

Soundings



American Cetacean Society – Monterey Bay Chapter
PO Box HE, Pacific Grove, CA 93950

AUGUST 2018

**MONTHLY MEETING AT
THE CENTER FOR SPIRITUAL AWAKENING
(522 CENTRAL AVE IN PACIFIC GROVE)
MEETING IS OPEN TO THE PUBLIC**

**Thursday, August 30, 2018
Time: 7:30 PM**

PLEASE JOIN US AT 7:00 PM FOR REFRESHMENTS

Speaker: John Calambokidis

Title: New Insights into Blue and Humpback Whales off California



John Calambokidis is a research biologist and one of the founders of Cascadia Research, a non-profit research organization formed in 1979 and based in Olympia, Washington. He periodically (1991-2012) serves as an Adjunct Faculty at Evergreen State College, teaching a course on marine mammals. His primary interests are the biology of marine mammals and the impacts of humans. As a Senior Research Biologist at Cascadia Research he has served as Project Director of over 100 projects. He has authored two books on marine mammals (the award-

winning *Guide to Marine Mammals of Greater Puget Sound* from Island Publishers, with R. Osborne and E.M. Dorsey, and *Blue Whales* from Voyageur Press, with G.H. Steiger) as well as more than 150 publications in scientific journals and technical reports. He has conducted studies on a variety of marine mammals in the North Pacific from Central America to Alaska. He has directed long-term research on the status, movements, and underwater behavior of blue, humpback, and gray whales. His work has been covered on shows by Discovery Channel and others and has been featured in National Geographic TV specials and a magazine article in 2009. John will be discussing some of his recent findings about blue and humpback whales off of California.

Please join us for refreshments before the program begins. More information is available on our website, www.acsmb.org.

Next month: Our next meeting will be on Thursday, September 27 at the Center for Spiritual Awakening at 522 Central Ave. in Pacific Grove. Our speaker will be Ted Cheeseman, who will talk about Antarctica and the Happy Whale citizen science project. As with this month, please note the change in location due to renovations taking place at Hopkins Boatworks Hall. Please save the date and join us!

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**ACS Monterey Bay chapter
needs you!**

**Please consider volunteering to
serve on the ACS Board of
Directors. Current openings
include Membership Chair
and Publicity Chair.**

**If you enjoy learning about
whales and sharing your
passion with others, we'd like
to speak with you. Please
contact any board member for
more information.**

BOOK RECOMMENDATIONS

Cruisin' the Fossil Coastline: The Travels Of an Artist and a Scientist Along the Shores Of the Prehistoric Pacific, by Kirk Johnson and Ray Troll. 2018 Fulcrum Publishing.

"Pain Forms the Character": Doc Bester, Cat Hunters and Sealers, by Nico De Bruyn and Chris Oosthuizen. 2017 Antarctic Legacy of South Africa.

Discovering the Mammoth: A Tale Of Giants, Unicorns, Ivory, and the Birth of a New Science, by John J. McKay. 2017 Pegasus Books.

CALENDAR

Aug. 11: Whalewatching with ACS Monterey Bay and Discovery Whale Watch on Fisherman's Wharf. Join us for our annual fundraiser! 8 AM – 12 Noon. \$45. Book with Discovery Whale Watch at 831-372-7064 or discoverywhalewatch.com.

Aug. 19: Science Sunday at the Seymour Center in Santa Cruz: "People in a Changing Sea: Achieving Resilient Coastal Fisheries in an Era Of Global Change." Presentation by Elena M. Finkbeiner, Ph.D. 1:30-2:30 PM.

Aug. 26: Annual ACS San Francisco Bay Chapter Farallon Island Whale Watch. Departs from San Francisco Whale Tours at Pier 39 in San Francisco. 8:00 AM-2:00 PM. For more information go to acs-sfbay.org.

Sep. 15: California Coastal Cleanup Day. Events are taking place statewide. For a directory of events go to <https://www.coastal.ca.gov/publiced/ccd/ccd.html>.

