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21. Geothermal Legends through History in Russia and the Former USSR: A Bridge to the Past

by

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Abstract: The use of geothermal resources in Russia and the former USSR dates back to antiquity and is always associated with legends. This chapter traces the history of hot and mineral springs from Crimean antique towns through Kiev Russia, Moscow State, and the Russian Empire to contemporary times.

This history can be seen as waves.
One arose in the Mediterranean near volcanoes and hot springs, rolled through the territory of Russia, and reached Kamchatka, where it met another culture in a magic land of geysers and volcanoes. Another originated in ancient Greece, rolled through Western Europe, crossed the Atlantic Ocean with the first settlers, and met the American Indian culture. Finally, the two waves reached the Pacific Ocean from different regions of high thermal activity and met at the Bering Strait. Christopher Columbus discovered America from the east coast as Vitus Bering reached America from the west. Consequently, the peoples of Kamchatka have legends as fantastic as those of the American Indians and ancient Greeks.

## Introduction

## M anifestations of the Earth's power-volcanoes,

 geysers, earthquakes-have always excited people's feelings of beauty and fear. Interest in the Earth's geothermal resources arose very long ago. For ages, people have used these natural resources. It is as difficult to answer when, where, and which people first discovered the medicinal properties of hydrothermal waters as it is impossible to ascertain who invented the plow and wheel. Evidently, the discovery of geothermal resources came to people naturally; very likely wild animals led ancient people to hot springs. For a long time, warriors treated their wounds in mineral hot springs.
## A Bridge from Ancient Greece to the Antique Towns of Crimea

## T

he curative properties of underground springs were known to Stone Age people. The mineral springs of Epidaurus in Greece could be considered the most ancient known spa in the world (6th century B.C.). Even now, the site still has inscribed plates with diagnoses and descriptions of treatments. A sanctuary of the god-healer Asclepius is placed 9 km from the port of Epidaurus.

Although it is impossible to trace the transformation of Asclepius from a hero at the beginning of the 5 th century B.C. to a god by the end of the same century, the Greeks honored him as the creator of medicine; Homer glorified him as a wonderful physician. According to legend, Asclepius not only treated sick people but also resurrected the dead. He acquired his healing ability from Apollo, the centaur Cheiron, and Athena. The goddess presented him with an ampule containing Medusa's blood, taken from the left side of her body. This blood had power to resurrect the dead. Athena kept another ampule of Medusa's blood, taken from the right side, that gave her power to destroy life and start wars. This legend has influenced Russian folk tales about "dead" water.

The significance of Asclepius and his sanctuary spread, and pilgrims arriving at Epidaurus had to clean themselves with sacred spring water and offer a sacrifice. Later they spent a night near the sanctuary, where the god healed them during sleep, a miraculous curing. In the beginning of the 4th century B.C., a theater was built on a slope of rock near the sanctuary, and solemn celebrations devoted to Asclepius were held there every four years. Historians presume that the founder of medical science, Hippocrates (460-370 B.C.), also lived and worked there.

For ages, waterways linked the Mediterranean with the Black Sea coast. In the 6th-5th centuries B.C., the Greeks founded towns on the Black Sea: Kerkinida, Chersonese, Feodosiya, and Panticapaeum (now Yevpatoriya, Sevastopol, Feodosiya, and Kerch).

The southern Crimean coast is famous for spas and health resorts with mineral springs and medical muds. Chersonese was founded in 421 B.C. Archaeological excavations begun in 1827 revealed thermae, theater ruins, and a mint. In the opinion of some investigators, the founders of this town-state were representatives of a democratic party forced to leave their native town, Pont Gerakleya, by a conquering oligarchic party. A famous Chersonesean oath tells about the
patriotism of its citizens. The text of the oath was cut on a marble plate in the 3rd century B.C., discovered during excavations.

The town had a good layout: streets edged with stone gutters crossed at right angles, and there were beautiful temples at the squares. Public buildings and the houses of rich people


Chersonesean mosaic floor from a bathroom, 2nd century B.C. were decorated with columns and mosaic floors. An outstanding piece of Chersonesean artistry and skill was the mosaic floor from the bathroom of a rich citizen. In the center of the composition, two women are bathing with a washbasin between them. Two birds are also represented in the mosaic.

