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## Brief Results of gray whale *Eschrichtius robustus* research off Chukotka, Russian Federation, 2012-2014

Sergey A. Blokhin, Dennis I. Litovka



INTERNATIONAL  
WHALING COMMISSION

**BRIEF RESULTS OF GRAY WHALE *ESCHRICHTIUS ROBUSTUS* RESEARCH OFF CHUKOTKA, RUSSIAN FEDERATION, 2012-2014**

Sergey A. Blokhin, **Dennis I. Litovka**

<sup>1</sup> – TINRO-Center, Shevchenko Alley, 4, Vladivostok, RUSSIA, 690950

<sup>2</sup> – Chukotka branch of TINRO-Center, PO Box #29, Otko Str., 56, Anadyr, Chukotka, RUSSIA, 689000

E-mails: [s.a.blokhin@mail.ru](mailto:s.a.blokhin@mail.ru); [d-litovka@yandex.ru](mailto:d-litovka@yandex.ru)

**ABSTRACT**

Totally in 2012-2014 from May to December about 400 gray whales were landed by whalers from 20 Chukotka villages. Traditionally the largest number (179 or 47,4%) was landed in the native village of Lorino (Mechigmsky bay). In June and September, scientists investigated 95 gray whales caught in the Mechigmsky bay.

In the sex structure the females were dominating (65.9%) with average size of 10.2 m. The average size of males was 10.0 meters. In the Mechigmsky bay the basis of whaling was sub-adults (69.9%). Roughly the general ratio of mature and immature of harvested whales was equal. 3/5 of examined whales had a size between 7.6 and 9.5 m. The maximum length of a whale was 14.3 m, and the lowest – 7.7 m. The majority of whales (89.5%) had complete or half-full stomachs. The highest body condition index registered with yearlings (1.24÷1.43%) and the immature animals with 1+ age had the lowest (0.78%).

The number of landed “stinky” gray whales in the Mechigmsky bay and in Chukotka region is decreasing. In 2012-2013 eight “stinky” whales with strong medical smell and taste were landed in Chukotka, which were excluded from the quota due to unusable and inedible condition.

The total number of 43 gray whales were identified during photoID in 2013-2014 at the Mechigmsky bay. The preliminary comparison of gray whales catalogue from Chukotka to Kamchatka and Sakhalin waters had no positive results.

**Key words:** Gray whale, distribution, number, harvest, sex-age and size structure, physiological state, body condition index, photoID

TINRO Center (Vladivostok) and ChukotTINRO (Anadyr) in 2012-2014 continued collecting a biostatistical material from the gray whales harvested by the Native hunters off the Chukotka Peninsula (Chukotka, Russia). The aim of this work is to determine the demographic and spatial structure and the feeding conditions of whales in the Mechigmsky Bay (north-east coast of the Chukchi Peninsula).

In 2012-2014, the Chukotka Department of Industrial and Agricultural Policy distributed the Federal permit to hunt gray whales (120 animals per year) between 20 Native villages of Chukotka (Fig. 1). Totally about 400 strikes on gray whales were made, 8 attempts were struck-and-lost and 12 "stinky" whales. The largest number of whales were hunted by the biggest Chukotka Native village Lorino (179 or 47,4%).

Among gray whales harvested in the Mechigmen bay females slightly predominated (65.9%). Immature whales consist the basis of the harvest (2/3 or 69.9%), females had 68.1% and males - 72.2% of sub-adults (Table).

More than a half (61.8%) examined whales had a size between 7.6 to 9.5 m. The average size of harvested females was 20 cm higher than males (10.2 and 10.0 m, respectively). The largest female of gray whale had a body length of 14.3, and the lowest - 7.7 m.

There were 7 pregnant females in the whaling in the Mechigmsky bay at 2012-2014. The length of growing embryos shown quite significant line correlation (Fig. 2).

More than a half of whales (89.5%) had complete or half-full stomachs. The highest body condition index registered with yearlings (1.24÷1.43%) and the immature animals with 1+ age had the lowest (0.78%).

