

State or Country: California Field No. S1054-1854-194

County: _____ Map: _____, 1

Locality: San Diego to San Miguel Id. and return

Lat. _____ N., Long. _____ W.

Water: _____

Vegetation: _____

Bottom: _____

Cover: _____ Temp.: see continuous record

Shore: _____ Current: _____

Dist. offshore: _____ Stream width: _____

Depth of capture: _____ Depth of water: _____

Collected by Carl L. Hubbs & party (see 3rd sheet) on R/S "Orca"

Tide: _____ Date: IX:13-20:1954

Method of capture: poison, seine, etc.

Orig. preserv.: 10% form + borax Time: _____

S1054-1854-194
"Orca" 1/5
Miguel Id.

SAN MIGUEL ISLAND TRIP
Research Ship "Orca"

Sept. 13-20, 1954

Objectives

Sea mammals and birds

Check occurrence of sea otter on San Miguel Island and possibly on other islands.
Study elephant seals and sea lions on Pt. Bennett, San Miguel Id. Habits + physiology.
Miscellaneous observations en route.

Fishes

Collect eubiotoids for serology.
Miscellaneous collections, incl. at least 1 deep-water specimen, on San Miguel and other islands.
Observe sharks, flying fish, etc., en route.

(over)

over
San Miguel Id. trip (cont.)

Archeology and paleotemperature studies

Check occurrence of
Cryptochiton in Pleistocene,
middens, + living.

Study middens + collect
material for the paleotemp.
and paleo-ecology studies.
Dive for underwater artifacts.

Mollusk collecting (in addition to
Cryptochiton).

Several collecting by
Chase, and by divers for
him.

Recent temperatures

Keep running record.

Miscellaneous collecting

Reptiles, fox, etc., on San
Miguel Id.

Saul L. Hulse

San Miguel Id. Trip, Sept. 1954

Personnel on trip

Joseph W. Sefton, patrón
Stanley F. Ellis, captain
James McNeilage, engineer
Webster Jackson, cook

Carl L. Hubbs, leader
Laura C. Hubbs, secretary
Emery P. Chase, conchologist
Andreas B. Rehnitz, serologist
Conrad Limbaugh, diver and
general observer.

Berly Boone Morgan, asst diver.

Raymond M. Silmore, mammalogist
Arthur L. # Kelly, pinned physiologist

Jay C. Quast, asst ichthyologist.

Carl L. Hubbs

San Miguel Id. trips.

TEMPERATURE LOG - Taken with
Carl Hubbs Sun Casting Thermometer #1

P.S.T. throughout
(X:13:1954)

	Reading	°C.
Inside Ballast Pt.	0707 4.89 =	17.79
	0708 4.60 =	18.72
Opposite " "	0708 ^{1/2} 4.75 =	18.25
	0708 ^{3/4} 4.43	19.66
N of Navy Bury	0711 4.78	18.10
Opp. " "	0713 4.98	17.50
S of Bury 10	0714 4.81	18.04
Opp. Bury 9	0716 4.69	18.42
" " 8	0717.5 4.78	18.10
	0719 4.92	17.71
" " 7	0719.5 4.72	18.32
	0721 4.99	17.48
	0722 4.94	17.62
	0723 5.05	17.20
" " 5	0723.5 4.83 =	18.00
	0724 4.78	18.10
	0726 4.99 =	17.48
" " 3	0730 5.02	17.44
	0732.5 4.70	18.40
" " 1	0736 4.77	18.18
On turn	0736.5 5.09	17.88
	0737.5 4.74 =	18.30
	0740 4.25	19.85
	0742 4.15	20.15
Just passed well-marked slide boundary zone; slide from Pt. Lomatored Crowned > ds.	0745 3.95	20.80
	0749 3.85	21.11
Passed a series of small N-S slides	3.75	21.43
	0752 3.85	21.11
	0804 3.78	21.30
	0817 3.81	21.26
Opp. Mission Bay Entrance	0829 3.86	21.06

over

0850, 3.83 (21.15); 0859, 3.90 (20.95); 0901, 3.85 (20.79);
0902.5, 4.00 (20.62); Inside slick, 0910, 4.09 (20.32);
0910.5, 4.02 (20.56); 0921, 4.01 (20.60);
0936, 4.01 (20.60); 0936 $\frac{1}{2}$, 4.01 (20.60);
0937, 4.01 (20.60); 0940, 3.92 (20.90);
0945, 3.89 (21.00); 0958, 3.91 (20.92);
entering slick, 0959 $\frac{1}{2}$, 3.91 (20.92);
inside " , 1000 $\frac{1}{2}$, 3.90 (20.95);
thought out of slick, 1001, 3.91 (20.92);
entering small slick, 1003, 3.92 (20.90);
inside slick, 1003.5, 3.90 (20.95);
" " 1004 3.92 (20.90);
" " 1004 $\frac{1}{2}$ 4.00 (20.63);
" " 1004 $\frac{3}{4}$ 3.95 (20.79);
" " 1005 3.92 (20.90);
outside slick, 1005 $\frac{1}{2}$ 3.90 (20.95);
1006, 4.00 (20.63); coming into small
slick, 1007, 3.95 (20.79); inside slick,
1007 $\frac{1}{2}$, 3.90 (20.95); outside slick,
3.89 (21.00). (Cont.)

TEMP. LOG
14:13:1954 (cont.)

14.13 con.

