

**PICEAS – Pacific Island Cetacean and Ecosystem Assessment Survey  
Weekly Report, September 1-7, 2005**

This is the sixth week of the PICEAS-05 cruise. Well, it's been a slow week on Lake Woebegone. As you can see from our mammal survey report (below) we've been mostly out of commission for the last four days. Only the hard work of the intrepid birders and oceanographers saved these days from being a total loss. We were able to survey for marine mammals for three full days, and on those days marine mammal densities were low, both visually and acoustically. The marine mammals that we did see were Bryde's whales, striped dolphins, and southwestern spinner dolphins (those are like regular spinner dolphins, but with a southwestern-style sauce). Yes, it's true! I don't have much material to work with this week.

On Sunday, we entered a band of very strong, Beaufort 6/7 winds that lasted until last night. These winds were not associated with any particular storm; rather they were just like trade winds on steroids. The waves grew to 12 feet and the McArthur (now very light on fuel) bobbed like a cork. The old-timers agreed, however, that this was sooo much better than the MiniMac, that we had no right to complain. So if any of this report sounds like complaints, just skip over those sections.

As I am writing this, we are headed to Honolulu for supplies and rejuvenation. We will tie up at Aloha Tower on Friday morning. We all feel ready for that!

**Marine Mammal Sighting Summary**

090105	0642	N09:07.87 W162:41.78	116.3 nmi	3.9
	1853	N07:28.81 W163:50.51		
090205	0702	N07:37.77 W164:55.46	61.9 nmi	3.0
	1745	N08:59.74 W164:07.53		
090305	0641	N09:31.97 W163:00.48	79.3 nmi	4.0
	1742	N10:39.28 W162:11.81		
090405	0638	N11:52.34 W162:36.85	38.4 nmi	5.7
	1042	N12:24.05 W162:15.08		
090505		Beauf 6/7, off effort		
090605		Beauf 6/7, off effort		
090705		Beauf 6/7, off effort		

CODE	SPECIES	TOT#
013	Stenella coeruleoalba	1
072	Balaenoptera edeni	1
079	unid. large whale	1
101	Stenella longirostris (southwestern)	1
	TOTAL	4

### **Acoustics Squeakly Report** (Shannon Rankin & Julie Oswald)

This rather uneventful week included no fewer than 15 detections of dolphin schools and 3 detections of sperm whales that were not detected by the visual team—all within 4 days of effort. Unfortunately, we were unable to obtain locations for many of these groups. There was a single unsuccessful acoustics chase on a group of probable false killer whales--- but the animals quieted down the minute we thought of turning. We did, however, obtain quality recordings of a group of mixed spotted and spinner dolphins, and a group of striped dolphins. Another successful sonobuoy was deployed on a group of feeding Brydes whales, with some excellent vocalizations.

On 03 September, we took our last opportunity before being slammed by the trades and went out on AR1 for another underwater speaker experiment adventure. This time we carried out two experiments. First, we played tonal signals to calibrate propagation models. Next, we played sweeps and swoops for Shannon to localize on and test out just how good we are at determining the location of whistling dolphins. Both experiments gave us good preliminary results.

### **Birder Blurb** (Michael Force & Sophie Webb)

Last week was notable for diversity and abundance; this week was notable for neither. Nevertheless, we experienced the now familiar scenario of euphoria alternating with days of despair. The Palmyra EEZ, for reasons unknown to us mere mortals, was frequently an area of high diversity, tallying up to 15 species in a single day. Moving north, however, we struggled to find eight or nine species. But we're not complaining! Although most species were considerably less common than previous weeks, we ended up with a respectable 22 species. One exception to the downward trend was Juan Fernandez Petrel—it outnumbered White-necked Petrel by a considerable margin in the northern part of the study area. This represents a dichotomous shift in abundance from what we observed in this area during our southbound transit. White-necked Petrel was previously considered a distinctly marked subspecies of Juan Fernandez Petrel. Its elevation to full species status was based, among other criteria, on having widely separated breeding ranges: Juan Fernandez Petrel off Chile, White-necked Petrel north of New Zealand. Perhaps their at-sea distributions demonstrate species-specific temporal and spatial characteristics. Other southwest Pacific breeders well represented this week were Black-winged Petrel and Buller's Shearwater, and we saw our first Kermadec Petrel after a couple weeks absence. We would expect Sooty Shearwater, seen almost daily, to be returning to their Australian and New Zealand breeding grounds, but they all were flying east or southeast. Are they returning instead to southern South America? Returning to effort was the marine mammal team after a 3-day weather-induced shut down. This was fortunate because long periods of inactivity can result in peculiar behavior: our Chief Scientist was observed on the flying bridge surreptitiously reading seabird identification guides. Shocking, but true...

