



## Laguna San Ignacio Ecosystem Science Program

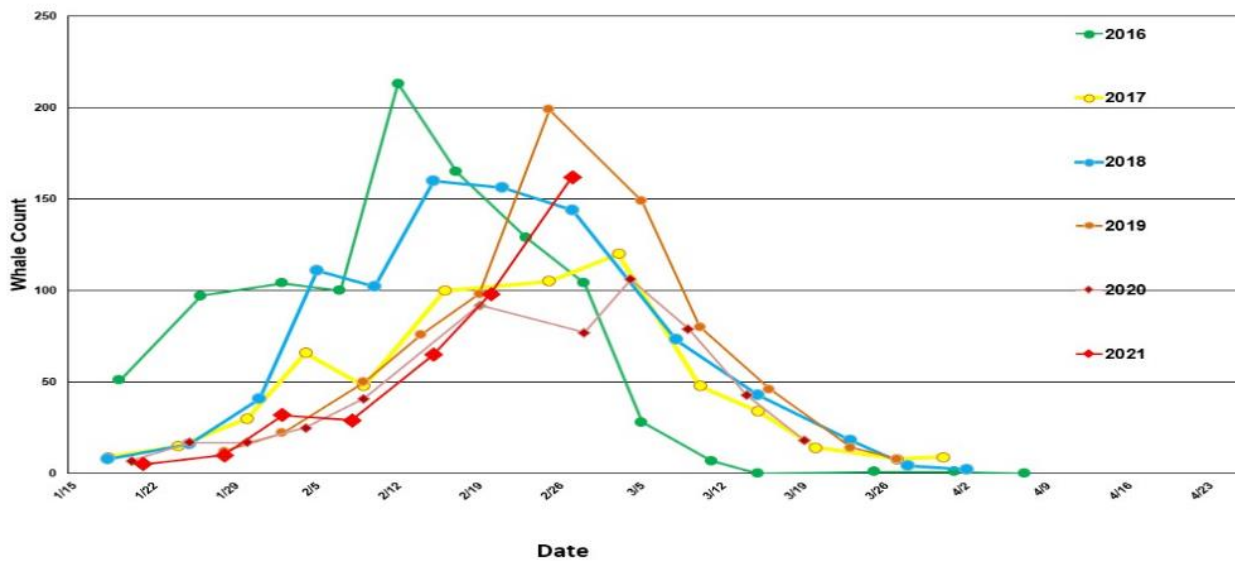
A Project of the Ocean Foundation in Baja California Sur, Mexico

February 2021 Field Report

### Gray Whale numbers increased during February



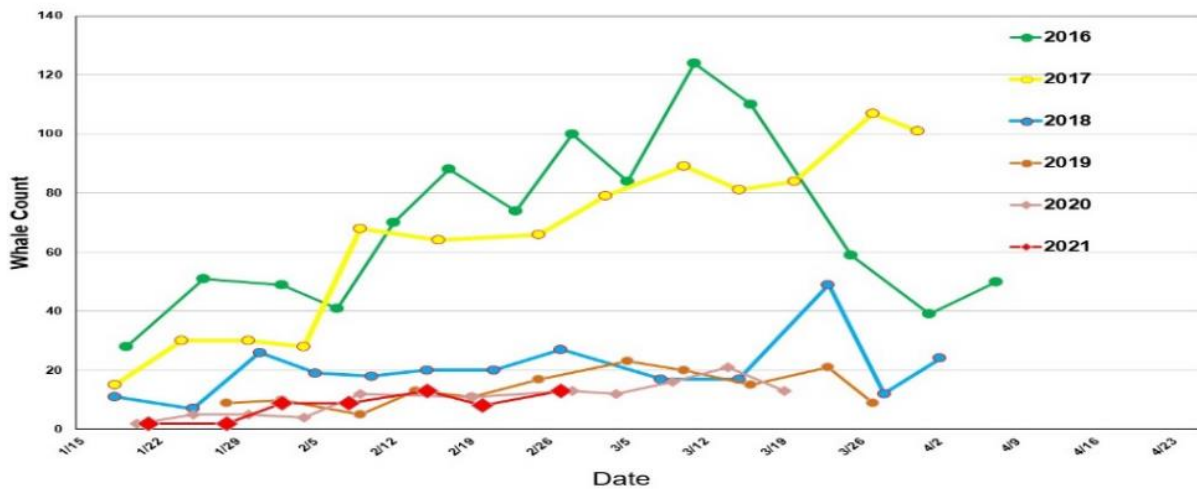
**LAGUNA SAN IGNACIO:** After a slow start in January the number of gray whales observed in Laguna San Ignacio gradually began to increase throughout the month. Our regular abundance survey on February 2nd detected 39 single whales and 9 female-calf pairs. As anticipated, these numbers increased each week to 162 single whales and 13 female-calf pairs by the final survey of the month on February 27. *Counts of single adult whales observed in boat surveys from 2016 to 2021.*



