

Exploring Kamchatka's Indigenous Past

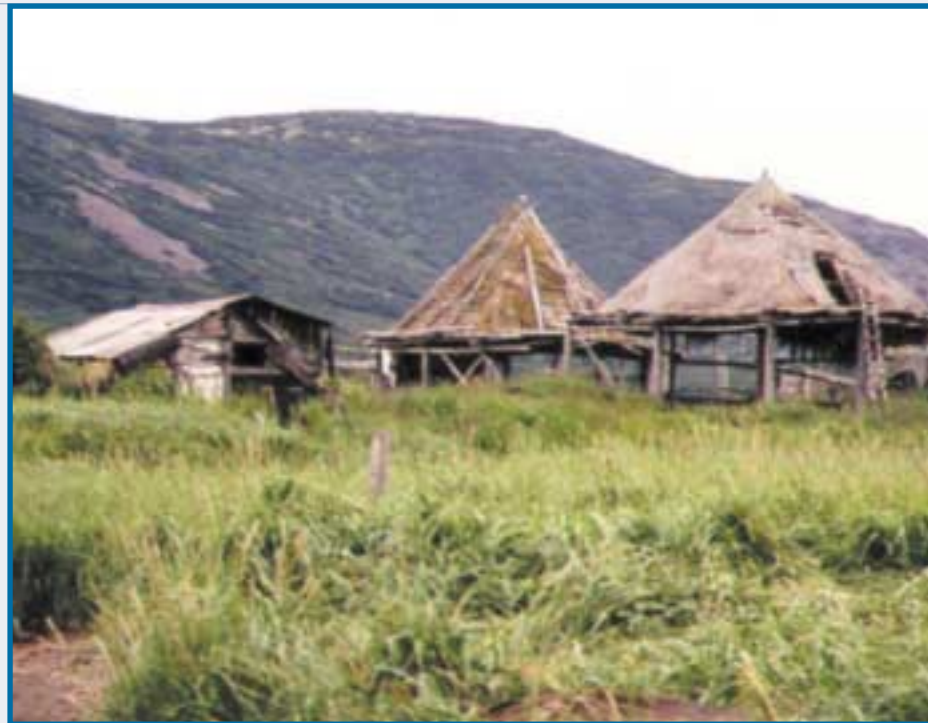
Molecular anthropology is sent to Siberia

For much of its history, the Kamchatka Peninsula in remote northeastern Russia has remained largely unknown to the outside world. The first Europeans to set foot on Kamchatka, Semyon Dezhnev and Fedot Alexeyev, arrived there in the mid-1600s, and the first permanent settlement was established in 1668 by Vladimir Atlasov. Although Russians maintained a constant presence on Kamchatka from that time forward, no one knew much about its geographic relationship to the rest of the world.

ROOTS OF INVESTIGATION

In the 1730s, Peter the Great commissioned Vitrus Bering to determine whether a strait existed between Eurasia and America and to map Russia's northeastern territories. Bering's journeys throughout the North Pacific revealed that the Kamchatka Peninsula extended southward from the Chukotka region, the area situated directly across from Alaska via the Bering Strait, and pointed down toward the northernmost of the Kirile Islands, which themselves led down toward the Japanese archipelago. Bering also found that the Aleutian Islands reached across the North Pacific from southwest Alaska toward the peninsula, ending with the Commander Islands in Russian territorial waters.

As a participant in the later Second Kamchatka Expedition, naturalist Stepan Krasheninnikov traveled around the peninsula and began recording the history and culture of the local tribes. His published accounts of these travels were the first books to describe the indigenous peoples of Kamchatka and formed the reference point for all subsequent ethnographic work carried out there.



Story and Photographs by Theodore G. Schurr

LEFT: The North Pacific region including the Kamchatka Peninsula; ABOVE: Fishing hut and balabans on Koshka Island; RIGHT: A bat (indigenous canoe) at a fishing camp on Koshka Island



MAPS COURTESY OF ALEXANDER KING/KORYAKNET



LEFT: View of Tymlat from helicopter; RIGHT: Fishing hut on a beach near Karaga



The Kamchatka Peninsula. Administratively, Kamchatka is divided into two major regions, the Kamchatka Oblast' [Province] and the Koryak Autonomous Okrug [Region] (KAR). The KAR is further divided into four Raions [districts]; the Karaginskiy (orange), Tigil'skiy (pink), Olyutorskiy (green), and Penzhinskiy (yellow). The administrative centers of these districts are indicated with red dots, with Palana being the capital of the KAR, and the other major villages with black dots.

