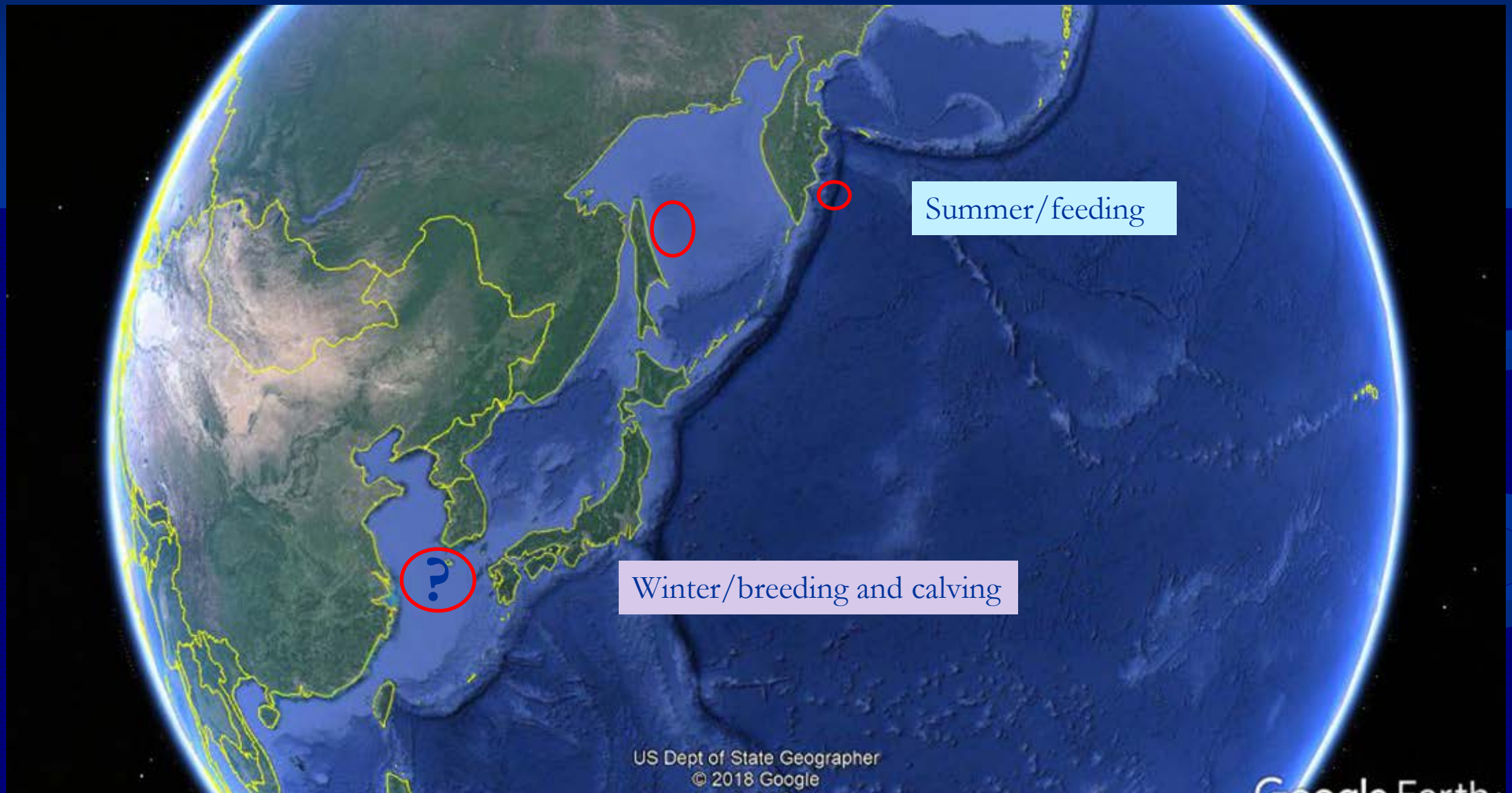
Gray whales in Mexico and the North Pacific: Eastern and Western Populations

Jorge Urbán R.

GRAY WHALES' WESTERN POPULATION

Population size: 191 individuals

(Cook et al., 2019)



GRAY WHALES' EASTERN POPULATION

Population size: 20,000 individuos

(Stewart and Weller, 2021)

Background

1977

238 JOURNAL OF MAMMALOGY *Vol. 58, No. 2*

PROBABLE EXISTENCE OF THE KOREAN STOCK OF THE GRAY WHALE (*ESCHRICHTIUS ROBUSTUS*)

ROBERT L. BROWNELL, JR., AND CHAN-IL CHUN, *Department of Vertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, D.C. 20560, and National Fisheries University of Busan (Busan Fisheries College), Busan, Korea, 601-01.* *Submitted 6 July 1976. Accepted 12 November 1976.*

Catch records from Korea in 1966.
Sighting of a mother with calf in 1968.

Berzin, A. A. 1990. Gray whales of the Okhotsk-Korean population in the Sea of Okhotsk. Paper SC/A90/G28 presented to the International Whaling Commission Scientific Committee.

Blokhin, S., M. Maminov and G. Kosygin. 1985. On the Korean-Okhotsk population of gray whales. Report of the International Whaling Commission 35:76.