Sep. 15: Farallones Sanctuary and Devils Teeth Whale Watch and Wildlife Expedition. Trip will be led by David McGuire, shark specialist, marine biologist and Director of the non-profit Shark Stewards. Departs from Castagnola's Seafood and Chophouse in San Francisco. 7:30 AM- 4:30 PM. For more information go to SharkStewards.com

Sep. 23-29: 16th Annual Sea Otter Awareness Week. For information on events taking place during the week please go to seaotterweek.org.

Sep. 28-29: Monterey Birding Festival, which will include field trips, workshops, and lectures. For more information please go to www.montereybaybird.org

Oct. 17-20: Society for Vertebrate Paleontology 78th Annual Meeting at the Albuquerque Convention Center in Albuquerque, New Mexico.

Nov. 2-4: American Cetacean Society 16th International Conference at the Hyatt Regency in Newport Beach, CA. Conference Theme: Whales & Us: The Next Generation. Early Bird registration now open at acsonline.org. Reserve rooms by October 4, 2018 at <https://book.passkey.com/go/AMCE18>.

Nov. 8-11: Western Society Of Naturalists Annual Meeting in Tacoma, WA.

Feb. 16 – Mar. 5, 2019: Antarctic Peninsula Whales and Landscape Expedition, in partnership with ACS. Itinerary, ship details and how to signup at cheesemans.com/Ant-Whales-Feb2019.

Feb. 27 – Mar. 2, 2019: Pacific Seabird Group 46th Annual Meeting in Kauai, Hawaii at the Aqua Kauai Beach Resort. For more information please go to www.pacificseabirdgroup.org

THE KILLING OF A BLUE WHALE REVEALS HOW DISCONNECTED WE ARE FROM NATURE

By Philip Hoare

Jul. 13, 2018 — They might as well have shot a giant panda. This week an Icelandic whaling company, Hvalur hf, caused uproar when it was revealed that it had killed a blue whale. Hvalur has killed hundreds of fin whales – mostly destined as meat for export to Japan. It resumed its hunt in June, after a three-year hiatus. But no blue whale – a highly endangered cetacean – has been deliberately killed for 40 years.

"We have never caught a blue whale in our waters since they were protected," Kristján Loftsson, the managing director of Hvalur told CNN. "We see them in the ocean. When you approach a blue whale, it's so distinct that you leave it alone."

Hvalur claims that the whale was a blue-fin whale hybrid. But experts agree the slumped leviathan on the Icelandic killing slope shows all the features of the largest animal that has ever existed on Earth. The mottled blue skin, the black baleen, the relatively tiny, hooked dorsal fin – all point to a pure blue whale (as if its purity actually mattered). Having seen many blue whales at close quarters, I can attest to this identification. As Peter Wilson, a whale expert and tour guide to Iceland, notes in his blog: “Whether they thought it was a blue or had someone out there who doesn’t know the difference, it shows complete disregard for any idea of expertise and a scientifically supported sense of sustainability”.

Surely the killing of such an animal should raise a furore as great as the one that met the shooting of Cecil the lion by a Minnesota dentist in 2015? Yet the (potentially very painful) death of this blue whale follows a under-reported story in May that Japan had killed 122 pregnant minke whales in its 2018 whaling season (sorry, “field survey”). It all starts to look like a sadly familiar game. Who can offend the most? Can they get away with it?

The heart of this issue lies in appropriation. Who owns a whale? When a sperm whale died off the coast of the Netherlands two weeks ago, it was towed back to land and lifted on to a quayside, where a necropsy was performed to determine cause of death (pneumonia) and ascertain how to deal with live strandings – a vital question on the shores of the shallow North Sea, where there has been a spate of such incidents in recent years. Unlike Hvalur, the organisations involved were behaving absolutely honourably. But as usual, the public was told to keep away, for reasons of “health and safety”. Sometimes science can get in the way of the very thing it tries to understand. By removing a whale from public sight – as if it is somehow shameful – don’t we increase the same sense of disconnection that can allow an Icelandic whaler to kill a blue whale, or Japanese whalers to slay hundreds of minkes?

