Soundings

American Cetacean Society – Monterey Bay Chapter
PO Box 51691, Pacific Grove, CA 93950

APRIL 2018

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, April 26, 2018
Time: 7:30 PM

PLEASE JOIN US AT 7:00 PM FOR REFRESHMENTS

Speaker: Dr. Matthew Savoca

Title: The Science of How and Why Marine Wildlife Eats Plastic

Matthew Savoca grew up in New York City, and has always been captivated by the natural world. He got his first taste of marine research while studying gulls at the Shoals Marine Laboratory on Appledore Island, Maine. His main interests in marine biology evolved while completing a Ph.D. in the Graduate Group in Ecology at UC Davis. For his doctoral research, he used a sensory biology approach to help explain why marine animals confuse plastic debris for prey items.

He is currently a California State Sea Grant Fellow working with NOAA's Southwest Fisheries Science Center in Monterey, and in mid 2018 will be starting a postdoctoral position in the Goldbogen Lab at the Hopkins Marine Station. Matthew's enthusiasm for science translation and communication is a driving force in his professional life. Over the years, he has spoken about marine science at state parks, museums, aquariums, and elementary schools. He aspires for a career where he can continue bridging the gap between science and the public. Matthew's passions include photography, hiking, birding, and traveling.

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, May 31 at Hopkins Marine Station. Please save the date and join us!

INSIDE THIS ISSUE

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.

CALENDAR

Apr. 15: 2018 Annual Oceans Colloquium at Moss Landing Marine Labs. "Rising Ocean Leaders." Colloquium will include keynote speakers, Ted-Style Talks and interactive demonstrations. Sunday, 9 AM – 4:30 PM.

Apr. 27: Lecture by Stephanie Green of Stanford University: "Reassembling Coastal Marine Ecosystems in the Anthropocene: Pattern, Processes, and Consequences." 12-1 PM at Hopkins Marine Station Boatworks Hall.

Apr. 28: San Francisco Zoo Albatross Art and Science Soirée. This celebration of the magnificent albatross will include authors, artists, and scientists. Breck Tyler will give a one-hour presentation about albatross natural history at 8 PM. Event goes from 7:00-9:30 PM.

Apr. 28-29: Moss Landing Marine Lab Open House from 9 AM – 5 PM. Open house itinerary will include seminars, field trips, marine lab demonstrations, arts and crafts and puppet shows.

May 3: Seminar at Moss Landing Marine Lab by Dr. James Watanabe of Hopkins Marine Station: Up, Down and Sideways: Four decades of change in a Monterey Kelp Forest. 4 PM.

Jul. 16-20: Superpod 6 in Friday Harbor San Juan Island, Washington. This five-day symposium on Southern Resident Killer Whales will include international killer whale scientists, filmmakers, authors, journalists, and naturalists! Whale watching opportunities will be ubiquitous.

Nov. 2-4: American Cetacean Society 16th International Conference at the Hyatt Regency in Newport Beach, CA. Conference Theme: Whales & Us: The Next Generation.

BOOK RECOMMENDATIONS

The California Field Atlas, by Obi Kaufman. 2017 Heyday. Winner of the 2018 Northern California Independent Booksellers Association Book Of The Year Award.

Reading the Rocks: How Victorian Geologists Discovered the Secret Of Life, by Brenda Maddox. 2017 Bloomsbury USA.

The Book That Changed America: How Darwin's Theory Of Evolution Ignited a Nation, by Randall Fuller. 2017 Viking.

SEA OTTERS ARE WALLED IN BY HUNGRY SHARKS

By Madelin Bodin

Mar. 16, 2018 — A plump, healthy-looking sea otter has stranded itself on a sandy beach at the northern end of Monterey Bay, California. Sea otters only rarely, if ever, come ashore, so its presence is a sign that something has likely gone awry. Yet unlike the sea otters that have been found starving and emaciated on the beaches farther south, what's wrong isn't obvious at first. But Teri Nicholson, a senior research biologist at the Monterey Bay Aquarium, knows exactly what is to blame.