Sightings of feeding gray whales in the NE coast of Sakhalin I. from aerial surveys (1979-1989)

Background

Vol. 18: 193–199, 2012
doi: 10.3354/esr00447

ENDANGERED SPECIES RESEARCH
Endang Species Res

Published online September 12

FEATURE ARTICLE

OPEN ACCESS

Movements of gray whales between the western and eastern North Pacific

David W. Weller[1,*], Amber Klimek[2], Amanda L. Bradford[3], John Calambokidis[2], Aimee R. Lang[1], Brian Gisborne[4], Alexander M. Burdin[5], Wendy Szaniszlo[6], Jorge Urbán[7], Alejandro Gómez-Gallardo Unzueta [7], Steven Swartz[8], Robert L. Brownell Jr.[1]

BIOLOGY LETTERS

rsbl.royalsocietypublishing.org

Research

CrossMark
click for updates

Marine biology

Critically endangered western gray whales migrate to the eastern North Pacific

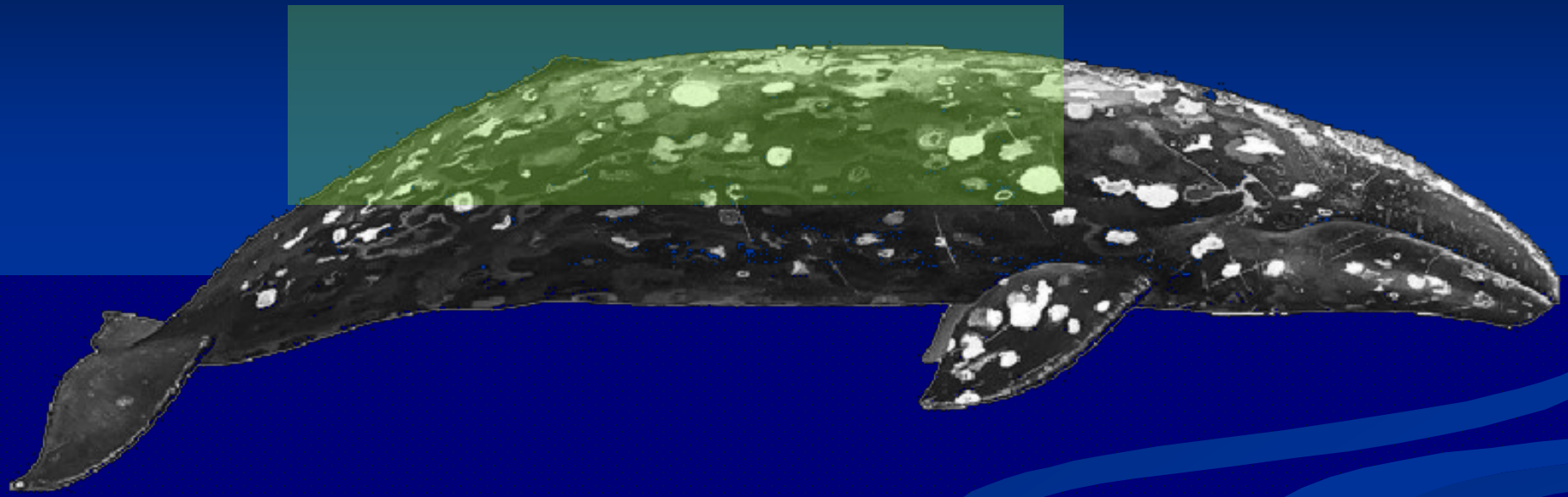
Bruce R. Mate[1], Valentin Yu. Ilyashenko[2], Amanda L. Bradford[3,†], Vladimir V. Vertyankin[4], Grigory A. Tsidulko[2], Vyacheslav V. Rozhnov[2] and Ladd M. Irvine[1]

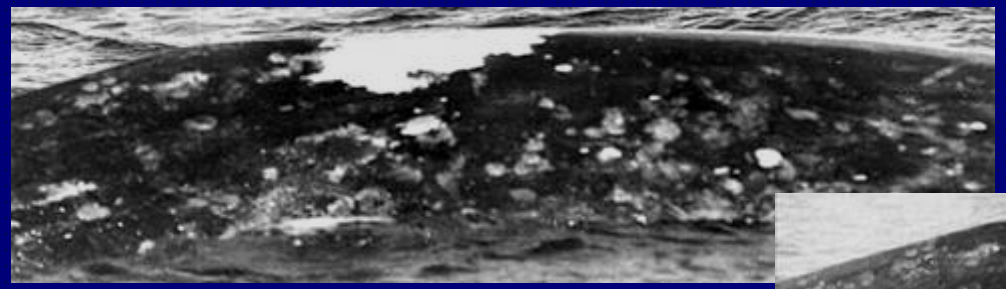
2012.
6 matches from Sakhalin I. with the west coast of Vancouver I. and 4 matches from Sakhalin I. with Laguna San Ignacio.

2015.
Three tagged whales moved from Sakhalin I. to the eastern North Pacific.

- Here we present an update about our knowledge of the migratory movements of the gray whales between the western and eastern North Pacific base on the comparison of photographic catalogs of the western gray whales feeding areas and the breeding and calving grounds of the eastern population.

Photo-identification





WESTERN GRAY WHALES OFF SAKHALIN ISLAND, RUSSIA:
A CATALOG OF PHOTO-IDENTIFIED INDIVIDUALS

CATALOG OWNERS

ALEXANDER M. BURDIN

Kamchatka Branch of Pacific Institute of Geography
Far East Branch - Russian Academy of Sciences
Petropavlovsk, Kamchatka, RUSSIA

DAVID W. WELLER

Southwest Fisheries Science Center
NOAA Fisheries
La Jolla, California, USA

CATALOG CURATORS

OLGA A. SYCHENKO

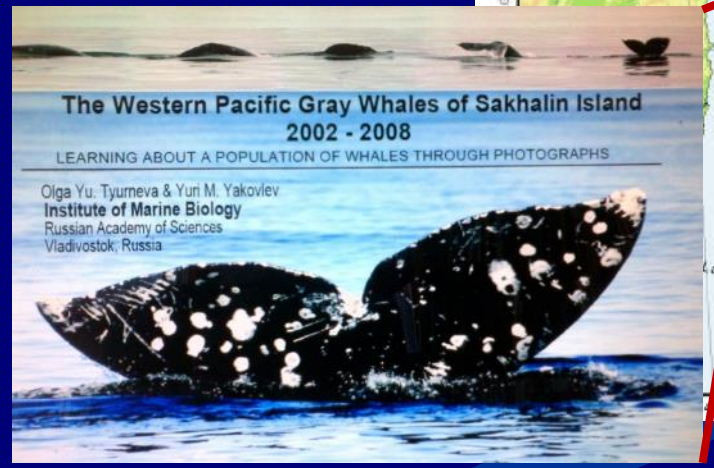
Kamchatka Branch of Pacific Institute of Geography
Far East Branch - Russian Academy of Sciences
Petropavlovsk, Kamchatka, RUSSIA

