



ARCTIC FIELD PROGRAM NEWS

PROMOTING SCIENCE AND STEWARDSHIP IN BERING, BEAUFORT, CHUKCHI AND OKHOTSK SEAS

Community-based Salmon Management: A “Win-Win” for Wildlife and People

Each year, one of the greatest wildlife spectacles on Earth unfolds in thousands of rivers throughout the vast North Pacific region: the migration of Pacific salmon. Following several years of life at sea, millions of wild salmon return to their natal rivers and lakes to spawn, a remarkable cycle that forms the keystone of a rich and complex natural architecture. Bears and birds depend on wild salmon. Entire forests are nourished by salmon, as the fish decompose on river banks, spreading essential nutrients inland from the ocean. Salmon fuel economies, support ancient and contemporary cultural traditions, and capture the hearts and minds of anglers, artists, and authors around the world.

Nowhere is wild salmon more plentiful and its habitat more intact than in Alaska and the Russian Far East. Today, coastal communities rely heavily on salmon for sustenance and maintaining cultural traditions. In these communities, the mere mention of a summer at “fish camp” lights up people’s faces and prompts them to recall countless fond memories of harvesting, processing, eating, and storytelling. Community members of all ages participate in fish camp each year, providing an opportunity for elders to pass ancient traditions on to younger generations.

Sadly, in many parts of the historical range of salmon, wild populations have been lost due to overharvest, habitat loss, and construction of dams for hydropower, with consequences that reverberate far beyond the rivers themselves. Remove salmon from rivers, and the careful construction of natural systems will crumble and valuable cultural heritage and traditional knowledge are jeopardized.

WWF works in the oceans and rivers of Alaska and Russia to ensure that wild salmon remain a keystone of healthy, intact ecosystems. In the Russian Far East, on the Kamchatka Peninsula, the Bolshaya River was once known for its plentiful salmon runs, which have long allowed communities to thrive on its shores. However, the Bolshaya’s convenient proximity to Kamchatka’s largest city, Petropavlovsk-Kamchatsky, has made it an easy target for illegal fishing activity. Over the past ten years, poachers have severely depleted the river’s salmon stocks through illegal and unsustainable harvest of salmon eggs and fish. Until recently, members of the communities that rely on

healthy salmon runs and law-abiding fishermen have had little opportunity to influence salmon fishery management in their local waters.

Fortunately, in some areas of Russia with critically diminishing salmon stocks, residents are taking steps to become more involved in the local management of their fisheries through the development of local salmon councils. By creating these councils, community members, fishing industry representatives, and local administrations are building a common platform for resolving a range of salmon management issues. Not far from Kamchatka, on Sakhalin Island, such councils have been operating since 2008 with the support of WWF’s partner organization, the Wild Salmon Center (WSC). WSC provided instrumental

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Photo by Laura Williams

■ SALMON IS A KEY FOOD SOURCE FOR MANY COMMUNITIES THROUGHOUT THE BERING SEA. HERE A YOUNG GIRL IN THE VILLAGE OF KHAILINO, KAMCHATKA, WITH PARTS OF FRESHLY CAUGHT SALMON.

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guidance in establishing salmon councils on Sakhalin, bringing experience and knowledge from lessons learned working with similar salmon councils in North America. To learn more about how these councils might work on Kamchatka, Sergey Vakhnin of the “Save Salmon Together!” coalition and WWF’s Anatoly Dekshtein traveled to Sakhalin in the spring of 2010 to attend a WSC salmon council training seminar.

Upon their return to Kamchatka, “Save Salmon Together!,” WWF and WSC set out to lay the foundation for a similar council in the town of Ust-Bolsheretsk, a community on the shore of the Bolshaya River. Sergey and Anatoly shared success stories they’d heard, describing the Sakhalin salmon councils’ progress toward combating poaching; restoring and monitoring salmon streams; educating the public; and promoting community involvement in fishery management. Concerned about the damage poaching has caused to the salmon population in their local river, the people and administration welcomed the idea of public salmon councils and began working to create one of their own.

Less than a year later, in January of 2011, Ust-Bolsheretsk’s District Mayor Igor Bondar established the Ust-Bolsheretsk Public Salmon Council by official decree. Comprised of local stakeholders, including representatives from regional government and enforcement agencies, educators, commercial fishermen, and local and indigenous people, the council acts as a conduit for ideas to be discussed and then proposed to relevant government agencies. The council also operates as a forum, addressing important issues such as: the fight against poaching, how to best develop ecotourism, local access rights, the value of traditional fishing practices, public outreach and education, stream restoration and monitoring, and overall watershed management.

With continued support from WWF and WSC, the Ust-Bolsheretsk Public Salmon Council has been successful in many areas: an anonymous poaching hotline has been successfully established, providing appropriate government agencies with reports of fishing regulation violations, and the council’s proposed new protocols and regulations have been implemented.

The Council’s successful efforts continue to set a precedent in Kamchatka for community-based fisheries management. We look forward to seeing continued success and growth of public salmon councils on the Kamchatka Peninsula! ▼



Photo by Michel Roggio, WWF-Canon

■ SOCKEYE SALMON RETURN UPSTREAM TO SPAWN.

UNDER THE MICROSCOPE

Focus on Species: The Sea Butterfly

Beautiful and bizarre, a group of swimming sea snails known as “sea butterflies” are one of the Arctic’s most abundant inhabitants, a vital part of the food chain, and today are extremely vulnerable to the hidden effects of climate change. The foot of these tiny animals has adapted to become a set of “wings” that propel them up and down the water column. Sea butterflies have a peculiar way of feeding, casting out a mucous net that is often many times wider than the animal itself, trapping other plankton and bacteria as they float by. The sea butterfly then consumes the entire net when enough prey is caught and constructs a new one. It is thought that the net also helps to increase the organism’s buoyancy as it floats through the open sea.

There is only one species of sea butterfly in the Arctic, *Limacina helicina*, but it is extremely plentiful in the cold waters of the north, comprising more than half of total zooplankton abundance in some seas. This ubiquitous sea butterfly makes up almost 50% of the pink salmon’s diet and is also preyed upon by sea birds, baleen whales, mackerel, herring, and other fish species. Another swimming sea snail, *Clione limacina*, feeds exclusively upon *Limacina*. The sea butterfly is an essential component of the food web in northern Pacific waters.

Today, this sea butterfly is highly vulnerable to increasing levels of carbon in the world’s oceans.

Limacina helicina’s thin shell is made out of aragonite, a common type of calcium carbonate. Aragonite is extra soluble in water, a fact which makes the northern sea butterfly very susceptible to chemical changes to seawater due to the effects of ocean acidification. The world’s oceans absorb nearly a third of the atmosphere’s carbon dioxide, a process that slows climate change on land but also significantly alters the pH of the ocean. As acidity increases, it becomes increasingly difficult for crustaceans and mollusks like *Limacina* to form their protective shells. These

chemical changes could cause this important animal to become locally extinct in just a few decades. Cold waters like the Gulf of Alaska absorb more CO₂ more readily than warmer seas, meaning that *Limacina helicina* could be one of the first animals to be affected by ocean acidification. Some scientists predict that the *Limacina* will be unable to live in some parts of the Arctic Ocean due to aragonite undersaturation as early as 2016!

Ocean acidification is often described as climate change’s “sister problem”—it is caused by more or less the same processes, and its effects could be equally dramatic. The loss of a species like *Limacina helicina* would have an enormous impact on Arctic ecosystems, a “canary in the coal mine” for global climate change. ▼

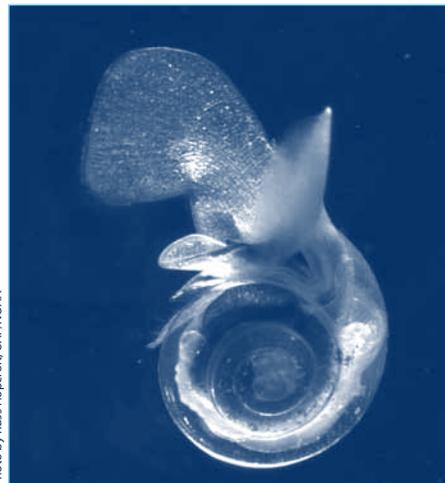


Photo by Russ Hopcroft, UAF/NOAA

■ LIMACINA HELICINA’S THIN ARAGONITE SHELL TYPICALLY RANGES BETWEEN 5-10MM.