“Charismatic megafauna” – whales, elephants, rhinos, lions, polar bears – have become the ammunition at the front line of ecopolitics. They’re media-friendly memes in the polarised debate over the animate “resources” of our planet. Both sides use animals to further their aims. The animals lose out, twice over. Their right to selfdom is denied, and the distance between us – what the art critic John Berger called “the narrow abyss of miscomprehension” – increases.

This spring, Cape Cod’s Center for Coastal Studies announced that the North Atlantic right whale, of



A blue whale – ‘the largest animal that has ever existed on Earth’
(Credit: eco2drew/Getty Images/iStockphoto).

which fewer than 430 remain, faces extinction by 2050. In the past 12 months, 18 individuals have been killed by ship strikes or by being caught in fishing gear. Not a single new calf has been observed this year. These whales haven’t been hunted by Icelandic or Japanese whalers. They die within sight of US shores, in the purview of the richest, most powerful democracy on Earth. Ordinary people are left feeling powerless. It is the monolithic leviathan of state that Hobbes critiqued, versus the exquisite yet fragile leviathan of the sea.

Ever since it began, the environmental movement has used the weighty issue of whaling as a Manichean struggle of good and evil. But given the urgency of this situation, we need new ways to think about ourselves and animals – as a continuum, not a demarcation. There is no “them” and “us”. The radical contemporary philosopher Tim Morton has defined a “dark ecology”, as an expression of “irony, ugliness, and horror”.

Are we doomed to re-enact these narratives, playing hopelessly with archetypes while animals die, over and over again? Or can we find a better story than the pathetic one told by that deflated, beautiful animal, hauled out of the infinite sea and into our sea of ignorance?

<https://www.theguardian.com/commentisfree/2018/jul/13/killing-blue-whale-disconnected-nature-sea-ignorance>

WRAP YOUR MIND AROUND A WHALE

By Nick Pyenson

Jun. 23, 2018 — The facts of a blue whale seem improbable; it is hard to wrap your mind around an animal with jaws the height of a football goal post. Those jaws are not just the ocean’s utmost bones (to borrow from Melville) but the utmost bones in the history of life on Earth.

And yet these superlative whales haven't been huge that long. In fact, they emerged just about 4.5 million years ago, coinciding almost perfectly with the human era.

We are living right now in the age of giants. Blue whales, fin whales, right whales and bowhead whales are the largest animals, by weight, ever to have evolved. How did this happen? And what does this tell us about how evolution works?

Fossils show that the earliest whales were more obviously mammalian — they had four legs, a nose, maybe even fur. They had bladelike teeth and lived in habitats that ranged from woodlands with streams to river deltas, occasionally feeding in the brackish waters of shallow equatorial coasts. And they were the size of a large dog.

If you were somehow able to return to an ancient shoreline and happened upon the entire assemblage of early whales, you wouldn't be able to guess which four-legged creature would beget the whales we know. In their own times and habitats, each was as well adapted as any sea lion or otter living today. But it was the whales that completely severed their ties to land that eventually won the evolutionary sweepstakes.

Still, it took these whales most of their 50-million-year history to become giants. It was not the parade of evolutionary transformations and innovations to their bodies (the refashioning of forelegs into flippers or the appearance in some species of baleen, for feeding, for example) that made them big. Instead, my colleagues and I argued in a 2017 study that the onset of ice ages, a few million years ago, affected the distribution of their prey, making it hyperabundant in warmer seasons along the coasts. This set the stage for long-range migration, while enhancing advantages that baleen whales already had for living large.

This brings up a theoretical question: Can whales continue to get bigger?

A lot about an animal's biology — how quickly its heart races, how many young it produces, how long it

lives — can be predicted from its size alone, whether it is enormous or microscopic. The mathematics that describes how biology changes across these scales is called allometry (the same math is used to explain economies and traffic jams). Applying allometry to the study of whales is the key to understanding not just what it takes to be a giant, but also the limits of living things on Earth.