	1007.75	3.95	20.79
		3.90	20.95
	1008	3.89	21.00
slide	1008	3.94	20.83
	1008.25	3.88	21.02
	1009	3.87	21.03
	1009.5	3.90	20.95
outside slide,	1013	3.87	21.03
not yet to slide	1013.25	3.90	20.95
" " " "	1013.5	3.86	21.06
inside slide	1014	3.89	21.00
Outside "	1014.5	3.85	21.11
	1015	3.89	21.00
Blue shark on R.	1016	3.86	21.06
	1016.5	3.88	21.02
Passing thru slide	1025	3.80	21.27
Outside slide	1025.75	3.83	21.18
Blue shark on R.	1026		
Broad slide	1026.5	3.80	21.27
Outside slide	1028	3.80	21.27
Inside " (well-defined)	1028.75	3.79	21.30
		3.78	21.32
		3.77	21.30
	1029	3.79	21.30
	1030	3.76	21.40
	1030.25	3.78	21.32
just outside slide	1031	3.78	21.32
Inside slide	1031.25	3.78	21.32
	1053	3.75	21.42
	1057	3.84	21.12
(over)			

IX:13:1954 (cont.)

1118	3.82	21.21
1121	3.77	21.36
1127	3.70	21.57
1140 PST	3.68	21.63
1148	3.69	21.60
1224	3.72	21.52
1236	3.73	21.50
1235	3.68	21.63
1240	3.70	21.57
1246	3.70	21.57
1250	3.69	21.60
1255	3.72	21.52
1300	3.71	21.55
1301	3.72	21.52
1303	3.75	21.44
1304	3.75	21.44
1305	3.76	21.40
1306	3.77	21.36
1307	3.76	21.40
1308	3.78	21.32
1309	3.80	21.27
1311	3.82	21.22
1312	3.81	21.25
1313	3.80	21.27
1314	3.83	21.46
1315	3.83	21.16
1316	3.84	21.12
1317	3.84	21.12
1318	3.83	21.16
1319	3.85	21.10

Many small white caps.

TX 13 1954 (cont.)

PST

1320	386	21.13
1323	387	21.07
1324	388	21.00
1325	391	20.92
1326	391	20.92
1327	391	20.92
1328	391	20.92
1329	393	20.85
1330	392	20.90
1331	391	20.92
1332	390	20.95
1333	389	20.98
1334	388	21.00
1335	395	20.80
1336	396	20.76
1337	396	20.76
1338	396	20.76
1339	396	20.76
1340	396	20.76
1341	396	20.76
1342	396	20.76
1343	396	20.76
1344	397	20.74
1345	395	20.78
1346	395	20.78
1347	397	20.74
1348	397	20.74
1349	397	20.74
1350	397	20.74
1351	397	20.74

TX 13 54 Cont.

PST

1352 397 20.74

1353 394 20.82

1354 395 20.78

1355 394 20.82

1356 396 20.76

1357 397 20.74

1358 395 20.78

1359 395 20.78

1400 396 20.76

1405 395 20.78

1410 394 20.80

1415 394 20.80

1420 392 20.89

1425 392 20.89

1430 391 20.92

Indicator 1435 393 20.90

buttons 1440 393 20.90

may not 1445 393 20.90

have been 1450 393 20.90

down 1455 393 20.90

1500 393 20.90

1505 393 20.90

1510 393 20.90

1515 355 22.06

1520 366 21.78

1525 368 21.62

1530 370 21.59

1531.5 360 21.90

1533 391 20.93

1535 393 20.85

IX 13/54

	PST	CRSR
	1540	403 20.55
	1545	400 20.63
:	WHITES POINT? 1550	420 20.00
:	1555 ⁶	415 20.15
	1600	413 20.20
	1605	408 20.36
	1610	408 20.36
	OPP. MILT. CAMP 1615	408 20.36
	1620	415 20.15
	1625	415 20.15
	NEAR ISTHMUS BAY 1630	426 19.82
	ENTRANCE 1633	436 19.50
	GUANO COVERED } 1635	436 19.50
	ROCK ABEAM } <i>Star down 1645 anchor</i>	
	TO STARBOARD } Secured MBN	
	1815	436 19.50
	2030	4.520
		19.00

IX:14:1954

0515 PST Depart Cherry Cove

0527	at 1/2 mi NW	" "	-4.45	19.20
Out till	0539		4.50	19.05
	0542		4.42	19.32
Out till	0553		4.37	19.50
" "	0559		4.41	19.35
" "	0611		4.52	19.00
	0616		4.51	19.02
	0622		4.55	18.87

0626	4.58	18.80	0650	4.63	18.65	0706	5.00	17.45
0633	4.63	18.65	0654	4.66	18.53	0710	5.16	17.00
0640	"	"	0659	4.90	17.76	0712	5.22	16.84
0645	"	"	0703	4.94	17.67	0714	5.27	16.66

Over

over

0719 5.24 - 16.72
 0722 5.19 ^{16.90} ~~17.20~~
 0727 5.16 17.00
 0730 5.14 17.05
 0737 4.95 17.61
 0740 " " "
 0746 4.94 17.62
 0750 4.95 17.61
 0754 5.02 17.44
 0758 4.96 17.48
 0805 4.99 17.48
 0810 4.97 17.52
 0816 4.96 17.56
 0821 4.96 17.56
 0825 " " 17.56
 0830 4.99 17.48
 0837 5.00 17.45
 0845 4.95 17.61
 0852 4.94 17.62
 0857 4.94 17.62
 0905 4.95 17.61
 0912 4.94 17.62
 0920 4.99 17.48
 0927 4.93 ^{17.65} ~~17.55~~
 0930 4.86 17.90
 0933 4.82 18.05
 0937 4.78 18.15
 0945 4.67 18.50
 0947 4.64 18.60
 0954 4.56 18.85