The craftsman's sector was located near town walls. There archaeologists have found the remains of ceramic production, in addition to metalworking, jewelry, and weaving. Metal medical instruments reveal information about the development of medicine in Chersonese, as do stone inscriptions. The antique world was full of such inscriptions, which are a unique, reliable way of recording and preserving information. During 150 years of excavations, archaeologists have found more than 500 Greek and Latin inscribed stones. These stone archives are like soundtracks of the most interesting pages of history. Here is the epitaph on Chersonesean stele dating to the 4th-3rd centuries B.C.:
"Father, physician Evkles from Tenedos, Set up this tomb to his son Leschanorid."

Crimea came under the influence of the powerful Roman Empire in 100 A.D. The Romans, moving in different directions and conquering new lands, built fortresses, harbors, and roads everywhere. Such fortresses and roads were built in Kharaks, near the present famous health resort of Miskhor. As elsewhere, the Romans built thermae, the remains of which have been excavated by archaeologists. The Romans also set up a sanctuary and laid ceramic water pipes. As at other sites, the thermae were public places for the Romans. They came there to rest, relax, talk about life, and even read. Later, the fortress at Kharaks was destroyed. But in 1912, architect A. V. Shervud built the famous "Swallow's Nest," which has become the symbol of Crimea's southern coast.

The earliest data about the natural waters' peculiarities of the Black Sea region can be found in written documents of ancient Greek and Roman scientists. The Greek historian Gerodot (490/480-425 B.C.) recorded the first systematic description of the Scythian mode of life and pointed out the existence of salt springs on the left side of Ipanid (South Bug). Later, Aristotle (384-322 B.C.) wrote about the same spring. Vitruvius, the Roman architect and engineer of the 1 st century B.C., also mentioned it. The Roman scientist Pliny the Elder (23/24-79 A.D.) wrote about a project to link the Black and Caspian Seas and mentioned the Crimean springs in his book Natural History. Historical documents show that ancient Russia was acquainted with Greek culture and the scientific heritage of Aristotle.

## Legends and Reality

In Georgia and Armenia, in the region of Caucasian mineral springs, the remains of ancient


The "Swallow's Nest" on Crimea's southern coast. Many famous hot springs are in this area. baths were found which date from the Bronze Age. In Armenia, in the Agmagan range, stone symbolic dragons (vishaps) remain near underground springs dating from 2000 B.C. These dragons were set up as deities, guardians of underground water.

According to legend, Georgian Duke Vakhtang Gorgasali (4th century A.D.) was hunting in the forests of the Kura River Valley and wounded a partridge. When he found it, the partridge was boiled in hot water. Later, thermae were built near the Georgian hot springs, and their fame spread. It was here that Duke Gorgasali founded the town of Tbilisi (Tbili means "warm" in Georgian). The ancient water collection galleries remain in the hot spring region of Old Tbilisi, and it is still possible to visit the hot spring baths.

Almost all hot springs are surrounded by legends and traditions. According to a Turkmen legend, the herdsman Archman was turned out of his aul as a bearer of all illnesses. Looking for shelter, he found a warm


The old bathhouses of Tbilisi, Georgia. spring. He drank water, bathed, and left the area in perfect health. Since that time, the efficacy of the Archman spring's medicinal properties has been elaborated on by new legends, real facts, and events. The area now includes a spa 130 km from Ashkhabad.

According to another legend, the 15th century Turk, Uzun-pasha, ruled over Akkerman (now Belgorod-Dnestrovsky). He put the Ukrainian beauty Paraskoveya into a damp dungeon. Once when Uzun-pasha wanted to come into dungeon, the doors opened, the shackles fell away, and the girl ran to Dnestr liman. But janizaries overtook her, and when they raised their curved yataghans above her head, a miracle happened. Suddenly, the girl began rising and disappeared into the air. The janizaries turned into stones, and crystal-clear spring water erupted in her footprints. Centuries have passed, but the spring lives.