The increasing counts of single adult gray whales (“Solos” breeding females and males) in Laguna San Ignacio were similar to the trends observed in 2019 and 2020: the arrival of the whales was about two week later than in the 2016-2018, but the increase in February closely matched the single whale increase 2018 and 2019. This increase in the number of single whales is encouraging, our field researchers continue to report more “skinny” or “flaca” single whales than we should be seeing (i.e., 18% of our photo-ID whales. **See Body Condition below**).

Unfortunately, the numbers of female-calf pairs observed in Laguna San Ignacio have remained very low since 2017, suggesting that the reproductive rate of the female whales is not recovering following the Unusual Mortality Event (UME) of 2019-2020, and that the UME may be continuing in 2021. While the numbers of newborn calves of the year continue to be low, both the calves and their mothers appear to be in good condition and healthy, and not suffering from a lack of food like many of the single whales.

*Counts of female-calf pairs observed in boat surveys from 2016 to 2021.*



\*\*\*\*\*If you would like to learn more about how we count gray whales in Laguna San Ignacio, [click on this link to read](#) a special report that explains how we use boat-based surveys to monitor trends in gray whale abundance, seasonal timing of lagoon occupation, and distribution\*\*\*\*\*

**BAHÍA MAGDALENA:** In Bahía Magdalena, the Team reported abundance survey counts between February 6 and on February 25 a total of 190 and 165 single whales, respectively, were counted on in Bahía Almejas. On February 8 and February 27, 33 and 41 singles whales, respectively, were counted in Bahía Magdalena, and on February 7 and 28, 49 and 30 single whales, respectively, were counted in Canal de Santo Domingo. Only 2 female-calf pairs were seen in Bahía Almejas, none in Bahía Magdalena, and 5 female-calf pairs were observed in Canal de Santo Domingo.

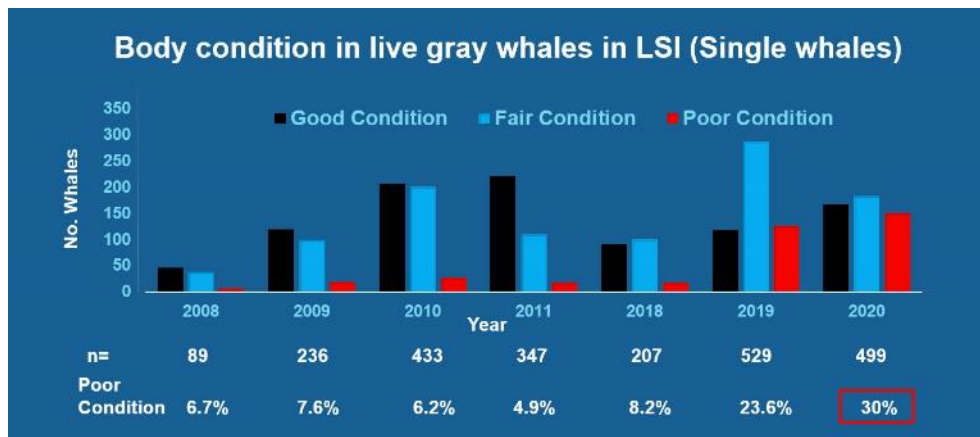
The number of gray whales observed in the Bahía Magdalena lagoon complex compared to the previous year (2020) indicates a similar number of single whales occupied these areas in February (587 in 2020 and 547 in 2021). However, the number of female-calf pairs was lower in the current year, with only 7 pairs seen in 2021 compared to 17 pairs observed in 2020.