Guest

man: Jones

0957 4.54 18.92
 1004 4.54 18.92
 1007 4.48 19.05
 1010 4.43 19.25
 HUBBIS
 1013 4.44 19.23
 1019 4.43 19.25
 1025 " " 19.25
 9c 300 thru to
 just W y W.
 side, average
 average
 1034, 4.50 19.04
 1039 4.52 19.00
 1044 4.48 19.05
 1054 4.55
 just changed
 1088 4.57 18.80
 1104 4.64 18.60
 1109 4.52 19.00
 1112 4.47 19.12
 LUNCH - 4c
 to clear with
 tip of 8c
 1141 4.55 18.88
 1143 4.52 19.00
 1146 4.50 19.04
 1157 4.47 19.12
 1200 4.44 19.21
 1201 4.46 19.18
 1202 4.46 19.20

1205 4.42 = 19.18
 1210 4.37 = ~~19.20~~ 19.26
 1215 4.35 = 19.52
 1222 4.41 = 19.35
 1225 4.45 = 19.20
 1227 4.52 = 19.00
 1235 4.48 = 19.05
 1237 4.45 = 19.20
 1240 4.43 = 19.25
 1247 4.40 = 19.37
 1253 4.46 = 19.18
 1258 4.50 = 19.04
 1300 4.54 = 18.92
 1302 4.61 = 18.78
 1303 4.69 = 18.41
 1307 4.74 = 18.28
 1304 4.81 = 18.05
 1305 4.97 = 17.55
 1306 5.06 = 17.30
 1307 5.11 = 17.15
 1314 5.24 = 16.72
 1315 " " = 16.72
 1317 5.30 = 16.55
 1318 5.38 = 16.30
 1320 5.41 = 16.22
 1320 5.43 = 16.15
 1322 5.32 = 16.50
 1322 5.28 = 16.60
 1324 5.13 = 17.10
 1325 5.05 = 16.32

San Miguel Id. Trip
 Temperature log (cont.)

1327	5.15 = 17.02	1419	5.62 = 15.60	1522	5.74 = 15.20
" 1/2	5.28 = 16.60	1421	5.70 = 15.30	1525	5.78 = 15.10
1332	5.25 = 16.71	1425	5.80 = 15.03	1528	5.85 = 14.87
1336	5.39 = 16.28	1428	5.84 = 14.90	1535	" = 14.87
1337	5.48 = 16.00	1429	5.80 = 15.03	1537	5.83 = 14.92
1338	5.53 = 15.85	1431	5.85 = 14.87	<u>Anchor</u>	
1340	5.50 = 15.95	1434	5.85 = 14.87	1548	5.87 = 14.80
1343 1/2	5.61 = 15.62	1436	" "	1617	5.87 = 14.80
1344	5.70 = 15.33	1437 1/2	5.90 = 14.72	18:35	5.88 = 14.77
1346	5.61 = 15.62	1439	5.79 = 15.05	2025	5.89 = 14.74
1346 1/2	5.56 = 15.78	1443	" "	<u><u>Beecher Bay</u></u>	
1348	5.48 = 16.00	1445	" "	14:15:195	by
1348 1/2	5.44 = 16.12	1447	5.74 = 15.20	0540	5.90 = 14.72
1349	5.40 = 16.25	1449	5.76 = 15.15	0620	5.89 = 14.74
1350	5.34 = 16.42	1450	5.81 = 15.00	0700	5.90 = 14.72
1351	5.30 = 16.55	1452	5.78 = 15.18	0740	5.89 = 14.74
1353	5.29 = 16.56	1453	9/10 to below	0825	5.89 "
1354	5.25 = 16.70	N side of Sta. Ross		0900	5.89 "
1356	5.22 = 16.80	1454	5.77 = 15.30	0940	5.85 = 14.87
1358	5.25 = 16.70	1456	5.71 = 15.30	1040	5.84 = 14.90
1359	5.29 = 16.56	1501	5.65 = 15.50	1250	5.68 = 15.40
1401	5.34 = 16.42	1504	5.63 = 15.55	1350	5.68 = 15.40
1401 1/2	5.41 = 16.23	1510	5.63 "	1435	5.69 = 15.36
1403	5.50 = 15.95	1513	5.73 = 15.25	1520	5.71 = 15.30
1404 1/2	5.36 = 15.77	1514	5.78 = 15.10	1700	5.71 = 15.30
1406	5.41 = 15.62	Turning back		1800	5.76 = 15.15
1407 1/2	5.65 = 15.50	toward Anchor			
1410	5.67 = 15.43	1516	5.81 = 15.00	(over)	
1411	5.62 = 15.60	1518	5.78 = 15.10		
1412	5.66 = 15.47	<u>1520 5.65 = 15.50</u>			
1415	" = 15.47	300 yds. of point			

IX:16:1954 Intermittent
Temp. taken only as
recorded

0542 Just underway
from Beecher's Anch.

0542 5.74 15.20

0547
0646 5.80 15.03

0556 abeam
north pt. Beecher

Bay 5.75 15.18

e/c 0604 5.68 15.40

0614 5.63 15.55

0617 5.72 15.30

~~0625~~

0637 5.72 15.30

0717 5.84 14.90

Almost abeam
W. end Santa
Rosa

0807 6.07 14.22

bet. Prince Id.,
and Bat Rock.

0820 6.13 14.00

on bottom

at anchorage
off old pier

0839 at anchorage

surface 6.11 14.08

0855 6.10 14.11

0920 6.11 14.08

0943 6.07 14.22

1255 5.99 14.45

1342 5.99 14.45

1811 6.00 14.42

2154 6.08 14.15

IX:17:1954
Intermittent temps. (cont.)
Anchorage, Cuyler Harb.

