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Long term changes in the sea otter's diet in Glinka Bay (Commander Islands, Russia)

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During last decade sea otter's decline occurred in different parts of species' area. Food limitation is one of the main reasons of populations decline in different animal species. Decrease in abundance of sea otters usually occurs in populations which have just inhabited available coasts. Sea otter is high-level predator that causes significant changes in coastal ecosystems when it spreads, then predator-prey system becomes stable. Any significant changes in distribution and abundance of preys are less expected to be influenced by changes in sea otter's diet. Sea otter inhabited all coastal zone of the Medny Is. (MI) since early 1960s and we believe that coastal ecosystem is stable. We didn't expect that any significant changes in sea otter's diet can take place on MI. To estimate the range of long-term changes in winter-spring sea otter diet we conducted a comparative analysis of 59 sea otter scats which were collected in Glinka Bay on same rocks in 1995 (28 scats) and in 2008 (31 scats). The number of consumed invertebrates and fishes was calculated in each scat and the taxonomy of each prey was determined. Remains of 5643 consumed preys were determined. The quantity-qualitative composition of consumed preys in 1995 and 2008 differed significantly. In winter-spring scats in 2008 on study area bivalves were more common and numerous in contrast to 1995. In scats which were collected in 1995 there were no remains of three species of the bivalves which were in scats in 2008. One of these species did not occur on Commanders before early 2000th. So, the significant changes in sea otter's diet took place on the MI in last decade. We think that this phenomenon may be caused by some changes in coastal ecosystems on MI. Based on this hypothesis we think that hydrological changes occurred in recent years.