

STAR 2000: DAVID STARR JORDAN WEEKLY REPORT

19 October 2000

Lisa T. Ballance

SCIENCE SUMMARY: 12 - 18 October

The Jordan has been offshore all week, but several out-of-place themes have prevailed day after day, reminding us of more neritic waters. First, the sea has been uncharacteristically green, sometimes containing a large amount of flotsam, both anthropogenic and natural, more typical of shelf seas than the pelagic ones hundreds of miles from shore. Throughout the week, we have continued to expect blue water, yet as this report is written, it has not arrived and we are now heading back inshore soon to be on the shelf once again. Second, the mixed-species schools of offshore spotted and eastern spinner dolphins we have sighted have not run from the ship, but rather run toward us to engage in extended periods of bow-riding. This convenient-for-biopsy-sampling and beautiful-to-behold behavior is nevertheless a bit out of place here so far offshore, where we are more used to these species fleeing from our ship. Third, the bird survey has had a healthy share of land birds crossing its strip; on one day land birds were almost as prevalent as seabirds, even though we were several hundred miles out to sea. Species have included Cliff Swallows, Chimney Swifts, Cattle Egrets, a Semi-palmated Sandpiper, Great Blue Herons, an Ovenbird, a Louisiana Waterthrush, an Osprey, and a Prothonotary Warbler (which found its way down to the engine room). And finally, weather has been lovely! with day after day of no- or low-whitecap seas, scattered clouds, humid and hot air. Even during our daring several-day run due west at 8 degrees 30 minutes north, the axis of high probability for the ITCZ, we had but few cumulus clouds and no rain.

Last week's report left off just as we were entering the vicinity of the Costa Rica Dome, with our first blue whale sighting. If one is to believe that blue whales prefer Dome habitat (a la Reilly and Thayer, 1990) then it is tempting to conclude that the CR Dome is spread over an extensive area this year, for we have had a streak of blue whale sightings, at least one every day, for five consecutive days in a row. A great many of these animals have seemed to be feeding, for their surface intervals are relatively short (a minute or so), their dive intervals long (10-12 minutes) and their progression forward between surface intervals small and unpredictable. For this reason, it has been difficult to biopsy or photograph them, although we have managed to do both for a healthy subset of these animals, including helicopter photographs on one animal during a cloudy afternoon (despite our generally good weather, they all seem to appear during higher wind and/or overcast times - worth a note?). Our acoustician, Kathy Hough, has also deployed sonobuoys on three separate animals. Time, and more sophisticated acoustic programs than we currently have aboard, will tell if these animals were vocalizing.

The helicopter has had a good week with a respectable number of flights (almost as many hours as the entire last leg), photos, and calibration schools - a record 3 in quick succession one morning. Fishermen have had a better than average go of it, with what appeared to be an old, bedraggled FAD yielding a dozen mahi, a couple of wahoo, one

yellowfin tuna, our visiting scientist's first deep-sea fish, and a personal record mahi for our oceanographer. (Our Chief Steward was hooked back by a mahi, but Allen prevailed, serving us the fish for lunch that day with a prominent bandaid displayed on his leg.) Friday the 13th left its mark on Richard Rowlett, for on this day, despite piles of sightings all day long, "... every time I begin my time on the glasses, Isabel goes and gets a sighting of dolphins, which leads into blue whales, then by the time we go back on effort, my rotation is over and I have to wait another two hours...". And, in keeping with the "out of place" theme for the week, the winner of the "Weird Sighting" contest was a small, open speed boat that we spotted while working a blue whale; it was zooming directly toward us at top speed, throwing huge sprays of white water into the air. Two miles away it suddenly stopped, milled around for a few minutes, then headed away, again at top speed until it was over the horizon - and some 200 nm off the Central American coast. Speculation aboard: news of a War On Drugs hasn't trickled out this far yet.

The week ended with our return toward the coast, and 18-20 knot winds as we headed for the formidable Gulf of Tehuantepec. We hope the seas will be in a restful state for our crossing, but at the close of this report, a sizeable swell is developing from that direction and the forecast is for 20-30 knots of wind and 10-foot seas.