0553 6.08 14.15

0627 " "

0735 " "

0815 6.10 14.11

0925 " "

1110 6.05 14.25

1206 6.01 14.40

1520 " "

1645 " "

IX:18:1954 Anchorage

0545 5.93 14.62

0607 " "

0613 under-
way

Almost abeam

Prince Id. 5.84 14.90

Rounding Prince Id. offside,

0621 5.83 14.92

0635 5.79 for a
few 15.05

Started recording Conting

0644 5.83 14.92

0646 5.74 rounding Pt 15.20

0649 5.82 14.80

0656 5.97 14.45

0651 6.06 14.24

0653 6.14 13.98

0654 6.24 13.66

0657 6.14 13.98

0701 6.60 12.57

0710 6.65 12.42

0731 6.72 12.22

TX 18:1954

0733	663	12.50	
0737	661	12.55	San Juan Tyler Bight
0739	666	12.40	slowing speed
0741	658	12.60	increased speed slightly
0745	659	12.58	1 inch down, Adams Cove
0800	663	12.50	at anchorage
0810	666	12.40	
0818	660	12.57	
0847	654	12.76	
1058	652	12.85	
1112	649	12.90	
1200	670	12.26	underway toward S. Cruz I.
1206	675	12.11	
1215	600	14.42	
1230	608	14.15	
1237	590	14.72	
1246	621	14.08	2 ⁿ channel bet. S. Miguel & S. Rosa
1258	598	14.45	Directly So. of Sandy Pt., S. Rosa I.
1309	589	14.74	
1320	"	"	
1330	553	15.85	
1340	522	16.80	
1350	527	16.64	
1358	518	16.90	Opp South Pt., Santa Rosa I.
1404	523	16.78	" Navy installation
1415	490	17.76	
1425	500	17.46	Opp Ford Pt.
1435	475	18.24	
1445	459	18.74	
1450	451	19.02	S. of East Pt., Santa Rosa I.
1500	478	18.15	Santa Cruz Channel

IX:18:1954 con.

1510	497	=17.55	alt. 50 → Fraser Pt., Santa Cruz I.
1520	495	17.60	
1530	503	17.27	
1539	489	17.50	Opp. Bull Rock
1542	489	"	
1555	479	18.10	
1601	448	19.10	Close to Willows Anch.
1609	434	19.55	Dropping anchor
1622	450	19.05	Anchorage
1628	449	= 17.76 - 19.04	
1637	449	+7.76 " 19.04	
1706	450	19.05	
1734	468	18.44	
1745	468	"	
1800	468	"	
1826	471	18.38	
2040	471	"	

IX:19:1954 Anchored at Willows, S. Cruz I.

0557	495	17.60			
0632	Departure for Catalina I				
0637	477	18.19			
0657	478	18.15			
0707	478	[Ships' clock about 8 min. fast, set back]			
0718	478	18.15	0840	486	17.90
0729	485	17.92	0851	494	17.62
0734	480	18.08	0859	494	17.62
0745	480	"	0915	494	17.62
0754	482	18.05	0930	497	17.55
0802	482	"	0945	511	17.15
0818	486	17.90	1002	502	17.46
0826	486	"	1030	515	17.02

IX: 19:1954

Intermittent temperature

		add			Time
		^{2 min}			O.K.
1052	5.26:16.70	0308	449	= 19.08	0635 4.07 = 20.40
1056	517 16.98	0317	451	= 19.04	0650 4.07 = 20.40
1103	503 17.38	0322	459	18.75	0703 3.96 = 20.77
1120	495 17.60	0327	461	18.70	0719 " = "
1150	485 17.92	0343	441	19.35	0755 4.02 = 20.60
1158	481 18.04	0400	432	19.63	0822 3.94 = 20.80
1245	481 18.04	0454	433	19.60	0831 4.08 = 20.36
1320	461 18.70	0508	426	19.82	0848 4.28 = 19.72
1340	469 18.42	0527	423	19.91	0900 4.35 = 19.53
1410	456 18.85	0608	433	= 19.60	0925 4.59 = 18.74
1425	440 19.30	0627			0930 4.68 = 18.45
1445	440 "	0631	417	= 20.40	0932 4.93 = 17.65
1453	430 19.67	Approaching Long Pt. Lt. Catalina			0945 5.22 = 16.82
1500	429 19.70	Opp. " " " " " "			Approaching Whistler Buoy
1505	429 "	Whites Cove " "			0947 5.28 = 16.60
1512	429 "	off Willow Cove			Buoy
1515	403 20.54	Esalloghin Canyon			0951 5.28 = 16.60
1517	399 20.65				0955 ^{Buoy 3} 5.28 = 16.60
1519	399 "				0958 5.36 = 16.38
1521	399 "				0960 " = "
1523	390				"
1525	399 20.65	approaching Casino Pt.			
1526	391	opp. 20.93 " "			
1527	Thru out slacking speed.				
1533	397	Anchored Avalon		20.72	
1645	399	" "		20.65	

IX: 20:1954

Underway at ~~0205~~ ⁰²⁴⁰

0242	410	= 20.32
0253	429	= 19.70
0302	439	= 19.38

Carl L. Huber.

San Miguel Id. trip
 Sept. 13 - 1954

LOG of miscellaneous observations

Sept. 13, 1954

0615 P.S.T. At dock 2 kingfishers

0645 Departure

Coming out of harbor regular watch not taken. Saw Western Gulls, H-c.

Comorants, Caspian or Royal Tern.

Hulls in
 crows-
 nest

~~0743~~ 0743 off Pt. Loma, after rounding
 Whistler buoy - only birds, Western Gulls.

0747 1 imm. Heermann Gull.

0748 1 lone imm. Brandt Cormorant on
 surface.

0802 Lone Zalophus → NE.

0820 Prionace, ab. 5'

0832 1 Sealion trailing a W. Gull; 1

1 Prionace at bow.

0833 Cypselurus californicus

0836 Prionace, ab. 5'

Flight
 course

No of leaps

ORCA

Same
 fish?

