half of 2000 for consultations will be examined. (R5; GLAVRYBVOD)

4. Under an ongoing project to study and conserve steelhead salmon and other native fish species and their habitats on the Kamchatka Peninsula, scientists and volunteers from the Wild Salmon Center (Washington, Oregon) and Moscow State University will continue expeditionary field work on Kamchatka during the summer and fall of 2000 to collect and analyze samples and data.

5. Specialists from both countries will begin comparative joint studies of the Sakhalin taimen and U.S. cuthroat. Preliminary field work, to be conducted on Sakhalin Island in the summer and fall of 2000, will include tagging, and biological sampling to assess distribution, abundance and population status.

Activity 02.05-8104, Comparative Studies of Fishes in Large Lakes of the U.S. and Russia

This Activity studies the ecology, focusing on comparative parasitology, of endemic fishes of the Great Lakes (U.S.) and Lake Baikal (Russia).

In 2000, the two sides will continue to exchange information on the accuracy of using parasites as markers of stock structure, and discuss plans for field work in Lakes Superior and Baikal in 2001. (GLSC; RAS)

Project 02.05-91, Ecology and Dynamics of Arctic Marine Ecosystems

This Project, abbreviated "BERPAC" (ABERing Sea - PACific Ocean@), studies the status and dynamics of Arctic marine ecosystems, including

their assimilative capacity, biological indicators of ocean pollution, and effects of human-caused disturbances, in order to establish scientific bases for predicting major ecological, geochemical and geophysical processes in the Bering and Chukchi Seas.

1. In 2000, joint monographs in the English and Russian languages will be published presenting the scientific results of the September 1993 BERPAC expedition. (BRD; RAS)

2. The two sides will discuss plans for the next BERPAC expedition, to be conducted in 2001. (BRD; RAS)

List of Acronyms and Abbreviations

ADF&G Alaska Department of Fish and Game

ASC USGS Alaska Biological Science Center, Anchorage

BARC Beltsville Agricultural Research Center, U.S. Department of Agriculture

BBRC Russian Bird Banding and Ringing Center, Academy of Sciences, Moscow

Chukotka TINRO Chukotka Federal Fisheries Research Institute, Anadyr

FWS U.S. Fish and Wildlife Service

GLAVRYBVOD Main Fisheries Directorate, Moscow

GLSC USGS Great Lakes Science Center, Ann Arbor

GOSKOMEKOLOGIA Russian State Committee for Environmental Protection

IBPN Institute of the Biological Problems of the North, Magadan

ICF International Crane Foundation, Baraboo, WI

IEE Institute of Ecology and Evolution, Russian Academy of Sciences, Moscow

KAMCHATRYBVOD Kamchatka Fisheries Agency

Kamchatka TINRO Kamchatka Federal Fisheries Research Institute

Khabarovsk TINRO Khabarovsk Federal Fisheries Research Institute

KIE Kamchatka Institute of Ecology, Russian Academy of Sciences

LE FWS Division of Law Enforcement

LESKHOZ Russian Federal Forestry Service

Magadan TINRO Okhotsk Federal Fisheries Research Institute

MBM FWS Migratory Bird Management

MBM-7 Region 7 FWS Migratory Bird Management (Alaska)

Monell Monell Chemical Senses Center, Philadelphia

MMM-7 Region 7 FWS Marine Mammals Management (Alaska)

MSU Moscow State University

NBBL USGS National Bird Banding Laboratory, Laurel, MD

NMFS U.S. National Marine Fisheries Service

NMML NMFS National Marine Mammal Laboratory, Seattle

NMNH Smithsonian National Museum of Natural History, Washington, DC

NWHC USGS National Wildlife Health Center, Madison, WI

OKHOTSKRYBVOD Okhotsk Sea Fisheries Agency, Magadan

OMA FWS Office of Management Authority

OSA FWS Office of Scientific Authority

PWRC USGS Patuxent Wildlife Research Center, Laurel, MD

R1 FWS Region 1 (CA, ID, WA, OR, NV, HI)

R5 FWS Region 5 (Northeast U.S.)

R7 FWS Region 7 (AK)

RAS Russian Academy of Sciences

RAS/FEB Far East Branch of Russian Academy of Sciences

REF FWS Division of Refuges

RRTAC USGS Raptor Research and Technical Assistance Center, Idaho

SAKHALINRYBVOD Sakhalin Fisheries Agency

SWFC NMFS Southwest Fisheries Center, La Jolla

TINRO Russian Pacific Federal Fisheries Research Institute, Vladivostok

USGS U.S. Geological Survey

VNIIPRIRODA Russian Federal Wildlife Research Institute, Moscow

VNIRO Russian Federal Fisheries Research Institute, Moscow

WDFW Washington Department of Fish and Wildlife

ZAPOVEDNIKS Zapovedniks Environmental Education Center, Moscow