For ages, people of different countries and nationalities have named places and villages after hot springs. These names reflect thermal and mineral water usage through history. For example, the name of the famous spa Khodga-Obi-Garm means "holy hot water" in Tajik. Yangan tau means "hot mountain" in Bashkir. The spa name Kuldur-Hot came from a misrepresented Tungus word Khul-Dgi-Uri. And Psekups means "hot spring" in Kabardian.

Medicinal properties of hot mineral waters were reflected in old Russian folk tales about living and dead water. These tales show people's dreams about magic water healing wounds and reviving the deceased.

The Russian folk tale "Ivan-Tsarevich and Grey Wolf" tells about the waters' curative powers: "Ivan-Tsarevich lies dead and already ravens fly above him. Suddenly Grey Wolf ran, caught a raven with his nestling, and said: 'Fly, raven, for living and dead water. If you bring it, I'll set free your nestling.' Nothing else to do. Raven flew. He flew long and fast, and brought living and dead water. Grey Wolf sprinkled Ivan-Tsarevich's wounds with dead water, and they healed.

Wolf sprinkled him with living water and Ivan-Tsarevich came to life...." The Tretyakov Gallery in Moscow has a painting by the Russian painter Victor Vasnetsov (1848-1926), "Ivan-Tsarevich and Grey Wolf."

The Russian poet, Alexander Pushkin (1799-1837), used folk legends about living and dead water in his famous poem "Ruslan and Ludmilla." Ruslan was killed and then came back to life due to living and dead water. The Russian composer Mikhail Glinka (1804-1857) composed an opera, "Ruslan and Ludmilla," in 1842 describing the event. Pushkin's poem is set in Kiev Russia at the time of Grand Duke Vladimir-Red Sun (?-1015). Here the lines are about living and dead water, translated by the author:

> In a silent solitary steppe,
> Behind the wild mountains' far range, The winds and terrible tempests dwelling,
> Where even witch's daring sight
> Fears late to deeply penetrate,
> A fairy valley is concealed, There are two springs in this fairy valley:
> One gaily flows with waves alive,
> Murmuring joyfully on stones,
> Another streams with water dead;
> It's calm around, winds sleep,
> Even a freshness does not blow,
> Centennial pines make no noise, The birds don't fly and the doe dares not
> To drink from secret waters there;
> Since the world arose, a few spirits
> Live, keeping silent in the valley And guarding the dense and wild shore...
> A hermit with two empty pitchers
> Once appeared in front of the spirits;
> They interrupted their long sleep
> And went away, brimming with fear.
> And bending forward he submerges
> The vessels into virgin waves;
> He filled them, in air disappeared
> And came in two short moments
> To the valley where lay Ruslan
> In blood, immovable, lifeless, silent;

> The old man stood still above the knight, He sprinkled Ruslan with water dead, And suddenly his wounds shone, At once the corpse of marvelous beauty Blossomed; after that the old man Poured on the hero living water. Now cheerful, new forces full, Palpitating with young life, Ruslan stands up, he looks around With greedy eyes at clear daylight, Past time gleams quick in front of him As an awful shadow, a terrible dream.

Many Russian folk tales recount dreams about magic water. Ivan-fool, for example, turns into Ivan-Tsarevich after bathing in magic boiling water in the poem-tale "Konyok-Gorbunok" by Russian writer Petr Ershov (1815-1869). Anyone who visits the Tretyakov Gallery remembers the famous picture of Victor Vasnetsov, "Alyonushka," illustrating the folk tale "Sister Alyonushka and Brother Ivanushka," where Ivanushka is turned into a baby goat after drinking water from a magic well (see first illustration). At the end of the story, he is turned back into a boy. Very often, Russian parents say to their children, "If you don't listen to us, you will turn into a kid like Ivanushka, who did not listen to his sister Alyonushka and drank fairy water."

Reality and invention are mixed in famous legends about the Bakhchisarai Fountain. The powerful Tatar dynasty of Gyreys ruled in Crimea for more than 300 years (1427-1783). There is the mausoleum of Khan Kerim-Gyrey's beautiful Georgian wife in Bakhchisarai and the famous "Fountain of Tears," dedicated to her by the khan and constructed as marble cups into which spring water incessantly flows from a marble wall. Local people, however, say that his wife was not Georgian, but Polish-Maria from the Pototsky family.