0837 Cypselurus californicus

Several W. Gulls.

In slick

Wind
 force 2-3

0901 large sealion: leaped clear of
 water at first sight. In slick.

0903 Prionace, ab. 6'

0904 Cypselurus californicus

Western Gull

0907 Prionace, ab. 5', between 2 slicks.

0910 Cypselurus

← Prionace, ab. 6'

ab. 100 yds
 short of
 from line,
 on old
 side.

over

0921 ab. 8 loons, likely Common
Loons in single file flight → SE.
[Prionace seen from stern by
Linbaugh, et al.]

0932 Prionace.

0954 " ab. 2 1/2'

Ca 0945-55 A single slender, silver
fish of moderate size leaping clear
near slicks. Bonito?

1003 A few W. Gulls on slicks.

1006 Prionace, ab. 3'.

1015 " , 3-4', in slick area.

[1026 Prionace, seen from stern], 1/2 mi.
short of a slick.

1050 - 1132 Off watch, for lunch,
except on stern, 1050 - 1100.

1037 Prionace, 3' ±

1147 Td (bonito?) leaping clear.

1150 Sooty shearwaters: 1 at surface,
feeding at slick; took to wing.
1 shark, prob. a Prionace.

1208 Prionace, ab. 4'.

1256 Left crossnet, but watched
considerably from bow.

1355 Linbaugh goes aloft.

1430 17 porpoise (Delphinus bairdi)
at bow for a short time - 22
subgroups, of which one (8) straggled
long. All adults. Seen well by
Hubb, Linbaugh, Richmond, et al.
(cont.)

Trips to San Miguel Id.
Log cont.

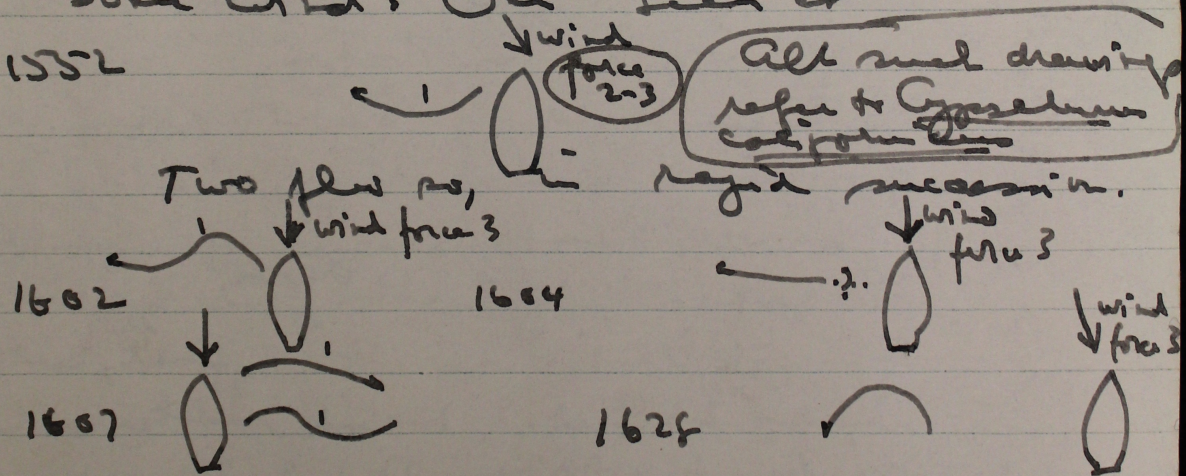
18:13:1954 (cont.)

around 1445 just ~~SW~~^{SE} of South point of
Catalina Island a small whale
definitely figured out as
Palaeoryctia antorostriata
leaped clear of the water 7-8
times, breaching about 3/4 its
length out on first leap, about
1/4 mile to E, it cleared the water.
Each time it came out belly
now or less up, arched over,
& fell on back, or back and side.
Limbs were and described throat
fluting on first breach. Mark
above, very white below. Very sleek
& streamlined. Short sharp. Color
braking near middle of side. D.
fin very small, inconspicuous &
posterior; flukes ^{dark} small, recessed.
Length est. as 15-18 feet, certainly
under 20 feet. Head rather sharp.
No back obvious. Definitely no markings
like hump whale. All dolphins seen
excluded. Base is set in between
& (Fren) definitely joints & piked
whale. Too small for finback calf
without water. It breached 3
times in rapid succession, its
showed back, without fluking, blowing
over

over

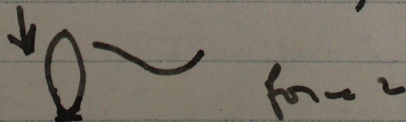
one with a bushy snout about 5 ft. high. Then it breached 4-5 times (as recalled by Hove & Limburg, only 3 more times seen by Philmore). Wilson saw a splash & a blue fin or tail later. He is acquainted with the sp. from an Antarctic trip, & feels sure of identity after an elimination of the delphinids & sigalid or various traits.

ca 1550 Several flying in S side of island, in calm sea, but with some wind. One seen at



All such drawings refer to *Cypselurus californicus*

1635 In 2 Bird Rock, near S. Thoms



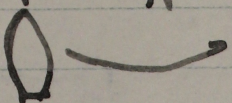
Anchor 1645.

collections 51054-185 & 186.

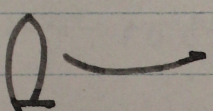
San Miguel Id. trip Log

IX: 14: 1954

0515 Underway from Cherry Cove,
Duthomes, Sta. Catalina Island.
↓ wind, force 1

0522  2 in rapid succession

Course from just outside Duthomes
to just clear South Pt., Sta. Rosa Id.