AMANDA L. BRADFORD

Pacific Islands Fisheries Science Center
NOAA Fisheries
Honolulu, Hawaii, USA

Contact email:
fenr@mtc.com
dave.weller@noaa.gov

THE NORTH PACIFIC GRAY WHALES MASTER CATALOGUE 2004-2011
Institute of Marine Biology Russian Academy of Sciences
O.Tyurneva
V.Vertyankin

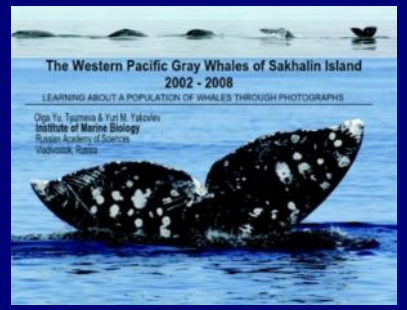


Sakhalin Island

- Burdin, M.A., Weller W. D., Sychenko, A.O. and Bradford, L.A. 1994-2016 (261)

VS

- Tyurneva. Y.O., and Yakovlev, M.Y. 2002-2017 (283)

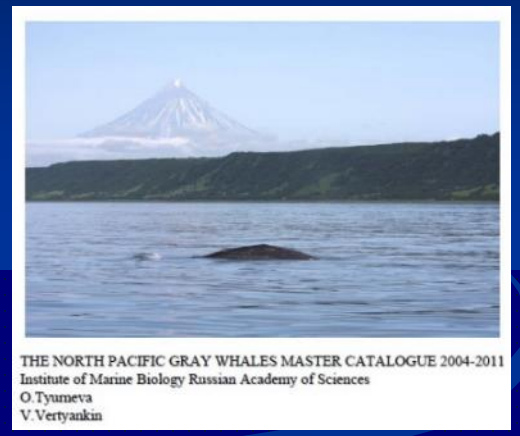


316 photo-id whales

VS

Kamchatka Peninsula

Tyurneva y Vertyankin 2004-2011 (145)

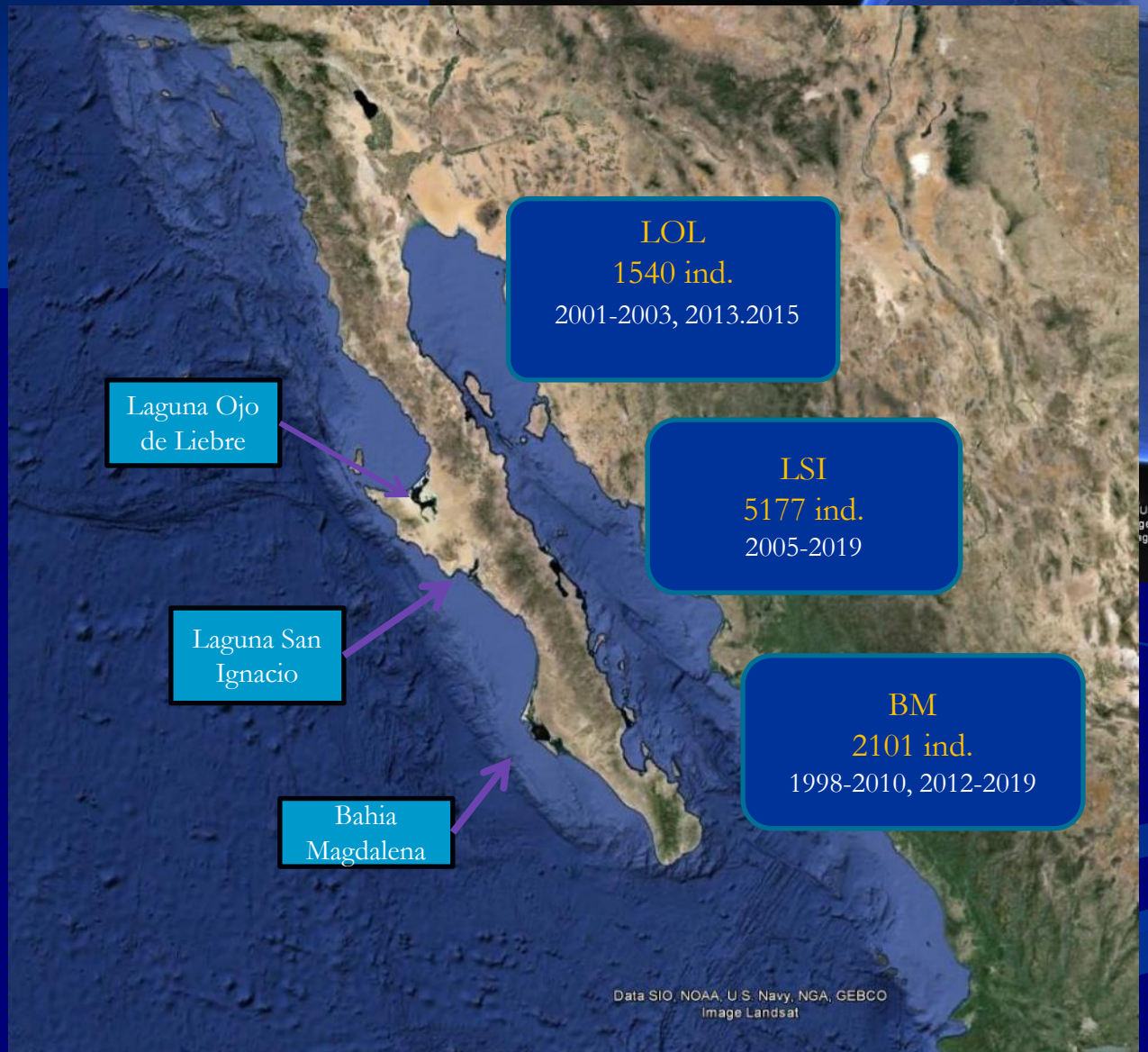


Western Feeding Group (WFG)