Letter from the Director



■ THE ARCTIC REGION.

seeking shelter inland, heeding the flood warnings in effect along the entire Bering Sea, Norton Sound, and Chukchi Sea coasts. While winter storms are not unusual, the impacts are magnified when there is no ice to soften the blows of the ocean.

The massive decrease in sea ice extent and increase in open water have huge impacts on humans and wildlife alike. Most people know that the polar bear depends greatly on the sea ice for habitat. The sea ice also provides habitat for walrus, and ringed, bearded and ribbon seals. Beluga whales also depend on sea ice that offers refuge from killer whales and feed along its plankton-rich edges. Sea ice acts as a living substrate, supporting microscopic plants and animals that are the base of a rich food chain in the marine environment.

For the last 30 years, Arctic sea ice has declined by about ten percent per decade! It's entirely possible that infants of today will spend adulthood living in a world with no multi-year Arctic ice. I thought about this a great deal during a recent visit to Churchill, Hudson Bay, Canada, where dozens of polar bears were waiting on land for the bay to freeze up so they can hunt on the ice for seals. Although threads of shore-fast ice were forming along edges of the Hudson, satellite images of the region showed a dark blue void – an Arctic bay entirely without sea ice.

As the symbol of the Arctic, polar bears have captured the imagination and hearts of people around the world. And now, more than ever, polar bears need our help. WWF collaborates with many partners on the ground to slow threats to the region and to allow for greater natural resilience in a system shocked by climate change impacts. We continue to rely on the best available science, information, and traditional knowledge to guide our recommendations on best practices in management and conservation measures in a rapidly changing world.

You'll read about these approaches and the work of WWF in 2011 in the following pages. Our goals are ambitious! We're striving to ensure that wild salmon will continue to fill the great rivers of Kamchatka and Bristol Bay; that walrus, polar bears, giant bowhead whales, tiny plankton, and coastal communities will thrive in pollution-free Arctic waters; and that in advance of growing industrialization of the region, conserving ecological and cultural values will be the highest priority action. While WWF's mission is biodiversity conservation, by reaching these goals – together with partners -- we'll secure a viable and hopeful future not just for the residents of the north, but for people and wildlife far beyond the Arctic.

Sincerely,

Margaret Williams
Director, WWF US Arctic Field Program

Dear friends and colleagues,

As this issue of the Arctic Field Program newsletter goes to press, a stretch of severe weather has enveloped all of Alaska, pushing us head-on into winter. Last week, Northern winds stung Anchorage with temperatures far below zero and hurricane-force winds pummeled the Bering Sea, whipping its waters into 20-foot seas and putting coastal villages on alert. As communities battened down the hatches in coastal Alaska, the US National Snow and Ice Data Center reported a record low for Arctic sea ice.

Usually by now (mid-November) the Bering Sea and the southern Chukchi Sea would already have some shore-fast ice, but none has been seen this year. Without the buffering effect of ice, the intense waves from this storm unleash their strength on the coast with full force, frequently hitting small and remote communities. On the Yukon-Kuskokwim delta, the streets in the village of Hooper Bay filled with sea water. Up the coast, Kivalina and Point Hope lost power. Many residents evacuated their homes,

All of the articles in this newsletter were written by Arctic Field Program staff in Russia and Alaska, unless otherwise noted.



FISH FOREVER

Alaska and Kamchatka are the last two great refuges for wild Pacific salmon, places where the sight of a river boiling bright red with sockeye is almost taken for granted. Unfortunately, healthy salmon populations are now a rarity for the rest of the Pacific Rim, which stretches from Hokkaido to California. Alaska and Kamchatka's salmon have endured, but today overfishing, aquaculture, poaching, logging, and oil and mineral development all threaten to destabilize the wild salmon stocks of the north Pacific.



FISH FOREVER

WWF and Community Partners Advocate for Reducing Salmon Bycatch

While WWF aims to protect valuable wild salmon habitat in Alaska and Russia, we also advocate for practices that ensure sustainable management of this keystone species. For this reason, we have promoted the establishment of restrictions on allowable levels of salmon taken as bycatch (unintentionally harvested species) in the Alaska pollock fishery. The most glaring example of this wasteful practice occurred in 2007 when a record 122,000 king salmon were dumped overboard by the pollock fishery.

Progress has been incremental. In 2009, WWF and salmon fishermen throughout western Alaska urged the North Pacific Fishery Management Council (hereafter, the Council) to set a hard cap of Chinook salmon bycatch in the Bering Sea pollock fishery. The Council agreed, and adopted an allowable limit of 60,000 salmon per year. While the setting of this restriction (none had previously existed) was a significant step, WWF, other NGOs, some coastal tribes, the U.S. Fish and Wildlife Service, and the U.S. State Department had recommended a lower cap of 29,000-32,500 salmon.

Although allowable limits have been set for king (also known as Chinook) salmon, there is currently no hard cap for chum bycatch, which reached a record high in 2005 when over 700,000 fish were captured. Declining Chinook salmon runs in Western Alaska have led to increasing reliance on chum salmon for both commercial and subsistence activities, especially along the Yukon River.

Another priority for WWF is to increase public participation, particularly from rural communities, in the Council process. In 2011, in an effort to engage greater

numbers of residents from Southwest Alaska on the issue of salmon bycatch, WWF staff conducted outreach to several communities and partnered with various organizations in information-sharing and training activities. Throughout the year, WWF's Verner Wilson III and advisor John Starkey attended numerous Regional Advisory Council (RAC) meetings across the state to discuss salmon bycatch and encourage local discussion about this problem. Five RACs in total passed resolutions on salmon bycatch reduction to the Federal Subsistence Board, which in turn passed its own strong resolution to adopt the lowest hard cap level—an important message for the Council and National Marine Fisheries Service (NOAA Fisheries).

In May of 2011, WWF staff partnered with the Yukon River Delta Drainage Fisheries Association and Kawerak, Inc. to provide training to more than 25 tribal and village leaders from western Alaska on effective participation in federal fishery management issues. Participants identified ways to effectively engage with decision-makers and the public toward a shared goal of reducing chum salmon bycatch in the Bering Sea pollock fishery. Many participants immediately applied their skills and new knowledge of the issue at the June 2011 Council meeting in Nome, Alaska. WWF worked closely with conservation and Alaska Native groups to provide strong testimony in favor of chum salmon bycatch reduction. In Nome WWF's Heather Brandon and Verner Wilson also provided written and oral comments that helped push the Council to establish the first-ever Chinook bycatch limit for the Gulf of Alaska. ▼



■ THE PORT OF DUTCH HARBOR IS THE CENTER OF ALASKA'S POLLOCK INDUSTRY.



FISH FOREVER

Expansion of Large-Scale Driftnetting in Russia— A Global Concern for Transboundary species

In the western Bering Sea, the expansion of large-scale drift nets is indiscriminately killing thousands of non-target species. These “walls of death” kill an average of 150,000 seabirds a year, along with countless non-target fish species and marine mammals. WWF has supported the creation of a database containing thousands of records detailing the impacts of driftnet fleet operations, summarizing the damages and associated economic costs in a 160-page report. In addition, WWF and its partners Pacific Environment and the Russian Far East Pacific Geography Institute co-funded the 2010 publication of a major report on seabird and marine mammal bycatch. Among the report’s findings is that the total cost of the damage incurred to seabird and marine mammal populations through driftnet bycatch is

estimated to be \$9,000,000 a year, based on wildlife compensation values set by the Russian government.

In 2011 WWF has used this information to advocate for conservation measures and restrictions on the western Bering Sea driftnet fishery. WWF presented the report’s results to various Russian government officials, including Russian Accounts Chamber chair Sergei Stepashin. Stepashin, whose role is similar to the US Comptroller General, came away from these meetings a staunch opponent of the practice, stating that “the driftnet harvest isn’t an industry—it’s poaching.” Mr. Stepashin has promised to approach the president of Russia with his concern. On an issue of such ecological and economic importance, a high-ranking government official like Stepashin is a powerful ally indeed. ▼



Photo by Yuri Artyukhin

■ EACH YEAR OVER 150,000 SEABIRDS, LIKE THIS NORTHERN FULMAR, ARE KILLED BY DRIFTNET FISHING.