0706  not yet on regular watch

0713 One mourning dove, Zenaidura
macrura, flew to ship, seemed to
try to land, then took off toward
Santa Catalina Id.


0715 Force now 2, headwind. On watch

0730 Aft.

Ca 0730 Lane saw a blackfooted albatross
astern.

0743 Several W. Gulls, (with us some
time). 1 Brandt Cormorant insects
ship, then takes off toward Catalina.

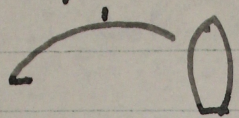
3 ↓ wind, force 2 ↓ force

0740 

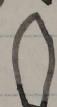
0742 Cormorant lands on slick bench floating
help & dies at once, repeating several
times. Gulls have been following slick
clouds.

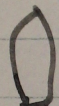
over

0745 Petrel, all black & rather large,
presumably Black Petrel, follows
ship, close to waves.

0801  ↓ Wind force 1-2

0818 → Force 3 - Sea increasingly choppy

0823  a few W. Gulls follow
along.

0838  ² taken by choppy wave?

0916 Off crowmast.

0922 3 Sooty Shearwaters + 5 W. Gulls
by floating kelp; wind force 1

0929 1 sealion.

0931 Prionace, ab. 5'. Another
earlier reported.

0934 Watch on bridge.

1100 3 porpoise at bow, not seen by
Silmore or me, but description by
Rechtzer fits Lagenorhynchus
obliquidens.

2 black-footed albatross astern.

1100 + Prionace (1)

1130 " (2, 1 large) } Lindey

1150 Stop again.

1200 School identified as Sauris (a better
view yesterday, around noon.

1215 low sawey at surface, wriggling.
(cont.)

San Miguel Id. trip.

LOG 18:14:1954 (cont.)

1207 Prionace, ab. 6', fining.

1209 Broad-leaved Zostera at surface, suggests growth along Santa Cruz Id. (prod). Other stands seen earlier. [Limbaugh saw broad-leaved Zostera growing in about 35' depth a flat above Plumbe Submarine Canyon, on recent trip].

1212 large schools of porpoise
[Limbaugh saw other schools, some large, some well under floating kelp, earlier in run along S side of Santa Cruz Id.]

[Prionace - Limbaugh also saw several other blue sharks in same area].

1213 Prionace, ab. 6'.

1214 sev. W. Gulls + 2 pink-footed shearwaters. [Limbaugh saw other pink-footed shearwaters at 1212.]

1233 Several more pink-footed shearwaters.

1236 Prionace, ab. 6'.

1255 Several more pink-footed shearwaters.

1257 Prionace, 6-7'.

1320 Opposite Bull Island. About 20 feet high up on granite rock or islet just E of Bull Id.

(over)

over

1430 In midchannel about on line
from Skunk Pt. of Santa Rosa Id.
to West Pt. of Santa Cruz Id.;
large numbers of actively feeding
Brant Cormorants and Brown
Pelicans, in very rough water
(force 5 or more).

1435 Anchorage Beechers Bay.

Seen in from well off
Carrington Pt.

Ca 1435 Gilmore saw an early colored
petrel, presumably the forktailed.

IX:16:1954 Depart Beechers Bay Anchorage

0615 Past Beechers Bay, a few cormorants
and a couple of brown pelicans

0625± several brown pelicans, a few
cormorants; 1 loon flying erratically
north as though confused in storm

0640 several western gulls

0645 close to kelp. Some of western gulls
seem to be of northern type. A few
Brant cormorants seemingly unconcerned
over very choppy sea.

0730± In San Miguel Passage. Pink-
footed shearwaters fairly common.

0741 4 ^{phalaropes} ~~forktailed~~ petrels in one flock.

Ident. from Peterson by color.

0839 Anchored Cuyler Harbor through
Sept. 17.

IX:18:1954

Cuyler Harbor to Bennett Pt., San Miguel Island to Willows Anchorage, Santa Cruz I.

- 0613 Underway from Cuyler Harbor
0648 CLH at Cravo best.
Abeam base of sand spit at East end of San Miguel heading W.
A few Bronx Cormorants
0650 2 phalaropes
0652 4 "
0721 Change course toward Adams Cove, a few western gulls.
0735 Off high point
-

En route from Pt. Bennett to Willows Anchorage.

- 1240 Abeam middle S. Miguel Passage Beaufort force 4, following sea a few western gulls.
1242 1 phalarope
1303 1 pink-footed shearwater
1310 1 cormorant going south.
1313 1 mola ± 2½ ft.
1326 " "
1335 3 molas in file with first shallowest and last deepest.
1336 3 molas in formation: ↖
1338 1 Mola; 1339 1 Mola - all about same size
1341 Prionace ± 5' 1341½ Prionace #15!
1342 " " surfacing.

(over)

IX:18:1954 con.

1355 1 Brant cormorant dove below with no trace
of wing beat; several w. gulls

1403 off Johnson Lee pier Prionace \pm 6' swimming.

1405 1 Brant cormorant dives

1406 Very broad-leaved Zostera floating; Cormorant

\rightarrow sea; 1407 another cormorant \rightarrow sea.

1412 Mola (1). 1413 Mola (2). 1418 Brant cormorant

1418 $\frac{1}{2}$ Mola (1) and more Brant cormorants.

1424 Phalarope (1), Mola (2), both in slick
thick with floating kelp, etc.

(All Molas recorded so far today
are about same size)

1425 Phalarope in slick

1426 8 Phalaropes at surface in group,
and one sea lion in slick; also one
leaping Mola.

1426 $\frac{1}{2}$ 3 more Phalaropes flying near slick.

1427 Prionace \pm 6', off slick.

1428 " about same size.

1430 " \pm 5'.

1433 2 Brant cormorants at surface.

