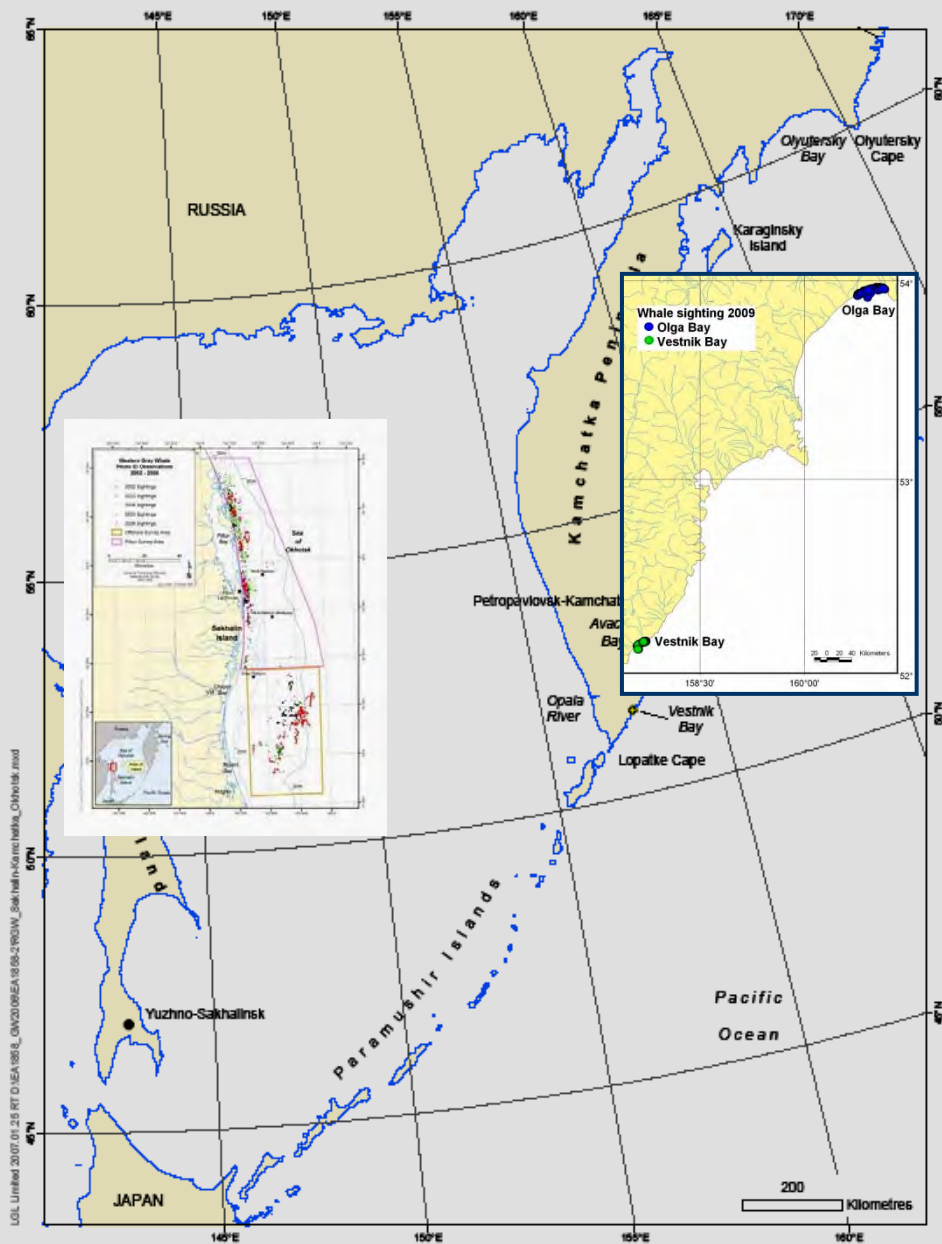


# Discovering a new feeding area for calf-cow pairs of Western Gray Whales on the south-east shelf of Kamchatka in 2009 and their utilizing different feeding regions within one season

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In 2009, photo-ID studies were conducted principally at the two Sakhalin feeding areas (Piltun and Offshore) and two Kamchatka areas (Olga Bay and Vestnik Bay)