The fountain has been memorialized, as well, in the fine arts. Pushkin wrote his famous poem "Bakhchisarai Fountain" in 1824. Soviet composer Boris Asafiev (1884-1949) created a ballet with the same name in 1934, and Russian painter Karl


The "Fountain of Tears."


Interpretation of "Bakhchisarai Fountain," an oil painting by Karl Brullov, 1849, sketched by Valentina Svalova. This famous painting of the legendary "Fountain of Tears" is one of the many works of art the fountain has inspired. The great poet Pushkin once wrote, "Fountain of love, fountain alive...."
Brullov (1799-1852) painted "Bakhchisarai Fountain" in 1849, which depicts a basin and fountain of spring water.

According to Pushkin's version of the legend, Khan Gyrey had a favorite wife, Zarema, in his harem. Then a new young wife, Maria, appeared. She was very sad but so beautiful that the khan forgot about Zarema. One night Maria died, and Zarema was killed by eunuchs-guards. From that time, Khan Gyrey left his harem and tried to forget those events by participating in cruel wars.

On returning from the wars, he built the "Fountain of Tears," which Pushkin described as

Fountain of love, fountain alive, I brought as a gift for you two roses. I like unceasing murmur yours And so poetic tears those.

Now, after more than one and a half centuries, living roses don't wither at the fountain, for someone brings fresh ones every morning.

## Saline Springs and Salt Boiling

MINERAL AND HOT SPRINGS WERE USED NOT ONLY FOR medical purposes but also for salt extraction. The oldest data about salt extraction date to Gerodot's time (5th century B.C.). It was one of the Greeks' trading products with Scythia. Later, salt was boiled from estuary waters in the Black Sea region and from saline springs north and east of Russia.

Salt boiling has been known in Novgorod Russia since the 11th century A.D. The people of Novgorod had searched for fresh and salt water and were familiar with concentrations of natural solutions, where salt separation depended on the temperature. Use of salt solutions spread, due to the preparation processes of paint for icons and astringents for building materials. The importance of salt water output was reflected in the names of Russian villages and coats-of-arms for Russian towns.

Since the 11 th-12th centuries, the technique of drilling for brines with wooden tubes was used in Novgorod. These tubes reached a depth of 170 m . Underground water


Coats-of-arms of Russian towns with symbols of salt boiling: (1) Starya Russa; (2) Ekaterinaburg; (3) Solikamsk.


Salt well drilling with wooden tubes.
output and salt boiling were at a high technical level in Russia, as confirmed by the interest of foreigners. An old Swedish book was titled, "Some data about Russia, its roads, ways, fortresses with approaches to them, about boundaries, combined by the last Royal Embassy of the Tsars's court in Moscow and written by Erik Palmquist in 1674." In particular, the author described the saltern at the Mshaga River, near the town of Narva, and included a drawing.

## Legends of the Urals

## U

 NDERGROUND WATERS ARE CONNECTED VERY CLOSELY WITH THE FORMATION OF MINERAL AND ore deposits. In the mid-18th century, Russian scientist M. V. Lomonosov elaborated on the roles of natural waters, solutions, water-rock interaction, elements migration, and water in geological processes and ore deposit formations. But ancient people already knew about metal ore deposits. The remains of precious and nonferrous metals output and smelting have been found in the Caucasus, Transcaucasia, Ural, Cisurals, Kazakhstan, Altai, Siberia, and Middle Asia. They are of different ages, the oldest dating back to 3000 B.C. In the Urals and Siberia, the signs of prehistoric ore-working, known as "chud mines," date from the middle of the 3rd millennium B.C. The mines prospered in the 12 th century B.C. and closed in the 5 th century A.D.

Drawing of a saltern near the Mshaga River made by Swede E. Palmquist, in 1674: (1) common view; (2) plan of the saltern; (3) profile of the building.

