

10 OCT 1999

12:07 07°

SIGHTING # 274

Globicephala macrohynchus

12:07

Ch 25

BAD BOUY - only static, antennae
did not pop up.

→ This recording was accidentally
made during the recording for
T. truncatus (Sight # 273, Sonobuoy # 40)
at point 9:38:56

→ 12:06 - 12:10 recorded
bad bouy, so stopped
recording

Date, Sonobuoy # 42 had

10 Oct 99 Globicephala sighting # 274
 12:25:20 macrorhynchus
 07° 23.24 689° 59.29 TAPE 10

Ch 17 110° 3ret Animals location relative to ship & sonobuoy (~2nm)

ship noise, water noise → good reception
 animals are -110° 3ret (~2nm)

-animals are about 2nm away
 ship is going to go back to course and speed

12:33 - no vocalizations so far (stopped recording @ 12:40)
 13:00 still no vocalizations (but good reception 7-8 bars)

animals had originally been traveling, then approached the ship. First buoy was right next to animals (animals basically milling around ship). Animals had moved away about 2nm from ship when the 2nd buoy was deployed (1st buoy was bad).

13:15 Sonobuoy reception red/right - 4 bars
 black/left - 5 bars

13:30 Sonobuoy reception red/right = 2-3 bars
 black/left = 3-4 bars

(stopped monitoring)

13:55 Sonobuoy reception red/right = 1-2 bars
 black/left = 2-3 bars

14:06 Sonobuoy reception red = 0 bars
 black = 2 bars

just possible
 check for
 reception

11:26 Start tape, very loud ship noise

11:31 Ship noise less, but nasty static

11:31:46 faint whistle?

11:34:40 faint whistle?

11:36:45 static is less frequent

11:37:50 faint whistle

11:38:08 whistle

11:46:20 faint whistle?

11:48:20 whistle

11:50:10-20 "

11:51:16 best whistles so far

11:53:25 whistle

11:53:46 pretty good whistle

11:56:10 very good whistle

12:08:20 series of upsweeps (kinda faint)

12:11:54 whistles

12:23:28 whistles (kinda faint)

12:26:45 "

12:28:25 faint whistles } lots more static

12:29:00 "

12:40 stopped tape

11 Oct 99 Orca #278 (MISSING)

11:25 Dropped sonobuoy in the vicinity of a cluster of sighting/resights of a small pod of Orca. Within several mi

Channel 19 - @ 60 ft

Signal came on right away. Very loud ship noise

We had a nasty static problem at the beginning, but that went away and we were left with substantial wind and water noise

12:19 right=3 bars left=4 bars

12:30 right=2 left=3

#44

TAPE 9

SIGHTING #282 B. musculus

(07°59.74 091°45.94) 400 ft

8:24:25 Start Recording

8:32:15 one whale is blowing ~400m away from ship

8:34:30 animal is 50° left, <100m from ship

8:39:16 <100m from ship

8:39:58 possible blue whale moan amid loud ship noise

8:43 ship turning, still lots of noise

8:44:30 relatively quiet again

9:00:40 animals ~400-500m from ship, ship noise loud

9:10 - now only recording on left channel
(right channel is Ch 52 sonobouy #45)

0912 - 0912 possible 6" S. 5.2 2.2

8:24:25 Sonobouy deployed, functional bouy

TAPE #9 (Initially Both channels - Left & Right)

There are ~2 blue whales within 1nm of the ship. We are maneuvering around the area to photo-id & biopsy animals - so far they appear to be relatively stationary.

EQ-50 shows distinct blobs @ 200m on both the HF & LF

0912 Sonobouy #44 now on left channel only
" #45 is on right channel

0921 End of Tape #9
Begin Tape #11

1000 Signal strength is 5 BARs

Group Size = 2

SIGHTING #282 E. musculus

45

TAPE #9

906' Ch 62 - right channel - Tape #9

9:12:11 Sonobuoy deployed ^{07° 59.63}
9/1° 45.52

0921 End Tape #9

Begin Tape #11

1000 Signal strength = 3-4 BARS

9:12:11 sonobuoy deployed - good buoy

9:17 animals are ~400 m behind us now
The ship is leaving the area

9:21-23 Likely signal at 18 Hz on both

buoys

~ 0928 Another signal at 19 Hz on both

- 0930:30 " " " " " "

