Soundings

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

JUNE 2010

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

DATE: THURSDAY, MAY 27TH , 2010

TIME: 7:30 PM. PLEASE JOIN US AT 7:00 FOR REFRESHMENTS

SPEAKER Brandon Southall, Ph. D., Southall Environmental Associates (SEA) Inc. and UCSC, Principal Investigator: SOCAL-10

Title: Integrating Biological, Bioacoustic and Behavioral Response Studies of Marine Mammals in southern California

Marine mammals around the world, including along the U.S. west coast, face many challenges due to interactions with people, from overfishing and entanglement to vessel strikes and disturbance from human sounds. Most of these issues remain poorly known and
carefully conducted science is needed to better manage and protect marine animals.

SOCAL-10 is a research project integrated with ongoing studies of basic diving, foraging, social behavior, and sound production of marine mammals in important biological areas near southern California. It extends previous studies and is being integrated with international research efforts investigating whether and how animals change their behavior when they hear different sounds.

SOCAL-10 is an interdisciplinary collaboration of experts in marine mammal biology and behavior with extensive field experience in safely and ethically measuring responses to controlled sound exposures. This project will take place during August and September 2010 in coastal areas from San Diego to Santa Barbara and the Channel Islands, as well as an offshore area on and around
the U.S. Navy's training range near San Clemente Island.

This presentation presents a special opportunity for our Chapter and Monthly Meeting Attendees to comment on research that is intended to induce behavioral responses, but with protective shut-down measures, in marine mammals in order to better understand and protect them. Dr. Southall, Principal Investigator on SOCAL-10, has sought out the best ways to get feedback from the public segment interested in marine conservation before the research has begun and will listen closely to our questions and concerns.

Please join us for what promises to be a special opportunity to learn about the efforts being made to study the effect of anthropogenic noise in the marine environment. This will also be a great opportunity to discuss the goals, experimental design, and safety measures proposed for the project with the SOCAL-10 Principal Investigator, before field work begins. Additional information, including a public summary of the project and some frequently asked questions, may be found at: http://www.sea-inc.net/SOCAL10.

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MEMBERSHIP……..

CALENDAR

July 14 (Sat): Monterey Bay Chapter Annual Indian Village, Summer BBQ Indian Village, Pebble Beach. For reservations and information please call
Diane Glim at 831-646-8743 or Check ACS Monterey Bay Website For More Info. BBQ Is Set For 5:00pm

July 24 (Sat): ACS National Blue Whale Trip will take place on the Condor Express based out of Sea Landing in Santa Barbara, CA. Depart at 8am and return at 4pm. For more info and reservations call Bernardo Alps at 310-548-0966

August 14: ACS National Blue Whale Trip will take place on the Condor Express based out of Sea Landing in Santa Barbara, CA. Trip departs at 8:00am and returns at 4:00pm. For more info and reservations please call Bernardo Alps at 310-597-0449

August 25-29: Blue Ocean Film Festival. Monterey, CA. A global Ocean Film and Conservation Event (www.bluefilmfest.com). Festival Speakers and Film Makers Include Dr. Sylvia Earl, Howard and Michele Hall, David Doubilet, Jean Michel Cousteau.

August 28, 9am-1pm: ACS Monterey Bay Chapter Summer Whale Watch Fundraiser. Cost-$50.00 Boat-Sea Wolf 2. Location-Monterey Bay Whale Watch-Fisherman's Wharf, Monterey , CA. Whales of the summer include blue, humpback, fin, minke and killer whales. For more info and reservations call Tony Lorenz at 831-901-7259

Nov.12-14: The American Cetacean Society 12th International Conference will be held in Monterey at the Embassy Suites Hotel and Conference Center. Speakers include Richard Ellis, John Calambokidis, Thomas Jefferson, Bernd Wursig, and Robin Baird. The conference will also include two whale watch trips, kayaking along Cannery Row, a Point Lobos interpretive hike and a marine life photo contest. For a full schedule and prices please go to acsonline.org. Local Monterey Bay ACS chapter volunteers are needed, and sign-ups will be available at the monthly meetings.

SUMMER CLASSES

Point Lobos Summer Adventure 2010
Session 1 - June 14 thru June 26
Session 2- July 5 thru July 16
Kids 9-15 will learn about sea life, mammals, birds, invertebrates, go hiking, build sand castles and much more. For more info go to www.pointlobos.org.