378 photo-id whales

- 229 only Sakhalin
- 63 only Kamchatka
- 86 in both locations

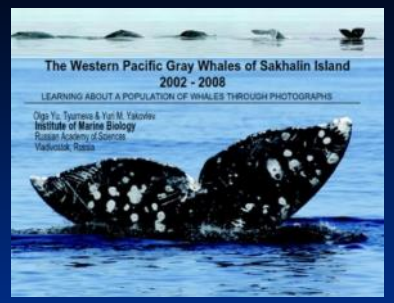
Baja California Península, México

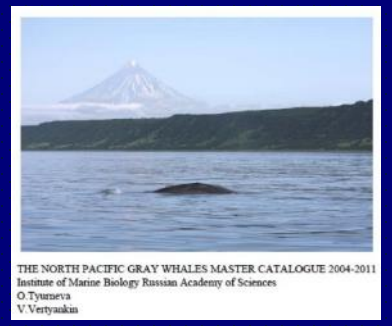


TOTAL

8,818 individuals

WFG





3,342,020 comparisons

vs

México

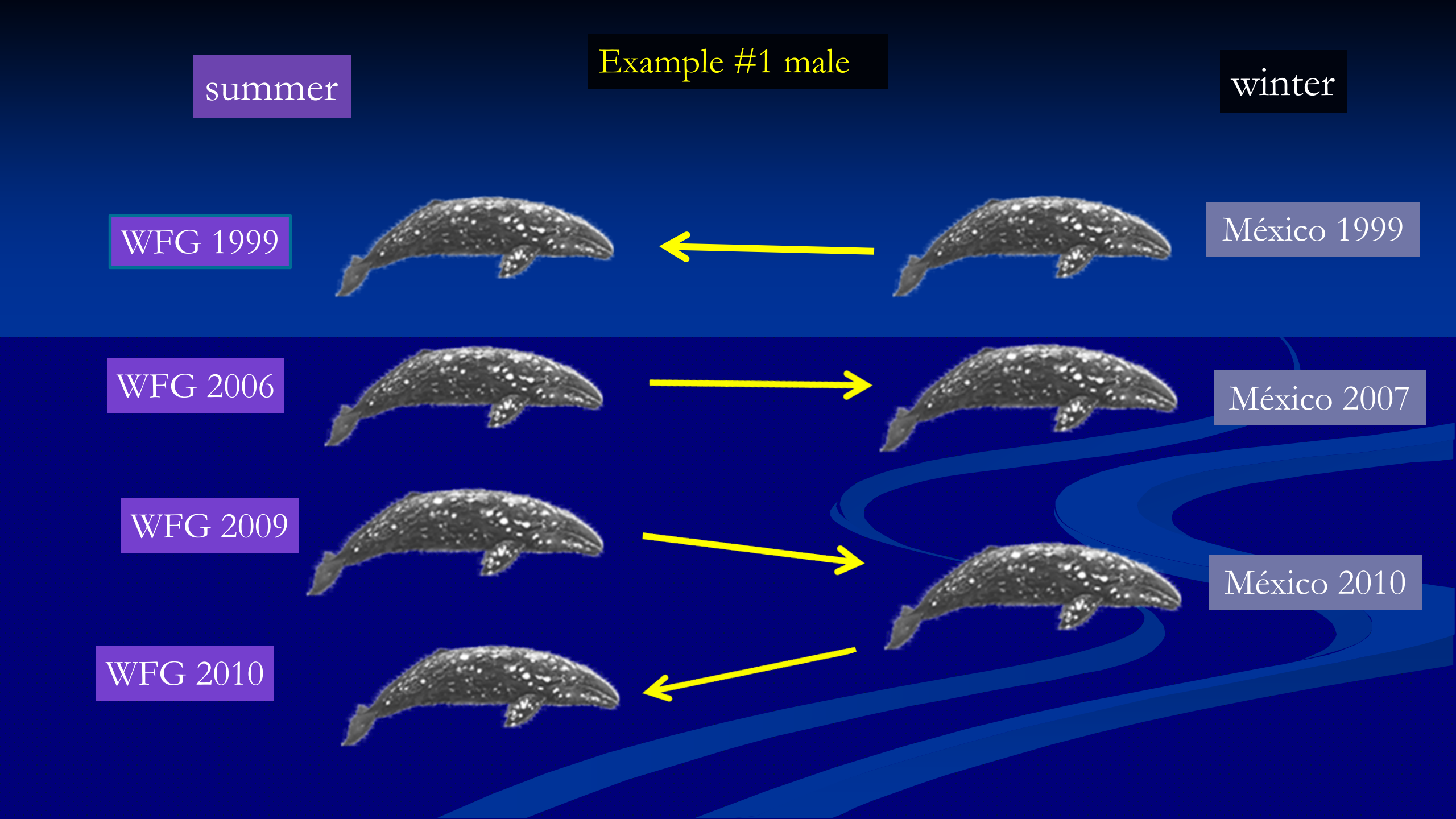
378 whales vs 8,818 whales = 43 recaptures

43 recaptures

- 22 females, 13 males, 8 sex unknown
- 14 recaptures Mexico - I. Sakhalin I. and P. Kamchatka
- 24 recaptures Mexico - I. Sakhalin
- 5 recaptures Mexico - P. Kamchatka