The number of landed “stinky” gray whales in the Mechigmsensky bay and in Chukotka region is decreasing. In 2012-2013 eight “stinky” whales with strong medical smell and taste were landed in Chukotka, which were excluded from the quota and annihilated due to unusable and inedible condition. However, this does not mean that there is no such whales, because interviewing data tells opposite that the number of "stinky" whales, seals, birds and fishes is at least stable. It also means that whalers learned to identify them from a distance, avoid and do not hunt on them.

Usually 1/3 of gray whales in the harvest have a chest or/and flukes injury, or/and scratches left by the killer whale teeth.

On behalf of the recommendations of the IWC Scientific Committee in the Mechigmsensky bay coastal waters we've conducted Gray whale photoID (Fig. 3). Which despite of high stress on animals during whaling shown good perspectives for identification of gray whales in Chukotka waters. The preliminary analysis of photos (2013 - 323, 2014 - 690) identified 26 animals by right side (constant catalogue numbers are ChukGW# 1 ÷ 26) and 17 whales by left side of the body and flukes (temporal numbers in catalogue are TEMPGW# 1 ÷ 17). We haven't seen any caws with calves and skinny animals.

The preliminary comparison of gray whales catalogue from Chukotka to Kamchatka and Sakhalin waters had no positive matches.

Our research in 2012-2014 indirectly indicate that the existing aboriginal hunting on the Gray whale has no negative impact to its population and feeding conditions in Chukotka waters, and thus can be implemented in the future in the same amount.