Thus the Ural region is very rich in mineral waters, ore deposits, and precious stones. The heaviest Russian golden nugget, "Big Triangle" weighing 36 kg , was found in the Urals in 1842. The area is a natural geological museum where different rocks and minerals lie in shallow beds-sometimes even at the surface-as in the Ilmen preserve. More than 250 minerals have been found there. Some of them are very rare and found only in that area. "Stone fever" began at the end of the 18 th century when Cossack Prutov found the first Ilmen blue topaz. Later, amazonites were discovered in Ilmen. And the Urals were famous for malachite.

The immense natural resources of the Urals gave rise to a great number of fairy tales and legends. Russian writer Pavel Bazhov (1879-1950) collected 43 of these ancient stories in his book Malachite Box. According to legends, the riches of the Urals belong to the Mistress of Copper Mountain, who could turn into a lizard. She could reward and ruin. She enticed

Danila-master, who dreamed of making a stone flower, into the mountain by promising that he would learn a secret skill. This story was the basis for a ballet by Russian composer Sergei Prokofiev (1891-1953), "Legend about Stone Flower."

## The Fairyland of Kamchatka

GEOTHERMAL WATERS attract PEOPLE'S ATTENTION MOSTLY in VOLCANIC REGIONS, WHCH have many hot springs and geysers and where the water temperature is higher than in other areas. Kamchatka is the "hottest" region of Russia. There are 127 volcanoes, with 22 active. The Kuril Islands have 100 volcanoes, with 21 active. The first data about the Kurils and Kamchatka were recorded by Siberian Cossack Vladimir Atlasov in 1697-1699. Here investigators discovered a unique fairyland of hot stones and lakes, boiling geysers, and volcanoes.

Atlasov's Cossacks walked on the hot land, bathed in hot lakes, and cooked food in boiling springs surrounded by glaciers and snows. They lowered meat and vegetables in wicker baskets into boiling water. It was not even necessary to salt the food as thermal waters are themselves salty.

In the 17th century, Moscow Russia, rapidly growing both in geographical size and trading areas, sent special expeditions to Siberia and the Far East. In 1648, the Russian explorer Semen Dezhnev discovered a strait between Asia and America, and on one trip, Atlasov reached Kamchatka. Tsar Peter I ordered several large expeditions, although he died before they became a reality. The most important were the Caspian Sea expedition (1715-1720), Messershmidt's expedition to Siberia (1719-1727), and Bering's expedition or the first Kamchatka expedition (1725-1730).

The Academy of Sciences, founded in 1725, also organized expeditions, and the resulting scientific reports included data about temperature measurements in water springs, permafrost zones, caves, and mines of the Urals, Siberia, Altai, and Volga River regions. One such expedition was the "Second Kamchatka" or the "First Academic" expedition (1733-1743), which included renowned scientists. As a result of this expedition, Stepan P. Krasheninnikov's Description of the Land of Kamchatka was published in 1756. It recorded the first scientific data about the rivers, lakes, hot springs, volcanoes, and geysers of Kamchatka, as well as descriptions of active volcanoes and geysers and temperature measurements for six groups of
hot springs. Of particular interest is Krasheninnikov's description of the South Kamchatka region, around the Paugetka River near the Kambal and Koshelev volcanoes: "Springs gush out in many places as fountains mostly with great noise. Some springs are as lakes in big gaps. Small streams flow from them, combining with each other, dividing all this area into small islands, and falling into the Paudgy [Paugetka] River." In 1739, Krasheninnikov observed the eruption of the Tolbachik volcano.

## S. P. Krasheninnikov and Description of the Land of Kamchatka

## S

 CIENCE IS Obliged to Krasheninnikov for the first detailed investigations and reliable descriptions of Kamchatka. These provided a unique source of knowledge about this remote part of Russia. The son of a soldier in the army of Peter I, Krasheninnikov experienced his great success due to his own talent and ardor for science. In 1732, at the age of 21, he was sent to study at the Academy of Sciences as one of the best students of the Slav-Greek-Latin Academy. In August of 1733, he was among six students included in the Kamchatka expedition under the command of Vitus Bering.Quickly, Krasheninnikov's expedition leaders, Gmelin and Miller, recognized his talent and decided to send him to Kamchatka in their place, as a most talented and capable student. Arriving at Kamchatka in October of 1737, Krasheninnikov immediately began to prepare for his first trip inside the peninsula. During his numerous expeditions, he collected rocks and minerals, plants and animals. The field for his investigations was very broad and included scientific observations and investigations, historic documents and archives research, descriptions of languages, modes of life, customs, and legends of the Kamchatka peoples.


