

Cruise Report

Tug WHITEFOOT

Leg I: January 3-5, 1980

Leg II: January 6-12, 1980

Leg III: January 20-23, 1980

Brad Butman
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Woods Hole, MA 02543

Vessel: Tug WHITEFOOT

Area of Operations: Georges Bank and Mid-Atlantic Continental Shelf

Dates: Leg I: January 3-5, 1980

Leg II: January 6-12, 1980

Leg III: January 20-23, 1980

Personnel: Leg I: Brad Butman, Chief Scientist

Barry Irwin, Technician

Robert Butman, Technician/Guest Observer

Leg II: Brad Butman, Chief Scientist

Barry Irwin, Technician

Leg III: Brad Butman, Chief Scientist

Andy Eliason, Eliason Data Service

Objectives:

The objectives of the WHITEFOOT cruises were to recover instrumentation on the continental shelf. We had planned to recover the instruments on OCEANUS 77 (Dec. 13-20, 1979), but the acoustic releases failed, due to a bad set of release batteries. The moorings to be recovered were:

Station Q - (40°30'N, 70°13'W)

Recover tripod mooring 178

Deploy current mooring 191

Station B - (38°44'N, 73°38'W)

Recover current mooring 180

Recover tripod mooring 177

All instruments had to be recovered by grappling since the releases failed. We also planned cross-shelf XBT sections. At the two mooring locations, side-scan sonar was used to locate the moorings.

Narrative:

Leg I

Jan 3 0900 Load WHITEFOOT
1915 Depart Woods Hole
Conduct cross-shelf XBT section

Jan 4 0430 Arrive Station Q
Search for mooring 178 with Benthos and AMF release.
No results.

1200 Start side-scan search of Station Q
1300 Locate tripod on side-scan record
1400 Start dragging for 178
1700 Stop dragging; poor weather forecast
2030 Deploy current mooring 191
2100 Continue XBT section to south at mooring 191
2300 Complete XBT section
Depart for Woods Hole
NE gale warnings

Jan 5 0930 Arrive Woods Hole. NE gale

Leg II

Jan 6 2000 Depart Woods Hole

Jan 7 SW gale, head slowly westward

Jan 8 1730 Arrive Cape May, N.J.

Jan 8 2100 Depart Cape May, N.J. for Station B

Jan 9 0400 Arrive Station B
Two surface buoys missing, surface VACM lost. Prepare
AMF release gear; fix technical problem.

1300 Start grappling for current mooring
1800 Stop grappling, weather moderate
1900 Side-scan search for tripod and current mooring

Leg II Cont.)

2200 Terminate side-scan. Hove to for night.
Jan. 10 0700 Return to Station B
0800 Side-scan
1300 Start grappling
1700 Tripod and current moorings onboard - retrieved in
same pass.
2000 Underway to complete XBT section
2300 Complete XBT section
Jan 11 Underway to Woods Hole through N.Y. and Long Island
Sound (Gale warnings)
2200 Arrive Port Jefferson, N.Y. (Winds S, 50-60 knots)
Jan 12 0600 Depart Port Jefferson, N.Y.
2000 Arrive Woods Hole, MA

Leg III

Jan 20 2200 Depart Woods Hole
Jan 21 0700 Arrive Station Q, winds NW 30-4- mph
Await calmer weather
Jan 22 1100 Arrive Station Q. Set up side-scan
1230 Complete side-scan; tripod located.
1300 Start grappling
1500 Tripod on deck; underway to Woods Hole
Jan 23 0400 Arrive Woods Hole
0800 Offload equipment

Tabulated information

Moorings Recovered:

Tripod mooring 177 (Station B)

Tripod mooring 178 (Station Q)

Subsurface mooring 180 (Station B)

- Bottom instrument recovered
- Surface component lost, VACM 0512

Moorings Deployed:

Current mooring 191 (Station Q)

(2 current meters and sediment trap)

Days at sea: Leg I - 3

 Leg II - 7

 Leg III - 4

 Total 14

XBT's: 23

Surface salinity: 23

Engineering Note:

The releases which failed in December, 1979 and which necessitated the WHITEFOOT cruise to recover instrumentation, have been checked to determine cause of failure. All three releases (Mooring 177, 178, 180) had receiver batteries manufactured in Feb. 1979 and all had failed. Other releases which had batteries manufactured in 10/78 and 5/79 were OK. The batteries have been returned to Malloy for inspection. Fortunately, only 1 VACM was lost (indirectly) due to the release failures. In retrospect, we were extremely fortunate to have recovered almost all our equipment given such disastrous release results.

STATION LIST

WHITEFOOT 3 - 22 January 1980

<u>Station</u>	<u>Depth</u> <u>(m)</u>	<u>Latitude</u>	<u>Longitude</u>	<u>XBT</u>	<u>Surface</u> <u>Salinity</u>	<u>Date</u>	<u>Time</u>
<u>Leg 1</u>							
1	21	41°11.7'N	70°49.1'W	✓	✓	1/3/80	
2	43	41°0.2'N	70°35.9'W	✓	✓	1/4/80	0030
3		40°44.4'N	70°19.7'W	✓	✓		0235
4	72	40°31.1'N	70°14.1'W	✓	✓		0430
5	91	40°19.6'N	70°9.3'W	✓	✓		2240
6	81	40°26.1'N	70°14.9'W	✓	✓		2340
<u>Leg 11</u>							
7	12	38°55.4'N	74°49.7'W	✓	✓	1/8/80	2130
8	23	38°52.1'N	74°33.6'W	✓	✓		2315
9	21	38°51.5'N	74°29.8'W	✓	✓		2325
10	55	38°49.5'N	74°17.5'W	✓	✓		0030
11	55	38°46.7'N	73°59.4'W	✓	✓		0200
12	62	38°42.9'N	73°41.8'W	✓	✓		0345
13	62	38°40.4'N	73°39.9'W	✓	✓	1/10/80	2000
14	78	38°36.3'N	73°32.4'W	✓	✓		2055
15	90	38°35.3'N	73°24.5'W	✓	✓		2145
16	143	38°34.6'N	73°16.0'W	✓	✓		2245
17		38°33.2'N	73°12.7'W	✓	✓		2305
<u>Leg 111</u>							
1	87	40°21.4'N	70°8.6'W	✓	✓	1/22/80	1705
2	78	40°25.7'N	70°11.8'W	✓	✓		1750
3	73	40°30.6'N	70°14.8'W	✓	✓		1840
4	63	40°37.0'N	70°19.7'W	✓	✓		1933
5	56	40°46.7'N	70°27.1'W	✓	✓		2048
6	50	40°56.3'N	70.33.4'W	✓	✓		2200