As a population, California sea otters are something of a success story. At the turn of the last century, scientists thought that hunters had killed the last of them for their lush pelts. Then, in 1938, about 50 were discovered off Big Sur, in central California. Protected under the US Marine Mammal Protection Act and the Endangered Species Act, the otters have made a comeback.

For decades, their numbers have mostly increased, swelling to 3,200 individuals. But now their range appears to be constrained. The otters can't seem to survive farther north than Santa Cruz or south of Santa Barbara. Their burgeoning numbers and restricted territory have led to overcrowding and, in some cases, starvation and death.

For the population to continue to grow, Monterey Bay Aquarium scientists believe the animals must expand into new territory. Yet the sea otters seem stuck where they are.

Nicholson, who has spent the past 25 years studying sea otter population trends, suspects that healthy-looking stranded sea otters hold the key to

Sea otters, by eating sea urchins, help kelp to flourish. Now, new research suggests this kelp may also be helping the otters in turn. (Credit: Sebastian Kennerknecht / Minden Pictures).

understanding the population's confinement. "When you look through their remarkably thick, dense fur, you find this penetrating laceration," she says. It's the result of a white shark bite.

Typically, one bite is all a shark takes to kill a sea otter. For a white shark looking for blubber-rich seals, a sea otter is just an unappetizing hairball. But to the otters, the sharks' intentions are irrelevant—they still end up dead, or wounded and in need of rehabilitation.

In a recent study, Nicholson trawled through 30 years of sea otter stranding records, accounting for 725 animals, and found that the sharks are effectively keeping the sea otters hemmed in. Within the sea otters' densely populated core range, 63 percent of strandings are due to emaciation. Yet at the edge of their range, shark bites cause the largest proportion of strandings.

"If you would have asked me 10 years ago if white sharks could limit the sea otter population," Nicholson says, "I would have said no."

But what accounts for the prevalence of shark-related strandings in some places but not others? According to Nicholson's new research, the answer seems to be kelp, or the lack thereof. Kelp forests are typical habitat for sea otters. But by comparing strandings against a map of California's dwindling kelp forests, she found that shark bites are most common where kelp is scarce.

Scientists are not yet sure exactly how kelp safeguards the otters against shark bites. Nicholson, for one, thinks the sharks simply don't see otters that are hidden amid the foliage. Otters that stray into kelp-free spaces, by contrast, are more likely to be spotted by hungry white sharks. Shark researchers from the aquarium are in the early stages of field research exploring the relationship in more detail.

Yet if sharks make leaving the safety of the kelp too daunting for the sea otters, what can be done to help bolster their numbers? Packing them up and moving them is an option, though not an ideal solution, says Andy Johnson, the aquarium's sea otter research and conservation program manager.

Doing so would require approval from the US Fish and Wildlife Service, which oversees the otter population as a threatened species under the Endangered Species Act. Though, Johnson adds, the sea otters' population is nearing the number needed for the species to be delisted.

Johnson says what he really wants is "to see an ecosystem-wide recovery, with sea otters repopulating areas throughout California." And for that, sea otters could use more kelp in which to hide.

https://www.hakaimagazine.com/news/sea-otters-are-walled-in-by-hungry-sharks/

Scientists Witness First Reported Case of Killer Whale Infanticide

By Ashifa Kassam

Mar. 23, 2018 — Scientists in the Canadian province of British Columbia have documented what is believed to be the first reported case of an orca whale killing an infant of the same species.

"We knew right away that this was a remarkable event," said Jared Towers, a cetacean researcher with Fisheries and Oceans Canada, of the encounter he and two colleagues witnessed in December 2016.

"We've been looking at killer whales for years on this coast and around the world – I study populations in different parts of the world – and witnessing aggressive behaviour between killer whales is almost unheard of."

Details of the incident were published this week in the journal Scientific Reports.The group had headed out to the northeastern coast of Vancouver Island after reports of strange vocalisations from killer whales in the area. When they arrived, they found a group of whales including one that appeared to be just a few hours old.

