



THE VALLEY OF GEYSERS – TWENTY YEARS AFTER THE GOSA EXPEDITION

by Andrey Leonov and Jack Hobart

Good news came from the Valley of Geysers – one of the largest geyser fields in the world, located in Kamchatka peninsula on the Russian Far East, in the Kronotskiy Reserve. The new “Catalogue of the Main Objects in the Valley of Geysers” was finalized and officially approved in November 2011.

Forty geysers with proper names are registered in the catalogue. It is notable that three of these geysers were actually named during the GOSA expedition to the Valley in 1991: Kuznechik (Grasshopper) Geyser, Gosha (GOSA) Geyser and Martyshka (Monkey Face) Geyser.

These geysers are located on Vitrazh (Stained Glass Wall), the main thermal wall of the Valley of Geysers. During the 1991 expedition, the Vitrazh attracted a lot of attention due to eruptions of Grot (Grotto) Geyser that was abnormally active during that visit. Expedition members included T. Scott Bryan, Jack Hobart, Bill Warnock, John S. Rinehart, Martha Fenimore, and Bob Colvin, guided by a warden and scientist of Kronotskiy Reserve, Vitaliy Nikolaenko.

Observing the Vitrazh closely, they noted three small, previously unnamed geysers. Vitaliy named the first Kuznechik, possibly because its abrupt outward bursts of water are reminiscent of the hop of a grasshopper. He honored GOSA with the second, presumably during one of the many toasts that occurred during the visit. The third was far more elusive, erupting only for about 15 seconds prior to stronger Grot eruptions. A number of names were used by the visitors, all based on the monkey-like appearance of its formation, erupting from a vent below a rounded face having both eyes and a nose as well. Since several people referred to it as “Monkey Face” in the only eruption videos that exist, this name has now been adopted.

Kuznechik and GOSA geysers are active at the present time with periods

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Kuznechik (or Grasshopper) Geyser can be seen in the center, with both vents erupting simultaneously. Fontan Geyser is directly above, 2011

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GOSA Geyser erupting to the left of the Grot runoff channel, also with Fontan above, 2011.

of several minutes. Eruptions reach about 1 meter. Martyshka (Monkey Face) Geyser has not been seen to erupt since 1991. This seems to reinforce the suggestion that its eruptions are only associated with strong eruptions of Grot Geyser which rarely erupts. For example, only 1 eruption of Grot was photographed in 2010. Furthermore, it is unlikely that an observer would be close-by prior to a Grot eruption and also note the splashing of a cute little geyser next to the strong runoff of one of the World's mightiest geysers.

A return visit of Russian geyser gazers to Yellowstone is waiting in the wings. It is hoped that unnamed geysers could be observed in Yellowstone and given appropriate Russian names.

Indeed, cataloguing of geysers is only one part of the ambitious project "Virtual Valley of Geysers" (www.valleyofgeysers.com), aimed to create open virtual model of the valley. Key components of the project are: 1) creating a high resolution digital model of the landscape, 2) cataloguing geysers and other significant features, then developing a web-based information system with texts, photos, and stereo cinematography, 3) improving the internet presentation of the model and associated stereo-3D "virtual reality" systems, and 4) interactive storytelling



The Monkey Face Geyser vent is located right under the "face" on the Vitrazh. Runoff from an overflow of the Grot Geyser pool is also occurring, 2011.

based on the model.

In subsequent articles, we will review the new catalogue of the Valley of Geysers and compare it with the 1991 GOSA report. The huge 2007 landslide shifted twenty two million cubic meters of rock, which changed the landscape dramatically, so it's time to update information about the Valley of Geysers for Sput readers. We will also

introduce the "Virtual Valley of Geysers," a representation of the valley that could serve as a model to emulate for Yellowstone geyser basins and parks throughout the world.

[Editors' note: The project's remarkable high-definition, 3-D imagery can be viewed at <http://valleyofgeysers.com/videos>]

A BRIEF REPORT ON TWO THERMAL AREAS IN ICELAND

by Tara Cross

David Monteith and I visited Iceland in late August, 2011. We did not have time to do a complete tour of all of the thermal areas, but we found two thermal areas with active geysers.

The big attraction, of course, is Haukadalur, where the famous Geysir and Strokkur are located. We did not have time to ask around to see if Geysir had been active recently, but the most current information we could find indicated that it was dormant and there were no physical signs of activity around its crater. However, Strokkur ("the churn") was active and in fine form. We watched it for a total of about 7 hours on August 24 and 26. Intervals appeared to vary based on the

amount of energy expended in the previous eruption. Most eruptions were single bursts to 20 to 60 feet (probably averaging around 40 feet). For these eruptions, intervals were usually 3 to 4 minutes. Some eruptions had 2 bursts, and, less frequently, there were 3- or even 4-burst eruptions. Based on my observations, and confirmed by the webcam, each extra burst added another 3 to 4 minutes to the interval. The intervals I timed after 2-burst eruptions were 5m47s and 7m21s. The interval after a spectacular 4-burst eruption was the longest we saw, 15m19s. And, every so often, there was a "minor" eruption with a weak burst to 10 to 15 feet. These

resulted in the shortest intervals of 2 to 3 minutes.

The only other true geyser we saw was a small feature near the southwest edge of the thermal area. I took an hour of data on it. Intervals ranged from 1m40s to 3m10s. It was difficult to see, but there appeared to be 2 vents, the larger of which sprayed a small column to 2 to 3 feet. There were also several perpetual spouters in the area, and there may have been other true geysers that were missed. I spent most of my time watching Strokkur.

We also took the long trek into the middle of nowhere to see Hveravellir. In 2003, Alan Glennon reported seeing 5 geysers at this small, remote thermal