Cruise leader bird report: “M’mmm, tastes like chicken!”

### Biopsy Weekly Report

	<b>Weekly Total</b>	<b>Cruise Total</b>
Bryde's whales	0	1
Pilot whales	0	2
Humpback whales	0	3
Melon-headed whales	0	41
Sperm whales	0	4
False killer whales	0	18
Spotted dolphins	0	2
Spinner dolphins	0	3
Rough-toothed dolphins	0	2
Bottlenose dolphins	0	11

### Photo-ID Weekly Report

	<b>Weekly Total</b>	<b>Cruise Total</b>
Humpback whale fluke IDs	0	4
Bryde's whale	1	4
Melon-headed whale (# groups)	0	2
False killer whales (# groups)	0	3
Pilot whales (# groups)	0	11
Striped dolphins (# groups)	0	2
Spotted dolphins (# groups)	0	3
Spinner dolphins (#groups)	1	5
Fraser's dolphins (#groups)	0	2

### Oceanographic Data Collections (Mindy Kelly and Lacey O'Neal)

<b>DATE RANGE</b>	<b>DAY</b>	<b>CTD</b>	<b>XBT</b>	<b>Bongo</b>	<b>Manta</b>	
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <b>PICEAS05</b>  <b>Leg 2</b>   <b>9/01</b>  <b>to</b>  <b>9/08</b> </div>	Thursday	2	3	1	1	
	Friday	2	3	1	1	
	Saturday	2	3	1	1	
	Sunday	2	3	1	1	
	Monday	1	0	0	0	
	Tuesday	1	4	1	0	
	Wednesday	2	3	1	1	
	Thursday	0	5	0	0	
	<b>Totals</b>		12	24	6	5

As the last week of Leg 2 comes to a close, we look back and tally our numbers. You can see operations varied a bit toward the end of the week. Large seas and powerful winds found the cast of McArthur II CTD crew standing on the stern staring at the seas deciding what the fate of that morning or evening operation would be. We are happy to report that only two CTD fatalities (clarification: the chance to conduct a cast, nothing has been lost)

occurred while net tows suffered a loss (same clarification as above) of one bongo tow, two manta tows and one light (oops...).

Surface water temperature has dropped from a very warm 29°C (84.2°F) to 27°C (80.6°F). As we end the week, the winds have wound down and the seas are falling to rest. If you ask me, it is the perfect way to describe the ending of the leg and our upcoming port call this Friday.

### **Fish Follies** (Jim Cotton)

The seas and winds made dipping challenging this past week as we experienced the full force of the NE trades. Half of our flyingfish samples were brought to us by Kevin Lackey and Lacey O'Neal (thanks guys) who picked up fish that had overcorrected leaving the water in the high winds and landed on our upper decks.

The excitement came this week when the puffer fish tried to escape. Fortunately, Steve Pierce spotted this convict on the deck and it was quickly returned to captivity. In moving the puffer to a higher security tank, it was netted with a small net, the kind used on gold fish in the fish stores. Typical of this breed the fish immediately puffed up upon being netted and freeing it was like removing a porcupine lodged inside pantyhose. We are happy to report the puffer is doing well after all this trauma and will be on parole at the Waikiki Aquarium soon.

All things considered, we did just fine this week adding the following critters to our collection:

- 6 Two-wing flyingfish
- 1 Four-wing flyingfish
- 13 Short-wing flyingfish
- 3 Lantern fish