They were about to leave when they heard splashing. "So we went over and that's when we saw that the calf wasn't surfacing anywhere," said Towers. They then saw a male swim under their boat holding the newborn calf in his mouth.

Researchers soon realised they were watching two different family groups interact –the family to which the calf belonged was being attacked by an unrelated 32-year-old male and his mother. "We started to realise that this is a chase and these two whales have attacked this group already," he said. "It was fascinating but we were horrified too."

The male refused to let go of the newborn. In what researchers described as "infanticidal teamwork," his mother appeared to be helping him in the attack, manoeuvring to fend off an attempt by the infant's mother to chase the male.

An underwater hydrophone caught the frantic vocalisations as the scene played out. "Finally the infant's mother hit the whale so hard, his blubber shook like Jell-o," said Towers. "And there was a huge splash and blood flying through the air and then that was it, that was the last hurrah." The infant had probably drowned by that time, he added.

While infanticide has been documented in animals such as lions and primates, this is the first reported instance in killer whales. (Credit: Alamy Stock Photo).

While infanticide has been documented in animals such as lions and primates, this is the first reported instance in killer whales. Researchers said they saw no indication that the male and his mother dismembered or consumed the baby orca after the killing.

They suggested the infanticide was a sexually selected behaviour, in that the adult male may have killed the calf in the hope of forcing its mother into a fertile state and creating a mating opportunity for himself.

That he was helped in the attack by his mother was, in some ways, not surprising to the researchers. Killer-whale mothers often stay with their adult sons for their entire lives, sharing their prey and knowledge.

The incident suggests that the relationship might go even further – that these mothers might also play a direct role in fostering mating opportunities for their male offspring, Towers said.

“It makes sense because any offspring that he’s able to sire carries 25% of her genes. So the more breeding opportunities he has, the better off she is as a grandmother.”

The finding could have broad implications for how researchers understand the social structure, behaviour and physiology of killer whales, said Towers. “Moving forward, we’ll be able to look at the social structure of this population and we’ll be able to say, this grouping or this dispersal pattern or this behaviour is probably due to infanticide risk.”

https://www.theguardian.com/environment/2018/mar/23/scientists-witness-first-reported-case-of-killer-whale-infanticide

Tagged Blue Whale Swims Around the South Island

By Michael Daly

Mar. 20, 2018 — Scientists have tagged blue whales off the New Zealand coast for the first time this summer, with one of the animals heading north while the other went for a swim around the South Island.

Researchers from the Department of Conservation, the National Institute of Water and Atmospheric Research, and Blue Planet Marine tagged two of the animals off the coast from Westport last month.

"They are really difficult animals to tag. It's the hardest by far I have ever done. It's really tricky, Niwa megafauna expert Dr Kim Goetz said.

"Generally when you tag these animals you want to find them while they're feeding at the surface... They're very pre-occupied."

But because the water was so warm this summer, the blue whales that were found were feeding well below the surface, and only spending a few minutes on the surface between dives.

"These are big animals. They move quickly. You only have the first time to get close to them," Goetz said.

Whales that were travelling rather than feeding could be doing 35kmh. "You can't approach them."

To put a tag on, a team would work from a six-metre boat launched from the main research vessel.

"When you find a whale .. you need to be in a very fast little boat that can get close to them," Goetz said. A line thrower, used to throw lines between boats, was modified to get the tag onto the whale.

"There's a specially designed bowsprit built onto the little boat that basically has a platform on the front of the bow, where the tagger stands, and is basically strapped into that. You're kind of above and ahead of the whale to get the tag on."

The two whales tagged were probably 20 metres long. "It's very humbling when you're around these animals. They could really destroy your boat if they wanted to," Goetz said.

"You see these animals next to the boat and they are way larger, but they generally don't care," she said.

"The person driving the little boat is very experienced... To drive around these animals you have to understand the animal's behaviour."

One of the animals tagged headed north up the west coast of the North Island, until transmissions stopped when it was near Auckland. It was not

uncommon for transmission to stop for a while and Goetz was hopeful signals would restart from that animal.

