

Commander Islands as the Significant Point for Monitoring Some Dangerous Changes in the Beringia Ecosystem

Vladimir Sevostianov

Abstract—This paper explores the many natural, historical, and economic reasons the Commander Islands are an essential focal point for field expedition work and finally for conservation projects in the unique ecosystem of the North Pacific. Around the Commander Islands we can find a biologically productive and diverse marine environment. For example, it is one of the richest areas of seaweeds by species and biomass in the world. However, the number of sea otters has dramatically declined during the last seven years in some parts of the Northern Pacific. This fact clearly displays that something is drastically wrong with the natural functions in the whole ecosystem of the Bering Sea.

Right now, we have a catastrophic situation with sea otters near Alaska and the Aleutian Islands. They have almost just disappeared for unknown reasons. According to Yereth Rosen (2004), in the Anchorage newspaper, "... sea otters are once again vanishing from Alaska's 1,000-mile (1,600-km) Aleutian chain and other parts of southwestern Alaska. This time, there is no obvious explanation. Alaska's sea otter population numbered 100,000 to 137,000 in the 1980s, with its core in the Aleutians and western Alaska. But numbers fell 70 percent from 1992 to 2000, according to the U.S. Fish and Wildlife Service. Some Aleutian populations are down to just a few thousand, about 5 percent of 1980s levels, the agency said." And the trend is continuing.

The Fish and Wildlife Service, which shares responsibility for protecting endangered species with the Commerce Department's National Marine Fisheries Service, had to move the sea otters to the list of endangered species for the USA. Almost the same situation is occurring with Steller sea lions and some other species, which are in the top level of the food chain.

All these facts clearly display that something is drastically wrong with the natural functions in the whole ecosystem of the Bering Sea. Around the Commander Islands we have biologically productive and diverse marine environments. The main reasons are the unique combination of some geological and hydrological factors around this small area. Also, near

the Commander Islands there are a few huge and active underwater volcanoes. Altogether, this is the most favorable condition for phito and zooplankton, which form the base of living for the other high range organisms in the ecosystem. It is the primary influence on the huge biodiversity of seaweeds near the coastal line of the Islands, too. Actually, it's one of the richest areas of seaweeds by species and biomass in the world.

That's why the sea otter population around the Commander Islands is still stable. So, I can establish beyond doubt that for many natural, historical, economic and other reasons, the Commander Islands are an essential focal point for field expedition work and finally for conservation projects in the unique ecosystem of the North Pacific. The urgency of the initiatives to be funded has been confirmed many times over by the United Nations Educational, Scientific and Cultural Organization (UNESCO). Already in 1993, the Commander Islands received the status of "Nature Reserve" under Russian Federal Law. In 2002, the Commander Islands received "Biosphere" status under UNESCO guidelines. We are hopeful (with all of the documents ready and with UNESCO approval) that the Commander Islands will obtain the highest status of "World Nature Heritage Site" under UNESCO.

Everybody acknowledges that the Commander Islands can serve as a wonderful model and preserve for the study of the Bering Sea ecosystem's natural processes, which is now starting to suffer stagnation and collapse. But for now we don't have real financial support for practical actions on the Commander Islands.

According to the role under UNESCO, the Biosphere status of the Commander Islands Reserve and the Nature Heritage status must work closely with native people (their population is around 300—mainly Aleut). First, they are going to work at the Reserve like a staff; second, they can use some natural resources in some special zones at the Reserve; and third, they will conduct some training programs at the Reserve and do all kinds of native activity outside and inside the Reserve and some of the territory on the Commander has been left for native people for fishing, hunting and harvesting.

During a long break in the lifestyle of the native people on the Commander, most of them have lost their ability to work with Nature. That's why one of the goals of the Biosphere Reserve will be restoring and protecting some unique aspects of the social and economic culture of the native people on the Commander Islands. Especially for Aleuts, it is extremely important they feel that their Islands will be safe with Nature forever!

In August 2003, a freight container (around 19 m³/160 barrels capacity) was thrown out of the ocean onto Bering

Vladimir Sevostianov, President of the Commander Islands and BC Nature Protection and Conservation Association, Canada–Russia.

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Island (largest island in the Commander archipelago). The container was full of some kind of polymeric liquid that is used in the building industry and produced in the United States. With a large cooperative effort, the locals managed to move the container farther away from the ocean and place it in a safe position on the beach. Unfortunately, most of the aggressive liquid leaked into the ocean. Luckily, the storm weather and direction of the wind moved the poison away from the breeding colony of fur seals, sea otters, sea lions, seals and marine birds, but towards another unique island, called Ariy, where the natural habitat is full of life.

This is an additional reminder that it is necessary to think urgently about organizing, on the Commander Islands, some kind of International Monitoring Observation Center, which can be based at the Commander Biosphere Reserve.

Reference

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