0932:35 " " " " " "

0935:50 " " " " " "

0936:31 Definite signal at ~18 Hz, ~15 sec

0940:20 " " " " " "

0944:30 " " " " " "

0949:45 weak signal

0956:50 17 Hz signal w/ harmonics on Rt channel only

1010 Ship lines have appeared on SB #45

1017 Static is really picking up on both
channels, but low freq signals still
look good

Group size = 2

1041 - Good sound on the new buoy
Just static on the old buoy

1049 - ship is sounding down

1051 - very quiet now

1133:20 - Blue whale w/ harmonics
center ~ 50 Hz, loudest at 25 Hz

1135:08 - another sound

1148:44 - another

1153:04 - another - stronger (11:55)

58:45 - another

58:52 - another (weaker)

58:36 - another? very faint

12:01:45 - another (faint)

12:04:20 - 45 Hz

12:04:45 - 95 Hz

12:11:35 - 55 Hz

12:13:30 - 55 Hz

12:15 - 55 Hz

12:20 - (20) monitoring for recording to LOT?
→ some detection is now

75-75 Hz

50 Hz

50 Hz

50 Hz

50 Hz

12 Oct 99

#46

Blue Whale Sighting # 286

Channel 54, 400 ft, Tape #11

1036 Buoy in the water (sound) @ 10:36 / 0.5 mi

1037 Right channel on recorder switched to
channel 54

Left channel is still channel 58

1040 7 BARS signal on channel 54
4.5 BARS on channel 58

1147 5.0 BARS signal flight in Ch 54

1209 2-4 bars

1225 2-3 bars

1235 2 bars

1306 (approx) 0-1 bar

Group Size = 2

interfered w/ 95 Hz pulses / calls

11:53:20 Blue whale w/ harmonics
11:55:28 "
11:57:10 "
11:59:15 "

12:40:27 95 Hz pulses
12:41:27 50 Hz harmonics
12:43:55 95 Hz pulses
12:53:04 55 Hz pulse (stronger)
12:54:45 another
12:56:32 another (weaker)

12:57:50 45 Hz pulses
12:58:48 55 Hz pulse (faint)
12:59:00 possible another 55 Hz increase in noise

12:57:42 95 Hz pulse
12:58:18 55 Hz pulse
12:59:45 95 Hz
13:00:03 55 Hz Static is getting worse

13:00:03 Static very bad
13:00:03 Low monitoring not recorded to 100%
bad static poor reception

12 Oct 99 Blue Whale Sighting #286 *

1120 Sonobuoy class #1 in the water, Left Channel
Sonobuoy Type #11

7 BARS signal strength

Initially it was very noisy, but I think that ship noise was overwhelming the buoy and making it distorted. Signal then did not sound like ship.

1147 5-6 BARS signal strength

1209 2-4 bars

1225 2 bars

1237 2 bars

1302 2 bars



Tape #11 was not working

Most of the good recordings from S # 282 and all of # 286 are lost

Group Size = 2

1499 Passage \leq mol d 11/42
(gap in recording)

1493 17 Oct Blue birds 288 TAPES 11
Feeding on lake lake & right
sands - Tape #11

Good luck 7 TAPES

1504 Higher sand on lake #12
Lake sand on lake #12

1512 2 birds - equal energy

1625 Lake #12

Group Size = 1

1511:30 P 1500 - 1511:30
 1511:30 P 1500 - 1511:30
 1524:30 P 1500 - 1524:30
 1528:00 P 1500 - 1528:00

Filtered

BLUE 4. WAV	✓	1511:30	to	1511:52	90 Hz
BLUE 3. WAV	✓	1522:20	to	1522:44	90 Hz
BLUE 2. WAV	✓	1524:30	to	1525:00	90 Hz
BLUE 1. WAV		1528:00	to	1528:22	90 Hz

1500 0000 Blue whale #288 TAPE II

1502 Blue whale #288
 Same 53 recorded in right
 channel UN Tape #11

1502 Good Blue whale #288
 1502 She is now in the water now
 1502 She is now in the water now

1502 End of recording

Grav Size = 1

LC 100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

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100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100-1000

100 3/4 228

110 6000

~~110 6000~~

13 Oct 99 Test of LCD-type Sonobuoy
Channel 12 90 ft @ 0838

I took the sonobuoy out of its inner steel cylinder, took the plastic cap off and threw the pieces overboard to see if I could get this pallet of "bad ones" to start working.