The other whale appeared to have been feeding in the Westport area before going through Cook Strait.

"It just went right through the strait and down the other side... It spent quite a bit of time in the Kaikōura area," Goetz said.

"Then it spent a chunk of time just south of Banks Peninsula, then it just kept heading south. It spent a little bit of time just off Stewart Island, then it came back north around the other side."

On the way up the West Coast it spent sometime around the Gilbert Seamount - about 550km west of Milford Sound.

"You can kind of make an assumption that the longer an animal is spending in an area, it's because it's found something to feed on," Goetz said.

Researchers needed a larger sample size, and it was hoped to develop a programme to tag more whales.

Pygmy blue whales tagged in Australia had travelled to New Caledonia then gone back south. It had been thought the two tagged off Westport might do something similar, perhaps head to Fiji. "We don't know anything about where their breeding grounds are."

It was thought the tagged whale that headed north might have been doing that "but we don't really know".

"We don't know what this one (the whale that swum around the South Island) is doing. I'm thinking this one is going to head north," Goetz said.

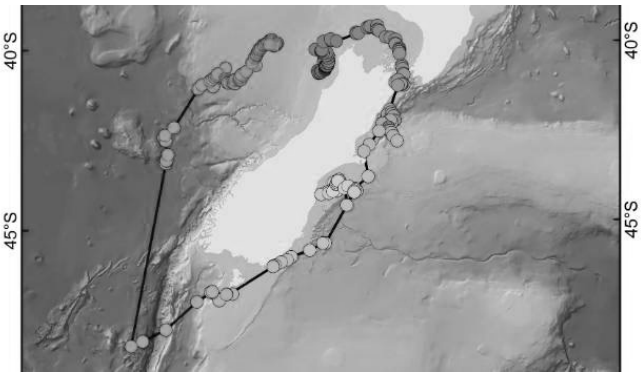
"So far it's done nothing we thought it was going to do."

It's thought the two whales tagged were pygmy blue whales, although that has to be confirmed from biopsies taken from the animals. Antarctic blue whales were also believed to come into New Zealand waters. The analysis will also show the sex of the two tagged whales.

Storms and much warmer than usual sea temperatures meant the researchers lost some of the days they had hoped to be at sea, and then didn't find any whales where they would normally have been.

Because the water was so warm it basically shut down the upwelling system, through which cooler water comes to the surface, driven by currents, winds and weather events.

As cooler water came to the surface it created a productive area where there was more phytoplankton in the water. That meant more krill, which blue whales fed on, Goetz said.



The tagged whale's route around the South Island - starting off Westport, going through Cook Strait and then down the east coast. (Credit: stuff.co.nz).

Usually there was upwelling in the area off Farewell Spit but not this summer, so when the researchers did manage to get into the waters off Taranaki they didn't find any blue whales.

By looking at satellite imagery and talking to tuna fishers, because tuna also eat krill, they ended up looking for blue whales further south. The two adult animals that were tagged were about 55km west of Westport in water that was about 200 metres deep, Goetz said.

"We only had a few days left. We thought at first we weren't going to get any tags out but we did get two."

https://www.stuff.co.nz/science/102420082/tagged-blue-whale-swims-around-the-south-island

'We Were Trying Not to Get Hit by Their Tails' – How I Filmed the Faroe Whale Hunt

By Patrick Barkham

Mar. 29, 2018 — If outsiders are dimly aware of an archipelago of 18 islands in the North Atlantic they probably picture the Faroes' spectacular peaks or horrifying blood-red bays. The islanders' annual slaughter of pilot whales, driven by flotillas of small boats on to the beach, is virtually the only occasion when the lives of 50,000 Faroese impinge upon the consciousness of the wider world.

Mike Day's debut film, *The Islands and the Whales*, begins with a familiar juxtaposition of these images but soon veers into unexpected territory. Rather than a polemic against the cruelty of whale hunting, this deeply immersive documentary tells of a disappearing way of life, a weather-beaten people who are now buffeted by globalisation – and pollution. Whale meat is laced with mercury and other toxins, and an epic study by a Faroese doctor has revealed

how eating it has impaired islanders' cognitive function, reduced IQs and increased their risk of Parkinson's disease. This is the big message for Day. "Our way of life is really ending theirs," he says.