FISH FOREVER

Trans-boundary Transfers of Ideas and People Support Salmon Conservation

In addition to implementing conservation action “on the ground” and advocating for best management practices, WWF’s strategy to improve salmon conservation includes strengthening capacity of current and future salmon fishery managers and conservationists. Thus, to foster the exchange of expertise and to encourage further development of salmon conservationists in Russia, WWF and Kamchatka State Technical University organized a week-long series of educational courses in April of 2011 on salmon management. Leading salmon experts and University of Washington professors Robert Lessard, Brandon Chasco, and Ray Hilborn traveled to Kamchatka’s largest city, Petropavlovsk-Kamchatsky, to conduct seminars on salmon genetics and ecology, while special attention was given to modern salmon management techniques, including fish counting methods. Participants were then able to try their hand at salmon run predictions using specialized computer software.

Then in September 2011, WWF hosted three Kamchatkans in Alaska for an eleven-day salmon study tour. The Russian delegation consisted of Diana Ananieva, head of the Ust-Bolsheretsk chapter of the Russian Association of Indigenous Peoples of the North (RAIPON) and a member of Kamchatka’s first public salmon council (see our cover story to learn more about these councils), Victoria Sharakhmatova, a representative of the Petropavlovsk-Kamchatsky chapter of RAIPON, and Sergey Bychkov, head of the Kamchatka Protected Areas Association. WWF’s Elisabeth Kruger, Verner Wilson, Dave Aplin, and David Parker guided the Russian delegation through an in-depth exploration of how salmon are managed and harvested in Alaska. Sergey, Victoria, and Diana all had the chance to participate in two conferences—the Wakefield Symposium on the topic of “Fishing People of the North,” and the American Association for the Advancement of Science (AAAS) Arctic Conference in Dillingham. The group also met one-on-one with representatives from every part of this salmon-rich state: fish biologists and managers, legislators, regulators, tribal and community leaders, and subsistence and commercial fishermen.

Throughout the trip, the Kamchatkans expressed a desire to hear about both the accomplishments and the failures of salmon management in North America. On-site interactions with salmon experts and local decision makers in Anchorage, Homer, and Dillingham allowed all of us to compare the positives and negatives of each country’s management program. In each meeting, Victoria, Diana, and Sergey established connections with their Alaskan colleagues, promoting continued cross-boundary collaboration to ensure the preservation of healthy, sustainable salmon populations across the Pacific. ▼

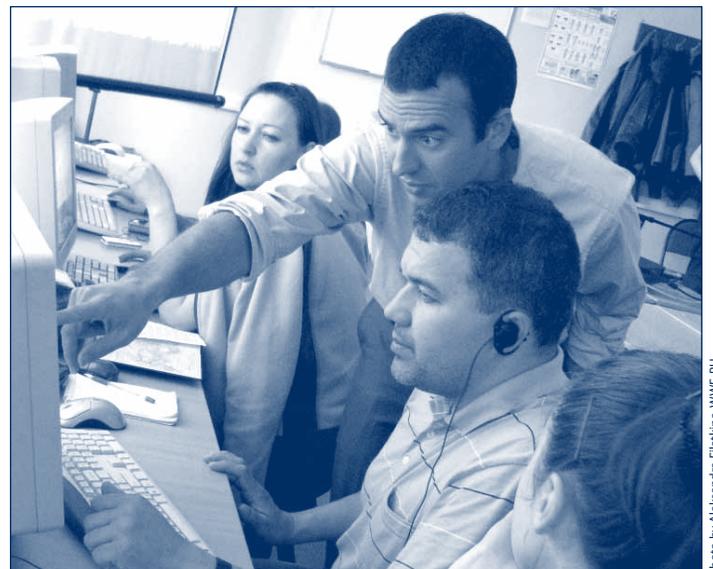


Photo by Aleksandra Filatkina, WWF-RU

■ UNIVERSITY OF WASHINGTON PROFESSOR BRANDON CHASCO HELPS KAMCHATKAN STUDENTS COMPLETE COMPUTER EXERCISES.



FISH FOREVER

DIAL 'P' FOR POACHING

Illegal poaching of salmon roe (eggs) and the killing of bears for parts such as paws and gallbladders continues to seriously threaten the health of Kamchatka ecosystems. To combat this program, anti-poaching brigades supported by WWF in the South Kamchatka Sanctuary and the Kronotsky Nature Reserve are continuing to make their presence known in the area. In 2011 the brigades expanded the scope of their operations to include nearly 100 miles of coastline adjacent to the protected areas, allowing them to combat illegal fishing in marine as well as fresh waters. The South Kamchatka Sanctuary brigade reported a comparatively lower level of contraband seized this year, which rangers believe to be an indication that fewer attempts were made to poach

within the Sanctuary. WWF also supported the activities of anti-poaching brigades in the “Volcanoes of Kamchatka” Nature Park, helping employees acquire a satellite phone system that allows rapid response to improve enforcement.

In addition to the brigades, everyday citizens in Kamchatka now have a confidential, reliable way to report salmon poaching in their rivers and streams: a “hotline!” WWF recently helped to launch this hotline that accepts anonymous reports via telephone while informing appropriate authorities about poaching violations. This innovative and inexpensive approach utilizes and strengthens the power of civil society and allows ordinary Russians to attack a systematic problem at the ground level. ▼



Photo by Aleksey Zagorsky

■ AN INSPECTOR REMOVES A POACHER'S NET FROM A RIVER IN KAMCHATKA.



FISH FOREVER

Illegal Oil Exploration in Russia's Key Fishery



Photo by Aleksandra Filatkina, WWF-RU

■ GAZPLOT'S WRITTEN RESPONSE TO WWF'S INQUIRIES.

The Western Kamchatka Shelf in the Sea of Okhotsk is home to Russia's most productive fishery. A full third of the value of the Russian seafood industry originates in the region, which is also a key marine habitat for some of the last remaining healthy stocks of wild Pacific salmon. In the past few years, however, the area has become targeted by Russian oil companies due to its offshore gas reserves. To counteract this growing threat to a globally important fishery, WWF is building a coalition of local residents, conservation organizations, and legal and environmental experts. In April of 2011, WWF and partners held a training workshop in the northwest Kamchatka village of Tigil on the issue of offshore oil development. Workshop leaders armed local residents and NGOs with information, practical tools and expertise to participate in public hearings on Environmental Impact Assessment documents provided by the Russian oil giant Gazprom. The effective testimony citizens provided at these hearings played a large role in the September 7, 2011 decision by the Russian Federal Service for the Supervision of Natural Resource Usage (Rosprirodnadzor) to deny Gazprom permission to conduct exploratory offshore drilling.

Environmentalists were then shocked when they discovered that Gazprom's subsidiary Gazflot had begun illegally drilling on the Western Kamchatka Shelf in September, soon after the hearings. WWF and its partners used satellite imagery to identify the exact location of the project, bringing the issue to the attention of the public and the relevant legal authorities. As a result, the company was placed under administrative trial. In blatant disregard for the rule of law, however, Rosprirodnadzor carried out a second ecological review on October 20th reversing its position, allowing Gasflot to formally begin a project that has already been in operation for over a

month. This second review was not accompanied by a second round of public hearings, a violation of federal law. WWF, the Russian Association of Indigenous Peoples, the Russian Pollock Association, and several other legal, ecological, and commercial organizations collectively signed and sent a formal appeal President Medvedev requesting a ban on illegal drilling on the Shelf and calling for the creation of a Protected Fishery Zone. WWF and our partners are determined to protect one of Russia's most abundant marine ecosystems from the threat of dangerous—and illegal—oil and gas development. ▼

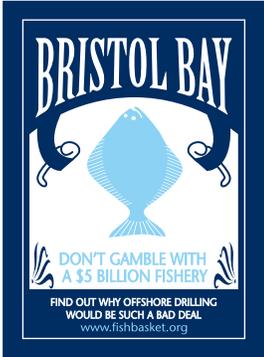


Map prepared by Kamchatka League Of Independent Experts

■ MAP OF GAZPROM'S PLOT IN THE SEA OF OKHOTSK (LIGHT BLUE LINES) AND LOCATION OF THE ILLEGAL DRILLING (NAVY BLUE STAR).



