How Isolated is the "Western" Gray Whale Population?

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The "western" gray whale population, also known as Okhotsk-Korean, is listed in the Russian and IUCN Red Books. The reason for that was the common belief that the population is isolated and very small.

Background. Historically, gray whales were common in the western North Pacific. A small population occurring south-west of the Honshu Island was hunted to extinction by whalers by the end of the 19th century and a more regular-size population was thought to inhabit the Sea of Okhotsk and other Asian seas. The whales of the latter came to feed in the Sea of Okhotsk and traveled to breed in the sea waters south of Korea and Japan. There is no reliable evidence that these whales in the Asian seas, but old gray whale bones have allegedly been found at some monasteries in China and Vietnam. The stock of this "population" was relatively large, but by the end of the 19th century it was depleted by whaling. Since the 1950s, there has been no information about the whales of this population.

The "eastern" (Chukchee - California) gray whale population had also been hunted to near extinction by the end of the 19th century as a result of whaling. The initial (=pre-commercial) stock of this population has been assessed at 18,600 individuals, which changed to 16,700 in mid-19th century, dropping to 2,800 in 1900 and rebounding to 12,600 in 1968, 21,600 in 1988 and 22,000–32,400 in 1998. It can be seen that after prohibition of commercial whaling, the size of the population almost doubled against its initial size. Some scientists believe that as a result of exceeding the environmental capacity, the population decreased in 2002 by 10,000 to the level of 14,000-21,000 individuals and since that time has maintained this - apparently natural – level of abundance.

Present knowledge. When the "Chukchee - California population" was at peak abundance (in the 1980s), gray whales resumed their appearance near Sakhalin. Their current number is approximately 110-140 individuals, with new animals sighted every year. There have been several records of young male whales netted by fishermen east of Hokkaido and Honshu. Noteworthy is the evidence of catching a very old whale with a turning-type stone harpoon left in its body. Such spears were used only by Chukchee aboriginal whalers.

The recent whale surveys resulted in gray whale sightings in the northern segment of the Sea of Okhotsk, and one whale was seen near the Northern Kuril Islands in 2008. During this year, 40 whales were encountered in Olga Bay off the eastern coast of Kamchatka, opposite the Komandor Islands. The photo ID showed that 20 of these whales had been earlier identified near Sakhalin.

Intensive studies of the Japanese and Korean scientists have revealed no gray whales migrating along the eastern coast of Japan or between Japan and Korea.

Possible scenarios of the "western" gray whale population recovery:

1. The commonly accepted scenario. The "population" occurring near the south-eastern coast of Honshu became extinct at the end of the 19th century. A few individuals of the "western" gray whale population survived the massive hunting in the Sea of Okhotsk and grew in number to 110 -140. They hibernate in unidentified areas south of Korea and Japan. Man-induced impacts or natural factors caused the whales to migrate during summer to northern areas of the Sea of Okhotsk.

2. The proposed new scenario. There has never been an isolated "western gray whale population". At least, there was intensive gene exchange between the western and eastern sub-stocks. We can't rule out the possibility of occasional use of the Asian wintering areas. We are currently witnessing recovery of the old habitats in the Sea of Okhotsk and, possibly, off the south-eastern coast of the Honshu Island. The authenticity of this scenario is supported by the following:

1. Gray whales have been caught near the eastern coast of Hokkaido and Honshu, including the old whale with a stone harpoon left in its body.
2. There is no evidence of the whales migrating to Asian wintering areas.
3. New adult whales are sighted near Sakhalin every year.
4. Some whales identified in Sakhalin were earlier sighted near the western coasts of Kamchatka and the Northern Kuril Islands.
5. A mixed group of gray whales have been found near the eastern coast of Kamchatka, half of them being the whales earlier identified in Sakhalin, including a female with a calf.

The proposed scenario of natural recovery of the "western" gray whale population. The "eastern" population migrates between the Chukotka coast and the Gulf of California through the numerous straits of the Aleutian Islands. We should not rule out the option that upon reaching and even exceeding the natural abundance limit, gray whales spread to their old western habitats via the recovered migration route from the Gulf of California along the southern coasts of the Aleutian and Komandor Islands to Kamchatka and further down to the Sea of Okhotsk. The well-known phenomenon of "skinny" whales found near Sakhalin can be explained, among other things, by their long travel across the Pacific, from California to the Sea of Okhotsk. This requires much more energy than just migrating in the shallow coastal waters. If this trend persists, including the growing whale numbers in the Sea of Okhotsk, part of the whales may begin to use the Asian wintering areas, including areas south-east of Honshu.

Priority tasks of the "western gray whale population" studies. Absence of the reliable data about the migration routes of the Okhotsk gray whales makes the studies of these whales an urgent necessity. These studies should include satellite tagging and hydroacoustic surveys.

Given the risk of affecting the whales' health, it is obvious that the tagging should be applied only to adult males, which is quite doable, if the surveyors use the exiting photo ID catalogue of the Sakhalin whales. The best time for tagging the whales near Sakhalin and eastern Kamchatka is in autumn, before they start to migrate. For these studies it is advisable to obtain recommendations from the Scientific Committee of the International Whaling Commission.

Hydroacoustic surveys from Cape Lopatka of the Kamchatka Peninsular will help determine the number of whales coming to the Sea of Okhotsk from the Pacific Ocean and then compare it with the information about the number of whales near Sakhalin.

These two methods, when applied, will to a significant degree prove or disprove the proposed new scenario of the natural recovery of the "western" gray whale population.