UCSC Summer Marine Science Courses:
Biology of Marine Mammals Bio 129
Session Two: July 26-August 27, 2010

Marine Science Illustration SCIC 126
Session Two: July 26-August 27, 2010

MLML Summer Marine Mammal Courses
Classes meet at Moss Landing Marine Lab and will be taught by Dr. Jennifer Hurley Zeligs. For more info contact Dr. Hurley at 831-771-4191.

Session 1: Working with Marine Mammals Bio 348. June 14-20 9:30-5:30 M-F

Session 2: Techniques and Theories of Animal Training Bio 347. June 28-July 4 9:30-5:30 M-F

BOOK RECOMMENDATION

For Young Readers:
Charles and Emma- The Darwins' Leap of Faith
by Deborah Heiligman.
National Book Award Finalist

Anthill by Edward O. Wilson
Winner of the Pulitzer Prize

Kenneth S. Norris, Naturalist,Cetologist and Conservationist 1924-1998-2010 UC Press

Introduction to California's Beaches and Coast
by Gary Griggs 2010 UC Press

Leopold's Shack and Rickett's Lab
The Emergence of Environmentalism

"Human rights" urged for whales and dolphins

Oslo - Whales and dolphins should get "human rights" to life and liberty because of mounting evidence of their intelligence, a group of conservationists and experts in philosophy, law and ethics said on Sunday.

Japan, Norway and Iceland, the main whaling nations, oppose such arguments that would outlaw hunting or even keeping the mammals in marine parks. They have long said there is no real evidence that they are smarter, for instance, than cows or pigs.

Participants at a University of Helsinki conference said ever more studies show the giant marine mammals have human-like self-awareness, an ability to communicate and organise complex societies, making them similar to some great apes.

"We affirm that all cetaceans as persons have the right to life, liberty and wellbeing," they said in a declaration after a two-day meeting led by the Whale and Dolphin Conservation Society (WDCS).

Thomas White, director of the Center for Ethics and Business at Loyola Marymount University in California who was at the Helsinki talks, said dolphins can recognise themselves in a mirror, an ability rare in mammals that humans only acquire at about 18 months of age.

"Whaling is ethically unacceptable," he told Reuters. "They have a sense of self that we used to think that only human beings have."

Hal Whitehead, a biology professor at Dalhousie University in Canada and an expert on deep-water whales, said there was more evidence that whales have human-like culture.

He said that sperm whales have sonars to find fish that are so powerful that they could permanently deafen others nearby if used at full blast. Yet the whales do not use sonars as weapons, showing what Whitehead called a human-like "sense of morality".

"It's like a group of human hunters armed with guns," he told Reuters. "There's a clear sense of how the sonar can be used."

Nations in the International Whaling Commission will debate a proposal to approve limited hunts for 10 years by the main whaling nations at a meeting next month, relaxing a 1986 moratorium imposed after many species came close to extinction.

"We want a shift to putting the individual at the centre of conservation," said Nicholas Entrup, of the WDCS.

That would mean giving minke whales, relatively plentiful and most often hunted, the same protection as endangered northern right whales.

But one expert biologist, who was not at the conference, said many researchers had wrongly concluded that whales and dolphins were smart because they have big brains.

"There's nothing to separate them from other mammals - seals, lions or tigers," Paul Manger of Johannesburg's University of Witwatersrand, told Reuters. They had evolved big brains largely to keep warm in the chill waters.

Saying whales were not especially bright was not the same as advocating hunts, he said.

"We protect fish stocks even though no one argues that they are intelligent," he said. -

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Oil spill could wipe out Gulf's sperm whales

Washington, May 22 (ANI): Experts say that the death of even three sperm whales could entirely deplete their population in the Gulf.

If the Gulf of Mexico oil spill kills just three sperm whales, it could seriously endanger the long-term survival of the Gulf's native whale population, according to the scientists.

Sperm whales are considered endangered under the U.S. Endangered Species Act, but the Gulf of Mexico population is considered especially vulnerable due to its relatively small size.

A 2009 stock assessment report by the National Oceanic and Atmospheric Administration (NOAA) estimated that the potential biological removal, or PBR, level for the Gulf of Mexico sperm whale population is three.

That means if in addition to natural deaths, three sperm whales a year are killed or removed by human causes, it could wipe out their population permanently.

Even the loss of a handful of whales could be disastrous because sperm whales – especially females – take a long time to mature sexually, and don't give birth to more than two or three calves in their whole lifetime.