“Too Special To Drill:” Bristol Bay, America’s ‘Fish Basket,’ Needs Permanent Protection



■ CUSTOM-LABELED PLAYING CARDS DISTRIBUTED AT THE PACIFIC MARINE EXPO IN SEATTLE CALLED ATTENTION TO BRISTOL BAY'S REMARKABLE FISHERIES.

Alaska's Bristol Bay and the southeast Bering Sea fuel the most productive fishery in the United States. The cold, nutrient-rich waters of “America’s Fish Basket” teem with many valuable fish species such as cod, pacific halibut, pollock, herring, red king crab, and salmon. A 2011 WWF study found that the total economic value of the area’s fisheries is between \$4.1 to 5.4 billion a year.

Bristol Bay is perhaps best known for its remarkable runs of wild salmon. Careful management and the pristine condition of this world-class ecosystem ensure the return of renewable and healthy salmon populations year after year.

For the residents of Bristol Bay, however, the value of healthy fish stocks cannot be expressed in dollar signs alone. Salmon is an integral part of the Bristol Bay family diet, and for thousands of years the fish has had enormous cultural and traditional meaning for the region’s indigenous and local people. The existence of entire communities in Southwest Alaska depends upon the well-being of the fisheries, and their products have global reach: people from around the world flock to the Bay each year to help harvest the area’s rich stocks of wild fish, and Bristol Bay salmon can be found on grocery shelves from Japan to the United Kingdom.

Bristol Bay and the eastern Bering Sea also provide critical habitat for the global migration of birds, including the endangered Steller’s eider and short-tailed albatross. Four flyways converge in Southwestern Alaska, bringing together populations from four different continents. More than twenty species of marine mammals also utilize Bristol Bay’s waters, which form the primary summer feeding grounds for the critically endangered North Pacific right whale. The Walrus Island State Game Sanctuary, one of North America’s most important walrus haulout territories, is located directly south of Bristol Bay.

Bristol Bay’s enormous economic, cultural, and ecological value depends on the health of its fisheries and wildlife. That’s why for more than six years, WWF has partnered with local residents, the fishing community and other conservation groups to protect the Bay from offshore oil and gas development. In 2010 WWF

celebrated Secretary of the Interior Ken Salazar’s decision to remove Bristol Bay from offshore drilling consideration until 2017. While this action represents a major accomplishment, WWF continues our efforts to ensure the permanent protection of the bay’s vibrant fisheries and wildlife. This April, WWF’s Verner Wilson III made a trip to the nation’s capital with other Bristol Bay fishermen and leaders to meet with Secretary Salazar to reinforce the important message that Bristol Bay, in the words of the Secretary, is “too special to drill.”

Offshore oil and gas development is not the only serious threat facing Bristol Bay’s productive ecosystem and the people who depend on it. The proposed Pebble Mine, located at the headwaters of the Nushagak and Kvijak rivers, could become the largest open-pit mine in North America. The risk of acid mine drainage, heavy metal leakage, toxic dust and huge fresh water withdrawals are just some of the threats that Pebble poses to the Bristol Bay watershed. If permitted, the Pebble Mine would require massive infrastructure development, including miles of roads, port facilities, and a vast supply of power. The creation of this infrastructure would make other mineral claims in the region more viable, further threatening Bristol Bay’s irreplaceable spawning grounds and the rich marine ecosystem that depends on them.

WWF has broadened our commitment to the region by joining the coalition of local communities, native organizations, conservation groups, and commercial and recreational fishermen working to protect Bristol Bay from Pebble Mine. We remain convinced that the risks posed by the project to the region’s ecosystem and economy are simply not worth taking. ▼



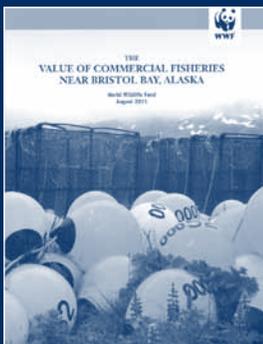
■ WWF'S VERNER WILSON III AT THE “FISH BASKET” BOOTH WITH PARTNERS GARY CLINE OF NUNAMTA AULUKESTAI AND ELLIE HUMPHRIES OF PEW ENVIRONMENT GROUP AT THE 2011 PACIFIC MARINE EXPO, ADVOCATING FOR PERMANENT PROTECTION FOR BRISTOL BAY.

Photo by Verner Wilson, WWF



Bristol Bay Economic Report

In August of 2011, WWF released a 26-page study entitled “The Value of Commercial Fisheries Near Bristol Bay, Alaska.” The study was prepared for WWF by Ecotrust, a Portland-based conservation organization, using methods like “value chain analysis” and “input-output modeling” to determine the value of the total economic activity associated with Bristol Bay fisheries. Value chain analysis examines the various steps through which a product passes and its corresponding change in value. For the fishing industry, these steps are harvesting, processing, and retail. However, this analysis alone does not take into account the immense economic benefits the fishing industry brings to other businesses, thanks to income that fishermen, processors, and retailers earn from Bristol Bay’s healthy fisheries. It also does not and cannot quantify the immense cultural and intrinsic values that the fisheries bring to local communities and fishing families. Through input-output modeling, which analyzes the interdependence between an economy’s various industries, the study is able to predict the value of the fishery to boat repair shops, grocery stores, gas stations, etc. All told, the study found that the value of commercial fisheries near Bristol Bay is equivalent to \$4.1 to \$5.4 billion dollars annually. This is a thriving industry built upon a pristine ecosystem that could be irrevocably harmed if oil, gas, and mineral development is allowed to proceed in the region. ▼





ARCTIC OCEANS PROTECTION



ARCTIC OCEANS PROTECTION

Lessons Not Learned: Offshore Development in Arctic Seas

“One lesson from the Deepwater Horizon crisis is the compelling economic, environmental, and indeed human rationale for understanding and addressing the prospective risks comprehensively, before proceeding to drill in such challenging waters”

~ Final Report of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, 2011

The full extent of the ecological, economic, and social consequences of the Deepwater Horizon oil spill will likely take decades to be determined, but more than a year and a half later, it is clear that it will go down as one of the largest environmental catastrophes in US history. In addition to killing eleven people, the accident led released of nearly five million barrels of toxic oil into the Gulf of Mexico, killing thousands of birds and marine mammals as well as countless fish and crustaceans. Communities throughout the Gulf Coast have been irreversibly altered, as livelihoods—fishing and tourism—that are dependent on the Gulf waters came to a screeching halt. Crude oil can still be found along Prince William Sound as a result of the 1989 *Exxon Valdez* catastrophe, a spill that was nineteen times smaller than Deepwater Horizon. While it may be too soon to assess the damages from the Deepwater Horizon, Shell and other multinational oil companies have already decided that it is time to begin drilling in the Alaskan Arctic.

WWF has been gravely disappointed by US federal agencies’ and the administration’s decisions on offshore development, particularly in the last half of 2011. The result is risky, fast-paced planning for offshore exploration, despite an acute lack of technology that could be used to clean up an Arctic oil spill. The National Commission, established by President Obama to examine the reasons for the BP disaster in the Gulf, also addressed drilling in the Arctic Ocean in its final report. The Commission cautioned that any exploration should proceed only when a competent and appropriate spill response procedure is in place. Indeed, fierce Arctic storms, freezing temperatures, long seasons of darkness and ice cover would hamper most clean-up efforts. The US Coast Guard’s nearest facility on Kodiak Island is 1000 miles away from the Arctic coast! In addition, very little is known about the

Arctic ecosystem threatened by offshore development; good baseline data is yet unavailable for many basic aspects of the environment, making an assessment of risks and measuring damages very difficult.

WWF is addressing the threat of an Arctic spill by highlighting the information gaps in Shell’s research and response plans. In the spring of 2011, the US Bureau of Oceans Energy Management and Enforcement (BOEMRE) released a memo assessing an Arctic blowout scenario which clearly proves that Shell’s oil spill response plans are completely inadequate: the government acknowledges the possibility that a blowout in the Chukchi Sea could release as much as 60,000 barrels of oil per day for up to 74 days, while in its own plan, Shell says it can recover only 5,500 barrels a day for up to 30 days.