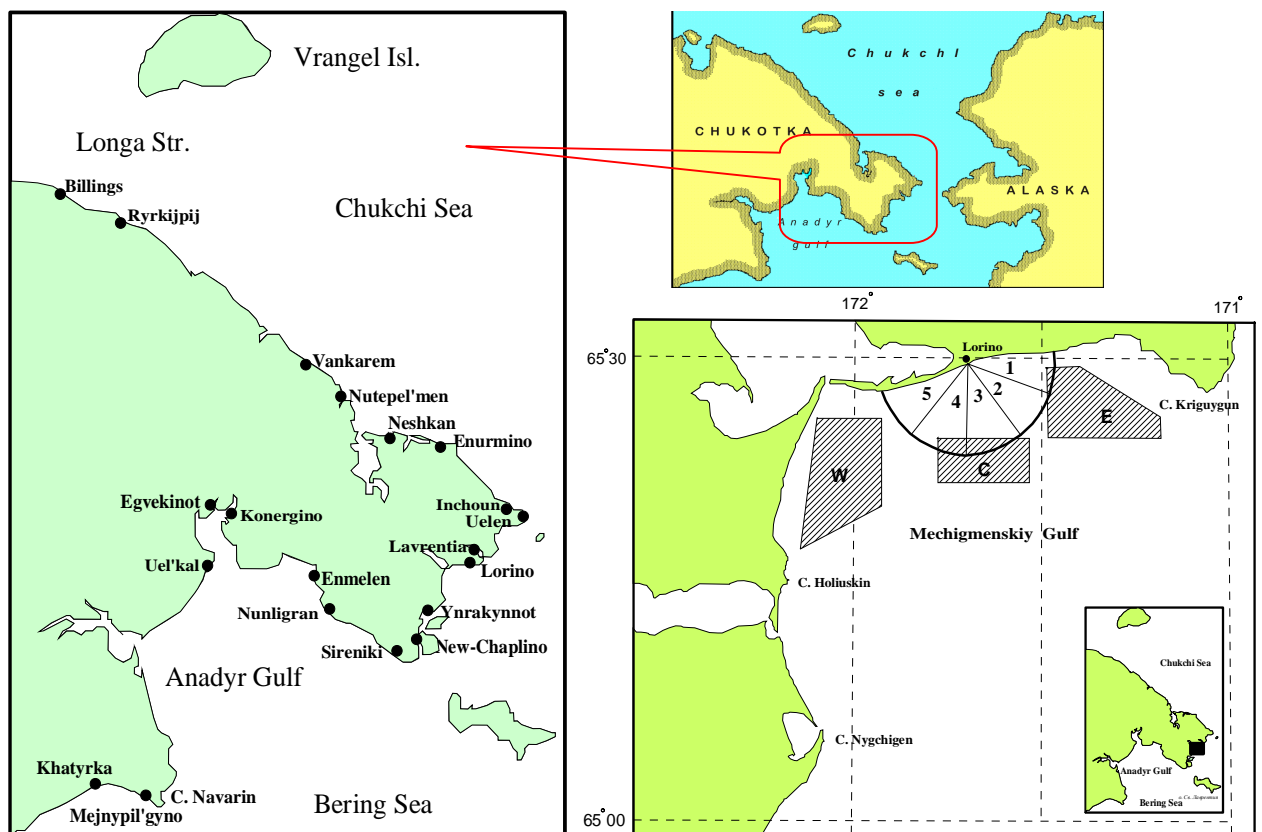


Fig. 1 - Native whaling villages of Chukotka in 2012-2014, observation water area and observation sectors in the Mechigmsenskiy Bay (Blokhin, Litovka, IWC 2009-2012)

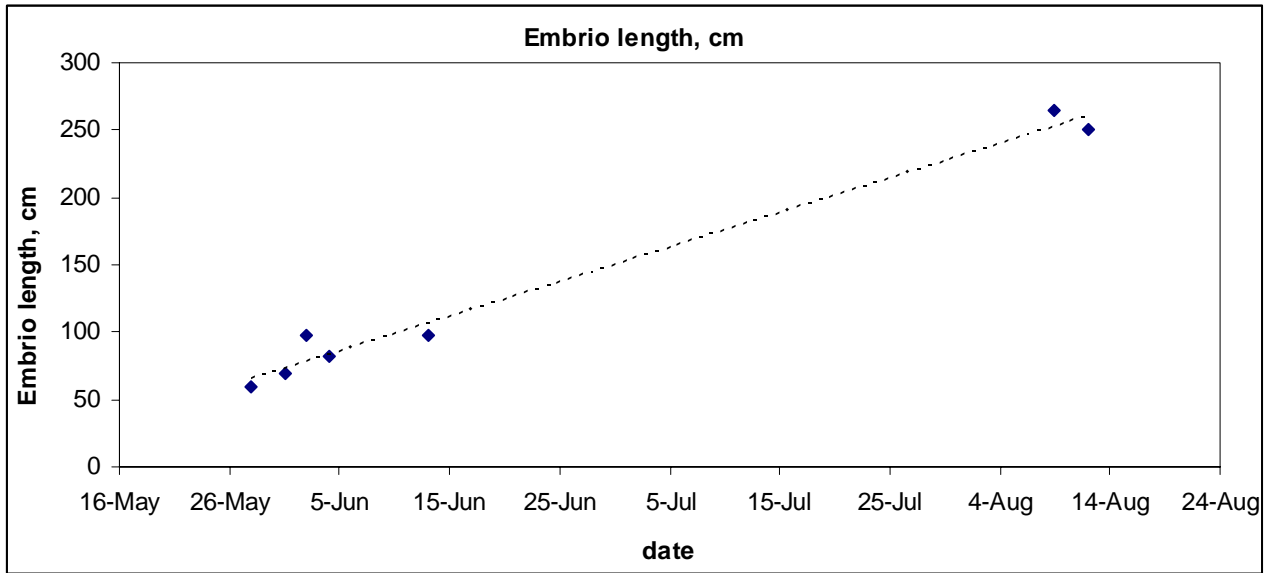


Fig. 2 - The length of embryos of gray whales harvested in the Mechigmensky bay, 2012-2014