The film was a five-year slog for Day, a Scot who quit his job as a lawyer, bought a camera with his savings and sailed to the Outer Hebrides to capture Scotland's last guga hunt. Guga are juvenile gannets that, for centuries, have been seized from their nests by cliff-climbing Hebrideans. After Day went out with the guga hunters, storms forced them to be rescued by helicopter – helping Day obtain a free aerial shot. While the film-maker repaired his boat in Stornoway harbour, some Faroese sailors pulled alongside. "They had this big, black block that they were carving off, and we said, 'What's that?' They said, 'pilot whale'. They salt-and-wind-dry the meat, and it's like jerky I guess." The Faroese invited Day to film their own traditional seabird hunt.

Day's first visit to the Faroes, in 2011, coincided with the annual meeting of its whale hunting association. He arranged to show five minutes of his guga-hunting film in the hope of persuading islanders to let him document their globally condemned whale hunt. "The collection of government officials, police, hunting sheriffs [hunt regulators] and hunters were obviously very skeptical," he says.

Outsiders' cameras tend to get smashed at the whale hunts; suspicious locals have been duped by visitors, like Day, claiming to be filming neutral social anthropology. "There wasn't much way of cutting through that skepticism, other than that the five minutes of film turned into the full hour." Afterwards, Day was interrogated – mostly about what the hell he was doing in that Hebridean storm.

Thus began four years of filming on the Faroes. Day would drive 1,200 miles from his home in Scotland, across to Calais and up to northern Denmark to catch a ferry. He spent two three-month stints on the islands, taking a big sack of rice and living "hand-to-mouth" off local fish. While he eventually attracted funders from the Wellcome Trust to Kickstarter – the final budget was £500,000 – he was not confident he could make a whale film. "It's a sanity-testing endeavour, that's for sure," he says. "I don't know another artistic project where you'd have such a large budget with such uncertainty for such a length of time."

'Suspicious islanders tend to smash cameras' … pilot whales being herded and slaughtered. (Credit: Andrija Ilic/Sipa/Rex/Shutterstock).

Day devoted 53 weeks to filming, and the result is a beautifully shot, naturalistic and deeply intimate look at Faroese society. Day and his cameras almost seem to disappear; there's no narration, no off-camera questions and no self-consciousness from the taciturn islanders; instead, the Faroese discuss over dinner how they are conflicted about the whale hunt. Their journey from a community without electricity and roads to a society with one of the world's highest proportions of Facebook users is not without self-doubt.

"Time is our greatest capital," says Day of his laborious method. "To be able to film the hunt probably took six months to a year, but to sit down at someone's family dinner table was another matter. It takes a long time to get that level of intimacy we need to tell the story in that way."

A doctor, Pál Weihe, emerges as one of the quiet heroes in a collection of stoical islanders. Day follows locals as they are tested by Weihe for heavy metals in their bodies as part of his epic 30-year longitudinal study which has helped expose the dangers of the concentration of pollutants up the oceanic food-chain. Day reveals the moving dilemma of Bárður Isaksen, a traditional hunter, and his wife, a nurse, who worries about the impact of pollution on their children.

For months, Day was unsure if he could document the notoriously unpredictable whale hunt. It only occurs if islanders chance upon a pod of pilot whales when they are hunting seabirds (a bizarre practice whereby fishermen scoop up fulmars floating on the water with what resembles an enormous lacrosse stick). Historically, whale meat was so important on these barren islands that it was a crime not to report a pod.

Roused into small boats, islanders herd the 20ft mammals into one of 17 designated hunting bays. Other islanders race on to the beach, brandishing a sinister-looking implement to sever the thrashing whales' spinal cords before slitting them underneath so they bleed out. The meat is then meticulously divided into portions and wheelbarrowed away by each islander.

