

STAR 2000 SURVEY NOAA SHIP McARTHUR

WEEKLY SCIENCE SUMMARY: 23-29 November 2000 (Tim Gerrodette)

The week covered by this report began on Thanksgiving Day, which we celebrated with a turkey picnic on the fantail prepared by the amazing crew in the galley. Everything was going fine until the red-footed boobies perched on the aft mast above us deposited the remains of THEIR Thanksgiving meal on us. They instantly became leading candidates for least popular seabirds.

During this week we moved steadily westward and, despite the fact that we were travelling along the axis of the dreaded ITCZ, we enjoyed sunny weather with moderate winds every day. West of Cocos Island we encountered a single, noticeably thin blue whale, and our practiced team swung into action. With skillful steering by the CO, we obtained a biopsy sample, ID photos and a recording of one low frequency "moan." Toward the end of the week we started to see those animals that are the focus of the survey, namely, eastern spinners and offshore spotted dolphins, both singly and in mixed schools. As the summary below shows, our total of 64 sightings for the week includes a diverse group of cetaceans.

MARINE MAMMAL SIGHTING AND EFFORT SUMMARY

Date Time Start/End Position Effort Avg. Beaufort

112300 0650 N05:34.78 W088:37.36 89.7nmi 2.6
1841 N05:40.94 W090:31.29

112400 0604 N05:44.09 W091:45.68 103.9nmi 3.0
1747 N05:47.83 W093:31.25

112500 0609 N05:55.58 W094:42.94 88.4nmi 2.1
1757 N06:44.05 W096:17.08

112600 0619 N07:20.33 W097:26.63 67.3nmi 3.4
1749 N07:26.27 W099:05.13

112700 0638 N07:36.17 W100:31.12 68.2nmi 3.4
1810 N08:13.56 W101:56.19

112800 0659 N08:36.11 W103:15.89 96.7nmi 3.0
1735 N08:51.69 W104:54.88

112900 0606 N09:06.33 W106:28.77 86.8nmi 4.0
1713 N09:19.66 W108:08.57

Code	Species	Total
70	Balaenoptera sp.	1
99	Balaenoptera borealis/edeni	1
75	Balaenoptera musculus	1
17	Delphinus delphis	1
36	Globicephala macrorhynchus	3
21	Grampus griseus	5
48	Kogia simus	1
51	Mesoplodon sp.	1
02	Stenella attenuata (offshore)	7
13	Stenella coeruleoalba	18
10	S. long. orientalis (Eastern)	5
03	Stenella longirostris subsp.?	1
18	Tursiops truncatus	4
49	unid. ziphiid	1
61	Ziphius cavirostris	2
77	Unid. dolphin/porpoise	11
78	Unid. small whale	1
TOTAL		64

35 mm PHOTOGRAPHIC SUMMARY (Paula Olson)

Species	#Schools/Individuals
Balaenoptera musculus	1/1

BIOPSY SUMMARY (Juan Carlos Salinas)

Species	This week	Cumulative Total
B. edeni	0	1
B. musculus	1	2
D. capensis	0	45
D. delphis	0	2
G. macrorhynchus	0	7
M. novaeangliae	0	4
P. macrocephalus	0	7
S. attenuata graffmani	0	15

S. attenuata subsp.	0	17
T. truncatus	1	20

SEABIRDS (Chris Hoefler)

This week was rather low key for the birders. We've entered a pelagic zone that produces just 3-5 Leach's storm-petrel per hour with occasional wedge-tailed shearwaters and a trickle of other birds. That trickle, however, gave us a common tern and red-necked phalarope - both much farther from shore than usual - and spectacular looks at an immature peregrine falcon. This guy alighted on the bow railing in early morning causing bird AND mammal effort to be momentarily suspended and scores of photographs taken. After he had cooled down, an unfortunate storm-petrel came into the falcon's range. Lisa, do we count a storm-petrel if it ends up in the crop of a falcon? This gruesome mid-air brunch took place within 600m of the starboard beam and no longer than 7 min. Otherwise, the only other thing to report is that Mike and I are having trouble keeping an even tan while surveying into the bright afternoon sun on the port side every day.

OCEANOGRAPHIC SUMMARY: (Dagmar Merkle)

Considering we are out in the middle of nowhere, it is phenomenal to see how so much can be sustained on so little. Chlorophyll values though low show a chlorophyll max at around 40m. These values are around a third of those found nearer the coast, and yet there is a plethora of diversity to be found out here. This is not only evident from the net tows but also from the dipnetting where one of the largest number of flying fish were caught at one station. Both Ring Net and Bongo samples caught large quantities of rather bigger than usual Euphausiids while the Manta tows caught a variety of interesting organisms, mostly blue Copipods some Portuguese man-of-wars, Janthina (Bubble Snail) and Blue Buttons (Porpita).

While this week's net tows have been rather interesting, this could not be said for the environmental conditions which have remained constant, sea surface temperature at 27 °C and salinity at 33 ppt.

Sample	This Week	Total
CTDs	14	189
XBTs	21	304
Manta Tows	7	95
Ring NetTows	7	52
Bongo Tows	7	96

ACOUSTICS SQUEAKLY REPORT (Shannon Rankin)

Another busy week for acoustics, with recordings of streakers, bottlenosed, spotters and spinners, pilot whales, more streakers, risso's, sperm whales, and more streakers. In addition to official sightings, we had 34 groups of animals that were heard but not seen. Interestingly, there were several sightings with close passes that produced not a whistle nor a click. This is the first time the Mac has spent quality time in the core area, and it is interesting that there is such a disparity between animals seen and animals heard.... In addition to the toothed species, we obtained a single blue whale moan and some great bryde's whale vocalizations.