Sometime later, in the late 19th and early 20th centuries, Franz Boas led a series of joint Russian-American expeditions into this region of northeastern

Siberia to study the biological and cultural relationships between northeastern Siberians and Native Americans. During those expeditions, known collectively as the Jesup North Pacific Expedition [JNPE], Boas and his colleagues acquired an enormous quantity of data on the cultures, languages, and biology of the indigenous peoples of the region. Until recently, much of the information remained unexamined and publicly inaccessible.

MOLECULAR AND ETHNOGRAPHIC STUDIES

Using these historical and ethnographic studies to guide our research, my colleagues and I began our molecular-anthropological analysis of the indigenous peoples of Kamchatka. We were interested in knowing where the Paleoasiatic-speaking Koryaks and Itel'men originated, when their ancestors arrived in Kamchatka, how they were related to other ethnic groups of the region (Chukchi, Evens, Yakuts, Ainu), and what their relationships to Native American populations were. We also wanted to assess the impact of Russian colonization on the size and diversity of the Kamchatkan populations, as warfare and disease had decimated them in much the same way European contact impacted indigenous groups of the Americas. In short, our research was designed to examine the prehistoric and historic influences on patterns of genetic variation in Kamchatkan native groups and to relate our genetic data with other ethnographic, archaeological, and cultural data from this region to reconstruct its population history.

LOCAL LIFE IN THE NORTHERN KAMCHATKA REGION

Within the Koryak Autonomous Region (KAR), the northern section of the Kamchatka Region, there are relatively few sizable communities. The largest towns — Palana, Ossora, Tigil', Kamen'skoye, and Tilichiki — have populations that number in the thousands at most. All of these towns are centers of the four districts comprising the KAR (Penzhinskiy, Tigil'skiy, Karaginskiy, Olyutorskiy), except Palana, which is the capital of this entire administrative region. The remaining settlements in the KAR are small villages located mostly along the rivers of the peninsula, and are composed of 300 to 500 inhabitants, many of whom are of indigenous origin.

Our field research in Kamchatka took us to both sides of the peninsula. In 1993, we worked in the villages of Karaga and Tymlat from the Karaginskiy District along the Bering Sea coast, while in 1996, we worked in the villages of Voyampolka and Kovran in the Tigil'skiy District along the Okhotsk Sea coast. Tymlat, a village of some 350 people, is located along the Tymlat River, which flows into the Bering Sea. The location of this and similar villages around the peninsula provided the Koryaks and Itel'men access to riverine and marine resources. However, from the 1950s through 1980s, the Soviet government closed many small settlements in the interior of the peninsula and relocated their inhabitants to coastal villages. Once situated there, native peoples were organized into reindeer herding or fishing cooperatives and subjected to greater political control by local authorities. Coastal villages were also easier for the Soviet government to supply by sea.

In the course of our work in Kamchatka, we learned a considerable amount about the indigenous peoples and Russians who lived in this region of Siberia. We obtained much of this information simply by traveling with people to wherever they were going on any given day. Among other places, these excursions took us to fishing camps, cemeteries, administrative offices, local museums, people's homes, and the banya (bathhouse), which turned out to be an especially good place to pick up tidbits of information about recent events and local politics.





LEFT: Koryak men netting salmon in Karaga River;
RIGHT: Koryak woman stringing up gutted salmon



Sometimes, people simply dropped by for a visit, such as a Koryak man from Tymlat who wanted to sell me a rather fresh mountain sheep's head, a journalist/poet from Palana who wanted to write a story about our research project for the local paper, and a Ukrainian hunter from Ossora who wanted to meet an American so that this person could help him obtain a Cabela's catalog.

Because it was summer during our visits, many people were engaged in salmon fishing. In the months of July and August, a number of Pacific salmon species return to Kamchatka to spawn in the various rivers of the peninsula. It is not surprising, therefore, that many aspects of Koryak and Itel'men cultures are oriented toward fishing, both for salmon from the ocean and for freshwater whitefish that inhabit the rivers of Kamchatka. Salmon fishing is not only important to the local people as a means of subsistence but is also a major part of the economy throughout the North Pacific region.

In 1993, we spent a lot of time visiting fishing camps around the village of Karaga on the Bering Sea side of the peninsula. Through our travels in this small area, we saw considerable evidence that traditional Koryak lifeways were being slowly supplanted by Russian cultural practices. Along the beach fronting the Karaginskiy Bay, we noted several small fishing huts used as temporary shelters by Koryaks as they netted fish in the river and estuaries nearby, while a couple of large commercial fishing boats worked in the bay. The presence of these Russian and Japanese ships in the offshore waters was constant while we conducted our work in the area.