43 recaptures

- 13 whales (6f, 6m, 1?) roundtrips (summer-winter-summer)
- 11 (9f, 2m) Winter-summer
- 6 (4f, 1m, 1?) summer-winter
- 13 in different years


Example #1 male
summer
winter
WFG 1999
México 1999
WFG 2006
México 2007
WFG 2009
México 2010
WFG 2010

Example #2 female

summer

winter

WFG 2011

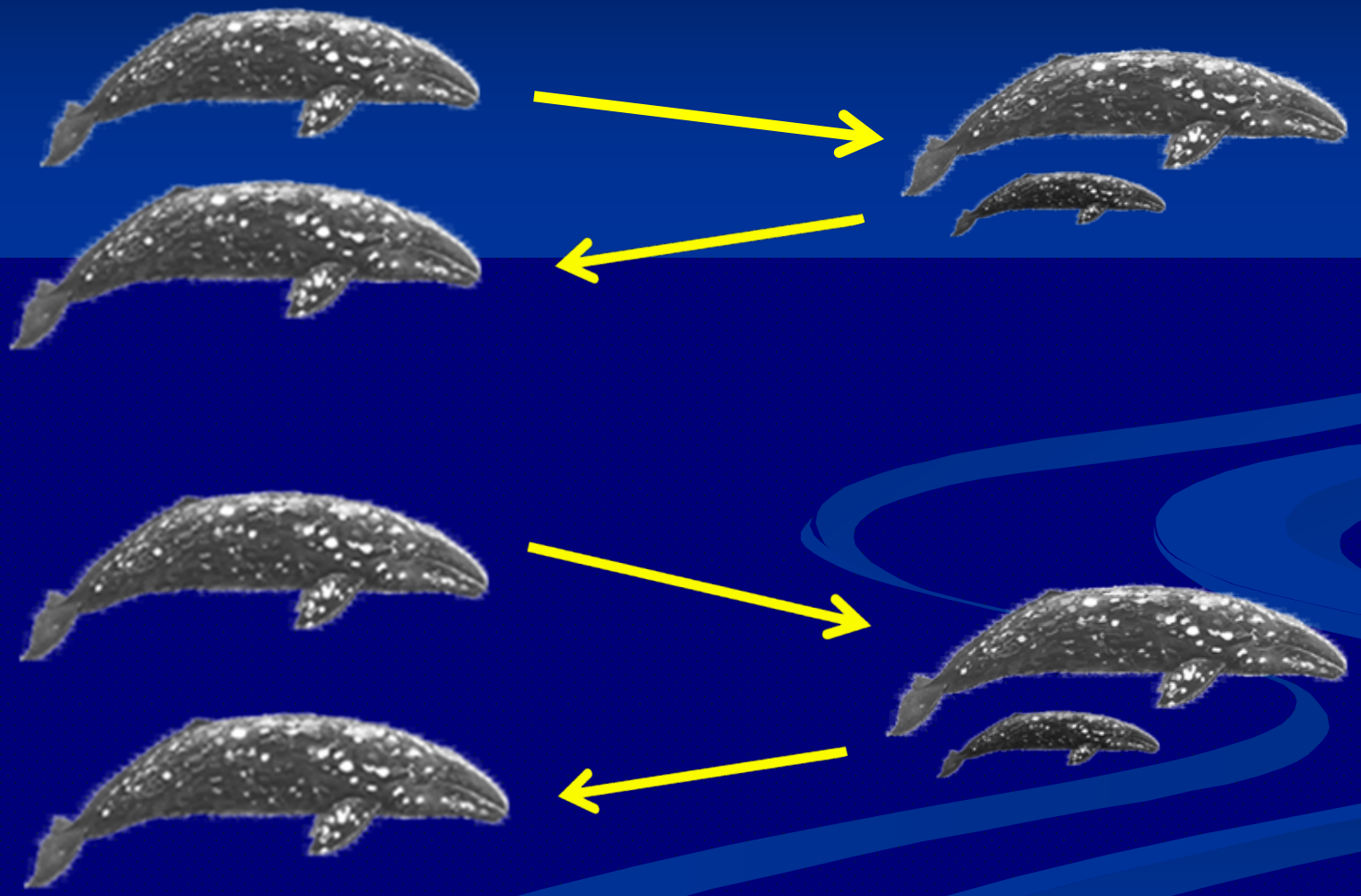
WFG 2012

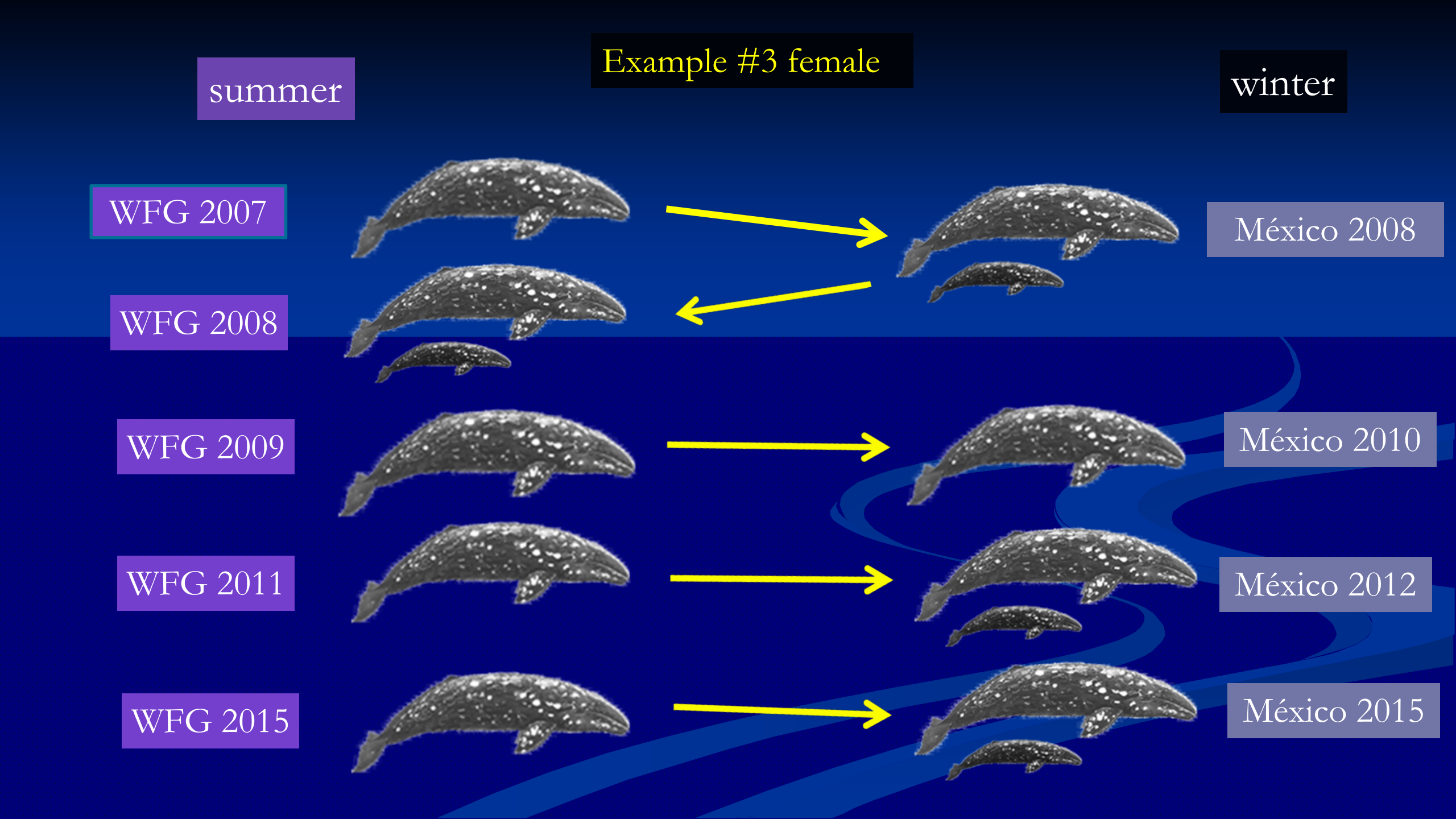
México 2012

WFG 2017

WFG 2018

México 2018



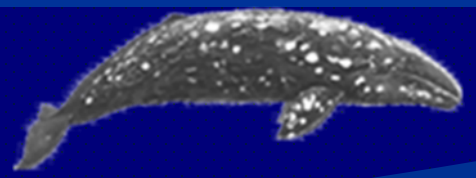

Example #3 female
summer
winter
WFG 2007
WFG 2008
WFG 2009
WFG 2011
WFG 2015
México 2008
México 2010
México 2012
México 2015

Example #4 ?