# Photo-ID Platforms



*Academic Oparin SV*



*Photo-ID Team in Zodiac*



*Behaviour Team*



*Kamchatka Photo-ID Team*



# WGW Photo-ID efforts during 2009 in Sakhalin Island shelf

Duration of expedition – from 2009\_07\_05 to 2009\_08\_03  
And from 2009\_08\_07 to 2009\_09\_28

Number of workdays involving PhotoID – 25

# WGW Photo-ID efforts during 2009 in Kamchatka shelf

Vestnik – 6 PhotoID days

From 2009\_05\_30

To 2009\_06\_14

May 1 day

June 5 days

Olga Bay – 8 PhotoID days

From 2009\_07\_11

To 2009\_09\_02

July 4 days

August 3 days

September 1 day

# PhotoID Individuals in Sakhalin and Kamchatka Catalogues

Number of whales in the catalogue registered on the shelf  
of Sakhalin Island from 2002-2009

**177**

Number of whales in the catalogue registered on  
Kamchatka in 2004 and the period of 2005-2009

**116**

From the Kamchatka Catalogue the following  
number has been registered in the  
Sakhalin catalogue

**61**

**One of the main objectives of the photo-ID study of WGWs is to determine cow-calf pairs and their association during the season (timing of cow-calf separation i.e., weaning) and assess the number, status and habitat use of cow/calf pairs (calf birth and survival rates)**





**The cows are identified by their close behaviour and proximity to the calf; as a rule, these feeding females also have significant body condition deficiency**

# Determining Calf



A "calf" was defined as an individual up to one year old (current year's offspring) as established by a set of criteria, such as their small body size (about one-third a mature adult) and demonstrating a close association with a particular adult whale

The calf identification process was based on a set of morphological and behavioral criteria that were evaluated by photographs, video footage and photo-ID field notes.







**The calf demonstrates smaller blow compared to adult whales**

**Calf identification is confirmed by field data**

**Calf or cow/calf identification is confirmed by the behaviour studies team**



The whale is not in the catalogue and was observed only in shallow waters

The whale was observed two or more times in close association with a full size adult whale that was presumed to be a cow



Pair cow/calf encountered multiple times near the shore (at shallow depth) within the close proximity of the same adult (and has a significantly smaller size)





**Calf can be encountered within groups of other calves from this year**





The whale looks like a calf (has a short round rostrum and fat body, is smaller than an adult, demonstrates playful behavior and has no "donut"-shaped barnacle spots)

2002



2003





**Until 2008 cow-calf pairs had only been recorded in the Piltun feeding area, and often near the mouth of Piltun Bay, where prey abundance is high and water is shallow, giving mothers & calves ideal foraging opportunities.**



# Photo-ID WGW in Olga Bay in 2009

**64+2 Temp** whales were identified

**34** whales were registered in Kamchatka Shelf in previous years

**30+2 Temp** whales were new for Kamchatka Catalogue

3 of 5 calves registered  
on the shelf of Sakhalin island in 2008  
were seen in Olga Bay in 2009

# **Mother-calf pair identified in Olga Bay, Kamchatka**

**No cow-calf pairs were recorded in Kamchatka during 2004, 2006 and 2007.**

**1 mother-calf pair has been registered for the first time in 2008**

## **Mother –**

has been seen earlier on an annual basis on the shelf of Sakhalin Island from 2002 through 2006

In 2003 she was identified with her calf on the shelf of Sakhalin island

In 2007 her presence was registered in Olga Bay

## **Calf –**

had the physical condition of class 1

# Number of cow-calf pairs identified in 2009 in Sakhalin Island shelf

KOGW###	B.TEAM ID W#	# days of registration		calf/calf	B.TEAM	IBM
		B.TEAM	IBM		cow	cow
167	136	8	2	y/y	unknow	92
168	137	3	3	y/y	97	97
169	130	3	1	y/y	31	31
173	135	8	1	y/y	50	50
174*	no data		2	y	no data	no data
175	133	8	1	y/y	unknow	unknow
176	132	8	no in IBM data	y	20	no in IBM data
177*	134	6	no in IBM data	y	15	no in IBM data