'As soon as we get to the level of three deaths caused by human interaction—and this would include the oil spill—that would jeopardize that particular sperm whale population.'

The sperm whale can be affected in 3 ways – by taking in toxins when they come up to surface to breathe, by inhaling poisonous fumes that can knock them unconscious and cause them to drown, and the last – the oil can taint the toothed whales' prey—fish and squid—affecting the whales' diets and hurting their chances of raising healthy calves.

Previous studies have shown that at least some of the Gulf of Mexico sperm whales are known to hang around where the Deepwater Horizon oil rig was located before it exploded on April 20, triggering the spill.

'Between 2000 and 2005, about 300 [sperm] whales were seen on a consistent basis right in that area,' National Geographic News quoted Texas Tech's Godard-Codding as saying.

'That would be the most likely way we would detect dead sperm whales.'

Research: Evolution Of Whale Size Link To Diet: 'A Huge Size Variation In Cetaceans'

DAVIS, CA May 20, 2010 -- The wide range of body sizes among whales arose early in their evolution and was associated with changes in diet, according to a new study by researchers at UC Davis and UCLA. The study appears in today's (May 20) issue of the journal Proceedings of the Royal Society B.

There's a huge size variation in cetaceans," said Samantha Price, a postdoctoral researcher at the UC Davis Department of Evolution and Ecology and co-first author on the paper. They range from dolphins and porpoises to the largest animal that has ever lived, the blue whale.

Modern whales appeared in the oceans about 30 million years ago, after a more ancient group of whale species became extinct. But scientists do not know whether modern whales evolved fairly rapidly, becoming diverse in size as they adapted to new ecological niches, or if the differences between groups appeared more gradually over time.

Price, then a researcher at the National Evolutionary Synthesis Center at Duke University, and co-authors Graham Slater, Francesco Santini and Michael Alfaro at UCLA constructed a "family tree" for whales based on genetic data, and used it to understand how the traits of diet and size evolved.

Fish-eaters, mainly dolphins and porpoises, tend to be small. Whales that feed on squid are larger, probably because they need to make long, deep dives to catch their prey, Price said. Plankton-feeding whales, such as the blue whale, are the largest of all. These differences hold up within groups -- dolphin species that eat squid are bigger than those that eat fish. Orcas are something of an outlier, as they eat a lot of fish but are large; but they also eat mammals such as seals and sea lions, Price noted.

A model of whale evolution that makes size dependent on diet gave the best fit to the data, Price said.

The work was supported by the National Science Foundation.

Scientists stunned as grey whale sighted off Israel

May 12, 2010 - The appearance of a grey whale off the coast of Israel has stunned scientists, in what was thought to be the first time the giant mammal has been seen outside the Pacific in several hundred years.

The whale, which was first sighted off Herzliya in central Israel on Saturday, is believed to have travelled thousands of miles from the north Pacific after losing its way in search of food.

"It's an unbelievable event which has been described as one of the most important whale sightings ever," said Dr Aviad Scheinin, chairman of the Israel Marine Mammal Research and Assistance Center which identified the creature.

A population of grey whales once inhabited the north Atlantic but became extinct in the 17th or 18th centuries and has not been seen there since.

The remaining colonies live in the western and eastern sectors of the north Pacific.

"What has amazed the entire marine mammal research community is there haven't been any grey whales in the Atlantic since the 18th century," he said. Scheinin said the creature, a mature whale measuring some 12 metres (39 feet) and weighing around 20 tonnes, probably reached the Atlantic through the Northwest Passage, an Arctic sea route that connects the Pacific and Atlantic oceans and is normally covered with ice.

"Here you have an animal that is supposed to live in the Pacific and because the ice in the Arctic is melting, it managed to get through this corridor near the Bering Strait," Scheinin told AFP.

The population which lives in the northeastern Pacific normally migrates southwards in around October, heading for warmer waters around the Gulf of California in a huge round trip of at least 5,000 miles (8,000 kilometres).

So when autumn came, this particular grey whale began travelling south, keeping the land mass on the left and heading for the Californian Gulf with the aim of "turning left" into the bay.

But instead, it reached Gibraltar and turned left into the Mediterranean and ended up off the shores of Israel, Scheinin said.

"The question now is: are we going to see the re-colonisation of the Atlantic?" he said. "This is very important ecologically because of the change of habitat. It emphasises the climate change that we are going through."