WWF is working hard to ensure that any offshore development in the Arctic proceeds only when sensitive coastal and marine areas have been protected and when the highest operational and technical standards have been put in place. While the WWF team advocates for those standards to be applied in Alaska’s Chukchi and Beaufort Seas, we are also providing recommendations and expertise in different international settings. Toward that end, in May, 2011 WWF’s Senior Program Officer on Oil, Gas and Shipping, Layla Hughes, traveled to an oil and gas convention in Moscow dedicated to emergency response sponsored by the Russian Ministry of Safety. Speaking to a group of Russian government officials, academics, oil companies, and non-profit organizations, Layla presented the difficulties of cleaning oil spills in icy Arctic waters. Additionally, in October 2011, Layla attended Arctic Council meetings in Norway, where she served on a Task Force established to develop an international instrument on Arctic marine oil pollution preparedness and response. ▼

■ CLEANING UP AN OIL SPILL WOULD BE EXTREMELY DIFFICULT IN THE DARK, FREEZING CONDITIONS OF THE BEAUFORT AND CHUKCHI SEAS.

Arctic Shipping: New Opportunities, New Dangers

Map by Hugo Ahlenius, UNEP/GRID-Arendal



■ EXPERTS EXPECT SHIPPING TO INCREASE ALONG THE "NORTHERN SEA ROUTE," WHICH WOULD SIGNIFICANTLY SHORTEN THE DISTANCE FROM EUROPE TO ASIA AND BRING MORE SHIP TRAFFIC THROUGH THE BERING STRAIT.

On July 19th, 2010, President Obama signed an executive order establishing a National Policy for the Stewardship of the Ocean, Our Coasts, and the Great Lakes. The document calls for the adoption of marine and coastal spatial planning in regional decision making and planning processes. NOAA defines marine spatial planning (MSP) as "a comprehensive, adaptive, integrated, ecosystem-based, and transparent spatial planning process, based on sound science, for analyzing current and anticipated uses of ocean, coastal, and Great Lakes areas."

WWF considers MSP to be a valuable tool

for the maritime industry, resource managers, and stakeholders alike. In areas such as the Arctic, where climate change and globalization are contributing to the growth of the shipping industry, precautionary planning for multiple uses, including shipping, is essential to ensure environmental protection of sensitive marine areas.

Declining ice levels in the past decade have made the Arctic a viable area of operation for many shipping companies. Russia has recently privatized its ice-breaker construction industry in anticipation of a shipping boom from East Asia to Western Europe along its Northern Sea Route, which is shorter than the traditional route through the Suez Canal by a full third. The Russian Maritime Fleet's Central Scientific Research Institute predicts that the volume of shipping along the Northern Sea Route, which passes through the Bering Strait, could increase almost one hundred times over by the end of the decade. Similarly, the last five years has seen an opening of Canada's Northwest Passage to limited commercial shipping for the first time in recorded human history. Increased oil and gas exploration in the Chukchi and Beaufort seas would increase vessel traffic—along with the possibility of shipping accidents—in domestic waters as well.

With this in mind, WWF commissioned the Marine Exchange of Alaska to conduct a baseline study of vessel movements in the Arctic and Bering Strait regions. The Marine Exchange operates over 70 AIS (Automatic Identification System) receiving stations throughout the state, including five stations along the Bering Strait and seven in the far North. The study showed the variety of vessels that currently transit the Bering Strait during the ice-free season, ranging from research vessels to barges, cargo ships and tankers. The data also pointed to a steady growth in vessel transits over the last several years. While in 2007, 55 vessel transits were recorded, in 2010, that number had grown to 175. This data also helped inform WWF's comments on the US Coast Guard's Port Access Route Study of the Bering Strait. WWF's Layla Hughes also participated in a workshop this August run by the USCG and the Institute of the North, an Alaskan education and policy organization. At the workshop a variety of stakeholders including environmental groups, state legislators, regulatory agencies, US lawmakers, universities, native corporations, and oil and gas companies worked together to consider environmentally sensitive areas and potential shipping lanes in order to protect this narrow passageway bridging the Pacific and Arctic oceans from shipping accidents. ▼



Photo by USFWS

■ THE MALAYSIAN FREIGHTER SELENDANG AYU'S GROUNDING IN THE ALEUTIAN ISLANDS IN 2004, WHICH SPILLED 300,000 GALLONS OF CRUDE OIL, WAS ANOTHER REMINDER OF THE ACUTE NEED FOR SHIPPING SAFETY MEASURES AND OIL SPILL RESPONSE IN ALASKA'S REMOTE SEAS.

Don't Be a Buckethead

We are all familiar with the devastating effects that oil spills and other man-made disasters can have on a marine ecosystem. But did you know that even the everyday operations of offshore development can harm sea life as well? Industrial equipment, oil platforms, and ship traffic introduce significant levels of noise pollution into the ocean, where sound travels fast, far, and efficiently. In the darkness of the sea, marine mammals rely on sound to communicate, find food, and avoid predators. Underwater noise pollution can have fatal consequences for vulnerable wildlife species, and its effects must be taken into consideration in the face of growing industrial development in the Arctic. WWF has partnered with Natural Resources Defense Council (NRDC) and Ocean Conservation Research (OCR) to develop a new interactive website, <http://www.dontbeabuckethead.com>, which demonstrates the effects of ocean noise on different Arctic species. The site, a work in progress, will be updated periodically as WWF, NRDC, and OCR, continue to advocate for policies and practices that mitigate the negative impacts of industrial noise on marine wildlife.

www.dontbeabuckethead.com





ARCTIC BRIDGE



ARCTIC BRIDGE

Science Knows No Boundaries: International Research Builds Bridges Across the Bering Strait

This past April, WWF Alaska welcomed two Russian colleagues to exchange polar bear information and research techniques with their American counterparts. There are two polar bear populations in Alaska; the Southern Beaufort Sea population has been studied extensively, but there are still many gaps in our knowledge about the Chukchi population, which migrates between Russia and Alaska each year. Females of this shared polar bear population are known to use Russia's Wrangel Island as a "maternity ward" to raise their newborn cubs. Collaboration between US and Russian scientists is critical if we wish to understand—and protect—this great icon of the north.

WWF's Arctic Biodiversity Coordinator Mikhail Stishov in Moscow traveled to Alaska in early April to join US Fish and Wildlife Service (USFWS) colleagues during their spring Chukchi polar bear field research season. Having lived and worked in the Wrangel Island Nature Reserve for over 20 years, Mikhail drew on his considerable experience studying polar bears. He took part in a USFWS capture and observation trip and discussed opportunities for future international collaboration on polar bear research with Alaskan colleagues. Mikhail also attended a workshop of the Conservation of Arctic Flora and Fauna (CAFF) Arctic Protected Areas Monitoring Framework in Girdwood, Alaska.

Natalia Illarionova, a polar bear biologist at the All-Russian Scientific Research Institute of Nature Conservation and a member of the Marine Mammal Council, traveled to Anchorage from Moscow on a WWF travel grant in late April, 2011. After visiting the WWF office, she flew further north to the Chukchi Sea coast, where she joined the USFWS polar bear team. Natalia learned first-hand about polar bear field research in the US with translation support provided by WWF Arctic and Bering Sea Program Officer Elisabeth Kruger. Natalia plans to use the knowledge and skills gained from her trip to conduct a similar study of Chukchi polar bears in Russia, which would help fill in substantial gaps in our knowledge about the population. International exchanges such as these field trips and workshops clearly demonstrate the value of collaboration on scientific and conservation issues across the Bering Strait. ▼

■ RUSSIAN POLAR BEAR BIOLOGIST NATALIA ILLARIONOVA, CONDUCTING POLAR BEAR RESEARCH WITH USFWS COLLEAGUES IN ALASKA IN APRIL, 2011.

Photo by Elisabeth Kruger, WWF



ARCTIC BRIDGE



The polar bear has been a beloved holiday icon of The Coca-Cola Company since 1922. Rapidly disappearing summer ice, however, has put the polar bear at risk. This holiday season, Coca-Cola is partnering with WWF to raise awareness and funds to help protect the polar bear and its habitat through a campaign called "Arctic Home."