Throughout the region, and especially along the rivers where salmon come back to spawn, Koryaks and Itel'men constructed raised platforms for drying fish, storing goods, and sleeping during the summer months. These balabans are four-sided pyramidal shelters located on top of a wooden platform, with roofing material made from dried grasses. The entrance to a balaban is at least 8 to 10 feet off the ground and

reachable only by ladder. Tall wooden racks are situated at either end of them for drying fish. Contemporary fishing huts resemble any of those found at small hunting or fishing camps in rural western Pennsylvania.

Today, nearly everyone living along the coast has access to a boat with an outboard motor for getting around and for salmon fishing. Some people had nonmotorized skiffs from which they netted salmon from the river. Using these boats, the fishermen would coordinate their efforts to handle large nets with another person. However, in the past, Koryaks would use narrow dugout canoes called *bats* for fishing. Judging from their storage next to fishing huts some distance from the water, it was evident that the *bats* have been replaced by more modern watercraft.

In many cases, people simply waded into the shallows of the rivers or brackish estuaries and netted fish by hand. The men usually worked together in pairs to handle the nets, sometimes in larger numbers if the nets were large. The fishermen gradually encircled the fish with the net, pushing them closer to shore, and then finally gathered them up in the net and dumped them onto the beach.

Once netted and brought onto shore, the salmon were gutted and cleaned. The cleaned salmon were then strung together with rope made from braided grasses and hung to dry on the racks attached to the balabans. In the picture above, an older Koryak woman is stringing together the fish that her grandson caught earlier in the day, using the newly braided ropes. In the next photo, her grandson is hanging the lines of fish that she has assembled on a rack to dry. Typically, the better-quality fish were dried and then stored for consumption during the colder months of the year. Some of the fresh meat was also salted or pickled for later use. The lesser-quality fish were often used to feed the dogs during the winter, as there are few other food sources for these animals at this time of year.

In addition to this, both Koryaks and Russians actively collected the eggs from gravid females to sell as caviar. Koryaks would typically receive 10 to 20



LEFT: Koryak man hanging lines of cleaned salmon to dry;
CENTER: Koryak woman cutting up sea lion blubber; RIGHT: Reindeer meat drying on rack in reindeer camp near Voyampolka



roubles, or sometimes bottles of vodka, for a 4-liter jar of caviar from a Russian middleman, who would then resell the same caviar at local markets at a price about 10 to 20 times higher.

Fish are not the only marine resource utilized by Koryaks, at least in traditional times. Some Koryaks hunted sea lions, as well as otter and other sea mammals, for their meat and blubber. Although this practice slowly diminished in the latter portion of the 20th century, sea mammal hunting still goes on. During our walk around Koshka Island, we encountered an older Koryak woman dismembering the remains of a recently killed sea lion, cutting up the blubber to store in a jar. The blubber was traditionally used to heat oil lamps and for cooking, and she was probably going to use it for both purposes.

Along with fishing, a significant segment of the Koryak population maintains reindeer herds. These groups live mainly in the interior of the peninsula, especially in the northern regions of the KAR. According to ethnographic sources, the Koryaks adopted this subsistence practice several hundred years ago under the influence of Tungusic-speaking Evens. I had anticipated being able to see some of these herds by flying farther into the interior of the Kamchatka peninsula. Unfortunately, when we reached this particular Koryak camp, all the reindeer herds belonging to its

residents were being tended on the tundra near the interior mountain range, where they graze for most of the summer. However, there was clear evidence that a reindeer had been recently slaughtered



Koryak man cleaning a screen used to collect salmon roe

MOLECULAR ANTHROPOLOGY AND KAMCHATKA'S POPULATION HISTORY

In molecular-anthropology studies, researchers examine the genetic variation present in human groups to better understand their population history. Most now analyze two nonrecombining genomes, the maternally inherited mitochondrial DNA (mtDNA) and the paternally inherited Y-chromosome, to obtain a broader view of this history. These genomes possess a series of different mutations, or markers, that help to define specific genetic lineages that are present in human populations. Because of extensive work with human mtDNAs and Y-chromosomes over the past decade, we now have a fairly good idea of the general geographic areas in which these lineages evolved. As a result, by characterizing the maternal and paternal lineages that are present in these populations, we can learn something about the genetic history of human groups, including the manner in which these lineages spread into neighboring populations, and their relative time depths in different parts of the world.

