

## **PICEAS – Pacific Island Cetacean and Ecosystem Assessment Survey Weekly Report, July 28 – August 3, 2005**

This is the first week of the PICEAS-05 cruise. We left San Francisco on Thursday, July 28, sailing under the Golden Gate Bridge around noon and setting course for Hawaii. As we were leaving, we were escorted by the tall sailing ships from Mexico and Russia – nice of them to plan this farewell show. As Chief Scientist for the project, I want to thank everyone here on the ship and back at home (especially Annette Henry, our survey coordinator, and the officers and crew of the McArthur II) for getting us going smoothly and on time.

Our departure day was one of those dreamed of by central coast researchers ... calm and clear. In those Beaufort 1/2 conditions, we found quite a few harbor porpoises and (a little farther out) Dall's porpoises. After our emergency drills, we launched AR1 for a little humpback whale show. Juan Carlos Salinas and Chris Cutler managed to come back with three biopsies and three fluke photo-IDs, with the help of expert boat handling by Hermie and Kevin. The mothership also managed to get one photo-ID, to boost our total to four for the day. The next two days were more like what we expected from the central California coast ... overcast and Beaufort 4/5 all day ... and surprisingly, no marine mammals were seen. Weather then improved dramatically, but our drought in sightings continued until almost the end of the fourth day, when Chris Cutler saved us with a sighting of the ubiquitous "unidentified dolphin". Our fine weather (Beaufort 0/1/2) continued for two more days as we entered the "land ruled by beaked whales". Imagine a place on this earth where beaked whales are the most common cetacean sighting. Yes, we had **five** beaked whale sightings in two days as we crossed over the seamounts known as the Moonless Mountains. This was similar to our experience crossing from San Diego to Honolulu at the beginning of the HICEAS cruise in 2002. The only other cetaceans were scattered sightings of striped and spotted dolphins. These were the most northerly spotted dolphins that anyone on the ship can remember. The acoustics team heard barely a squeak for three consecutive days.

Finally, yesterday, we found some sperm whales. The acoustics team (Shannon Rankin and Julie Oswald) directed us to a solitary male that had escaped detection by the visual observers. It was located 3.2 miles off the trackline but was initially heard 21 miles away. We launched the small boat, but the animal was evasive and traveling rapidly, and the weather was a sloppy Beaufort 5, so our team had to return empty handed. Within an hour, the visual team found a large, widely scattered group of sperm whales that included some calves and smaller animals. They were a chatty group, but the acoustics team did not hear them until we were within 2-3 miles. Knowing how difficult it is to estimate group size for large groups of sperm whales, we conducted counts for our standard 90-minute time period; during this time, observers identified 5-6 distinct subgroups. This group was also traveling, and not a single fluke was seen. Richard Rowlett also found us a small killer whale group near the end of the day. Weather prevented launching the small boat for either the large sperm whale group or the killer whales (really, Bob), but

we did manage to get some photographs of the killer whales. The killer whales had nothing to say to us... not even a “so long and thanks for all the fish”.

### Marine Mammal Sighting Summary

072805	1323	N37:44.16	W122:45.22	47.7 nmi	1.9
	2012	N37:16.14	W123:51.98		
072905	0627	N36:25.88	W125:43.38	130.7 nmi	4.8
	2009	N35:18.03	W128:15.26		
073005	0644	N34:27.34	W130:09.12	142.5 nmi	4.4
	2033	N33:19.23	W132:39.85		
073105	0617	N32:24.27	W134:37.54	102.4 nmi	2.0
	1940	N31:22.12	W136:52.30		
080105	0638	N30:38.05	W138:26.15	80.4 nmi	1.7
	1912	N29:57.01	W140:00.65		
080105	0638	N30:38.05	W138:26.15	80.4 nmi	1.7
	1912	N29:57.01	W140:00.65		
080305	0609	N27:09.12	W145:37.89	69.6 nmi	4.0
	1920	N26:26.22	W146:49.85		

CODE	SPECIES	TOT#
002	Stenella attenuata (offshore)	2
013	Stenella coeruleoalba	1
037	Orcinus orca	1
040	Phocoena phocoena	13
044	Phocoenoides dalli	11
046	Physeter macrocephalus	2
048	Kogia sima	1
049	ziphiid whale	1
051	Mesoplodon sp.	2
061	Ziphius cavirostris	2
076	Megaptera novaeangliae	10
077	unid. dolphin	3
	TOTAL	49

### Acoustics Squeakly Report

Rankin, Oswald, and Soldevilla

No greater hell exists than that which the acousticians experience in the first week at sea.

