

Soundings



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

MAY 2017

**MONTHLY MEETING AT HOPKINS MARINE STATION,
LECTURE HALL BOAT WORKS BUILDING
(ACROSS FROM THE AMERICAN TIN CANNERY OUTLET STORES)
MEETING IS OPEN TO THE PUBLIC**

Thursday, May 25, 2017

Time: 7:30 PM

PLEASE JOIN US AT 7:00 FOR REFRESHMENTS

Speaker: Scott Benson

**Leatherback Turtles in the California Current:
Why Leatherbacks Cross the Pacific**



Scott Benson is the lead investigator of the leatherback turtle ecology program and coordinates studies of the distribution, abundance, movement patterns, foraging ecology, and health of endangered western Pacific leatherback turtles along the U.S. West Coast and throughout the Pacific. His research integrates bio-telemetry, aerial surveys, vessel-based sampling, and satellite remote sensing to enhance understanding of how oceanographic processes influence the occurrence and behavior of this species, and to aid U.S. and international conservation and recovery efforts. Since 1986, Scott has been involved in ecological research and conservation of marine vertebrates in the Pacific Ocean, including

integrated studies of marine mammals and seabirds along the U.S. West Coast. Stationed at Moss Landing Marine Laboratories, his education includes a B.A. from San Diego State University and an M.S. in Marine Science from San Jose State University.

Scott will discuss the declining populations of the Pacific Leatherback Sea Turtle, which have placed it on NOAA's list of eight endangered species most at risk of extinction in the near future. He will also be discussing the endangered sea turtle's biology, distribution, movements and foraging ecology.

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 at Hopkins Marine Station Boatworks Hall at 7:30 PM on Thursday, June 29. Please save the date and join us!

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needs you!*

*Consider serving on the
Board of Directors as
Membership Chair, Publicity
Chair or Education Chair.*

*Please talk to any board
member for more
information.*

CALENDAR

May 19: Hopkins Marine Station Spring Seminar by Anne Solomon of Simon Fraser University: "Tipping points and transformation in coupled human systems." 12:00 - 1:00 PM.

May 26: Hopkins Marine Station Spring Seminar by Les Kaufman of Boston University's Marine Program: "Sustainability Dynamics on Hybrid Landscapes: The 4 Humors of the Anthropocene." 12:00 - 1:00 PM.

Jun. 2: Hopkins Marine Station Spring Seminar by Cassandra Brooks and John Weller of Stanford University: "Ocean Legacy: How the International community adopted the world's largest marine protected area in the Ross Sea, Antarctica." 12:00 - 1:00 PM.

Jul. 13: Presentation by John Calambokidis McCauley at the Channel Islands National Park Robert J. Lagomarsino Visitor Center in Ventura, CA: "Whale Protection and Vessel Speed Reduction in the Santa Barbara Channel." 7:00 PM.

Jul. 29: ACSMB Summer BBQ at Indian Village in Del Monte Forest (off 17 Mile Drive near the Bird Rock Vista Point). 2pm - 5pm. Tickets are \$25, BYOB & Table Setting. There will also be a silent auction and Raffle. To RSVP contact Katlyn Taylor at katlyn.taylor.oc@gmail.com or mail check to ACSMB, P.O. Box H.E., Pacific Grove, CA 93950. More information to come in the June issue.

Aug. 26: ACSMB Summer Whale Watching Fundraiser with Discovery Whale Watch. This annual fundraiser will explore the marine mammal rich waters of Monterey Bay in search of Blue and Humpback Whales. 9 am - 2 pm. \$45. For reservations contact Katlyn Taylor at katlyn.taylor.oc@gmail.com or mail check to ACSMB, P.O. Box H.E., Pacific Grove, CA 93950.

BOOK RECOMMENDATIONS

A Natural History of California, Second Edition, by Allan A. Schoenherr. 2017 UC Press.

Collecting Evolution: The Galapagos Expedition that Vindicated Darwin, by Mathew J. James. 2017 Oxford University Press.

Beaked Whales: A Complete Guide to their Biology and Conservation, by Richard Ellis and James G. Mead. 2017 Johns Hopkins University Press.

