

PICEAS – Pacific Island Cetacean and Ecosystem Assessment Survey

Weekly Report, August 4-10, 2005

This is the second week of the PICEAS-05 cruise, and we finished our transit from San Francisco to Honolulu. Thursday, Friday and Saturday run together in my mind ... typical low-density, unproductive cetacean habitat combined with trade-wind conditions. We did manage to find a few animals, including pilot whales and sperm whales. Saturday evening, Luke (one of the McArthur's fine engineers) caught a big mahi mahi which swam its way onto Sunday's dinner plates – (thanks Luke!)

Most of the cetacean excitement this week came on Sunday. We found ourselves ahead of schedule, so we had most of the day to work on cetaceans in the lee of Hawaii's Big Island (a.k.a. Hawaii). There seems to be an "island effect" in Hawaii whereby ocean productivity and cetacean abundance is enhanced close to the islands. We followed the 1000-fathom depth contour northward along the Kona coastline, just about 5 miles offshore. We had sightings most of the day, starting with rough-toothed dolphins (Steno to their friends) as appetizers, moving on to large groups of spotted dolphins and melon-headed whales as the main course, and with false killer whales as dessert. We launched the small boat and kept it out most of the day working with whatever dolphins we found. We were very successful in getting 19 biopsies from the melon headed whales and 12 biopsies from the false killer whales (including four long shots from the bow of the McArthur). The samples from false killer whales are especially treasured as this species is one that is caught in the tuna long-line fishery and is one of the species we are most concerned about on this cruise. We were also able to get a number of photo-IDs of melon-headed whales and false killer whales.

Our small boat team aided in the rescue of a Hawaiian fisherman whose engine had expired. We saw him paddling his boat slowly to shore with a single paddle. Our small boat crew found him fairly content with his situation (broken engine, no radio, offshore wind coming up) but he was also happy to be towed to shore if we wanted to do that. Maybe I need to learn more island attitude.

We had a ceremony on Sunday to transfer the command of the ship from Dan Morris to Greg Hubner. This is a very significant milestone for a new captain... sort of equivalent to a teen-ager getting the keys to his own car. We're sorry to see Dan go, but for those of us who have sailed on various Macs with Greg over the past 16 years, we know that he'll be taking good care of his new set of wheels.

We arrived in Honolulu at Aloha Tower on Monday, Aug 8 at 0900 (right on schedule). The officer's sponsored a change-of-command party at Gordon Biersch that evening (many thanks for including the scientists!). We just left Honolulu today after a brief stop to re-supply. The saga continues.

Marine Mammal Sighting Summary

| | | | | |
|--------|------|----------------------|-----------|-----|
| 080405 | 0623 | N25:47.67 W148:24.76 | 135.3 nmi | 4.2 |
| | 1936 | N24:10.53 W150:07.64 | | |
| 080505 | 0644 | N22:56.12 W151:19.11 | 114.7 nmi | 4.9 |
| | 1838 | N21:28.95 W152:41.80 | | |
| 080605 | 0603 | N20:14.90 W153:51.66 | 88.5 nmi | 4.6 |
| | 1838 | N19:11.52 W155:11.53 | | |
| 080705 | 0609 | N18:57.06 W155:55.71 | 43.4 nmi | 2.7 |
| | 1728 | N20:04.83 W156:05.77 | | |
| 080805 | | IN PORT HONOLULU | | |
| 080905 | | IN PORT HONOLULU | | |
| 081005 | | IN PORT HONOLULU | | |

| CODE | SPECIES | TOT# |
|------|-------------------------------|------|
| 002 | Stenella attenuata (offshore) | 3 |
| 015 | Steno bredanensis | 3 |
| 031 | Peponocephala electra | 1 |
| 033 | Pseudorca crassidens | 1 |
| 036 | Globicephala macrorhynchus | 1 |
| 046 | Physeter macrocephalus | 1 |
| 077 | unid. dolphin | 2 |
| | TOTAL | 12 |

Acoustics Squeakly Report

Rankin & Oswald

Acoustic detection of cetaceans ramped up as the week progressed. The acoustics team had a total of seven sperm whale detections last week, one of which was within the range of the visual team. After we turned towards the acoustic detection, the observers spotted the whales within seconds. The acoustics team also had eight unidentified dolphin detections, most of which were outside of the range of the visual observers. Julie finally had a chance to test her real-time acoustics species ID program, ROCCA, on schools of spotted dolphins, rough-toothed dolphins, and false killer whales. Great vocalizations were obtained on all three species, and ROCCA performed well. It seems the program runs great; we just have to get Shannon up to speed!

Luckily we haven't had any baleen whales: our sonobuoys do not seem to be particularly cooperative, and we also had a bad receiver. ET extraordinaire Clay repaired the receiver the first day in port (yeah!), and we just need to find ways to fix up the buoys before we find any baleen whales... All in all, things are slowly coming together...

| Biopsy Weekly Report | Weekly Total | Cruise Total |
|-----------------------------|-------------------------|-------------------------|
| Humpback whale | 0 | 3 |
| Melon-headed whale | 19 | 19 |
| False killer whale | 12 | 12 |
| Rough-toothed dolphins | 2 | 2 |

| Photo-ID Weekly Report | Weekly Total | Cruise Total |
|--------------------------------|-------------------------|-------------------------|
| Humpback whale fluke IDs | 0 | 4 |
| Melon-headed whale (# groups) | 1 | 1 |
| False killer whales (# groups) | 1 | 1 |

Birder Digest

(Michael Force & Sophie Webb)

We officially entered the tropics this week (crossing the Tropic of Cancer), as well as the US EEZ. Underlining these early milestones were, respectively, lots of White-tailed Tropicbirds and our first shorebird sightings (Pacific Golden Plovers, Ruddy Turnstones and a single Sanderling). Bird abundance and diversity noticeably increased as we approached the Big Island. Particularly noteworthy in this latter category were Wedge-tailed Shearwaters, and Bulwer's and Hawaiian Petrels. We encountered our first feeding flocks as well as species typical of nearshore waters around the Hawaiian Islands, including our first Brown and Black Noddies.

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

| DATE RANGE | DAY | CTD | XBT | Bongo | Manta |
|---------------------------|---------------|------------|------------|--------------|--------------|
| Leg 1 8/4 to 8/8 | Thursday | | 3 | | |
| | Friday | | 3 | | |
| | Saturday | | 3 | | |
| | Sunday | | 2 | | |
| | Monday | | | | |
| | Tuesday | | | | |
| | Wednesday | | | | |
| | Totals | | | | |

It has been another week of preparation and XBT casts for oceanography. Full-scale oceanographic observations will begin when we enter the study area (tomorrow).