The float did deploy correctly !!
Lots of static, but difar signal is clear, perhaps it is falling all the way to 1000 ft

0849 Still bad static, signal strength is 6-7 BARs

0857 Still bad static, strong difar signal 4-5 BARs

TAPES II # 12

- bryde's a.w.v
- 1629 Dolphin whistles / previous sighting
 - 1629:40 Loud whistle
 - 1631 More whistles
 - 1632 Begin Recording / Tape II (to end)
 - 1632-34 Pulsed sounds @ 68 Hz ?
probably a ship noise line
 - 1637:30 Ship noise suddenly decreases
and all sorts of animal noises are audible
 - 1638:45 radio interference
 - 1640:15 harmonic upswEEP 50-200 Hz / misc sBv
 - 1641:10 nearby overboard starts up and goes by. Out?
 - 1644 pulsed sounds / harmonic upswEEP / whistles
& tweets
 - 1648:00 loud pulsed sounds
 - 1648:30 " " "
 - 1649:00 harmonic upswEEP
 - bryde's b.w.v
 - 1650 End of Tape II
 - 1654
 - 1655 dolphin echo location clicks?
 - 1656:17 pulsed signals, 400-1000 Hz
 - 1658 dolphin whistle clicks & squeaks?
 - 1658:45 strong harmonic upswEEP
 - 1701:45 strong barks
 - 1706:10 lower faster barking
 - 1708- whistles, continue
 - 1710:46 speed barking, low noise [lots of radio interference]
 - 1711:43 dolphin whistles, clicks

→ skip page to continue

14 Oct 79 Bryde's whale sighting #
Tape # II / Tape # 12 Channel 58 90ft

Noisy at first, got quieter as ship
move away 7 BARS signal strength.

Water depths only about 240' so
I set buoy for 90'

Started recording after ship noise
was reduced @ 1632

~1700 Started Tape #12
1714 Still 6 BARS, radio
frequency interference

1837 Stopped recording - still 3-4 BARS

TAPE #12, SOMEBODY #53

(53:cont)

BRVES - d. w. w.

17:14:19 Chirps, "barks" good

17:15:15 good "barks"

17:15:47 very brief series of clicks

→ keep hearing interesting sounds, but *LOTS*
of radio interference

→ 18:59 moan!! - upsweep w/ harmonics!

17:37 bizarre low freq. knock (19-46 Hz)

17:52 again knock (hear again occasionally after, between 19-46 Hz)

19:19 barks

19:32 barks > at different latitudes

20:15 good barks, etc.

22:09 barks, dolphin squeals

→ 22:47 moan!! upsweep w/ harmonics

17:25 whistles (pretty faint)

27:18 different LF pulses? (faint)

→ 17:27:56 Great Moan!! w/ harmonics

(+ more cool stuff, but broken up by radio interference.)

11

nada, but

1332 still just loud ship noise on Channel 2
maneuvering for photos in vicinity of buoy

CH 2 for next page

1342 - No di far signal

1351 - ship tuning, 1 noise

~1400 - very brief pulses (~12 Hz - 55 Hz, centered ~60 Hz)
several in a series

14 13 20 strange brief ratchet noise - couldn't really see on spec

14 14 35 occasional light knock sound (maybe something
touch hydrophone)

14 15 50 another ratchet sound - a little stronger,

14 30 00 some LF lines ~ 20 Hz, 40 Hz > maybe due to ship
noise or ...

14 34 50 odd knocking sounds (faint)

14 41 40 LF (36 Hz) - possibly due to ship noise?

14 43 00 more of those knocks

14 45 10 max knocks

1500 Ship passing starboard 200m port beam

1515 LF - noise or pulse? 4 Hz → 47 Hz

1525 Ship has been maneuvering a lot to pick
up bolts - lots o' noise, & it is changing

1531 EOT

1536 Start Tape #14

1610 Short moon? ship noise? 110 Hz + 162 Hz

1619 6-7 BARS

See next page

B. Musculus Sighting # 332 10/16/99
Channel 58 90' 53B
Right channel Tape 13

Strong RE signal - No audio

Start tape 1330

~~EQ-58 - Red patches @ 300m (grey?)
220m - clusters~~

~~14 20 whale on now
30° starboard, 600-700m (going to make
another pass for biopsy)~~

~~1531 EOT #13~~

~~1536 START TAPE #14 - SHIP IS NEARBY
RETRIEVING DARTS~~

~~1539 SONOBOW ~ 200m OFF PORT BEAM, NOW IN
TRANSIT TO ANOTHER BLUE WHALE SIGHTING
(~ 20m away)~~

~~* 1545 STOP MONITORING* but still recording, just in case.~~

See next page

1332 Loud ship noise. Trying to get photos of whale

1339 60 Hz signal / AC noise?