Number of identified pairs – 6

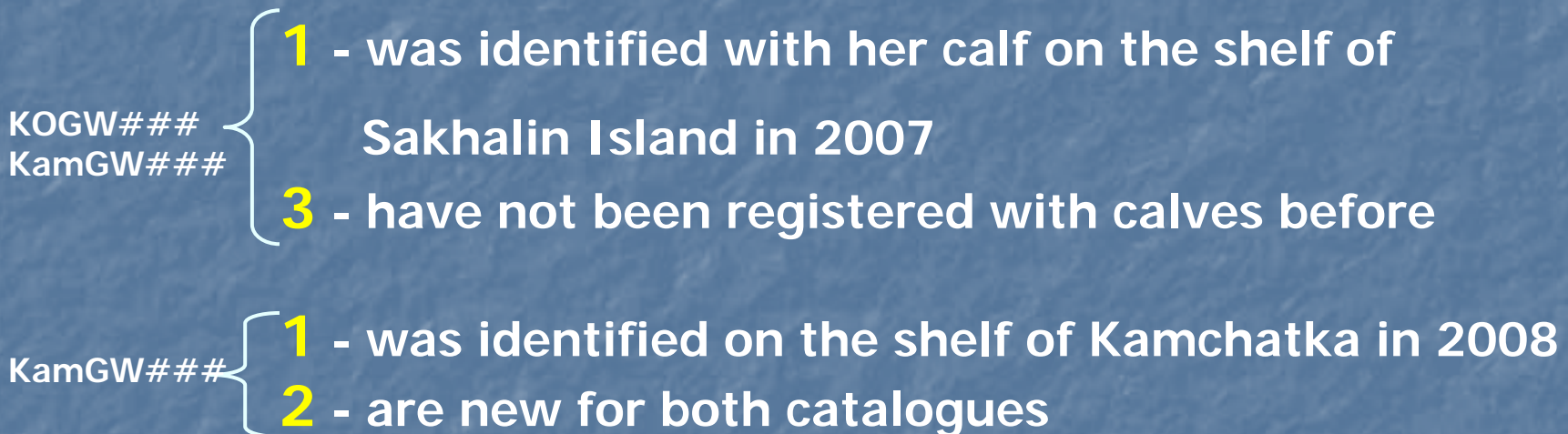
Number of identified calves – 8



# Number of cow-calf pairs identified in Olga Bay, Kamchatka 2009

**7 cow-calf pairs were registered**

## Mothers –

- 

KOGW###  
KamGW###

  - 1** - was identified with her calf on the shelf of Sakhalin Island in 2007
  - 3** - have not been registered with calves before
- KamGW###

  - 1** - was identified on the shelf of Kamchatka in 2008
  - 2** - are new for both catalogues

# Recording of Cow/Calf pairs in Olga Bay on the Southeastern Shelf of the Kamchatka Peninsula and Evaluation of Calf Certainty

Calf Kam/KoGW	Date of Observance	Cow Kam/KoGW	Date of Observance	Reliability Grade and Criteria is used	Total Grade
85	2009_07_11	84/110	2009_07_11	A1,2,3	A
	2009_07_21	84/110	2009_07_21		
	2009_08_20				
	2009_09_02				
86	2009_07_11	001/090	2009_07_11	A1,2,3	A
	2009_07_21	001/090	2009_07_21		
	2009_08_04	001/090	2009_08_04		
	2009_08_14	001/090	2009_08_14		
	2009_08_20				
	2009_09_02				
88/174	2009_07_11	087/103	2009_07_11	A1,2,4	A
100	2009_07_16	57	2009_07_16	A1,2,3	A
	2009_07_21	57	2009_07_21		
	2009_07_27	57	2009_07_27		
	2009_08_20				
102	2009_07_21	101	2009_07_21	A1,2,4	A
	2009_07_27		2009_07_27		
104/177	2009_07_21	temp1/015	2009_07_21	A1,2,3+D3	A
105	2009_07_21	106	2009_07_21	A1,2,4	A
	2009_08_14				
	2009_08_20				
	2009_09_02				

subsequently observed offshore Sakhalin

was observed in Vestnik Bay in November

subsequently observed offshore Sakhalin

Breakup of cow/calf pairs started on 21 July and  
proceeded till 14 August

# Number of mother-calf pairs identified in 2009 on the Sakhalin Island shelf

KOGW###	B.TEAM ID W#	# days of registration		calf/calf	B.TEAM	IBM	Kamchatka Team	
		B.TEAM	IBM		cow	cow	calf KamGW###	cow KamGW###
167	136	8	2	y/y	unknow	92		
168	137	3	3	y/y	unknow but it was present			
169	130	3	1	y/y	31	31		
173	135	8	1	y/y	50	50		
174	no data		2	y	no data	no data	88	87=KOGW103
175	133	8	1	y/y	unknow	unknow		
176	132	8	no in IBM data	y	20	no in IBM data		
177	134	6	no in IBM data	y	15	no in IBM data	104	Temp1=KOGW015