summer

winter

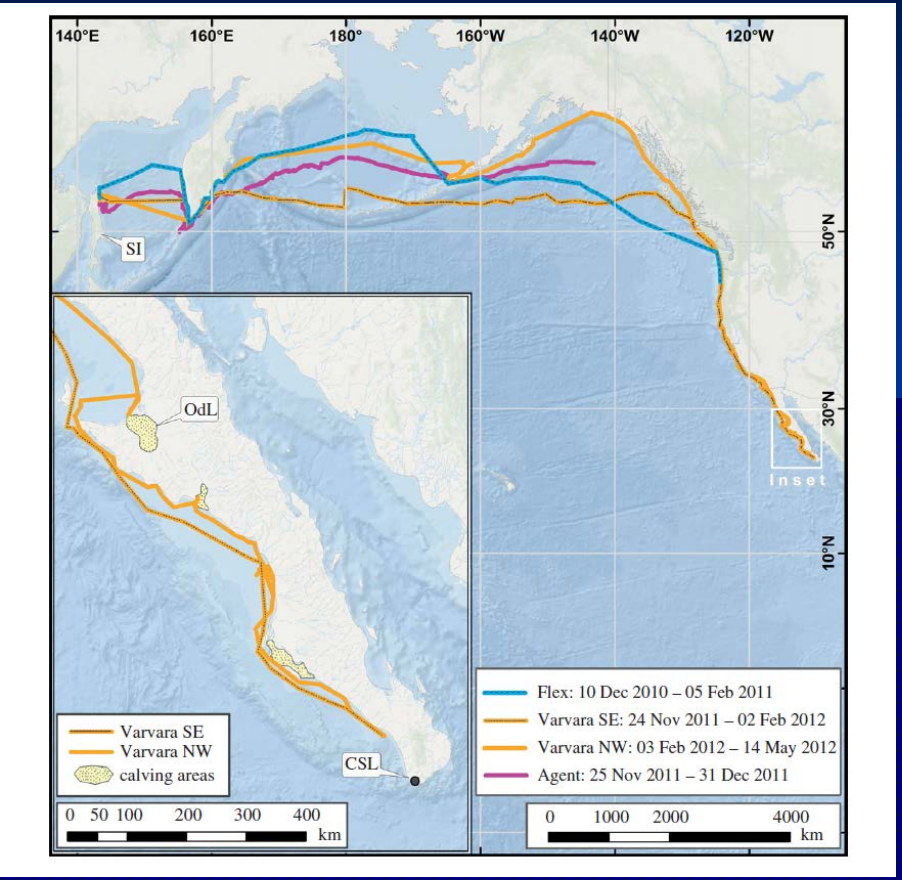
WFG 2011



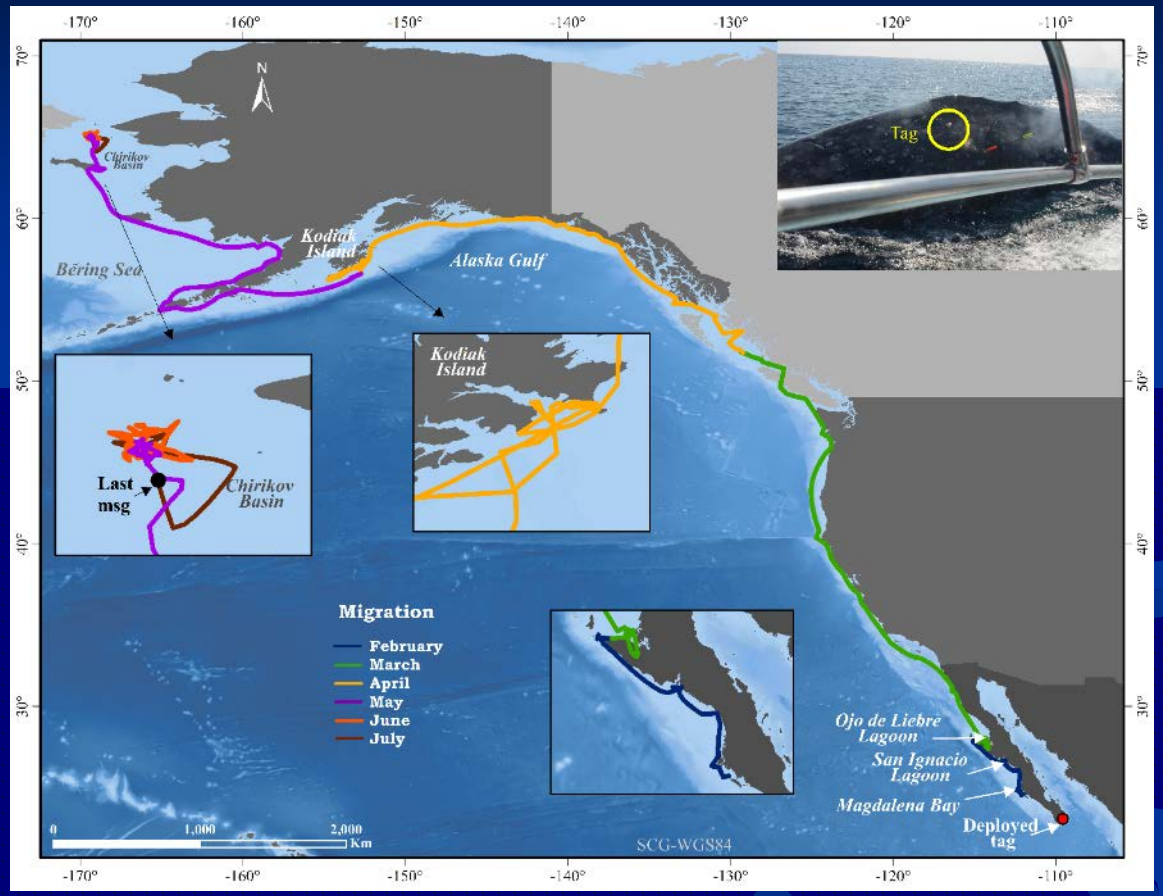
México 2012

WFG 2012

Sakhalin Island, Russia to Baja California



Baja California to Chirikov Basin, Alaska



BIOLOGY LETTERS

Marine biology

Critically endangered western gray whales migrate to the eastern North Pacific

Bruce R. Mate[1], Valentin Yu. Ilyashenko[2], Amanda L. Bradford[3,†], Vladimir V. Vertyankin[4], Grigory A. Tsidulko[2], Vyacheslav V. Rozhnov[2] and Ladd M. Irvine[1]

frontiers

Migration route and behavior of an eastern North Pacific gray whale from Los Cabos, Baja California Sur to the Chirikov Basin, Alaska

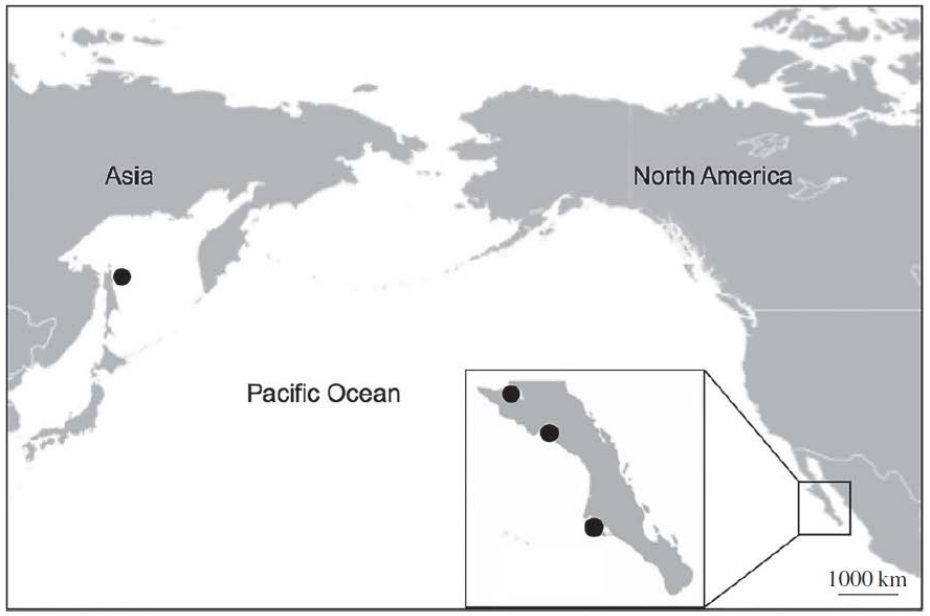
Jorge Urbán R. [1*], Esther Jiménez-López[1], Héctor M. Guzmán[2], Lorena Viloria-Gómora[1]