There are disadvantages to being enormous. The largest whales are so big and thick with blubber that overheating in warmer waters is a risk.

Whale lungs are so large and specialized that they present their own quandaries. They must be able to collapse quickly enough to avoid rupturing when the whales dive deep (as some toothed whales do), but also to reinflate rapidly at the surface after two hours underwater. Blue whales don't dive anywhere close to the depths you'd expect for their body size. In part it's because their prey live near the light, but it also seems that it takes too much energy to breathe all the oxygen necessary for a deeper plunge.

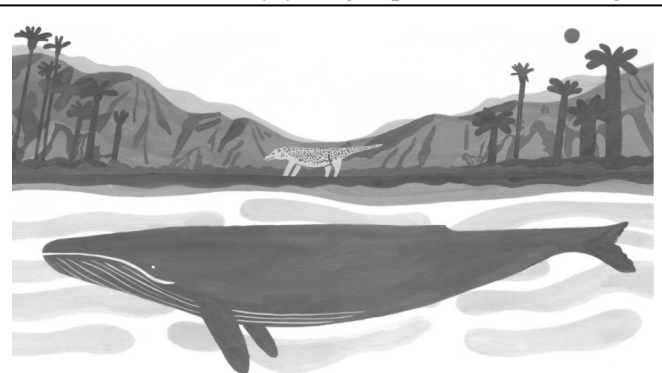
As organisms scale up, physics dictates what's possible for any kind of movement and function, be it blood flow, digestion or locomotion. Sauropod dinosaurs, for example, had limbs like columns to support their massive weight, yet their load was most likely lightened by an avian-like respiration system, which permeated their skeleton with air sacs.

Whales obviously haven't had to deal with the force of gravity since they became fully aquatic; underwater, they are essentially weightless. Instead, forces such as drag have shaped their bodies, especially when feeding. When scientists used allometry to calculate drag on mathematical models of different-size whales, they found that beyond lengths of 110 feet a blue whale would not be able to close its mouth fast enough around quickly escaping prey. Others have found that a whale that big wouldn't gain enough calories from the mouthful to make up for the energy lost from the act.

In other words, the largest whales ever measured, at 109 feet, are theoretically the largest whales that can exist.

Of course, physics isn't the only factor imposing limits on these leviathans. Whaling is estimated to have killed nearly three million whales in the 20th century alone.

Human hands have imperiled other cetaceans. Not a whistle or splash of the Yangtze River dolphin has been recorded since the first decade of the 21st century. Responsibility for the extinction of this species can be placed squarely on our shoulders: We dammed the only river in which it lived. Other species



(Credit: Ariel Lee).

such as the vaquita, a small porpoise that has never been spotted outside the Gulf of California, remain on the extinction watch list; there are only one or two dozen left.

The news isn't all dire: Some whale species, such as humpbacks, have rebounded from the brink; gray whales, icons of the West Coast, are even expanding to new habitats as climate and oceans change.

But on today's planet, large body size is correlated with a higher extinction risk. Almost all of the largest whale species today, including blue whales and right whales, are navigating an increasingly urbanized ocean, full of larger and faster ships, noise and detritus. The extreme size of the largest whales puts them at risk of entanglement in fishing gear and trauma from ship strikes.

Their size can also be a liability if the environment changes rapidly, which we know is happening now, thanks to the behavior of our own species. Features of past whale worlds, such as sea-level rise and the acidification of ocean water, will return in the near future as a result of widespread burning of fossil fuels driving climate change.

How successfully whales and humans can share this evolutionary moment is a high-stakes story that's still being written. The more we learn about these giants that can live more than twice as long as we do, and whose migrations take them across entire oceans, the better their chances of survival on Earth in the age of humans.