Olga Bay

Two of seven calves identified on the Kamchatka Shelf were recorded on the Sakhalin Island Shelf in 2009

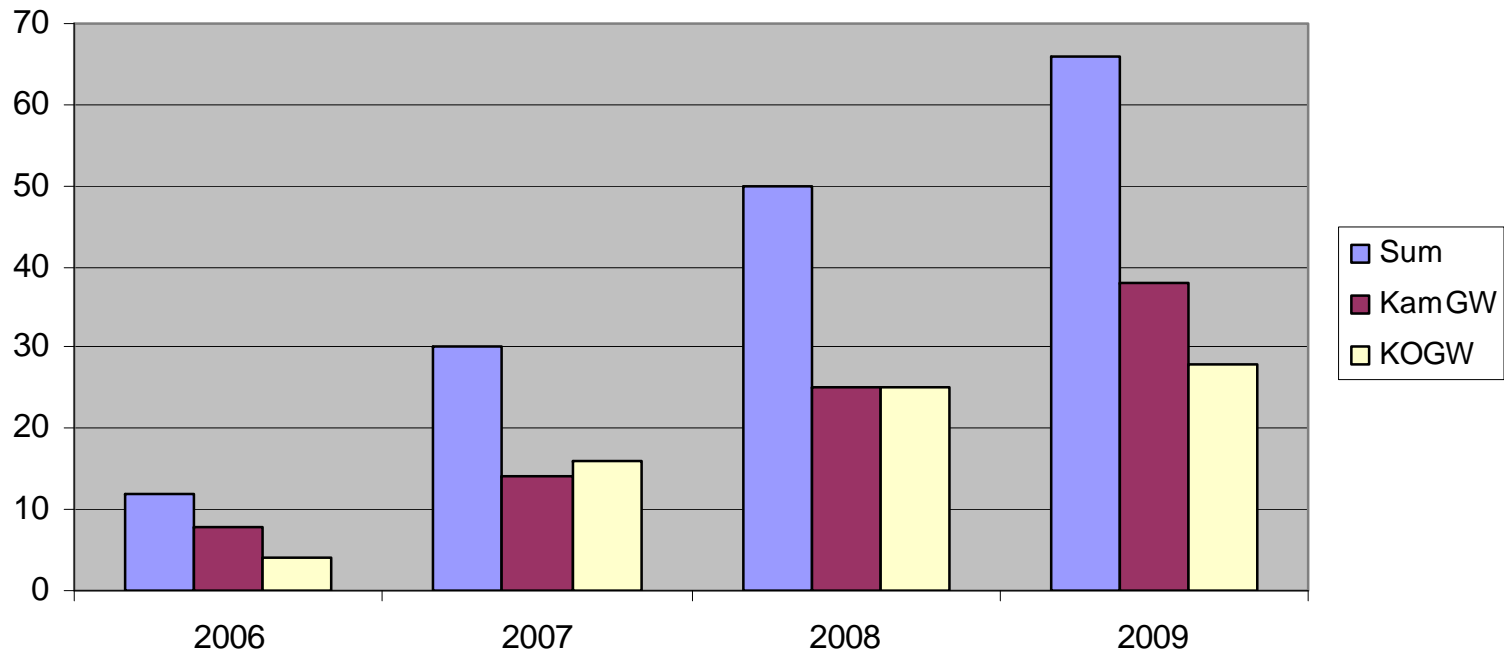


# 10

calves with mothers registered in the Sakhalin catalogue were observed in two distant regions, i.e., near northeastern shores of Sakhalin Island and eastern shores of Kamchatka in