To call attention to the cause, Coca-Cola is introducing limited-edition "Arctic Home" Coca-Cola cans in the U.S. and Canada. In addition, Coca-Cola has committed \$2 million toward WWF's polar bear conservation efforts, which includes work to preserve the "Last Ice Area." This territory – approximately 500,000 miles between Canada and Greenland – is where sea ice is predicted to last the longest.

Anyone who wants to help the polar bears can join the effort by texting a Coca-Cola "Arctic Home" package code to 357357 to donate \$1 to WWF. They also can donate online at ArcticHome.com. Coca-Cola will match all donations made with a package code by March 15, 2012, up to a total of \$1 million.

For a number of years, WWF has partnered with Coca-Cola on important environmental initiatives ranging from polar bear protection to freshwater conservation. Through this new campaign with Coca-Cola, WWF has a tremendous opportunity to raise awareness and resources to ensure that a permanent Arctic refuge remains for future generations. ▼



ARCTIC BRIDGE

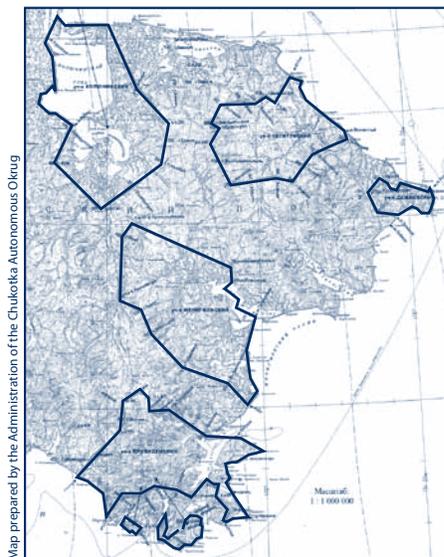
An Important Step Forward In the Creation of an International Park in the Bering Strait

With less than 50 miles between them, the territories of Alaska and Chukotka are, in the words of the Russian poet Yevgeny Yevtushenko, “divided twins.” The indigenous peoples of the two regions possess a shared cultural and linguistic heritage. The international boundary across the Strait simply does not exist for the fish, birds, and sea mammals that call the Bering and Chukchi Seas their home. Although the idea for creating an international park spanning the area of the former Bering Land Bridge—or “Beringia”—has existed since the 1980s, the concept has been gathering momentum recently: the Russian government made the creation of Beringia National Park a priority a few years ago, and the National Park Service in the US has increased public outreach in Alaska to gauge local interest in collaboration with Russian communities. Then, on May 26th, 2011, a new interest in trans-boundary cooperation was signaled when Dmitri Medvedev and Barack Obama issued a Joint Statement on Cooperation in the Bering Strait Region.

Over the past two decades, the creation of an international protected area was hampered by the lack of a designated federal territory on the Russian side of the Bering Strait. In December of 2011, however, the Russian government approved an Environmental Impact Statement (EIS) for over 7,000 square miles of protected areas that will form Russia’s new Beringia National Park. WWF Russia played an instrumental role in the preparation of the park’s proposal. WWF Russia has deep expertise in protected areas and over the past two decades has contributed to the creation of over 90 regional and federal protected areas in Russia, with an overall acreage of more than 170,000 square miles. Beringia National Park’s territory will signify an important step forward in Arctic conservation, as it contains vital habitat area for migratory birds, polar bears, Pacific walrus, and endangered whales. It will also provide for the preservation of culturally and archeologically significant sites and the traditional subsistence rights of the region’s native people.

The approval of the EIS by the Russian government is a key milestone, and we anticipate the final designation of the park in 2012. Once this is complete, new opportunities for greater international collaboration will be available in the Bering Strait. If the communities of the Bering Strait decide to pursue the concept of an international protected area, there are many examples to consider as possible models. Transboundary protected areas have been in existence since 1932, when Canada and the USA signed an agreement creating the Waterton Glacier International Peace Park. The Russian Federation currently has four international parks along its borders, collaborating with China, Finland, and Kazakhstan, while the United States co-manages several parks with Canada.

In any case, WWF welcomes the commitment by the Russian government to protect large intact areas of Arctic habitat, while ensuring that communities will be able to continue traditional use activities, an important part of the region’s heritage. ▼



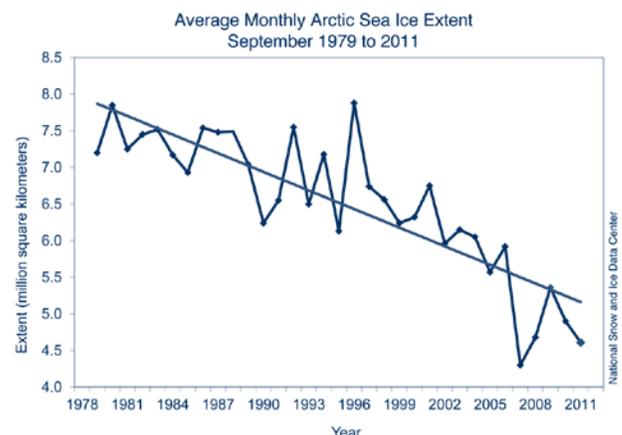
■ RUSSIA’S NEW BERINGIA NATIONAL PARK WILL BE COMPRISED OF SEVERAL NON-CONTIGUOUS UNITS ON THE CHUKOTKA PENINSULA



ARCTIC BRIDGE

Arctic Walrus Left Stranded By Climate Change

In August, 2011, a massive walrus haulout (resting area) of over 20,000 animals appeared near Point Lay, Alaska—a troubling phenomenon directly related to the changing face of the Arctic. The National Snow and Ice Data Center (NSIDC) revealed on October 4th that the minimum extent of Arctic sea ice in 2011 came very close to reaching 2007 levels, when the amount of ice recorded was the lowest since the NSIDC began collecting data in 1978. The atypically rapid and extensive ice retreat is impacting Pacific walrus populations dramatically, as the animals are forced to haul out on dry land instead of on ice floes. Walrus must then swim hundreds of miles to feed, causing significant physical strain for mothers and their pups. Similar haulouts have formed off the coast of Alaska for four out of the past five years, and have been known to occur on the Russian Arctic coast of the Chukotka Peninsula for over a decade. WWF has worked with communities in the Chukotka region to create walrus sanctuaries on Capes Vankarem and Kozhevnik, where local residents patrol and protect the walrus to minimize human disturbance. While we closely monitor the populations of this vulnerable animal on both sides of the Bering Strait, WWF continues to advocate for national and global policy actions that will reduce greenhouse gas emissions, the main culprit in the rapid and accelerated increase of temperatures and loss of Arctic sea ice. ▼



■ THIS YEAR SAW ICE COVERAGE IN THE ARCTIC DROP TO NEAR RECORD LOW LEVELS.



Pandas and Polar Bears: Studying an Arctic Icon in the Alaskan Arctic

WWF works at multiple scales to achieve our conservation goals. In many cases, our own staff are involved in field work to inform wildlife conservation and management. Below is an account of one such staff member, biologist Geoff York, Arctic Species Coordinator for WWF's Global Arctic Program, who participates in polar bear research on an annual basis.



Photo by Geoff York, WWF

■ GEOFF YORK IN THE FIELD IN 2011.

The date is April 1st, 2011. Spring has arrived in the majority of the Northern Hemisphere, but at the U.S. Fish and Wildlife Service (USFWS) field camp near Kotzebue, Alaska, the temperature is still a frosty -25°F. WWF's polar bear expert Geoff York wakes up early to enjoy a hot breakfast before organizing his field gear for the day. When everything is ready, Geoff climbs into the helicopter with Dr. Karyn Rode, a USFWS biologist, to head out onto the ice to look for polar bears. The light is excellent in the frigid air, and the team quickly spots several pairs of prints on the ice—a family group. When the animals themselves come into

view, however, it becomes clear that they have already been marked with a very large (but temporary) number, indicating that they have been captured before. Not wishing to disturb the bears any more than necessary, the team moves on. Seven polar bears in total are encountered that day, all bearing numbers from prior capture. It seems that the animals are not moving around very far this season.

In this part of the Arctic, the most important factor affecting research is the weather, which can change in an instant. Warmer days can be hopelessly foggy, making aerial identification almost impossible, and high winds or icing conditions can make flight extremely dangerous. During these frequent weather delays, scientists analyze tissue and blood samples, enter collected data into their computers, prepare tranquilizer darts, clean and sterilize equipment, and obsessively check the weather.