I think we have reason to hope that these largest creatures on the planet will continue to awe us for centuries to come, living, as they do, on the knife-edge between perfect and perilous adaptation.

<https://www.nytimes.com/2018/06/23/opinion/sunday/wrap-your-mind-around-a-whale.html>

ARTIST CAPTURES 'VISCERAL' GRIEF OF KILLER WHALE HOLDING DEAD CALF IN VIRAL PAINTING

By Liam Britten

A Washington State artist's painting of J-35 — the southern resident killer whale that has been keeping its dead calf afloat for over a week — has struck a chord with thousands of people gripped by the story.

Lori Christopher's watercolour painting, *See Me*, has been shared more than 8,500 times on Facebook since the artist posted it on Wednesday.

Christopher, of Hat Island, north of Seattle in the Salish Sea, said she was moved by J-35's story and later inspired to reflect it in her art.

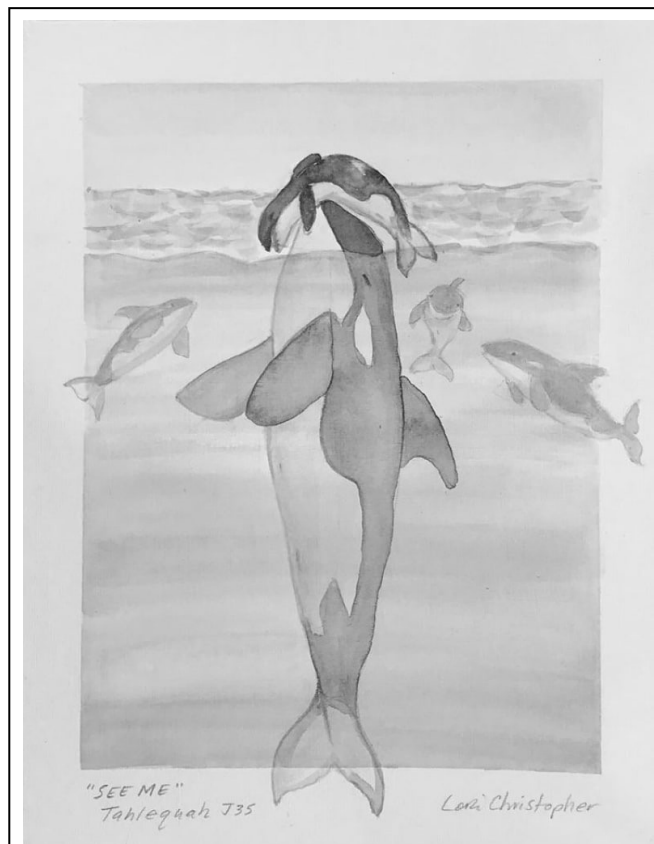


This July 25 photo shows the orca mother, J-35, balancing its dead calf on its nose trying to keep it afloat. (Credit: Ken Balcomb / Centre for Whale Research).

"Her grief was so visceral ... and had gone on for so many days that it was more of a cry out for help," Christopher said, adding it was almost as if the whale was trying to get our attention.

"When she's raising it above the water it becomes clear that she's grieving and she needs help. They all need help."

The painting depicts the heartbroken mother J-35 — also known as Tahlequa — holding its calf above



Lori Christopher's painting, *See Me*, depicting southern resident killer whale J-35 — also known as Tahlequa — went viral after she posted it on Facebook. (Credit: Lori Christopher/Facebook).

the water with a look of determination on its face as the dead offspring is draped, discoloured, over its snout. Other whales of the pod look on with faces expressing concern or uncertainty.

'Everything is on the table'

Christopher says it's critical that action be taken to save the remaining southern resident killer whales. She hopes by raising awareness and creating an emotional connection to J-35 with her art, that might happen.

As of Thursday, J-35 was still with its dead calf, Fisheries and Oceans Canada marine mammal coordinator Paul Cottrell said.

He told *On The Coast* guest host Angela Sterritt that researchers spent Friday trying to find it to check up on it. Another priority is recovering the body of the calf to conduct a necropsy.