## 2009

# INTERANNUAL INTERCHANGE OF IDENTIFIED GRAY WHALES IN OLGA BAY, KAMCHATKA



Year	2006	2007	2008	2009
Sum	12	30	50	66
KamGW	8	14	25	38
KOGW	4	16	25	28

# TERM OF RESEARCH WORK IN DIFFERENT YEARS IN OLGA BAY

From 2006\_08\_21 }  
To 2006\_08\_22 } 12 whales

From 2007\_08\_02 }  
To 2007\_08\_05 } 30 whales

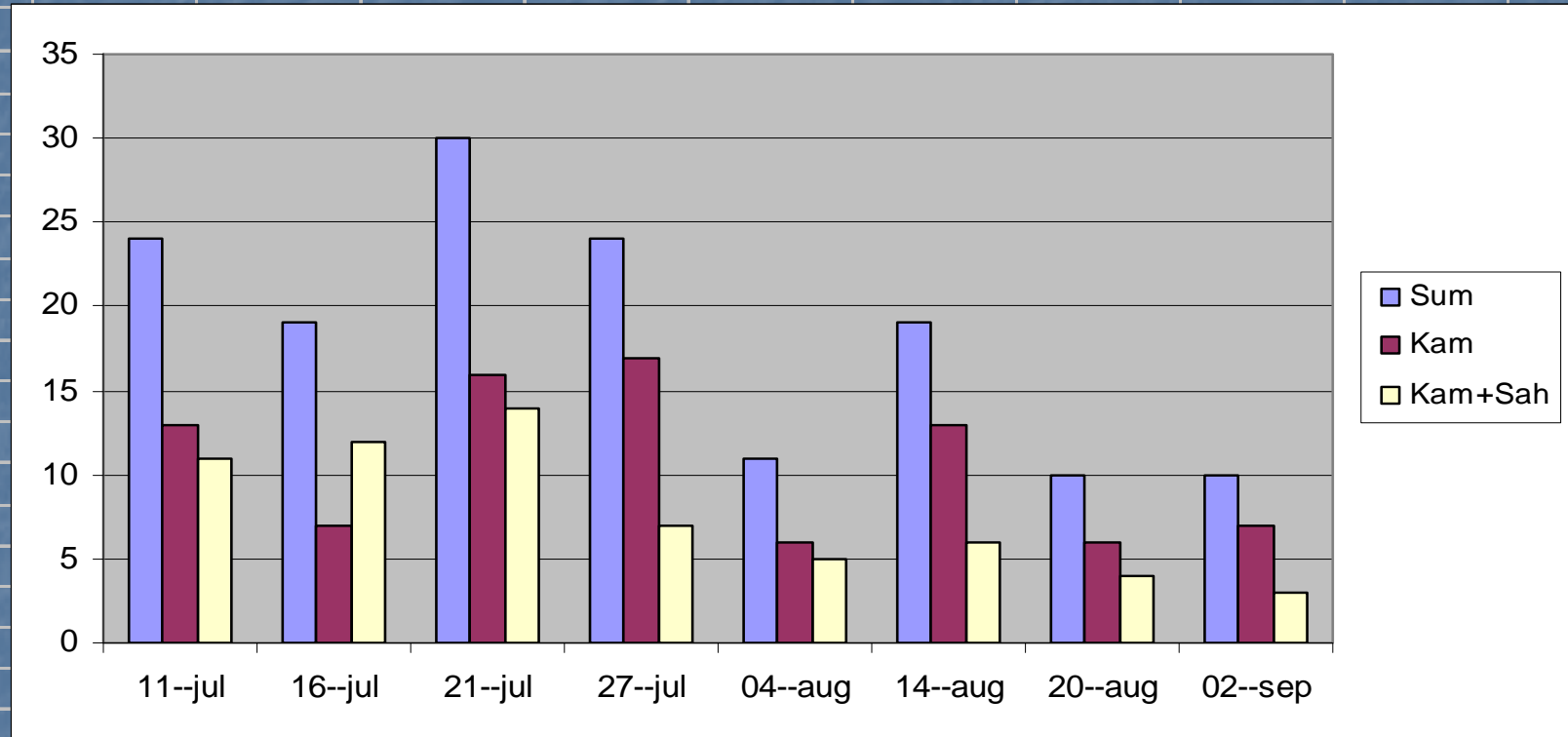
From 2008\_08\_19 }  
To 2008\_08\_28 } 50 whales