It is not until April 6th that Geoff and the other biologists have a chance to mark a previously unidentified polar bear. Everything possible is done to reduce the animal's stress level; once the bear is sedated, the team must move both quickly and carefully. A hood is placed on the bear's head to shield her eyes from direct sunlight. The bear is marked and measured. Several samples are taken to assess

the animal's health, diet, and genetic background. A tripod and digital scale are set up to measure the her weight. Female adults are fitted with a tracking collar, which will help the USFWS understand population ranges, habitat use, and denning areas. (You can follow the locations of polar bears online at WWF's Polar Bear Tracker website at www.panda.org/arctic)

Geoff's April trip to the Chukchi coast lasts nine days. As WWF's polar bear expert, he usually spends three to four weeks a year in the field, while the USFWS typically conducts research near Kotzebue for two to three months a year. When Geoff first started studying polar bears 14 years ago, scientists were able to work in both the spring and the fall, but in recent years, fall ice has been forming much later in the year, when the days are simply too short to make research viable. Almost everything we know about polar bear populations comes from mark and capture studies: home ranges, reproductive success, population trends, diet, etc. This information is becoming even more valuable as human activity in the Arctic increases, leading to both bears spending more time on dry land and more humans spending time in traditional polar bear habitat, leading to greater bear-human interaction.

This winter, Geoff joined the USFWS on a trip to Alaska's North Slope to study the application of Forward Looking Infrared (FLIR) technology to identify and locate maternal dens. Pregnant females typically dig a den in the snow during the early winter in order to safely give birth and nurse her cubs, emerging in the early spring. FLIR technology has shown to be highly successful—up to 80%, in some cases—at identifying denning locations in a way that does not disturb the animals. The oil and gas industry has a serious interest in avoiding these areas—the crushing of a den by construction equipment would be a real tragedy, and a worker's life could be put in danger if he or she accidentally stumbled upon a polar bear mother and her cubs.

Geoff York came to WWF in 2008 after working for the US Geological Survey. Geoff became a "Panda" in order to, in his own words, "bridge the gap" between science and policy. While his new role reduces his time in the field, the opportunity to work with polar bears and his colleagues is personally inspiring and helps establish conservation measures for one of the Arctic's most endearing—and threatened—species. ▼



Spotlight On Partner: Tom Tilden

Working with partners is integral to achieving WWF's ambitious conservation goals in the Arctic, including our efforts to protect Bristol Bay's rich fisheries and wildlife. WWF appreciates the opportunity to work with diverse partners, including Alaska Native leaders and organizations, businesses, government agencies, scientists, and fellow conservation organizations throughout 2010 and 2011. Here we talk with partner and friend Thomas Tilden about our shared goals in Bristol Bay.

Tom Tilden is a long-time fisherman, resident and leader of Bristol Bay. Born and raised there, he started fishing in the bay as a child, recalling that “as soon as I could walk, I was told to stand on the net line” to help bring salmon onto the beach at his family’s set-net site. At age ten, he started fishing with his dad on a boat, where they caught record amounts of salmon that summer and learned the work ethic of the fast-paced fishing lifestyle. Tom now owns his own boat and fishes the bay every summer for both subsistence food and income. His family and his lifelong connection to the region have inspired him to advocate for the protection of Bristol Bay. “My grandma moved here from Nelson Island. She told me Bristol Bay was the most naturally rich area anywhere, that we lived in a very rich place with whales, caribou, moose, all kinds of fresh and saltwater fish, seals, plants, berries and other things, and as long as we have all these natural resources, we’ll be fine as a family.”

Tom’s leadership and passion to protect Bristol Bay have propelled him to serve on many boards and in elected office and to work with many partners, including WWF. He currently serves as Chief of the Curyung Tribe of Dillingham, Alaska and sits on the board of the Alaska Federation of Natives and Nunamta Aulukestai (“Caretakers of Our Lands”), a non-profit organization comprised of nine native villages in Bristol Bay working to protect the area from the proposed Pebble Mine and offshore drilling. He was even on the front-lines when offshore oil lease sales were first held in Bristol Bay in the 1980s. “It stunned and devastated me to think that the federal government would put our resources in jeopardy. I was very happy to help in efforts to ensure the leases were bought back.” [Note from the editor:

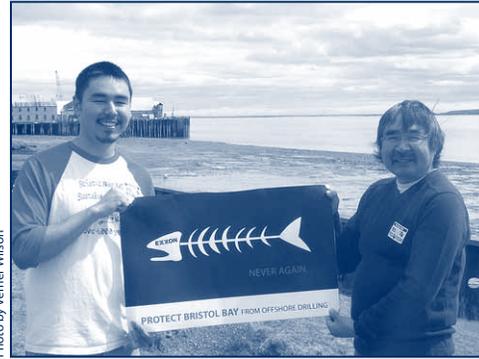


Photo by Verner Wilson

■ WWF'S VERNER WILSON AND TOM TILDEN IN BRISTOL BAY.

The oil leases were purchased by the US government in 1995. But in 2003 and 2007, respectively, Congress and President Bush reopened the possibility for lease sales in the Bay again].

Tom was relieved in 2010 when President Obama cancelled these leases until 2017, but says that the region needs permanent protection. To help achieve that goal, Tom testifies when he has the opportunity, writes letters, travels to educate others, and meets with decision-makers. “I agree with Secretary Salazar when he said that Bristol Bay is a national treasure. Whales migrate from Russia and seals travel from that side as well to Bristol Bay, so it’s not just a national treasure but an international one, too. WWF realizes that and that’s why I really like working with WWF.” ▼



■ ASIGYUKPAK SPIT, BRISTOL BAY, ALASKA.

Photo by Scott Dickerson

SPECIAL RECOGNITION

WWF is fortunate to have many individuals and organizations throughout the region who make outstanding contributions to conservation in the Bering Sea and Arctic. We are pleased to recognize the following people for their special achievements in 2011:

Congratulations to **Dorothy Childers** for receiving the Alaska Conservation Foundation (ACF)'s Olaus Murie Award for Outstanding Professional Contributions. Dorothy is a long-time leader in marine conservation, with a passion for supporting vibrant coastal fisheries and fishing communities. In granting the award, ACF particularly recognized Dorothy's recent contributions to an ambitious and exciting project by the Bering Sea Elders Group that identifies and maps especially valuable ecological and cultural areas in the northern Bering Sea. We commend **Dorothy and Muriel Morse** for their extraordinary efforts and exemplary approach in this truly community-based effort. ▼

After three years as President and CEO of the Alaska Sealife Center (ASLC), **Dr. Ian Dutton** has moved to the Anchorage-based Rasmuson Foundation, where he is now Vice President. In his advisory role for several Alaskan science and academic organizations, Ian has been a strong and persistent voice for marine conservation. While at ASLC, Ian energetically worked to vastly increase the center's public profile and expanded its outreach and science programs. Thanks to Ian and his excellent team, ASLC will continue to captivate many audiences as they learn about Alaska's seas. We'd like to congratulate Ian for his outstanding leadership at the ASLC and wish him the best in his new endeavors. ▼

Jeremy Matthis, Assistant Professor of chemical oceanography at the University of Alaska School for Fisheries and Ocean Science, was honored at the Alaska Sealife Center's 2011 Marine Gala with the Alaska Ocean Leadership Award for Marine Research. Dr. Matthis has conducted groundbreaking research in ocean acidification and its effects on Alaskan marine ecosystems. Dr. Matthis is an effective communicator on this critically important issue. We appreciate the time and expertise he has shared with the WWF Alaska team and the public at large. Congratulations, Jeremy! ▼

Over the last five years, marine biologist **Michelle Ridgway** has been leading a team of young students from St. Paul and St. George, two remote communities in the central Bering Sea, in studying marine and coastal ecosystems. Through hands-on learning on their own shores, these motivated students documented several key findings, including their discovery of a unique, rare Bering Sea species: the "Golden V" kelp. In 2011, the students presented the results of their work at a major international science conference in Seattle, the Ecosystem Studies of Sub-Arctic Seas Symposium, sponsored in part by the North Pacific Marine Science Organization (also known as PICES). Whereas the keynote speakers at these events are usually seasoned scientists, for the first time ever, Bering Sea youth were the keynote speakers. Congratulations, Michelle, for your leadership in science education, and for inspiring the next generation of Bering Sea scientists. ▼