SIGHTINGS AND EFFORT SUMMARY FOR MARINE MAMMALS: 12 - 18 October

Date Start/Stop Time Lat Long Total NM Av. Beaufort

101200 0655 N09:00.79 W090:45.10 63.9 nmi 3.9
1755 N10:04.64 W091:07.22

101300 0705 N11:14.81 W091:33.25 36.3 nmi 3.8
1837 N10:35.22 W092:19.07

101400 0701 N09:38.93 W093:17.75 72.1 nmi 2.1
1809 N08:44.68 W094:17.29

101500 0710 N08:45.30 W095:32.98 54.0 nmi 2.0
1905 N08:38.84 W097:02.19

101600 0724 N08:44.13 W098:39.11 91.8 nmi 4.1
1856 N08:41.51 W100:22.11

101700 0736 N09:53.31 W100:17.54 83.4 nmi 4.9
1857 N10:42.70 W099:07.60

101800 0730 N11:15.02 W097:55.14 68.2 nmi 4.8
1854 N11:45.42 W096:46.29

CODE	SPECIES	TOT#
002	Stenella attenuata (offshore)	10
010	Stenella longirostris orientalis	6
013	Stenella coeruleoalba	13
015	Steno bredanensis	2
018	Tursiops truncatus	6
021	Grampus griseus	2
049	ziphiid whale	3
051	Mesoplodon sp.	3
061	Ziphius cavirostris	4
075	Balaenoptera musculus	8
077	unid. dolphin	10
078	unid. small whale	1
TOTAL		68

COMMON DOLPHINS 0
 SPOTTED/SPINNER 16
 BLUE/HUMPBACK WH. 8
 OTHER DELPHINIDS 33
 OTHER CETACEANS 11

AERIAL PHOTOGRAMMETRY SUMMARY: 12 - 18 October

8.7 flight hours

Species	Schools/ Indivs. Photographed	Schools Calibrated
Stenella coeruleoalba	7 schools	6
S. attenuata/S. longirostris	1 schools	0
Balaenoptera musculus	1 individual	

BIOPSY SUMMARY: 12 - 18 October

Species	This Week	Total
<i>Balaenoptera musculus</i>	4	14
<i>Balaenoptera edeni</i>	0	3
<i>Megaptera novaeangliae</i>	0	2
<i>Berardius bairdii</i>	0	2
<i>Orcinus orca</i>	0	7
<i>Pseudorca crassidens</i>	0	3
<i>Globicephala macrorhynchus</i>	0	37
<i>Feresa attenuata</i>	0	6
<i>Delphinus capensis</i>	0	3
<i>Delphinus delphis</i>	0	5
<i>Lagenorhynchus obliquidens</i>	0	4
<i>Stenella attenuata</i>	23	77
<i>Stenella attenuata graffmani</i>	0	52
<i>Stenella attenuata</i> subsp.	0	54
<i>Stenella coeruleoalba</i>	3	5
<i>S. longirostris orientalis</i>	14	58
<i>Steno bredanensis</i>	0	5
<i>Tursiops truncatus</i>	8	67
<i>Rhincodon typus</i> (whale shark)	0	(1)
Totals	52	404

35 mm PHOTO SUMMARY: 12 - 18 October

Species	No. Schools/Individuals
<i>Grampus griseus</i>	1 school
<i>Tursiops truncatus</i>	1 school
<i>Stenella attenuata</i> *	4 schools
<i>Stenella longirostris</i> *	4 schools
<i>Balaenoptera musculus</i>	5 individuals

* all photos of *S. attenuata* and *S. longirostris* were from mixed-species schools

TURTLE CAPTURES: 12 - 18 October

Species	This Week	Total
Loggerhead (<i>Caretta caretta</i>)	0	9
Olive Ridley (<i>Lepidochelys olivacea</i>)	8	157
Green (<i>Chelonia mydas</i>)	0	6
Totals	8	172