From 2009\_07\_11 }  
To 2009\_09\_02 } 64 whales

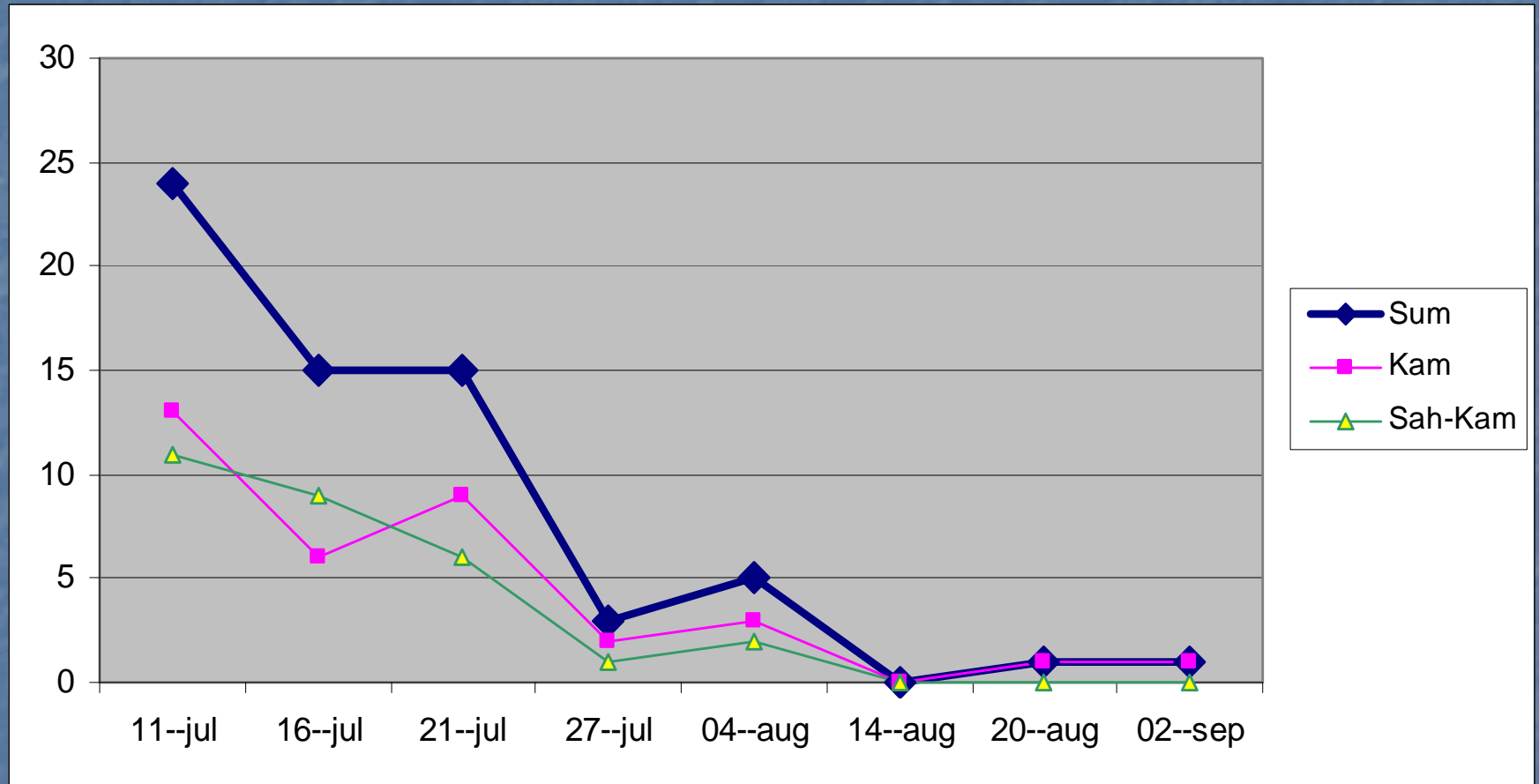




# Number of Identified Whales in Olga Bay (Kamchatka) for Each Day of Research in the 2009 Field Season



# Recording of New Whales in Olga Bay (Kamchatka) in 2009



The obtained data suggest that the Piltun area of the Sakhalin shelf is not the only feeding area for mother-calf pairs and that a second “nursery ground” for foraging whales is located in Olga Bay, Kamchatka.





**Thank you for your attention**