'WHISPERING' KEEPS HUMPBACK WHALES SAFE FROM KILLER WHALES

Apr. 26, 2017 — Newborn humpback whales 'whisper' to their mothers to avoid being overheard by killer whales, researchers have discovered. The recordings -- the first obtained from tags directly attached to the whales -- are published today in *Functional Ecology*.

Ecologists from Denmark and Australia used temporary tags on humpback mothers and their calves in Exmouth Gulf off western Australia to learn more about the first months of a humpback's life.

According to lead author Simone Videsen of the University of Aarhus: "We know next to nothing about the early life stages of whales in the wild, but they are crucial for the calves' survival during the long migration to their feeding grounds."

"This migration is very demanding for young calves. They travel 5,000 miles across open water in rough seas and with strong winds. Knowing more about their suckling will help us understand what could disrupt this critical behaviour, so we can target conservation efforts more effectively."

Humpbacks spend their summer in the food-rich waters of the Antarctic or Arctic, and in the winter migrate to the tropics to breed and mate. While in tropical waters such as Exmouth Gulf, calves must gain as much weight as possible to embark on their first, epic migration.

Together with colleagues from Murdoch University, Videsen tagged eight calves and two mothers. To capture the faint sounds of the calves, they used special tags developed by the University of St Andrews.



Humpback whale mother and calf near the Hawaiian Islands Humpback Whale National Marine Sanctuary. (Credit: Ed Lyman/NOAA, under NOAA permit #14682).

The tags attach to whales via suction cups and record sounds made and heard by whales, along with their movements, for up to 48 hours before detaching to float at the surface.

The study found that mothers and calves spend significant amounts of time nursing and resting. The recordings also revealed that newborn humpbacks communicate with their mothers using intimate grunts and squeaks -- a far cry from the loud, haunting song of the male humpback whale.

The data tags showed that these quiet calls usually occurred while whales were swimming, suggesting they help mother and calf keep together in the murky waters of Exmouth Gulf. "We also heard a lot of rubbing sounds, like two balloons being rubbed together, which we think was the calf nudging its mother when it wants to nurse," says Videsen.

Such quiet communication helps reduce the risk of being overheard by killer whales nearby, she believes: "Killer whales hunt young humpback calves outside Exmouth Gulf, so by calling softly to its mother the calf is less likely to be heard by killer whales, and avoid attracting male humpbacks who want to mate with the nursing females."

The findings will help conserve this important humpback habitat and -- crucially -- ensure these nursery waters are kept as quiet as possible.

"From our research, we have learned that mother-calf pairs are likely to be sensitive to increases in ship noise. Because mother and calf communicate in whispers, shipping noise could easily mask these quiet calls."

There are two major humpback whale populations, one in the northern hemisphere and the other in the south. Both breed in the tropics during the winter and then migrate to the Arctic or Antarctic during the summer to feed.

Humpback whales are slow to reproduce. Pregnancy lasts for around one year and calves -- which are 5 metres at birth -- stay with their mothers until they are one year old. During their first weeks of life, calves can grow by up to one metre per month.

<https://www.sciencedaily.com/releases/2017/04/170426093314.htm>

IN FIJI, NOTHING SAYS 'I LOVE YOU' LIKE A SPERM WHALE TOOTH

By Serena Solomon

Apr. 11, 2017 — SUVA, Fiji — Tucked inside a dark shopping plaza in this otherwise enchanting city in the South Pacific is Henry's Pawn Shop. Inside, Joseph Baivatu, 29, prepares to make the next



Sperm whale teeth, known as a tabua, displayed at a flea market in Suva, Fiji. Tabuas are given ahead of an engagement or at weddings, funerals and births. They are also used to seal an apology. (Credit: Lam Yik Fei for The New York Times).

payment on a layaway for something very special: a large sperm whale tooth. Known as a tabua in Fiji, a sperm whale's tooth is often given by a groom and his family to the parents of the man's (hopefully) future bride when he asks permission to marry her.

"The whole of my life I want to be married, so I give my goods and my time," said Mr. Baivatu, a Vodafone technician in Suva, Fiji's capital and largest city. "I give the tabua, and that means 'I love you' from the inside."

Mr. Baivatu, who is as soft-spoken as he is tall and broad shouldered, said he had yet to meet the future Mrs. Baivatu, but that detail does not get in the way. He is determined to be ready with tabuas when she turns up.