Using this approach, my colleagues and I investigated the genetic prehistory of two Kamchatkan populations, the Koryaks and Itel'men. Our analyses revealed that Koryaks and Itel'men are not genetically closely related to Native American populations, and, in general, exhibit stronger genetic affinities with eastern Siberian and East Asian populations than with those of the North Pacific Rim. In fact, Kamchatkan groups share several maternal and paternal lineages with populations from the Lower Amur River region, suggesting possible common ancestry for these groups. Our results support the view that Paleoasiatic tribes originating in the Siberian mainland near the Sea of Okhotsk expanded into Kamchatka relatively recently (~6,000–8,000 years ago), although remnants of ancient Beringian populations that gave rise to the Chukchi, Eskimos, and Aleuts may have been absorbed by ancestral Koryaks and Itel'men.



FOR FURTHER READING

Fitzhugh W. W., and A. Crowell, eds. 1988. *Crossroads of Continents*, Washington, D.C.: Smithsonian Institution Press.

Jochelson, W. R. 1908. *The Koryak. The Jesup North Pacific Expedition. Volume 6, Memoirs of the American Museum of Natural History*. New York: AMS Press, 1975.

Krasheninnikov, S. 1972. *Explorations of Kamchatka, North Pacific Scimitar*. Portland: Oregon Historical Society.

Lell, J. T., M. D. Brown, T. J. Schurr, R. I. Sukernik, E. B. Starikovskaya, A. Torroni, and D. C. Wallace. 1997. "Y-chromosome Polymorphisms in Native American and Siberian Populations: Identification of Founding Native American Y-chromosome Haplotypes." *Human Genetics* 100:536–543.

Lell, J. T., R. I. Sukernik, Y. B. Starikovskaya, L. Jin, B. Su, T. G. Schurr, P. Underhill, and D. C. Wallace. 2002. "The Dual Origins and Siberian Affinities of Native American Y Chromosomes." *American Journal of Human Genetics* 70:192–206.

Schurr T. G. 2000. "Mitochondrial DNA Variation in Native Americans and Siberians and Its implications for the Peopling of the New World." *American Scientist* 88(3):246–253.

Schurr T. G., R. I. Sukernik, E. B. Starikovskaya, and D. C. Wallace. 1999. "Mitochondrial DNA diversity in Koryaks and Iteĺmen: Population Replacement in the Okhotsk Sea–Bering Sea Region During the Neolithic." *American Journal of Physical Anthropology* 108:1–40.

Starikovskaya, Y. B., R. I. Sukernik, T. G. Schurr, and D. C. Wallace. 1998. "Mitochondrial DNA Diversity in Chukchi and Siberian Eskimos: Implications for the Genetic Prehistory of Ancient Beringia." *American Journal of Human Genetics* 63:1473–1491.




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because parts of the animal were being dried for later use by members of the camp. I can unequivocally state that reindeer is the best meat that I have ever eaten.

PERSPECTIVES FROM THE KAMCHATKA PROJECT

This is necessarily a brief sketch of the population history and culture of the indigenous peoples of Kamchatka. However, it does provide a reasonably thorough description of the way of life in the rural areas of the KAR during the time of our field expeditions. It should also be noted that both Koryaks and Iteĺmen are attempting to reinvigorate their cultural traditions while, at the same time, finding the means to sustain themselves economically in the ever-changing sociopolitical environment of Russia.

AUTHOR'S NOTE

Members of our collaborative team included Drs. Rem Sukernik and Elena Starikovskaya from the Institute of Cytology and Genetics in Novosibirsk, Russia, and Dr. Douglas Wallace from the Center of Molecular Medicine at Emory University in Atlanta, Ga. As part of this project, my colleagues and I carried out two separate field expeditions in different parts of the Koryak Autonomous Region in Kamchatka (page 41). During these expeditions, we gathered information about the history of this region through interviews with local residents and administrators, and through Russian Orthodox Church records. For our genetic analyses, we collected blood samples and genealogical information from our study participants. Following this work, we flew back to the Center for Molecular Medicine and began our molecular genetic studies of DNA extracted from the blood samples. While these studies revealed much about the history of the Koryaks and Iteĺmen, on which we published in the *American Journal of Physical Anthropology* in 1999, most of this article focuses on the information obtained during our work in Kamchatka. 

Theodore Schurr has spent the past 14 years investigating the genetic prehistory of Asia and the Americas through laboratory studies of mtDNA and Y-chromosome variation in Asian, Siberian, and Native American populations. Schurr serves as an associate editor for the journal Current Research in the Pleistocene, and as a scientific consultant for Family Tree DNA. He is currently an assistant professor in the department of anthropology and a consulting curator of the Physical Anthropology Section of the Museum.