The DFO has said it will reduce the total chinook salmon fishery removal by 25 to 35 per cent to increase food for the orcas. Cottrell said "everything is on the table" when it comes to protecting the whales.

"There's definitely lots going on on the research and management side," Cottrell said. "It's kind of a multi-prong approach because you ... have to look at all of the potential threats to recovery."

<http://www.cbc.ca/news/canada/british-columbia/killer-whale-dead-calf-1.4774220>

ANCIENT BONES REVEAL TWO WHALE SPECIES LOST FROM THE MEDITERRANEAN SEA

Jul. 11, 2018 — Two thousand years ago the Mediterranean Sea was a haven for two species of whale which have since virtually disappeared from the North Atlantic, a new study analysing ancient bones suggests.

The discovery of the whale bones in the ruins of a Roman fish processing factory located at the strait of Gibraltar also hints at the possibility that the Romans may have hunted the whales.

Prior to the study, by an international team of ecologists, archaeologists and geneticists, it was assumed that the Mediterranean Sea was outside of the historical range of the right and gray whale.

Academics from the Archaeology Department at the University of York used ancient DNA analysis and collagen fingerprinting to identify the bones as belonging to the North Atlantic right whale (*Eubalaena glacialis*) and the Atlantic gray whale (*Eschrichtius robustus*).

After centuries of whaling, the right whale currently occurs as a very threatened population off

eastern North America and the gray whale has completely disappeared from the North Atlantic and is now restricted to the North Pacific.

Co-author of the study Dr Camilla Speller, from the University of York, said: "These new molecular methods are opening whole new windows into past ecosystems. Whales are often neglected in Archaeological studies, because their bones are frequently too fragmented to be identifiable by their shape.

"Our study shows that these two species were once part of the Mediterranean marine ecosystem and probably used the sheltered basin as a calving ground.

"The findings contribute to the debate on whether, alongside catching large fish such as tuna, the Romans had a form of whaling industry or if perhaps the bones are evidence of opportunistic scavenging from beached whales along the coast line."

Both species of whale are migratory, and their presence east of Gibraltar is a strong indication that they previously entered the Mediterranean Sea to give birth.

The Gibraltar region was at the centre of a massive fish-processing industry during Roman times, with products exported across the entire Roman Empire. The ruins of hundreds of factories with large salting tanks can still be seen today in the region.

Lead author of the study Dr Ana Rodrigues, from the French National Centre for Scientific Research, said: "Romans did not have the necessary technology to capture the types of large whales currently found in the Mediterranean, which are high-seas species. But right and gray whales and their calves would have come very close to shore, making them tempting targets for local fishermen."

It is possible that both species could have been captured using small rowing boats and hand harpoons, methods used by medieval Basque whalers centuries later.

The knowledge that coastal whales were once present in the Mediterranean also sheds new light on ancient historical sources.

Anne Charpentier, lecturer at the University of Montpellier and co-author in the study, said: "We can finally understand a 1st-Century description by the famous Roman naturalist Pliny the Elder, of killer whales attacking whales and their new-born calves in the Cadiz bay.

"It doesn't match anything that can be seen there today, but it fits perfectly with the ecology if right and gray whales used to be present."

The study authors are now calling for historians and archaeologists to re-examine their material in the

light of the knowledge that coastal whales were once part of the Mediterranean marine ecosystem.

Dr Rodriguez added: "It seems incredible that we could have lost and then forgotten two large whale species in a region as well-studied as the Mediterranean. It makes you wonder what else we have forgotten."

Forgotten Mediterranean calving grounds of gray and North Atlantic right whales: evidence from Roman archaeological records is published in the journal *Proceedings of the Royal Society of London B*.

The study was an international collaboration between scientists at the universities of York, Montpellier (France), Cadiz (Spain), Oviedo (Spain) and the Centre for Fishery Studies in Asturias, Spain.