Tabua (pronounced tam-BOO-ah) roughly translates to "sacred" in Fijian. The valuable relic, associated with good luck and even supernatural powers, has traditionally paved the way for marriages in this nation of more than 300 islands.

With few countries still harvesting whales and laws limiting the international trade of endangered species like the sperm whale and their specimens, the number of tabuas circulating in Fiji is dwindling, causing prices to rise. A single tooth strung with braided cord as an oversize pendant on a necklace can cost hundreds or even thousands of dollars. Mr. Baivatu is aiming to buy 12 teeth, which he said would amount to three months of his salary.

Despite the cost, giving tabuas "is very much still alive and a part of our culture," said Apo Aporosa, a New Zealand-based anthropology researcher with Fijian heritage. The practice is more common in rural areas, he said, but even in the urban areas, the tradition continues among some families.

Most noble families descended from chiefs keep a cache of tabuas available for when a son is in need. The modern-day romantics who choose to keep the tradition alive, however, often require a few trips to a pawnshop in a city center like Suva.

With about 90,000 people, Suva has the feel of a large town. Colorful buses clog the narrow streets, their windows missing glass to make the humidity a little more bearable. Just as colorful is the city's heart: the fruit, vegetable and flower market where villagers make the daily journey to sell their produce.

In addition to engagements, tabuas are given at weddings, funerals and births, and to seal an apology.

Tabuas "essentially communicate that the holder or presenter highly esteems the sanctity of the agreement, promise, etc.," Simione Sevudredre, from the department in Fiji's government that oversees indigenous affairs, wrote in an email.

During the days of warring tribes, before Fiji became a British colony in the late 1800s, if a chief wanted someone killed and was unable to do it himself, he offered a tabua to another tribe to take care of the matter. This was the case for an unfortunate 19th-century British missionary, the Rev. Thomas Baker.

According to national legend, the missionary offended a village chief, who then offered a tabua to another tribe to kill him. In 2003, the descendants of the village that killed — and promptly ate — Baker presented 100 tabuas to the missionary's ancestors in an effort to break what was viewed as a curse on the area related to the death.

At a handicraft market in downtown Suva, Sarah Naviqa, a shopkeeper, sat in a tiny stall surrounded by mats, bags and fans woven from pandanus leaves. She plunked a blue plastic bag containing half a dozen sperm whale teeth on the table. Some were cream. Others had a brown hue. Their size varied from the length of a hand to the length of a forearm. The largest weighed about three pounds and cost about \$1,000.

Buying a tabua ahead of an engagement is also about status, she said.

"It means the man's family is quite well off," said Ms. Naviqa, whose husband presented six tabuas to her family in 1970.

The parents gave their blessing for the marriage, but Ms. Naviqa said she had ultimately made the decision. "I was working and very independent," she said.

Ms. Naviqa keeps a supply of tabuas available by buying them from families who run into financial troubles. "Once they get into financial constraints, that is when they have to sell these items," she said. "Keep

on recycling, eh? And very good business. The more recycling, the better for us."

A fish specialist for a conservation nonprofit, Waisea Batilekaleka, 34, was recently heading back to Suva from a work trip on one of the many ferries that link the city with Fiji's outlying islands. Mr. Batilekaleka said that during the time of his engagement and wedding in 2002, he had given almost 20 tabuas to his wife's family.

Some he inherited from his family and others came from his mataqali, or clan. Mr. Batilekaleka also took three years to save for the four he bought himself. He gave his wife a diamond ring, which remains rare in much of Fiji.

Mr. Batilekaleka said that saving for the tabuas, which 15 years ago cost him about \$150 each, had shown that he was "willing to take up this responsibility to become a husband and a father."

Despite the value placed on tabuas, Fijians did not traditionally hunt whales. Instead, it was hunters from the neighboring island nation of Tonga who killed the whales and traded the teeth with the Fijians. That supply was cut off when Tonga banned whaling by royal decree in 1978.

Two decades later, Fiji signed a global treaty that restricted international trade in endangered species and their parts, including sperm whale teeth. A cultural exemption allows for the export of 225 tabuas each year, according to Sarah Tawaka, a senior environmental officer at Fiji's Department of Environment. A special permit is required to bring sperm whale teeth into Fiji, Ms. Tawaka wrote in an email.