Many thanks to **Tim Troll** and **John Branson** for their creativity and foresight in bringing to life the characters and color of Bristol Bay through the exhibit "Sailing for Salmon," which over the past two years has been shown in Dillingham, Homer, Anchorage, and Cordova. The exhibit will appear in Juneau and Naknek in the future – don't miss it! This stunning historical photo collection and clever narrative has given thousands of Alaskans and visitors from around the world the opportunity to learn about the unique 125-year old history of the Bristol Bay salmon fishery. **Tim Troll** is Southwest Alaska Program Director for the Nature Conservancy and **John Branson** is the official historian for the Lake Clark National Park and Preserve. Congratulations, Tim and John, and thank you, for telling the story of people, culture and history of Bristol Bay, and their indelible ties to wild salmon. ▼

On October 21, 2011, WWF Russia staff members **Ekaterina Khmeleva** and **Alexey Knizhnikov** received presidential letters of commendation for their contribution to the Russian Federation's initiative to the June 2010 G-20 summit in Canada. Following the devastating Gulf of Mexico oil spill disaster, Ekaterina and Alexey helped to initiate new international efforts to promote environmental safety during offshore development. For example, with their input an international fund for marine oil spill prevention and the adoption of best practices was proposed as an agenda for the G-20. The special recognition letters were signed by **President Dmitriy Medvedev. Mr. Arkadiy Dvorkovich**, Assistant to the President, presented the letters of gratitude to the WWF experts to commend WWF Russia on their contribution to the G-20's Global Marine Environmental Protection workgroup, which is dedicated to developing mechanisms for information exchange among member states to prevent and respond to incidents related to offshore oil and gas development as well as maritime transportation. ▼

ARCTIC FIELD PROGRAM SUPPORTERS

WWF could not do our work in the Arctic without the generosity and support of many individuals and organizations. We'd like to thank the following supporters:

- ◆ The Dornette Foundation
- ◆ The Winifred L. Stevens Foundation
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- ◆ The Trust for Mutual Understanding
- ◆ Seaworld/Busch Gardens
- ◆ WWF Canada
- ◆ WWF Netherlands
- ◆ The 444S Foundation
- ◆ Grace Schaible
- ◆ Denise Allen and Mark Hayes
- ◆ Camp Denali
- ◆ Many WWF members and individual supporters
- ◆ Anonymous donors



WWF Arctic Field Program: Who Are We?

From Washington to Anchorage, Kamchatka to Moscow, Oslo to Ottawa, the WWF Arctic team is spread far and wide. We have a talented and dedicated team of conservationists, and introduce you to our “core team” of the WWF Arctic Field staff based in Kamchatka and Alaska.



Margaret Williams is the Managing Director of the WWF US Arctic Field Program. She joined WWF in 1998 in Washington, DC and moved to Anchorage in 2005. Margaret leads an international team in the Bering, Beaufort and Chukchi Sea in WWF's effort to address climate change, shipping safety, offshore oil and gas development and fisheries issues. Having spent several years in Russia, she has a special interest in Russian conservation.



David Aplin is WWF's Senior Program Officer for community education and outreach. David joined WWF in 2005 to manage the Bering Sea Coastal Communities for Science program and WWF's Climate Witness activities. Today he coordinates WWF's outreach efforts in ocean acidification, noise impacts on marine mammals, and advocating for the protection of Bristol Bay's fisheries and biodiversity.



Heather Brandon is WWF's Senior Program Officer for fisheries. Heather advocates for marine habitat conservation and sustainable fisheries, working closely with scientists, communities, NGO partners, the fishing industry, and the North Pacific Fishery Management Council. She also works with WWF Russia on salmon and marine issues in the Kamchatka area.



Janice Hidalgo is the Office Administrator for the Arctic Field Program. Originally hailing from Wichita, Kansas, she first came to Alaska in 1974. Janice and her husband took a 10 year hiatus from Alaska to live in the DC region but returned “home” in July 2006. Janice has extensive administrative work experience.



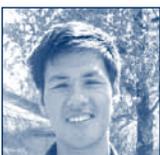
Layla Hughes is WWF's Senior Program Officer for oil, gas and shipping. Layla joined WWF after working and living in the Arctic community of Barrow, where she was the Assistant Borough Attorney for the North Slope Borough and played a leading role in preparing a legal strategy that resulted in an injunction on oil and gas leasing in the Beaufort Sea.



Brandi Klotz is the new Program Coordinator for the WWF US Arctic Field Program and will be heading to Anchorage in November of 2011. She joined WWF in 2008, providing support to the Africa/Madagascar Program from Washington, D.C. Brandi has a professional interest in the ways that the private sector, specifically extractive industries, can be included in conservation efforts. She is fluent in French and has a personal interest in linguistics as well.



Elisabeth Kruger is WWF's Arctic and Bering Sea Program Officer. She helps coordinate activities in the Russian Far East and Alaska, particularly in areas concerning polar bear, walrus, and fisheries management. Prior to joining WWF, Elisabeth spent four years living and working in Siberia, near Lake Baikal, where she was active in the local conservation movement.



David Parker is WWF's Russian-speaking intern for 2011. A 2010 graduate of Middlebury College with a degree in Russian and East European studies, David helps with WWF's activities across the Bering Strait by researching, translating, and interpreting. He was born and raised in Anchorage and has previously lived in Moscow and Irkutsk, Russia.



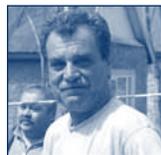
Laura Wigand joined WWF as an intern in 2011 during the summer between her first and second year of graduate school at the University of Washington. While at WWF, Laura researched the development and spread of salmon councils in Russia and researched North Pacific Fishery Management Council Bering Sea agenda items. After working in Juneau and Anchorage, Laura returned to Seattle to complete her degree in Marine Affairs.



Verner Wilson III is WWF's program officer on efforts to protect the fisheries and marine health of Bristol Bay and the Bering Sea. Verner is a Central and Siberian Yup'ik Eskimo born and raised in Bristol Bay, Alaska, which is home to the world's largest wild sockeye salmon fishery. He grew up practicing sport, commercial, and subsistence fishing in the Bristol Bay region. Verner graduated in 2008 with a Bachelor Degree in Environmental Studies from Brown University.



Sergey Rafanov joined WWF Russia in November 2010 as head of the Kamchatka-Bering Sea Ecoregion office, a critical part of WWF's work in the Bering Sea and the Arctic. He leads a team of five in conserving the ecosystems of the Kamchatka region. Originally from Western Russia, he first came to Kamchatka as a volunteer on an ecological expedition. Sergey also serves as a liaison for grassroots NGOs, local communities, environmental activists, and youth to ensure broad support for WWF's activities.



Anatoly Dekshstein is the senior Marine Program Officer for WWF in our Kamchatka office. Anatoly has 26 years of salmon research experience in the Pacific Institute of Fisheries & Oceanography, which he now applies to WWF's Kamchatka Salmon Conservation Initiative. He also oversees WWF's project to reduce seabird bycatch in the longline fishery and supports coastal and marine conservation in priority areas, such as the Commander Islands.



Alexandra (“Sasha”) Filatkina is WWF's communications officer in our Kamchatka office. Sasha joined WWF in 2006 and is WWF's lead on developing communications with journalists, local communities and regional authorities. Sasha also produces public events and campaigns, films, publications, environmental lectures and workshops for Kamchatka's WWF office.



Ekaterina (“Katya”) Lipatova is Office Manager in WWF's Kamchatka. In 2006, Katya played a central role in establishing our Kamchatka office and setting up systems to work efficiently with Moscow, Alaska, and Washington, DC - all of which are many time zones away from Kamchatka! Katya oversees not only project budgets, expenses, grantees' financial reports and bills, but also is responsible for all technical aspects of office maintenance.



Denis Semenov is a marine officer in WWF's Kamchatka office. He has years of experience in logistics, and international trade of fish products, which he is now applying to WWF's projects in fisheries, particularly in tracking the chain of custody of Kamchatka salmon products. Denis is also an experienced diver and accomplished underwater photographer.



ARCTIC FIELD PROGRAM NEWS

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