1436 1 " "

1437 Prionace \pm 5'.

1442 Clustered school of 10 Molas at surface,
beside a Brant cormorant.

1443 Mola leaping about same size as others.

1445 Prionace, 2 each about 6'.

1447 Mola leaping.

1458 12 Molas in cross file, all heading E.

Opp. Santa Cruz Passage, 10 close
together and one outlier on either side, all
in an even line; all of nearly same size.

IX:18:1954 con.

1502 Mola ± 3 ft.

1503 6 moles in cross file all about 2 ft.;
and one Phalarope.

1505 Prinias $\pm 4\frac{1}{2}$ ft., then one ± 6 ft.

1517 Mola $\pm 1\frac{1}{2}$ ft.

1521 At least 3 moles in cross-file, $\pm 1\frac{1}{2}$ ft.

1527 " " 4 " in one clustered school.

1529 2 moles $\pm 2\frac{1}{2}$ ft., together; a few W. gulls

1530 cluster of 12 moles, each $\pm 1\frac{1}{2}$ ft.

1535 Above Skull Island, at least 60 sea
hens on top of more westerly islet and
a few W. gulls and brown pelicans.

1536 1 Mola ± 3 ft.

1548 School of 4 moles, each ± 2 ft.

1555 A double school of moles, at least
12 + 8.

1558 A cluster of 8 more moles.

1601 Mola; another leaps ahead.

1602 Another leaps close to shore;
slowing down.

1605 Off outer rock at Willows Anchorage,
Prinias ± 3 ft. Mola leaping

IX:19:1954

Willows Anchorage, Santa Cruz

06320 dep. ^{to Avalon, Catalina I.}

0703 CLH in Crows nest. Water very
clear, course to clear E. side of
Catalina.

0707 School of sauries.

0708 Scattered sauries; 1 brown pelican

0710 Scattered sauries; Prinias $\pm 6'$
over

IX:19 un.

0711 3 br. pelicans heading toward Santa

Cruz I.

0715 scattered sauries

0717 2 W. gulls → Santa Cruz I.

0719 Prionace ± 6'. 0720 1 lone sawry skipped
about 3 ft.

0721 School of sauries about 6' down.

0723 3 sawry schools at surface.

0724 another school

0726 Mola ± 2 ft.; another school of sauries.

0727 A few sauries; 1 W. gull → S. Cruz I.

0728 2 schools of sauries plus outliers,
several skipped.

0729 2 other schools.

0731 large school of sauries.

0732 Mola ± 1 ft.; 2 shearwaters prob. sooty;
5 W. gulls ~~to~~ Santa Cruz I.

0733 Prionace ± 6' under a big school of
sauries but not feeding

0735 2 schools of sauries.

0737 more sauries.

0742 2 schools of sauries.

0744 Prionace ± 9'.

0746 " ± 5'; 1 sawry.

0747 Sauries - 2 schools, 1 large.

0750 Brant cormorant : 1 → offshore.

0752, 53, 57, 58, 1800 (large school), 01, 04, schools, sauries

0807 Prionace ± 6'. 0810 2 W. Gulls

0811 Sauries - 1 school

0814 " " }

0820 I went below. 0834 returned.

IX: 19: 1954 (cont.)

0840 Mola + 2 1/2' 0846-52 off watch.

0856 floating kelp with dark fern abt. 6' long below.

0902 W. gull → So.

0920 A lone porpoise ident. by D. fin shape and color as Lagenorhynchus obliquidens actively feeding at surface with 2 gulls dropping in frequently → NW, off port side; made no move toward ship.

0922 5 W. gulls on surface.

0928 Yg. sea lion very dead.

0930 Lagenorhynchus obliquidens at least 3 → NW, off port side within 1/8 mi., feeding very actively along with 5 W. gulls. Made no move toward ship.

0934 A few more scattered porpoises abt. 1/2 mi. off portside heading NW.

0936 Many porpoises seen ahead feeding with gulls.

0937 Porpoises now about 3/4 mi. off port, very active, often arching out of water; dorsal seems all dark (possibly Delphinus, but observation not certain, and head shape not discerned; all → NW, a few all other, except for circling forays.

0945 Several more porpoises (sp.?) seen about 1/2 mi. to port, → NW. It is (over)

over 1X:19:1954 (cont.)

now noticed that a slick just beyond
the buoy extends indefinitely
parallel to our course. Again a
few gulls.

0950 now encountering force 3.

1008 1 W. gull heading W.

1016-1201 off watch.

1202 1 W. gull → E.

1216 1 Brant cormorant circles ~~slip~~ slip
flying then → Santa Barbara I.

1242 2 Phalaropes → SE.; 2 W. gulls → E.

1248 1 W. gull → E.

1255 W. gull ± 2'.

1258 5 W. gulls.

1305 Prinace ± 5'.

1307 1 W. gull → NW.

1315 1 double-crested cormorant making
frequent 1 sec. dives under thick floating kelp.

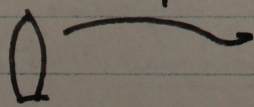
1325-1407 off watch.

1428 Prinace ± 6'.

1440 1 W. gull

1515 Force now down to 2.

1522 1 Cypselurus californicus



1526 half speed opposite casino.

1530 at anchor

Miscellaneous log - (X: 20: 1954

Avalon to San Diego

0240 underway.

0630-0710 aloft, nothing seen.

Force barely 3 wind from just astern;
sky more or less overcast

0930 aloft again Force 3. Same wind direction.
Coast has been up about 1/2 hr. has
seen no fish or mammals.

0935 a few W. gulls.

0942 5 galaropes.

0944 a few W. gulls.