Enterprising Fijians have taken advantage of dead sperm whales that wash up on beaches. The jaw and teeth of a sperm whale found dead on Nukulau Island near Suva in 2015 were quickly taken, according to *The Fiji Times*. Dead sperm whales in Tonga faced similar fates.

Tabuas made from plastic are also circulating, according to sellers in Suva, who said they had ways to identify the fakes.

"You use matches to light the tabua," said Rachel Turaga, 19, a shop assistant at Henry's Pawn Shop. "If it melts, that's the fake one."

It has been five months since the interview with Mr. Baivatu at Henry's Pawn Shop, and his search for a wife continues. "I'm still looking," he said through a spotty phone connection. On the bright side, he now has 11 tabuas, one short of his goal.

<https://www.nytimes.com/2017/04/11/world/asia/suva-fiji-tabua.html>

THE OTHER IVORY TRADE: NARWHAL, WALRUS AND... MAMMOTH

By Ashley Coates

Apr. 29, 2017 — Considered to be a “sea unicorn” in the centuries before the Arctic was properly explored, the “horn” of the narwhal was an object of fascination for Europeans, and particularly monarchs, who paid for the tusks with many times their weight in gold.

Queen Elizabeth I is said to have spent £10,000 on a narwhal tusk, a fortune in Elizabethan England, roughly equivalent to £1.5m today, and had it placed within the crown jewels.

Although no longer considered to be the horn of the unicorn, today the average price of a narwhal tusk is around £3,000 to £12,000, while rare “double tusks” can fetch as much as £25,000.

A species of toothed whale, the narwhal can grow to be more than 5m long and live for up to 50 years. A relative of the white beluga whale, narwhal grow a helical unicorn-like tusk that is actually a protruding canine tooth. The exact use of this unique feature is still debated by scientists, with recent studies suggesting it is a highly sensitive organ used for detecting temperature and chemical differences in the water.

The International Union for the Conservation of Nature does not consider these species to be at immediate risk, but the 75,000 narwhal alive today are now considered to be “near threatened”. In practice, this means narwhal could soon become vulnerable due to changes in their natural environment and the impact of hunting.

Canada and Greenland permit the hunting of narwhal by the native Inuit for subsistence purposes, landing an average of 979 whales a year between 2007 and 2011. The Inuit have hunted narwhal for centuries, using the animals as both a source of food and income.

In addition to the global trade in tusks and teeth, a Whale and Dolphin Conservation Society study found that shops in Japan were selling ground narwhal tusk as a tonic to treat fever, measles, venereal disease as well as general pain relief. Shop counter prices for this medicine varied from \$540 (£421) and \$929 (£724) for 100g.

A WWF and Traffic report from 2015 warned that the effects of climate change means the hunting of narwhal needs to be better monitored and regulated, but did not consider the international trade in narwhal parts to be a threat to the survival of the species today.

Noting the significant economic and cultural importance of the narwhal to Arctic peoples, the report said: “Successful management will result in populations and stocks that are healthy, stable, resilient to threats and a continued resource to local communities.”

The report called for: “More consistent reporting of CITES trade data. More precise reporting of the narwhal body parts in trade. Reporting of items exported as personal and household effects (souvenirs). Developing a study on the supply chain and consumer demand dynamics for narwhal parts.”

The Whale and Dolphin Conservation Society is concerned that the hunting of narwhal has already become unsustainable.

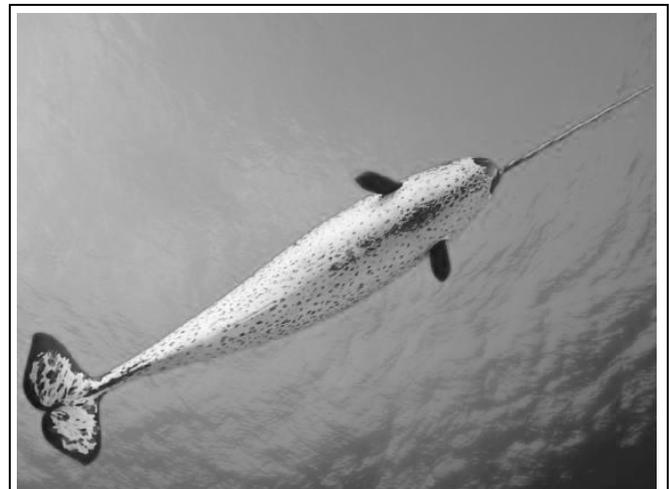
“Narwhals have been ‘overharvested’ in Canada and Greenland, raising cause for concern,” the organisation said.