So far, the whale seems to be happy enough in the waters off the shores of Israel, he said.

"It is pretty thin, which indicates the trip was quite harsh, but we think it can survive here," he said. "Grey whales are very generalist in what they feed on."

Now experts are mulling the possibility of tracking the whale by satellite - a costly operation that would need outside funding and expertise, Scheinin said.

"It's quite a big operation to do this. If it stays around here for the next month, it's worth having someone come in and do this professionally," he said.

"It will be interesting to see where it goes and to follow it."

Cancer Kills Many Sea Lions, and Its Cause Remains a Mystery

By Ingfei Chen March 4, 2010 - For 14 years, since they first reported that a disturbing proportion of deaths among rescued California sea lions were caused by metastatic cancer, researchers have been trying to pinpoint the source of the illness.

In 1996, Dr. Frances Gulland, the director of veterinary science at the Marine Mammal Center in Sausalito, and colleagues at the University of California, Davis, found that a striking 18 percent of deaths in stranded adult sea lions were the result of tumors in the reproductive and urinary tracts.

“It’s such an aggressive cancer, and it’s so unusual to see such a high prevalence of cancer in a wild population,” Dr. Gulland said. “That suggests that there’s some carcinogen in the ocean that could be affecting these animals.”

The center has not observed the same syndrome in other seals.

Years of study have led researchers to think the answer lies not with any one culprit, but with several. Their research has added to a body of evidence concerning industrial contaminants in the ocean and their effects on the health of its inhabitants.

Sea lions have had to cope with a variety of challenges lately. There was the animals’ mass exit from Pier 39 in San Francisco late last year, which experts suspect was driven by a hunt for a better food supply. Also in 2009, the Sausalito

mammal center had an unusually busy year. It took in a record 1,370 sick and injured California sea lions, and doctors found major problems in many, including malnutrition, parasitic diseases and bacterial kidney infections. Some had brain seizures from a toxic algae poisoning.

But the cancers are what Dr. Gulland found most worrisome.

One day last month, a volunteer rescue crew netted an ailing sea lion stranded on Stinson Beach and drove back to the hospital, which was newly rebuilt and reopened last summer. The thin, lethargic 200-pound young adult male had paralysis in its genital area and in its swollen hind flippers, clear signs of cancer.

"It's pretty distressing to see," Dr. Gulland said.

The veterinary team had to euthanize the animal. A post-mortem examination revealed not only cancer in the penis, but also tumors riddling the lymph nodes, lower spine, kidneys, liver and lungs. The disease typically starts around the penis in males and the cervix in females, then spreads. In an average year, the Marine Mammal Center sees 15 to 20 California sea lions with cancer.

The center always performs a post-mortem dissection. That work is "really what tells us about health trends in the ocean," Dr. Gulland said.

The nonprofit center is one of the two biggest marine mammal rescue-and-rehabilitation facilities in the world — the other is in the Netherlands — dedicated to researching the health troubles of the animals it finds, said Dr. Sylvain De Guise, a veterinary scientist at the University of Connecticut.

Members of the medical staff in Sausalito, Dr. De Guise said, "have been pioneers at going beyond treating one individual at a time and releasing it, and have tried to understand the bigger picture, the causes and consequences."

Ordinarily, veterinary experts do not see much cancer in wild animals, but there has been little monitoring for the disease. Recently, however, cancer has emerged as a key concern for some endangered species, including green sea turtles, Attwater's prairie chickens and Tasmanian devils, said Denise McAloose, a veterinary pathologist at the Wildlife Conservation Society in New York City.

In addition, about 18 percent of dead, stranded beluga whales in the St. Lawrence River estuary in Canada were found to have intestinal tumors or other cancers, which have been linked to industrial pollutants.

No one knows how much of the general California sea lion population has tumors, or if the current rate is higher thanbefore. No diagnostic test for the disease exists, said Dr. Robert DeLong, a research biologist at the National Marine Mammal Laboratory in Seattle who has participated in the cancer studies.

In his field observations among a colony of 100,000 animals in the Channel Islands — the birthplace for most California sea lions that travel the state's coast — Dr. DeLong said he saw two to five sea lions a year with huge advanced tumors.

When Dr. Gulland and Dr. Linda Lowenstine, a veterinary pathologist at the University of California, Davis, began investigating the cancer mystery, the obvious suspect was environmental contaminants. The Channel Islands lie off the Southern California Bight, where, from the late 1940s until the early 1970s, manufacturing companies discharged millions of pounds of DDTs and PCBs into the sea. Cleanup continues, but the chemicals linger.