*Counts of gray whales observed in February 2021 boat surveys in the Bahía Magdalena lagoon complex, Baja California Sur, Mexico..*

Locality	February	Female-Calf Pairs	Singles
Bahía Almejas	06	1	190
	25	1	165
Bahía Magdalena	08	0	33
	27	0	41
Canal de Santo Domingo	7	4	49
	28	1	30

\*\*\*\*\* Read more about the Gray Whale Unusual Mortality Event at:  
<https://www.fisheries.noaa.gov/national/marine-life-distress/2019-2021-gray-whale-unusual-mortality-event-along-west-coast-and> \*\*\*\*\*

**BODY CONDITION: MORE “SKINNY” WHALES 2021:** LSIESP researchers have documented the decline in gray whale body condition since the winter of 2018 (see [Ronzón-Contreras et al. 2020](#)), which is believed to have contributed to the ongoing gray whale Unusual Mortality Event (UME) (see [Christiansen et al. 2021](#)). The percentage of “skinny” or “poor condition” single whales observed in the lagoon last winter 2020 was 30%, while the females with calves were in good b condition overall.



This winter (2021) a total of 483 individual whales were photographically-identified from digital photographs taken in January and February. These PRELIMINARY observations of gray whales in the lagoon indicate that “skinny” or “poor condition” whales are again in higher percentages than were observed in the past before the UME began. The table below summarizes the PRELIMINARY evaluation of these individual whales, with 18% of 454 single whales (n= 82) appear to be in “poor condition” while all of the 29 female-calf pairs appear to be in “good” to “fair” condition. The final assessment of gray whale body condition in Laguna San Ignacio will be determined from all of the photographic-identification images obtained during the entire winter breeding season (January to April 2021).

<b>Body Condition of Gray Whales in Laguna San Ignacio During January and February 2021</b>	
<b>Females with calves (total n= 29)</b>	<b>Percent of Total</b>
Good Condition (n= 28)	97%
Fair Condition (n= 1)	3%
Poor Condition (n= 0)	0%
Unknown (n= 0)	0%
<b>Single Whales (total n= 454)</b>	
Good Condition (n=173)	38%
Fair Condition (n=115)	25%
Poor Condition (n=82)	18%
Undetermined (n=84)	19%

When the gray whales arrive in Baja California in early January, they have completed their summer of feeding areas in the North Pacific, Bering and Chukchi seas and migrated south to the breeding areas along Baja California’s Pacific coast. Gray whales are very efficient swimmers and should arrive on the breeding grounds in very good condition. It continues to be alarming that many of them are underweight, and this suggests that the Unusual Mortality Event (UME) is continuing in 2021. Exact percentages of “skinny” whales will be estimated from all of our photographic identification data collected during the 2021 winter, and this will help to determine if the UME is continuing.

**STRANDED WHALES:** In January and February 3 stranded gray whales (2 males adults, and 1 calf) were discovered in Laguna San Ignacio, and 5 adult gray whales (4 males and one female) were discovered in the Bahía Magdalena Bay complex.



### **NEW PUBLICATIONS RELEVANT TO NORTH EASTERN PACIFIC GRAY WHALES:**

Silber, G. K., *et al.* February 25, 2021. Co-occurrence of gray whales and vessel traffic in the North Pacific. *Endangered Species Research*. Vol. 44:177-201.

Christiansen, F., *et al.* January 21, 2021. Poor body condition associated with an unusual mortality event in gray whales. *Marine Ecology Progress Series* Vol. 658:237-252.

Stewart, J.D. and Weller, D.W. January 2021. Abundance of Eastern North Pacific gray whales 2019/2020. NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-639, <https://repository.library.noaa.gov/view/noaa/27928>

Huntington, et al. February 24, 2020. Evidence suggests potential transformation of the Pacific Arctic ecosystem in underway. *Natura Climate Change*, [www.nature.com/natureclimatechange](http://www.nature.com/natureclimatechange); <https://doi.org/10.1038/s41558-020-0695-2>.

Urban, et al. (*In Press*) Migratory behavior of an Eastern North Pacific gray whale from Baja California Sur to Chirikov Basin, Alaska. *Frontiers Online Publication*.



*LINK: Learn how you can become a supporter of our gray whale research in Laguna San Ignacio and Bahía Magdalena by making a recurring donation to our program.*