Stepan P. Krasheninnikov, important early explorer of Kamchatka. He first arrived on the peninsula in 1737.

Krasheninnikov fulfilled his task perfectly. His book, Description of the Land of Kamchatka, is known as a brilliant work in world geographic literature, and it was translated into English, French, German, and Dutch. Unfortunately, many details of the book were omitted in translations. The book was illustrated with engravings by Grimmel, based on drawings by the painter Berkman, who took part in expedition. The book consists of four parts:


The Kamchadals were a nation of people

The Kamchadal, from I. F. Krusenshtern's atlas.

living in Kamchatka. Krasheninnikov collected many stories and legends from them. Although a critic suggested transferring the Kamchadals' stories to the ethnographic section (Part III) of the book, Krasheninnikov did not agree, and the legends and tales of ancient people of Kamchatka permeate the entire narrative.

Legends and Stories of the People of Камсhatкa
$\mathrm{A}_{\text {rchaeological excavations have }}$ determined that people settled in

Kamchatka about 15,000 years ago. There were three main nationalities: the Kamchadals, Kurils, and Koryaks. The Kamchadals were as masterful at telling legends and tales as the ancient Greeks. They ascribed miracles to all high mountains, volcanoes, hot springs, and lakes. Malicious spirits dwelled in hot springs and souls of the deceased in volcanoes. Some legends recount moving mountains, which perhaps reflect earthquakes.

## Shiveluch Volcano.

This mountain was once at the site of Kronotzk Lake, but it was forced to move to another place because the susliks disturbed it too


The Shiveluch volcano. From Krasheninnikov, 1786 much. Two big lakes behind Tiim Mountain were formed by the footprints of Shiveluch as it moved to the new place.

Kronotzk Lake. High mountains surround Kronotzk Lake, two of them higher than others. One of them is Kronotzkaya, and another one is anonymous (now Krasheninnikov volcano). As this


Krasheninnikov volcano in the foreground and Kronotzkaya volcano on the horizon. From Aprodov
volcano is flat on top, the Kamchadals tell that Shiveluch volcano, once located at the site of Kronotzk Lake, leaned upon the volcano when it got up, breaking off its top.

Silver Fir Forest. The Shemech River has many hot springs around it and a silver fir forest at its south bank, unique in Kamchatka. This forest is forbidden to the Kamchadals; none dare to even touch it. According to a legend confirmed by many examples, anyone who touches it dies a violent death. They tell also that this forest grew from the bodies of Kamchadal warriors. Starving, they were forced to eat the bark of trees and finally perished of starvation in the forest.

Quarrel of the Kamchadals with Sea Whales. Three cliffs resembling columns are in the sea, near the convergence of the Unagkig River. The cliffs were torn off the coast during an earthquake. At the same time, this part of the coast, together with a Kamchadal settlement, fell into the sea. According to legend, this settlement was destroyed by sea whales after the Kamchadals quarreled with the whales over a knife the whales demanded from them.

The Malicious Spirit Unkalyak. Unkalyak ("Stone Spirit") is a big gorge. The Koryaks tell that a malicious spirit, Unkalyak, lives there. Anyone who passes near this place must sacrifice a stone. If they don't, the spirit sends misfortune. Since people throw stones at the same place, there is now a big pile of stones.