“The annual hunting in western Greenland (since 2004) significantly exceeded the quotas recommended by those scientific bodies of regional and international organisations charged with narwhal management.”

Aside from hunting, the WWF cites a number of growing threats to the sustainability of the narwhal population, including underwater man-made noise generated by the oil and gas industry as well as military activity. As whales use sound for navigation and communication, this can be very disruptive to species such as the narwhal.

Unsurprisingly, climate change is high on the list of threats to narwhal. These whales use the ice to hide from predators, and lower sea ice coverage in the Arctic makes the whales more vulnerable both to hunting by man and natural predators such as killer whales.

Although the Inuit people are permitted to sell narwhal derivatives, in both the United States and the



A male narwhal. (Credit: Rex).



Sealer Aron Aqqaluk Kristiansen from the settlement Kangarsuatsiaq, Upernavik commune, poses with the head of a narwhal that had double tusks. (Credit: Getty).

European Union, there are complicated sets of restrictions on what can and cannot be imported without permits and penalties for contravening import rules can be expensive.

A joint US-Canada anti-smuggling investigation known as Operation Longtooth uncovered a significant and profitable illegal trade in narwhal tusks in the United States. In 2013, Gregory Logan was arrested in the US for offences relating to a staggering 250 narwhal tusks, resulting in a fine of \$385,000 and an eight-month conditional sentence. In 2015, *United States v Andrew Zaruskas* saw the defendant sentenced to 33 months in prison for “unlawful trafficking of narwhal tusks and teeth”. The animals in question were hunted legally, and lawfully purchased in Canada, but the re-selling of these items is strictly prohibited in the US.

In 2009, seven narwhal tusks were legally put up for sale with prices ranging from £500 to £10,000 each in a “Gentleman’s Library” auction at Bonhams, before being removed following a campaign by the Whale and Dolphin Conservation Society, which argued that the high prices would further encourage the global trade in narwhal parts.

Like the narwhal, the carving of walrus tusk goes back many centuries. Yupik, Inuit, Inupiaq peoples are believed to have made ornamental walrus tusks as far back as prehistoric times, while Northern Europe’s interest in walrus emerged later.

The Vikings are thought to have started trading walrus ivory when the Conquests restricted the supply of elephant tusks from Africa, with England’s King Alfred the Great amongst the recipients.

Also like the narwhal, the walrus is subject to complicated hunting and export rules, and there have been reports that the international regulations aimed at preventing the sale of elephant ivory is inadvertently hurting the Alaskan communities who carve walrus ivory for a living.

Exempt from the US Marine Mammal Protection Act, Alaskan Natives are one of a number of Arctic communities that are permitted to hunt the walrus for both meat and sales of “worked” ivory, within restrictions by countries with territories in the Arctic. The WWF estimates an average of 5,406 walrus were hunted from 2006-07 to 2010-11, which “equates to less than 3 per cent and 4 per cent respectively of the estimated global populations for each subspecies”.

As remains the case for a lot of the scientific research taking place in the Arctic and Antarctic, poor data has prevented conservationists and scientists from accurately assessing the current condition of the Arctic walrus populations. Another WWF and Traffic report concluded: “Limitations in available trade data make it very difficult to make inferences on the impact of international trade, whether current provisions and regulations are adequate and whether further action is needed.”

Walrus are not considered to be an endangered species but the tightening up of restrictions on the sale of ivory in states such as California, Hawaii, New York and New Jersey, as well as negative press concerning the sale of elephant ivory around the world, is thought to be having an impact on the traditional craftsmanship of communities in the region.

Yet with many marine mammals protected from human exploitation, and most whaling banned by the International Whaling Commission since 1982, the Arctic permits stand out as an anomaly.

“There are some Alaskan communities who really rely on the income they receive from walrus ivory to sustain their lives,” says Tanya Shadbolt, a freelance environmental consultant who worked on the WWF/TRAFFIC reports. “It’s very easy for scientists to come in and say ‘you can’t do this’, without understanding the impact on people, and vice-versa.”