That being said, things are actually running quite smoothly now, and we have spent the better part of the week becoming re-acquainted with the sound of the Big Mac. Ahhhh... how she purrs..... Mid-week, Julie took advantage of the desert-like conditions in the North Pacific gyre and played experimental tones to ground-truth propagation models of dolphin whistles, with the added benefit of providing hearing tests for Shannon and the small boat crew (beeeeeeeeeeeeeeeeeep). We finished the week with a bombardment of

sperm whales--- and despite the mass chaos, Julie was able to direct the ship to the whale so that we could learn that not all sperm whales abide by their consistent rules of behavior. The dolphins have not been so friendly (barely a peep here and there), but we have high hopes for next week.

<b>Biopsy Weekly Report</b>	<b>Weekly Total</b>	<b>Cruise Total</b>
Humpback whale	3	3

<b>Photo-ID Weekly Report</b>	<b>Weekly Total</b>	<b>Cruise Total</b>
Humpback whale fluke IDs	4	4

### **Birder Digest**

Seabirds (Michael Force & Sophie Webb)

After a frenetic dash through the bird-rich California Current, where the high numbers of Sooty Shearwaters, Common Murres, Western and California Gulls taxed our data collection efforts, things settled down to the soporific pace typical of the North Pacific Gyre. Here, trash outnumbered birds, but we did manage to find a few gadfly petrels such as Murphy's, Cook's, Kermadec and Dark-rumped (Hawaiian?) Petrels, the majority of these are frustratingly distant. Continuing southwestwards, overall abundance and diversity plummeted to where we closed out the week with the occasional White-tailed and Red-tailed Tropicbird. An immature Brown Booby was far from any colony, and may have been loosely associated with two nearby fishing vessels. Making a surprise visit on board was a sub-adult White-tailed Tropicbird. Found in the early morning by a wandering mammal observer, it quickly became a star attraction in a multitude of digital photo albums.

### **PICEAS 2005 Oceanographic Weekly Reports Ship: McArthur II**

<b>DATE RANGE</b>	<b>DAY</b>	<b>CTD</b>	<b>XBT</b>	<b>Bongo</b>	<b>Manta</b>
<b>Leg 1</b>  <b>7/28</b> <b>to</b> <b>8/3</b>	Thursday	X	1	X	X
	Friday	X	3	X	X
	Saturday	X	3	X	X
	Sunday	1	2	X	X
	Monday	X	3	X	X
	Tuesday	X	3	X	X
	Wednesday	X	3	X	X

It has been a week of preparation and XBT casts for oceanography. Although we are not conducting full oceanographic operations during the transit we have managed to keep

busy collecting surface chlorophyll samples, POM (Particulate Organic Matter) samples, conducting XBT casts and preparing for future operations. We also did one 1000m CTD cast to obtain a sound speed profile for Julie's acoustic calibration study. We will soon be sitting at the starting line anxious to begin full oceanographic operations on leg 2. I am also happy to report that all the oceo. computers are behaving

### **Poetry Corner by Katie Roberts of the McArthur Literary Society**

Come with me to the Moonless Mountains  
Lofty peaks midst Pacific seas

These mystic mounts will promise none  
But fairest skies and gentlest breeze

And off our beam Halobates dance  
A spindly spider with jointed knee

Who forages the nekton sheen  
Set adrift in trade winds lee

Hirundichthys dart and skim  
The gentle waves on wing-ed fins

A piscine with avian whimsy  
Much like Exocetus kin

But where are our true feathered hosts?  
The tropic birds horizons coast

While jaegers soar and dip and dive  
And Juan Fernandez petrels thrive

And where might be the blows and breaches  
Of the beloved cetacean creatures?

The megafauna charismatic  
Make their entrance quite dramatic

Ziphius may steal the show  
From densirostris' cameo

But delphin creatures streaked and spotted  
Make the most of time allotted

And boast with aeriels and tails a-lob-bed

(As if the sperm whale clicks applauded)

So come with me to the Moonless Mountains  
For Nature there just may bequest

A key to the McArthur's crew  
To unlock Neptune's treasure chest