God Kut and His Wife. The Koryaks consider Kut as the God and first inhabitant of Kamchatka. The nearest river to his yurta was called Ualkal-va-em, "Cheek River," as he marked his dwelling with a whale's jaw. Koryaks now put trees in front of their yurtas instead of whale's jaws. The Koryaks also tell the story of Kut's presence. Not far away is an unnamed lake with an island divided in two parts by a hollow. Kut collected birds' eggs on this island. The hollow arose as a result of Kut's fight with his wife over eggs. Kut's wife was lucky and found big birds eggs, but Kut found only small eggs. He was upset and considered her happiness as the reason for his failure. He wanted to take away her eggs, but she resisted. A fight ensued: Kut dragged her by the hair, wishing for revenge. As a result of that fight, the hollow arose in the island.

Stone Boats. Nine versts (a verst is 1067 m ) from the upper reaches of the Ozernaya River (Lake River) there is a white rocky mountain with peaks that look like vertical boats. Local inhabitants tell that God Kut, the creator of Kamchatka, lived in this place and used stone boats
for fishing in the sea and lake. When he left, he put his stone boats on the mountain. They were surrounded by such great reverence that people feared even to approach them.

Gamul Spirits. The Opala River flows from under Opala hill, the highest near the Penzhinskoye Sea (now Shelekov Gulf). It serves as a beacon for sailors of both seas, although it is 85 versts inland from the Penzhinskoye Sea. The Kamchadals respect it very much and tell terrible things about it. They fear not only to climb it but even to approach its foot, as many Gamul spirits live there. This is why a great number of sables and foxes live there. The Kamchadals say that there is a large lake on the top with many whale bones, as Gamuls eat whales.

Heart of Alaid. Near the south end of Kamchatka is a deserted island, Alaid, consisting of one high mountain with smoke above the peak. The Kurils living near Kuril Lake tell a legend about Alaid. The mountain was originally located in the middle of the lake. Because of its height, it blocked the light to other mountains and constant quarreling occurred. Alaid was forced to leave and reside in the sea. But Alaid left its heart in the lake, in memory of its former location. The stone is situated in the middle of Kuril Lake and is called "Heart-Stone." The path of Alaid is traced by

View of Kuril Lake with the island "Heart-Stone," also called the Heart of Alaid. The view is from the Iljin volcano. The Kambalnaja and Koshelev volcanoes are in the background. Sketch by V. Svalova



Alaid Island. From Krasheninnikov, 1786
Lake River, which arose when the mountain began to move to the sea. Water from the lake rushed after Alaid, carving a path to the sea.

Kamchatka Volcano. The Kamchadals suppose that Kamchatka hill (now Klyuchevskaya hill) is a dwelling of the deceased. It erupts when the dead heat their yurtas. The dead catch whales in an underground sea and eat them. They burn the whales' fat for lighting and their bones for firewood. Gamul spirits also live in this mountain, where they boil whales, catching them by night and bringing home 5 or 10 whales skewered on their fingers. This is confirmed by the numerous bones found at all fire-spitting mountains.

Bilyukay. Special spirits live in high mountains where snow always lies, and the main spirit is Bilyukay. The Kamchadals fear to pass near high mountains and volcanoes. Bilyukay drives before him partridges or black foxes. Those who see him will be lucky in hunting and fishing all their lives.

The Kamchadals and Cossacks think that eruptions are the omens of bloodshed. They prove it by many examples. They state that the longer and stronger the eruption, the greater the bloodshed.

Real Story. The Kamchadals suppose that all hot springs and volcanoes are the dwellings of spirits. So they feared to approach them and to show them to the Russian explorers. But Stepan Krasheninnikov knew about the hot springs, and inhabitants of the Shemyachinsky settlement were forced to explain the true reason why they hid their knowledge. Finally, they showed the hot springs to Krasheninnikov but did not come to them. When they saw how the Russians bathed in the springs, ate boiled meat, and drank the water, the Kamchadals thought that they would soon perish. After returning, the Kamchadals told about the audacity of the Russians and were surprised that even spirits could not harm them.

## In Conclusion

THESE STORIES HAVE COVERED VAST EXPANSES OF TIME AND TERRITORY, STRETCHING FROM Russia's western to eastern frontiers. Some stories, perhaps, continued on their journey east to North America, and others returned from the east to Russia. The movement, part of their natures, is annealed in time.

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Bath pavilion for women, built in Fatepur by the Emperor Akbar in the 16 th century. D. Chandrasekharam


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