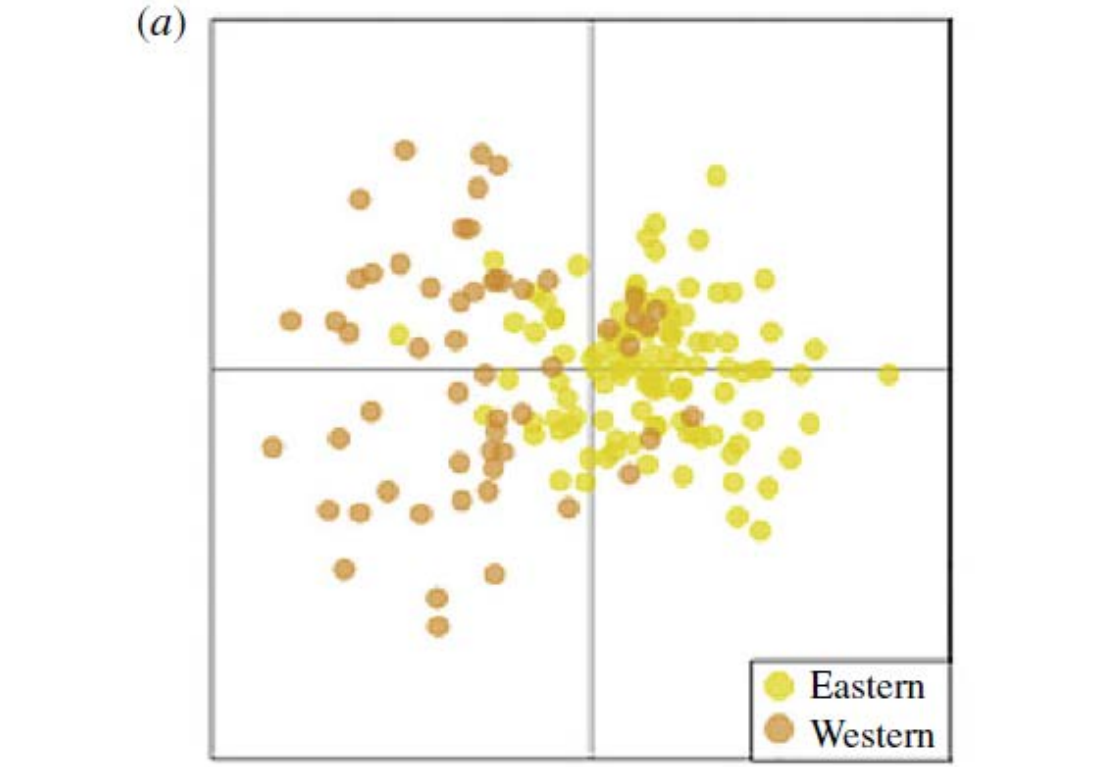
Population genetics

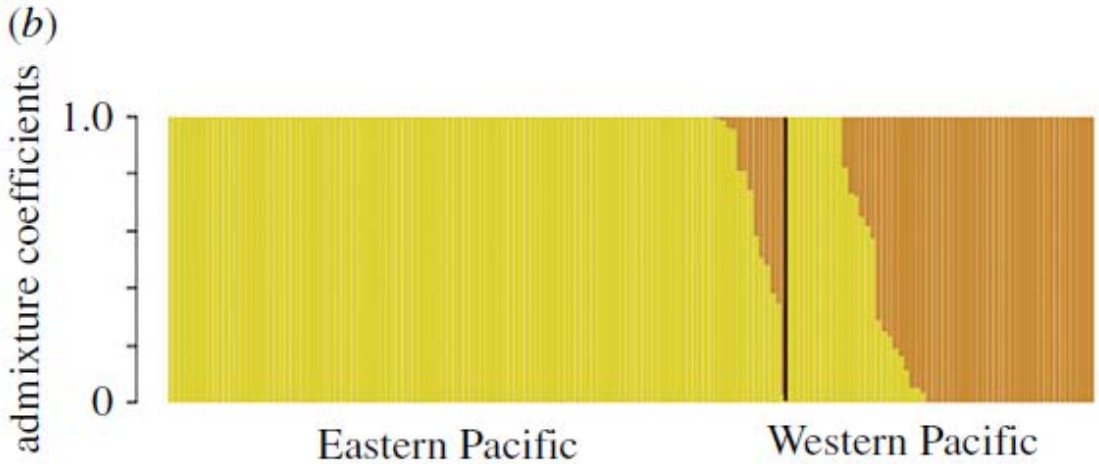
Genetic data reveal mixed-stock aggregations of gray whales in the North Pacific Ocean

Anna Brüniche-Olsen[1], R. Jorge Urban[2], Vladimir V. Vertyankin[3], Céline A. J. Godard-Codding[4], John W. Bickham[5] and J. Andrew DeWoody[1,6]

BIOLOGY LETTERS 2018







Conclusions

- The 43 recaptures together with the 11 previous records indicate that at least 54 gray whales migrate from the feeding ground in Russia to the eastern Pacific and Baja California.
- These whales represent close to 20% of the known Sakhalin Island gray whales.
- The gray whale records from Japan and Korea indicate that some gray whales are wintering in the western Pacific.

Conclusions

- The coastal Waters from Sakhalin Island and Kamchatka Peninsula are feeding grounds for gray whales from the eastern and western populations.
- Genetics suggest interbreeding between Eastern and western populations during the winter breeding season
- The historical wintering grounds of the western gray whales remain unknown.

Thanks to our sponsors ~ Gracias a nuestros patrocinadores

The Ocean Foundation

Germantown Copy Center

Columbia

Tamarack

NRDC

Ecoturismo Kuyima

natural habitat adventures

University of Hawai'i Mānoa

Murdoch University Perth, Western Australia

Marisla foundation

Searcher Natural History Tours

Exportadora de Sal

Baja discovery

Whaleman

SEMARNAT Secretaría de Medio Ambiente y Recursos Naturales

CONACYT

Comisión Nacional de Áreas Naturales Protegidas

And Generous individual sponsors & donors