STAR2000: DAVID STARR JORDAN Weekly Report - Robert Pitman

SCIENCE SUMMARY: 31 August - 7 Sept 2000

For ocean sailers, 15-20 kts of wind moves you smartly about - certainly not the stuff of best-selling memoirs, but then on the other hand it doesn't unecessarily rattle the martini tray. During centuries past, trade winds established empires, determined the outcome of wars, and literally set the course of history. But for us they are just a pain in the stern. They represent the outer limit of our abilities to detect dolphin schools and an annual source of frustration for the mammal observers. (Our birders, Mike Force and Sophie Webb, know no such limits). Much of this leg has also been spent imbedded in the ITCZ (Intertropical Covergence Zone), where circulating air from both hemispheres meet in the tropics, heat, rise, and dump huge volumes of water on our survey efforts. Sigh. The scientific party is holding up amazingly well though, with the help of an endless barrage of movies and well-fingered Mexico travel guides. (It should be noted here that Todd Pusser's rumored rainy day record of 7 consecutive movies remains inviolate - nice work Todd!). The helo isn't feeling so good - in fact the prognosis is so bad that she will be getting an engine transplant in Acapulco. A battery of specialists are flying in for the operation and we're hoping for a speedy recovery (by next leg!). Oceanography is fully operational. Our problem winch has not been a problem for a while and we are considering making up some of our lost bongo tows next leg. After a long dry spell we got into some turtles the last two days and we even caught two mating pairs. We put a satellite transmitter on the female of the first pr - with the ultrasound we could see she had well-developed follicles and was probably going to be heading to a beach soon to plant her family. We'll get to see where she calls home now. The other turtle pair, however, involved a large male having his way (read intromittent) with a much smaller subadult male. The problem with wild animals is they just don't have a clue about what's natural and what isn't. The spotted dolphins we saw along the coast south of Acapulco are bigger and more heavily spotted than the ones we encountered north of Manzanillo. We're still calling them "unid spotters" but they are definitely looking like S. a. graffmani now. Our biological revelation this week (if we get enough of these we can write our own Book of Revelations): olive ridley sea turtles are suction feeders. We've been pumping delicate little gelatinous organisms, intact, out of their stomachs (jellyfish, ctenophores, pteropods, etc.) - in order to be as perfectly preserved as we find them, they had to have been inhaled. Makes sense: if you tried to bite down on something small like a tiny jellyfish underwater without suction feeding, you would only compress the water in you mouth and squirt it away from you. Nature only seems clever because evolutionary blunders are quickly culled in the real world. We'll be holed up in Acapulco for the next 4 days, pouring Coronas on our wounds and steeling ourselves up for the next leg. Our esteemed colleague, Lisa Ballance, will be taking over the reigns (rains?) next leg - we look forward to sailing with her!

SUMMARY OF MARINE MAMMAL EFFORT AND SIGHTINGS

Date Time Latitude Longitude Effort Beaufort

083100 0834 N08:42.44 W114:32.45 25.9 nmi 4.6
1549 N09:13.28 W113:25.59

090100 0812 N08:15.00 W112:04.48 29.5 nmi 5.2
1859 N06:51.03 W111:08.48

090200 0726 N07:24.52 W110:00.93 87.8 nmi 4.8
1900 N08:37.92 W108:32.96

090300 0711 N09:28.67 W107:21.53 87.3 nmi 4.8
1834 N10:36.37 W105:55.33

090400 0657 N11:26.02 W104:49.74 89.4 nmi 4.5
1823 N12:27.74 W103:23.88

090500 0651 N12:58.54 W102:19.00 76.3 nmi 2.1
1834 N13:06.65 W100:43.17

090600 0640 N13:08.48 W099:34.81 90.1 nmi 3.0
1804 N14:29.61 W098:44.09

090700 0731 N15:53.88 W098:12.11 67.8 nmi 3.0
1848 N16:36.31 W099:35.30

Code	Species	Total
001	Mesoplodon peruvianus	1
002	Stenella attenuata (offshore)	14
010	Stenella longirostris orientalis	4
013	Stenella coeruleoalba	6
015	Steno bredanensis	2
018	Tursiops truncatus	2
021	Grampus griseus	1
032	Feresa attenuata	1
048	Kogia sima	3
049	ziphiid whale	1
077	unid. dolphin	12
090	Stenella attenuata (unid. subsp.)	5
TOTAL		52

AERIAL PHOTOGRAMMETRY: 0 hrs of flight time this week.

BIOPSY:

Species	This Week	Total
Balaenoptera edeni	0	2
Balaenoptera musculus	0	10
Berardius bairdii	0	2
Delphinus capensis	0	3
Delphinus delphis	0	4
Globicephala macrorhynchus	0	13
Feresa attenuata	6	6
Lagenorhynchus obliquidens	0	4
Orcinus orca	0	3
Stenella attenuata	2	39
Stenella attenuata subsp.	18	46
Stenella coeruleoalba	0	2
Stenella l. orientalis	0	38
Steno bredanensis	0	4
Tursiops truncatus	3	31
Total	29	207

35 mm PHOTO-ID:

Species	Schools/Individuals
Mesoplodon (peruvianus?)	1 school
S. attenuata (offshore)	1
S. attenuata (unid. subsp.)	3
S. longirostris orientalis	2
Steno bredanensis	1

TURTLE CAPTURES:

Species	This Week	Total
Loggerhead	0	9
Olive Ridley	15	71
Green	0	5
Total	15	85