But if those chemicals are solely to blame, the researchers asked, why was cancer originating mainly in the uro-genital tract, and not in the kidney or liver, as one would expect?

"That didn't really fit," Dr. Lowenstine said.

But, in examining sea lion tumor cells with an electron microscope, Dr. Lowenstine noticed what looked like viral particles. And indeed, in a major discovery in 2000, a different team of researchers in Washington, D.C., identified a herpesvirus in the sea lions, a close relative of the human herpesvirus that fosters Kaposi's skin cancer lesions in AIDS patients. Recent studies by the California researchers have shown that the sea lion virus likes to live in the reproductive tract and, among adults, is twice as

common in males — infecting 45 percent of them — as in females.

But environmental contaminants are not off the hook. Because it takes several "hits" of environmental or genetic damage to turn a healthy cell into cancerous one, the researchers speculated that the virus and chemicals could be interacting to trigger tumors.

Sea lions accumulate high concentrations of PCBs and DDTs in their blubber from eating contaminated fish; mothers also pass the compounds to babies. An analysis by the California researchers and experts at the Northwest Fisheries Science Center in Seattle found that animals with higher blubber PCB concentrations were more likely to have died of cancer.

"PCBs are notorious for two different things," Dr. Lowenstine said. They can suppress the immune system, which may increase a sea lion's vulnerability to the herpesvirus infection, but they also have estrogen-like hormonal effects.

In research published last summer, Dr. Lowenstine and Dr. Gulland and their associates began exploring the possibility that the contaminants interact with hormone receptors in the reproductive tract of sea lions to help promote cancer.

Meanwhile, a third piece of the puzzle is genetics. Another study revealed that animals with cancer are more inbred than those without it, so bad genes are probably also at work.

But proving cause and effect in the cancer mystery is difficult, the investigators said, especially given that experiments cannot be done on sea lions, which are federally protected.

"We don't have all the answers by any means," Dr. Lowenstine said. But the scientists are now mapping out a large study of 300 sea lions to study which of the three prime suspects — virus, PCBs or genetics — is most strongly tied to cancer.

To the California investigators, sea lion cancer is further evidence that what people do on land directly influences what happens to marine mammals in the ocean. And what makes them sick might affect us, too.

"Sea lions do eat a lot of the same things we do," Dr. Gulland said. "So we really should start paying attention to what we're putting into the oceans."

SIGHTINGS compiled by Monterey Bay Whale Watch. For complete listing and updates see *www.gowhales.com/sighting.htm*

Date	#	Type of Animal(s)
5/30 p.m.	4	Humpback Whales
5/30 a.m.	8	Killer Whales (transient type)
	3	Humpback Whales
	150	Pacific White-sided Dolphins
	20	Risso's Dolphins
5/29	15	Humpback Whales
	85	Pacific White-sided Dolphins
	40	Risso's Dolphins
5/28 p.m.	12	Humpback Whales
5/28 a.m.	35	Humpback Whales
5/27	6	Humpback Whales
	20	Pacific White-sided Dolphins
5/26 p.m.	2	Humpback Whales
	25	Risso's Dolphins
5/26 a.m.	4	Humpback Whales
	55	Risso's Dolphins
5/25	4	Humpback Whales
	75	Risso's Dolphins
	9	Dall's Porpoise
	3	Harbor Porpoise
5/24 p.m.	2	Humpback Whales
	200	Risso's Dolphins
5/24 a.m.	1	Humpback Whale
	2300	Pacific White-sided Dolphins
	200	Risso's Dolphins
	2500	Northern Right Whale Dolphins
5/22	1	Humpback Whale, poor weather
5/20	2	Humpback Whales
	350	Pacific White-sided Dolphins
	60	Risso's Dolphins
	100	Northern Right Whale Dolphins
5/19 p.m.	4	Humpback Whales
	350	Pacific White-sided Dolphins
	2500	Risso's Dolphins
	200	Northern Right Whale Dolphins
5/19 a.m.	5	Humpback Whales
	300	Pacific White-sided Dolphins
	2000	Risso's Dolphins
	200	Northern Right Whale Dolphins
5/18 p.m.	7	Humpback Whales
	50	Pacific White-sided Dolphins
	300	Risso's Dolphins

Skipped dates indicate no trip

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