0949 Roundly whistler buoy, a few W.
gulls.

1023 At least 5 bottlenose porpoises
(Tursiops) coming into harbor. Seen
very clearly.

Archeological notes

IX:15:1954

Midden at Northwest Anchorage, Beechers Bay, Santa Rosa Island. Worked the cliff top midden back along the top of the ravines not more than 100 ft. in vicinity of spring at Northwest Anchorage. Most of the midden is loose light sooty brown material but locally it grades down into a hard caliche ~~with~~ with midden shells including Haliotis crackerodi and H. ~~?~~ rufescens. The midden sample came from the loose soil. A fair supply of Cryptochiton, Nitidulites and Haliotis was obtained for isotrope analysis.

There was no opportunity for exploration for under water artifacts.

Carl L. Hull.

IX: 16: 1954

Archaeological notes

Cuylers Harbor, San Miguel I.

Initial exploration of the bottom disclosed no artifacts, except for hearth stones.

The extremely fine middens well up on the steep slope beside the old pier (just north) were examined at considerable length by the party, particularly C. H. + L. C. Hubbs and Mr. Chase.

Considerable Cryptochiton was evident on the talus and on the beach.

Only a small sample of Cryptochiton was taken in the midden, but all may be used for isotopic analysis because good samples of unbroken valves were brought in by others from on top the mesa on IX: 16 and IX: 17. Mr. Chan continued

collecting ^{on IX: 17} in the same midden as worked on IX: 16. This deep midden lies about 75 ft. above the sea. It starts with tan sand, sand, shells etc. & works up into a almost solid midden, ~~the~~ with shells (mussels + clams) ^{predom. (valley)} and fish, ^(sea otters, fox, etc.) ~~and~~ ^{and} ~~is~~ ^{is} abundance. Some sticks are light-colored, a bit cherty, with shell charred, indicating fire.

IX:18:1954 (A)

Archaeological notes

Point Bennett, San Miguel Island

Examined midden as marked on chart in sand area from base of high slope on Adams Cove NW $\frac{2}{3}$ way to N shore.

Most of the midden material is on the surface, when exposed by blowout action of the almost invariably strong NW winds. On the steep slope to the east of Adams Cove deep caliche is evident following the slope contour and presumably due, as elsewhere on the island, to leaching from generations of sand. One ~~large~~ thin-indented subbird was noted further out. [Very likely the "Pleistocene" that I sampled on the north side of Sta. Rosa on an earlier trip, with Cryptochiton included, was caliche also, and literature reported Pleistocene on the island, needs critical reevaluation.]

Fluffy brownish midden in place on exposed hill & then at tops of slopes. In several places several feet of dark semicompacted sand is exposed, with the abundant land snail but no shells or artifacts, except for the toy foot or two. Again, recency is evident.

(over)

I took one sample sack separately
from a fluffy midden, largely
random, but otherwise nearly all
material was picked up at the
surface, using care not to get
recent droppings by man, ravens
or gulls.

Carl L. Hues.

Midden material from Bennett Pt., San Miguel I. IX:18:1954

Collected by Carl H. Hubbs and Conrad Limbaugh, Identified by Emery P. Chase (shells).

<u>Acmaea patina</u>	25	} random sample Limbaugh's note
" <u>limatula</u> Carpenter	6	
" <u>scaber</u> Gould	2	
" <u>pelta</u> Eschscholtz	15	

Acmaea shells picked up at random, not particularly common.

<u>Lotia gigantea</u>	21	} Part of random sample
<u>Fischerella volcano</u> Reeve	6	
<u>Diadora aspra</u> Eschscholtz	1	
<u>Crepidula adunca</u> Sowerby	1	
<u>Astraea undosa</u> Wood	1	

Essentially random {

<u>Tegula</u> ?	1	
<u>Tegula brunnea</u> Philippi		large size
" <u>funeralis</u> Adams		" "
<u>Stalioa cracherodi</u> Leach		very abundant
" <u>rufescens</u>		" "

no green abalones found.

Mytilus californianus Conrad. Relatively rare, had to hunt for a good sample.
Septifer bifurcatus Reeve many seen, but also rare.

(over)

Phocooides californicus Conrad 1 }
Protathaca staminea Conrad 1 } only
 seen

Decapod fragments. Scarce

Barnacles. Scarce, probably adventitious
(other than Cryptochiton)

Chiton valves. many. Not common, except
in one soft midden digging

Cryptochiton huge series, could have
brought back a bushel.

Sea urchin fragment. Strongylocentrotus
purpureus prob. Very rare

Pinctometopon pulchrum fragments.
Very rare.

Many sea lion bones.

One human skull and a complete section
skull, taken close together.
Small quantity of artifacts. Not common.

One separate sample from a single
fluffy midden kept intact.

One bowl, practically complete when
all pieces found (one of pieces lost
in transporting to boat).

Carl L. Hulse, L. S. H.

Willow Anchorage.

There is a deep unconsolidated midden at the E edge of the core, apparently a dump. Considerable search by me disclosed no Cryptochiton, in comparison with the warm sea temperature now observed & the fish fauna seined. If midden is contemporaneous with those on Sta. Rosa & San Miguel, the temperature differential will be indicated as of considerable duration. Emery P. Chase took a selection (sample bag full) from the fauna, the midden (digging in). He also saw no Cryptochiton. He reported ³4 ~~3~~ of Astraea nodosa, ~~2-3~~ 5 of Nobilia nobis, many broken valves of Mytilus (predominant). All species seen in brief digging were saved. A few pieces of worm; a few ³⁻¹⁴ barnacles; pieces of Strongylocentrotus purpuratus, 1 Fissurella volcano, 1 Olivella lybica, 2 Acmaea pelta, ~~2~~ ¹⁴ of Halotis cracherodi. Barnacles & worm tubes on other shells; 1 fish bone (branchiostegal). Dirt may disclose smaller species.