<https://www.sciencedaily.com/releases/2018/07/180711093227.htm>

SIGHTINGS

Sightings are compiled by Monterey Bay Whale Watch. For complete listing and updates see <http://www.montereybaywhalewatch.com/slstcurr.htm>

Date	#	Type of Animal(s)
7/31 8 am	50	Humpback Whales
7/30 9 am	29	Humpback Whales (lunge-feeding and breaching)
	1	Harbor Porpoise
	1	Mola Mola (ocean sunfish)
7/29 8 am	30	Humpback Whales
8 hour All Day	5	Risso's Dolphins
7/28 8 am	30	Humpback Whales (lunge-feeding and breaching)
	2	Mola Mola (ocean sunfish)
	12	Black-footed Albatross
7/27 2 pm	26	Humpback Whales (lunge-feeding)
	300	Rafting California Sea Lions
7/27 8 am	18	Humpback Whales (lunge-feeding and breaching)
	1	Pacific White-sided Dolphin
	20	Risso's Dolphins
	1	Mola Mola (ocean sunfish)
7/26 8 am	14	Humpback Whales (lunge-feeding)
	2	Harbor Porpoise
7/25 8 am	25	Humpback Whales
8 hour All Day	10	Dall's Porpoise
	1	Black-footed Albatross
7/24 8 am	12	Humpback Whales
	25	Risso's Dolphins (breaching)
	1	Black-footed Albatross
7/23 8 am	45	Humpback Whales (lunge-feeding and breaching)
	5	Risso's Dolphins
	7	Dall's Porpoise
	6	Harbor Porpoise
	1	Black-footed Albatross
7/22 8 am	23	Humpback Whales

	150	Risso's Dolphins
	10	Dall's Porpoise
	4	Mola Mola (ocean sunfish)
	7	Black-footed Albatross
7/21 9 am	17	Humpback Whales
	180	Pacific White-sided Dolphins
	40	Risso's Dolphins
	2	Mola Mola (ocean sunfish)
	1	Black-footed Albatross
7/20 9 am	9	Humpback Whales (tail throwing and tail lobbing)
	60	Risso's Dolphins
	3	Mola Mola (ocean sunfish)
7/19 8 am	20	Humpback Whale
	1	Blue Whale
	80	Risso's Dolphins
	15	Dall's Porpoise
	1	Short-fin Mako Shark
	1	Black-footed Albatross
7/18 8 am	25	Humpback Whales
	50	Pacific White-sided Dolphins
	10	Northern Right Whale Dolphins
8 hour All Day	200	Risso's Dolphins (breaching)
	1	Black-footed Albatross
	1	Tufted Puffin
7/17 1 pm	20	Humpback Whales (lunge-feeding and breaching)
	50	Pacific White-sided Dolphins
	10	Northern Right Whale Dolphins
	200	Risso's Dolphins
7/16 8 am	7	Humpback Whales (lunge-feeding and breaching)
	5	Pacific White-sided Dolphins
	5	Risso's Dolphins
7/15 8 am	13	Humpback Whales (breaching)
	4	Black-footed Albatross
	1	Tufted Puffin
7/14 8 am	40	Humpback Whales
	200	Pacific White-sided Dolphins
8 hour All Day	100	Northern Right Whale Dolphins
	150	Risso's Dolphins
	1	Tufted Puffin
7/13 4:30 pm	14	Humpback Whales
	1	Minke Whale
	75	Risso's Dolphins
7/12 1 pm	12	Humpback Whales (cow/calf pair)
	1	Sabine's Gull
7/11 8 am	20	Humpback Whales (lunge-feeding)
	2	Blue Whales
8 hour All Day	1,300	Pacific White-sided Dolphins
	200	Northern Right Whale Dolphins
	100	Risso's Dolphins
	15	Dall's Porpoise
	1	Black-footed Albatross
7/10 8 am	10	Humpback Whales (breaching)
	10	Pacific White-sided Dolphins
	1	Northern Right Whale Dolphin
	1	Black-footed Albatross

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