Day got wind of a whale hunt shortly after he and his sound recordist were rappelled 100ft down a cliff to a slippery ledge for a night to film the Faroese guga hunt. The sound man caught a chill. "We had to cover him with still-warm bird carcasses to keep him warm," says Day. "Then the camera broke because there was so much fog and sea-spray." On his way up, he spun round on an uncoiling rope with the camera on his back: "There's GoPro footage of that which still makes me ill." Day had just enough time to recharge his camera batteries before the whale hunt began. When he arrived, "there were some people on the beach who were upset we were there with the camera but they found out we were the guys who had gone off the cliff," he says. He was accepted. "We'd earned our stripes."

In one shot, these big, sentient mammals convulsing on the beach make a noise that sounds like screaming. Was it hard to film? "It's a difficult scene on many levels. First of all we're trying not to get hit by a tail and killed. We're trying not to sanitise the scene and at the same time we're trying to recalibrate the audience to see it as it was to be there, which isn't to come at it with our prejudices," says Day.

"Of course it's horrific, it's horrible to see animals being slaughtered, but if you eat meat it comes from that. The atmosphere at the hunt isn't what you'd presume. It's a harvest for them, free food, and it's expensive to live there. At the beginning, when they're standing on the beach there's a real tension because everybody wants it to go well, and it's not an easy task. The frenzy of the slaughter is framed by relief at the end when it goes well."

Some way into the film, outsiders appear. Activists from Sea Shepherd, the anti-whaling charity, arrive in a plush campervan, with expensive boats and a piratical logo, intent on direct action to stop the slaughter. The islanders revolt, quietly, against the likes of Pamela Anderson. "Whether or not it's intended, it's perceived as gunboat diplomacy when you cruise into a place with multi-million pound vessels and skulls and crossbones," says Day. "If an Iranian ship came up the Thames and said, 'You can't eat pork because to us it's sinful and it's an intelligent animal, so we're going to picket your farms,' people would be out on the riverbank with bacon rolls protesting. And of course that's the reaction up there."

According to Day, locals "who hadn't eaten whale since they were kids suddenly became very defensive of their right to do it. It's definitely perceived as cultural imperialism. The nations that have polluted the seas have turned up to tell them that eating whale is wrong. To me that embodied so much of our own lack of awareness."

The anti-whaling activism had another consequence too: islanders became suspicious that the urgings of Weihe, the Faroese doctor, not to eat whale meat was part of a conspiracy to stop the hunt, undermining his public health message. Ultimately, says Day, "we're not arguing for or against the whaling. People have their own minds made up about that issue. We're saying if the pollution is so bad in the sea that the animals are that toxic, then all of these groups should be uniting over this bigger threat."

https://www.theguardian.com/film/2018/mar/29/faroes-whale-hunts-the-islands-and-the-whales-mike-day

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)
3/31 9 am	4 7 800 15 20	Humpback Whales Killer Whales Pacific White-sided Dolphins Harbor Porpoise Black-footed Albatross
3/30 8 am	2 11 15	Gray Whales Humpback Whales Harbor Porpoise
3/29 8 am	1 3 1,000 25 3	Gray Whale Humpback Whales Pacific White-sided Dolphins Northern Right Whale Dolphins Black-footed Albatross
3/28 8 am	1 2 5	Gray Whale Humpback Whales Bottlenose Dolphins
3/27 10 am	2 3 200	Gray Whales Humpback Whales Risso's Dolphins
3/26 8 am	3 70	Humpback Whales (tail lobs) Risso's Dolphins
3/25 10 am	4 18 1,200 1,000	Gray Whales (mating) Humpback Whales Pacific White-sided Dolphins Northern Right Whale Dolphins
3/24 11:30 am	11 2	Humpback Whales Harbor Porpoise
3/23 10 am	11	Humpback Whales, amazing bait ball with anchovies at the surface
3/21 10 am	14 30	Humpback Whales Common Dolphins
3/20 10 am	10 3	Humpback Whales (lunge feeding!) Bottlenose Dolphins
3/19 10 am	2 5 40	Gray Whales Humpback Whales Pacific White-sided Dolphins

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