1342 Good difar signal, but buoy seems to be overloaded w/ ship noise

1351 ship turning, 1 noise

~1400 very brief pulses (~12 Hz - 55 Hz, centered ~20 Hz) several in a series

1413:20 strange brief ratchet noise, couldn't really see in spec

1414:35 occasional light knock sound (maybe something touch hydrophos?)

1415:50 another ratchety sound - a little louder

1430ish some LF lines ~20 Hz, 40 Hz > maybe due to ship noise or ... ???

1434:50 odd knocking sounds (faint)

1441:40 LF (36 Hz) - possibly due to ship noise?

1443:00 more of those knocks

1445:10 more knocks

1500 (and) ship passing sonoboy 200m port beam

1515 LF noise or pulse? 9 Hz to 47 Hz

1525 Ship has been maneuvering a lot to pick up belts - lots of noise, & it is changing

1531 EOT #13

1536 Start Tape #14

1610 - Short moan? Ship noise? 110 Hz & 162 Hz

1619 - 6-7 bars

1803

B. musculus Sighting # 332 10/16/99
Channel 2 90' 53B
left channel Tape 13

Strong carrier 7 BARS
Loud audio of ship

EQ 50 - red patches @ 300m (DSC)
yellow patches @ 220m (may patches)

1649 - Ch 2 left channel - 5 bars
Ch 48 (new boy #56) right Channel - 7 bars

1420 whale is now 30° starboard, 600-700m
(going to make another Biopsy pass)

1531 EOT #13

1536 BOT #14 (on ship's nearby retrieving drifts)

1539 Sonoboy ~200m off port beam, now in transit
to another blue whale sighting ~2nm away

* NO MONITOR 1545 - 1610 *

1649 - Ch 2 left channel (5 bars)
Ch 48 (new boy #56) right Channel - 7 bars

1738 EOT #14

1803 BOT #15

← doesn't sound like any animal, maybe ship

SONOBOU #56 (Ch 48, right Channel)

BLUE - A. WAW (Filtered & amplified)

- 16:49 Sonobouy #48 deployed, good signal
loud ship noise - overlaid
15:15:20 brief faint whistle? may have been difan? losing my mind?
15:44 no monitor - 5 min

→

1803 beginning to get low freq signals that are on both channels but strongest on the most distant one

BLUE - B. WAW (Filtered & amplified)

1818 ship speeding up, leaving whales, going to CTD station

1834 ship is noisy. Currently we are 1.3 nm from location of buoy Ch #48

1836 Ch #2, upsweep @ 100 Hz

1838 Stopped tape

1927 Started tape after possible signal seen on Ch #2
Long upsweep 98-103 Hz (not recorded)

→ 1928 Ch #2 - harmonic signal?

1929 Ch #2 128 Hz signal (faint on Ch #48)

→ 1934:40 Ch #2 114 Hz signal

→ 1939:55 Ch #2 (110-140 Hz) signal (faint on #48)

(a few more very faint ones next min or so after this one)

2004:41 possible pulse ~117 Hz (Ch #2, faint on #48)

2030:50 right ch: Dolphin whistle (upsweep) & clicks

2034:26 right (#48) upsweep (dolphin), clicks still going

→ through to 20:49

2042:24 now hear some clicks on Ch #2 → through to 2102

2052 - EOT #15

2055 - BOT #16

→ cont

10.16.99

Ch 48

16:49

B. musculus

09°53.4 N

96°03.1 W

Sighting # 333

TAPE #4

- sonobouy dropped at

good signal

Ch 48 - right (7 bars)

Ch 2 - left (5 bars)

1719: Blue sighted 1.5 nm to starboard (we are now ~1.5 nm from sonobouy)