“Some Inuit can get upset and they can end up disliking because they see people coming in and making decisions that affect their livelihoods and they don’t have a voice in it.”

“Science informs management decisions, it is needed because the information collected is what is used to monitor the species and ensure the population is doing ok. For me, what stuck out the most from this

research was the delicate nature of the situation. Everybody wants what is best for the species. The Inuit want what is best for the species too, they rely on them.”

The global trade in ivory is not restricted to species that are alive today. Mammoths last walked the Earth roughly 4,000 years ago, and it is estimated that as many as 10 million carcasses lie frozen under the Arctic Circle.

Melting permafrost in the Siberian tundra has uncovered preserved mammoths, which are legally sold, but conservationists are concerned that smugglers are passing off illegally-traded elephant ivory as mammoth tusks to avoid detection.

Douglas MacMillan, a professor of conservation and applied resource economics at University of Kent, has argued that banning the mammoth trade would actually increase demand upon genuine elephant tusks.

Writing on the website IFLScience, Macmillan says: “A recent analysis linked with empirical data predicts that the 84 tonnes of Russian mammoth ivory that was exported to Asia on average per annum over the period 2010-12 would have actually reduced poaching of wild elephants from 85,000 per year to around 34,000 elephants per year, primarily by reducing elephant ivory prices by about \$100 per kg.”

Worries about the potential impact of the mammoth ivory trade has led India and the US states of New Jersey, New York, California and Hawaii to ban the sales of mammoth tusks altogether. As well as the potential risk to elephant populations, paleontologists are concerned that science is losing valuable information from tusks that are sold commercially are never taken into the laboratory.

Speaking to *National Geographic*, Daniel Fisher of the University of Michigan said: “There’s still important questions to be solved about woolly mammoths. Do we study the tusks and learn something from them, or do we carve them?”

http://www.independent.co.uk/news/long_reads/the-other-ivory-trade-narwhal-walrus-andmammoth-a7699861.html

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)
4/30 4 pm	13	Humpback Whales
	15	Common Dolphins
4/30 2 pm	10	Killer Whales (unsuccessful hunt)

	2	on Gray Whale cow/calf pair Gray Whales (cow/calf pair)
4/30 12:30 pm	1 12	Blue Whale Risso’s Dolphins
4/30 9 am	27 50 15 3	Humpback Whales Long-beaked Common Dolphins Risso’s Dolphins Harbor Porpoise
4/30 8 am	32 90 4	Humpback Whales Risso’s Dolphins Harbor Porpoise
4/29 4 pm	9	Humpback Whales (breaching)
4/29 2 pm	10 50	Humpback Whales Long-beaked Common Dolphins
4/29 12:30 pm	11 40	Humpback Whales Long-beaked Common Dolphins
4/29 9 am	10 6 1 1 40 2 1	Humpback Whales Killer Whales Blue Whale Minke Whale Long-beaked Common Dolphins Harbor Porpoise Black-footed Albatross
4/29 8 am	6 4 1 5	Humpback Whales Killer Whales Blue Whale Harbor Porpoise
4/29 8 am All Day	3 25	Humpback Whales Killer Whales (predation on a Gray Whale and Fur Seal)
4/28 9 am	22 150 100 25	Humpback Whales Pacific White-sided Dolphins Risso’s Dolphins Harbor Porpoise
4/28 8 am	17 200 7	Humpback Whales Long-beaked Common Dolphins Harbor Porpoise
4/28 8 am All Day	35 1 200 5	Humpback Whales Blue Whale Long-beaked Common Dolphins Harbor Porpoise
4/27 9 am	8 9	Humpback Whales Killer Whales
4/27 8 am All Day	14 9 200 4	Humpback Whales Killer Whales Long-beaked Common Dolphins Harbor Porpoise
4/26 2 pm	2 9 1	Humpback Whales Killer Whales (feeding on a Gray Whale) Black-footed Albatross
4/26 9 am	3 9 2 100 5 7	Humpback Whales Killer Whales (feeding on a Gray Whale) Gray Whales Common Dolphins Harbor Porpoise Black-footed Albatross
4/24 8 am All Day	14 13 20	Humpback Whales Killer Whales Long-beaked Common Dolphins

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