

SCIENCE SUMMARY: 24-30 August 2000 - Robert Pitman

It has been a grueling week: the Trade Winds and ITCZ have buffeted our binoculars and sogged our spirits, respectively. On our one good weather day we had very few clients although we did get out in the small boat and collect three biopsies from some uncooperative spotters - our first "evasive" samples of the trip. The biggest problem we have with bad weather is finding enough things for Juan Carlos to do (a bad case of Work Ethic Hypertrophy) - we may have to loan him out to the Deck Department for a few days. We've been having mechanical problems with the starboard winch. Without warning, the wire suddenly lurches forward or backwards at high speed. If it shows any more signs of malfunction we're going to have to suspend the nightly tows. Made in Japan: We got some news back on the tagged loggerhead we caught on Leg 1. It was raised in captivity and released in Japan in Oct 1993 when it was one year old. At that time it was 22.4 cm long (SCL) and weighed 1.8 kg; when we caught it after 7 yrs at sea it was 50.2 cm long and weighed approximately 21 kg. This kind of data is crucial for determining growth rates of sea turtles in the wild and for establishing residency times for juvenile loggerheads in the eastern Pacific. Perhaps more importantly, however, our recapture suggests that headstarting sea turtles (i.e., raising hatchlings in captivity) may be a workable conservation strategy, at least for loggerheads. So far this year our nightly dipnet stations haven't yielded much: to date we have caught only 294 flyingfish specimens of perhaps 10 different species, but there are other consolations. Insects are a dominant life form on earth - if you consider diversity alone, that which we smugly refer to as the Age of Mammals quickly accedes to the Age of Insects. Curiously though, with one notable (and often ignored) exception, insects have steered clear of the world's oceans. The exception is *Halobates*, a genus of 5 open ocean species of water striders that inhabit warm oceans around the world, and we catch them almost every night during our quest for flyingfish (*Halobates* started out as a bycatch issue; now it's full-blown directed take). With a body the size of a "0" and legs the length of eyebrow hairs (before I turned 50), they are difficult to see under our spotlights on windy nights. But on a flat calm evening you can easily spot their beady little blue bodies, ricocheting around at amazing speeds. Some nights we catch hundreds, other nights just one, but they are always there. Biologists have a long history of catching and killing things (call it the Audubon Syndrome), but those same murderous individuals often turn out to be some of the strongest advocates for nature conservation. Apparently, there are quite a few of us who cannot fully appreciate how fragile and beautiful an organism is until we hold it lifeless in the palm of our hand. During the daytime, when there isn't a breath of wind and the sunlight angles in just right, we can actually see *Halobates*, skating around in dizzy loops from the flying bridge. But when the seas kick up and tumbling combers toss our boat about, I always wonder how the tiny *Halobates* are faring - and only because I stuff their little bodies into vials of alcohol every evening. Go figure.

SUMMARY OF MARINE MAMMAL EFFORT AND SIGHTINGS

Date Time Latitude Longitude Effort Beaufort

082400 0800 N14:17.61 W117:10.59 99.5 nmi 4.5
1936 N13:43.31 W119:04.76

082500 0801 N13:18.51 W119:07.97 80.3 nmi 4.6
1854 N12:58.72 W117:45.10

082600 0753 N12:42.26 W116:36.64 86.3 nmi 4.0
1940 N12:15.90 W115:04.32

082700 0739 N11:42.02 W115:09.76 65.1 nmi 2.1
1932 N10:46.70 W116:31.62

082800 1348 N09:36.54 W118:14.14 7.8 nmi 5.0
1651 N09:21.09 W118:34.50

082900 0818 N08:26.63 W119:52.60 95.9 nmi 3.9
1904 N07:04.75 W118:58.32

083000 0754 N07:15.00 W117:38.63 80.8 nmi 4.0
1926 N08:07.42 W116:01.82

Code	Species	Total
002	<i>Stenella attenuata</i> (offshore)	7
010	<i>Stenella longirostris orientalis</i>	5
011	<i>Stenella longirostris</i> (whitebelly)	1
013	<i>Stenella coeruleoalba</i>	2
046	<i>Physeter macrocephalus</i>	1
077	unid. dolphin	5
099	<i>Balaenoptera borealis/edeni</i>	1
Total		22

AERIAL PHOTOGRAMMETRY: 3.4 hrs flight time yielded photographs of *S. attenuata*/*S. longirostris* mixed (2 schools), *Kogia* sp. (1), *Mesoplodon* sp. (1); no calibration schools.

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
Lagenorhynchus obliquidens	0	4
Orcinus orca	0	3
Stenella attenuata	3	37
Stenella attenuata subsp.	0	28
Stenella coeruleoalba	0	2
Stenella l. orientalis	0	38
Steno bredanensis	0	4
Tursiops truncatus	0	28
Total	3	178

35 mm PHOTO-ID: *S. longirostris orientalis* - 2 schools

TURTLE CAPTURES:

Species	This Week	Total
Loggerhead	0	9
Olive Ridley	0	56
Green	0	5
Total	0	70