1723 whale location 09°55.0 N 096°02.7 W

1738 EOT #14

1803 BOT #15 Ch 2 (left) = 4 bars Ch 48 (R) = 7 bars

1920 CTD Station: Ch #48 right 5-6 BARs
Ch #2 left 3-4 BARs

2052 EOT #15

2055 BOT #16

2057 right Ch #48 4-5 bars

left Ch #2 4 bars

> Net tows, going ~1-2 knots

2105 - done w/ station, getting underway

2120 - right Ch 48 = 3-4 bars

left Ch 2 = 3 bars

2130 right Ch 48 = 2-3 bars

left Ch 2 = 2-3 bars

SONOBOY 56/55
CON'T

CH2 - left
CH48 - right

- 2118 DOLPHIN CLICKS BACK - CH2
2134 CH2 - dolphin slides still there
but static getting bad (reception = 23)
CH48 IS starting to get static too (bars)
2136 - CH2 pretty much out
2137 - STOPPED MONITORING
(Both Channels at 23 bars)

- 1130 4.6 kHz whistle
 1131 faint whistles
 1152 same whistles
 1156 good clicks & whistles & buzzes
 Sounds like both species

Globicephalus (& Tursiops)

11:23 on 17 Oct '99

Tape #17

Chan 25 / 60'

- 1125 Good carrier 7 BARS
 Loud ship noise
 1128 Ship leaving the area
 1133 Tursiops - new sighting
 w/in 1/2 mi of pilot whales
 1136 Audio signal got weak / still 7 BARS
 on RF reception.
 1137 Buoy dead acoustically / still 7 BARS
 12:00 Buoy working again - recording (13:00) winter noise
 1218 Noise getting loud right ch = 4 bars
 left ch = 4-5 bars
 1226 Noise very loud deep ~1200 Hz
 1230 right ch - 3 bars
 left ch - 4 bars
 1235 stop recording - for ears of noise
 1245 right ch - 3 bars left ch - 3 bars
 Stop monitoring

Tape rewound to 12:00 - only
 The first 30 minutes were saved

0804 - 0908 Pulses at ~160 Hz / whales?

0808:52 pulse 128 Hz + 160 Hz

0813:40 pulse 130-160 Hz

0817:30 pulses 114-162 Hz

0829 pulsed rapid signals at 133 Hz almost continuously. Electronic noise lines are evident at multiples of 60 Hz

0832 133 Hz signal stopped abruptly

0919 Lots of ship noise lines, 60 Hz noise is much less. There is a consistent ship noise line at 138 Hz + 122 Hz. These could be what was seen before at 133

0936 60 Hz noise lines are back

Bryde's Whales - several in the area

10/18/99 0753 Sonobuoy Tape #17

Channel 25 400'

0757 Good carrier 7 BARS

Overloaded w/ ship noise

0801 Returning to course + speed, acoustic signal quality is patchy

0805 Noisy, but lower frequencies look OK

0816 Signal static worse 4-5 BARS

0825 Nasty Static Stopped recording 3-4 BARS

0828 Restarted recording when I saw pulsed signals @ 133 Hz

0850 Stopped recording Tape #17

0915 We have turned the corner and are now getting closer to the buoy again. Many Bryde's whales were seen in the area (see Buoy 57 + 60 sightings)

0918 Started tape #17 again. Can clearly hear the Mac.

0923 3-5 BARS

0936 Stopped recording 3-4 BARS

59

Bryde's whale Sighting #
Chen #58 90'

Failed - Sunk

Bryde's Whale Sighting #

0855

Failure — Sank

#61

Tursiops truncatus

CH 12
(both Channels)

08:23

10/19/99

0826 FABULOUS WHISTLES!
SHIP NOISE LOUD, BUT GOOD VOCALS

0834 even better whistles/clicks
0838 ship noise lower, whistles & clicks still great
Sperm whales in background?

0847 - stop monitoring, but still recording
still getting great signals

0937 - static bad, stopped recording
(still occasional whistle)

0915 Bad static - rewind tape to this
point for next Sonobuoy

saved an example of T. truncatus
tursiops ex. wal → from times
lw/spen

0840:15
0848:45
0901:00

0825 right = 7 bars left = 7 bars
Good buoy - good reception
(ship at half speed, dolphins had been
barricading)

0833 EOT #17

0834 Start Tape #18

0844 right = 6 bars left = 7 bars

0937 Stop recording - static bad
right = 3 bars left = 4 bars