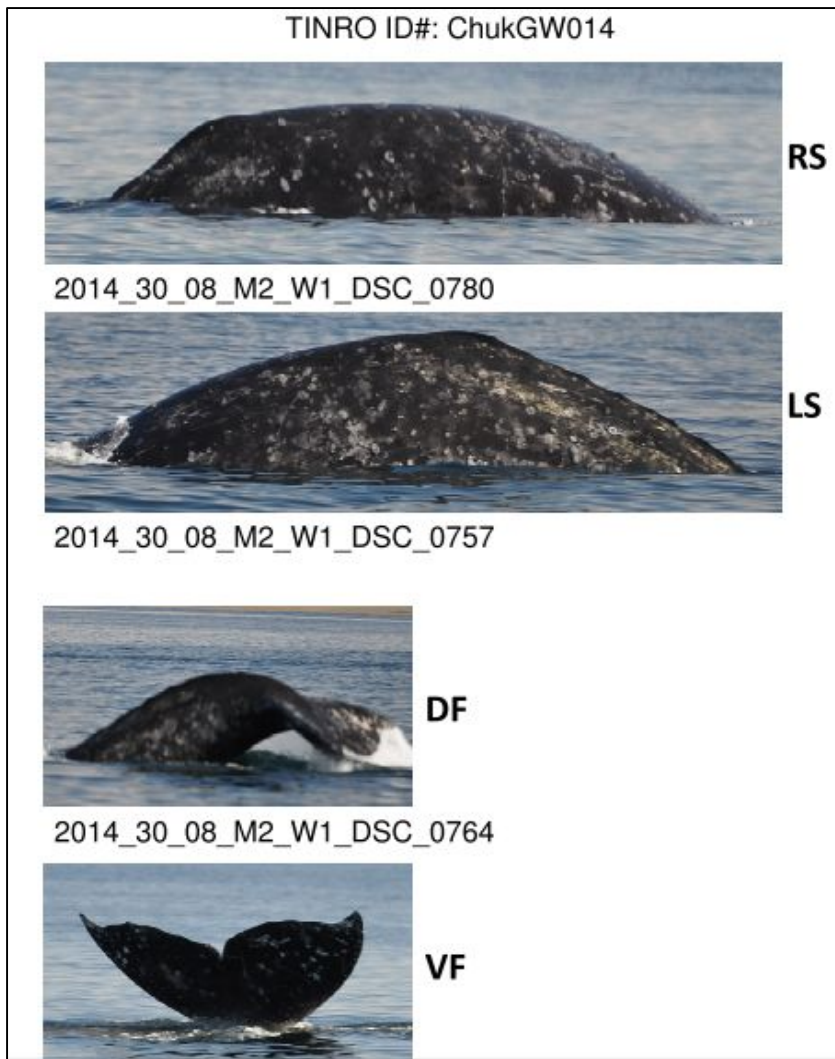


Fig. 3 – Result of gray whales photoID in the coastal waters off Chukotka, 2013-2014

Table – Sex-age structure of gray whales, caught in the Mechigmsky bay, 2012-2014

	Number	%	Subadults, %	Ave size, meters			Ave age, years		
				all	subad	adults	all	subad	adults
<b>2012</b>									
Females	14	60.9	78.5	9.7	8.8	13.1	7.7	2.1	28.3
Males	9	39.1	44.4	10.4	8.4	12.1	9.6	1.5	16
In total	23	100	65.2	10	8.7	12.4	8.4	1.9	20.6
<b>2013</b>									
Females	25	80.7	80	9,8	9.1	12.7	6.0	2,8	21,7
Males	6	19.3	83.3	9.5	9.0	12,4	6.0	2.2	25
In total	31	100	81	9.8	9.1	12,6	6.6	2.7	22,4
<b>2014</b>									
Females	23	56,1	56,2	11,0	9,5	13,0	3,9	2,6	19
Males	18	43,9	72,2	10,1	9,2	12,7	3,8	2,2	25
In total	41	100	63,4	10,6	9,4	12,8	3,8	2,4	22