

Cruise Report - RRS Frederick Russell 8/84

. 5-16 May 1984

Personnel:

N.A. Holme	MBA	Scientist i/c
R.L. Barrett	MBA	
J.W. Wood	MBA	
D. Nicholson	MBA	(14-16 May)
J.B. Wilson	IOS	Wormley
R. Belderson	IOS	Wormley (4-14 May)
A.R. Stubbs	IOS	Wormley

Objects

- (1) To investigate the benthos in selected areas of the English Channel in relation to bedforms revealed by side-scan sonar.
- (2) Resurvey of ground previously investigated in the Plymouth area as part of a long-term monitoring programme.

Weather

Generally good, but strong winds prevented work on two days, and sampling in mid-Channel on May 13 was made difficult by heavy swell.

Outline programme

3-4 May	In Millbay Dock, Plymouth. Loaded and set up gear.
5 May	Sailed from Plymouth. Preliminary trials of TV sledge and sonar en route for Isle of Wight area.
6-9 May	TV sledge tows and sonar surveys off Isle of Wight.
10 May	Sledge and sonar surveys S. of Anvil Point.
11 May	South of Portland. Sledge tow cancelled on account of bad weather and limited time available between naval exercises. Sonar surveys carried out across Lyme Bay and on Looe ground.
12 May	Sledge and sonar surveys off Dodman Point and Gribbin Head. Proceeded to mid-Channel station overnight.

- 13 May Sledge and sonar surveys of barchan sand waves towards mid-channel, S.W. of the Eddystone.
Returned to Plymouth Sound overnight.
- 14 May Day trip from Plymouth. Sledge and sonar surveys in Eddystone area.
Detailed sonar survey outside Plymouth breakwater.
- 15 May Sledge and sonar surveys on Looe ground, St Austell Bay and off Gribbin Head.
- 16 May Docked at Falmouth. Unloaded gear.

Scientific Results

- (1) Surveys off the Isle of Wight showed a repetitive pattern of deposits on tide-swept grounds, corresponding with the parallel lines shown on the sonar plots. Analysis of the results should give a good indication of possible sediment transport paths. However the bottom fauna was generally more restricted than on grounds off Anvil Point worked in 1982.
- (2) Further surveys on the Anvil Point grounds confirmed the preliminary conclusions of the 1982 surveys (which were made without the benefit of side-scan sonar plots), and the results are being incorporated into a paper being prepared for press.
- (3) The survey of barchan sand waves in mid-Channel outside the Eddystone was started under conditions of heavy swell, which moderated during the day. Some difficulties were experienced in maintaining a course over sand waves recorded on the sonar plot, but at least one traverse was successfully accomplished.
- (4) Satisfactory repeat tows were made on previously worked grounds off Looe, Gribbin Head, and Dodman Point. At one point the sledge passed immediately across the path just swept by an otter trawl which should show interesting effects where the water was not too cloudy.

Results on the videotapes and films were generally good. Underwater visibility was good through the cruise, but in the early part there was a little cloudiness resulting from wave motion, and a plankton bloom was starting to develop in the last days, off the Cornish coast.

A list of the stations worked is appended.

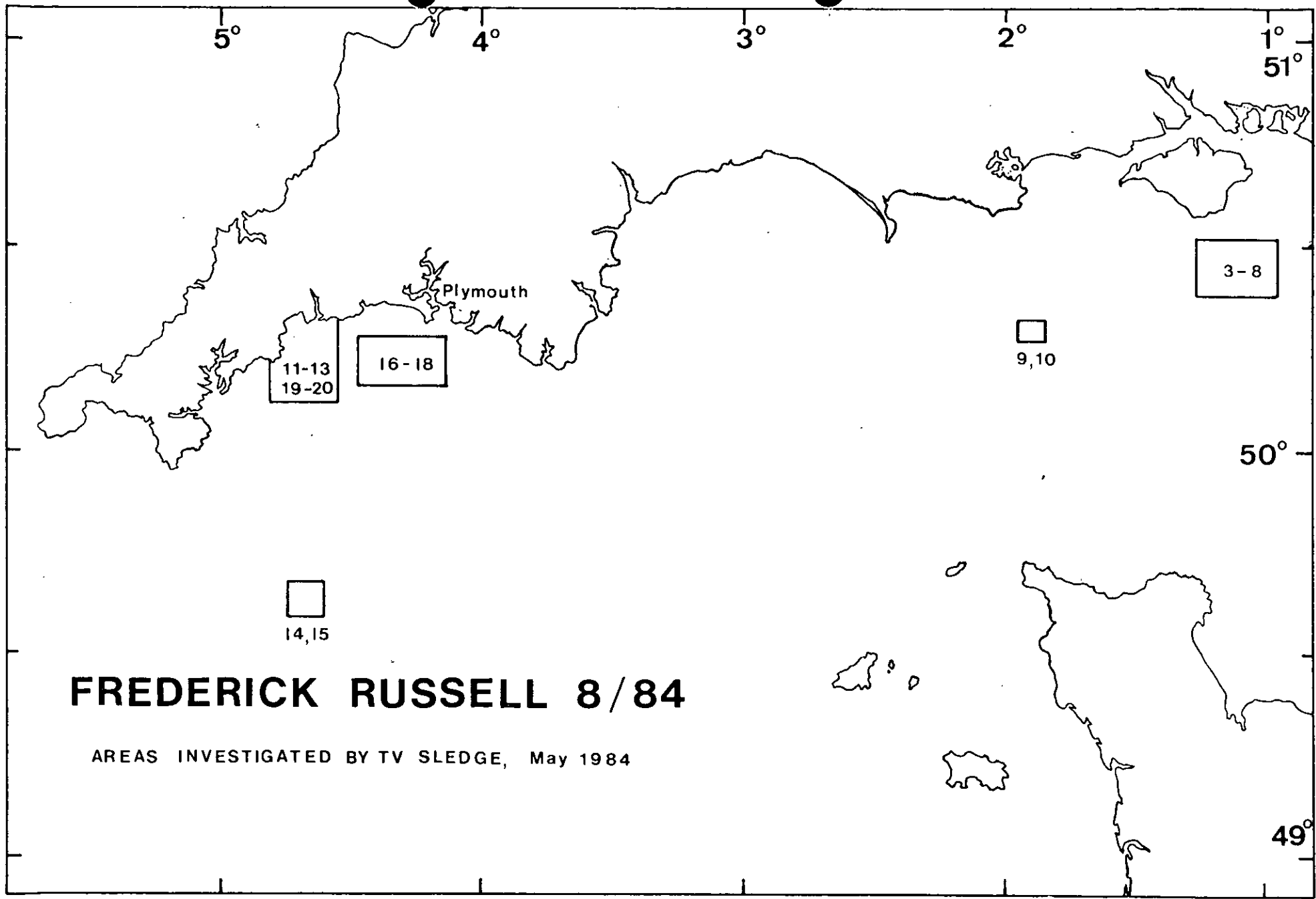
N.A. Holme

25.9.84

RRS Frederick Russell Cruise 8/84

Log of TV sledge tows

No.	Date	Duration		Shot	Hauled	Notes
	May	hr	min.			
1	5	2	20	Bigbury Bay	-	Tests
2	5	2	5	Lyme Bay	-	Tests
3	6	1	30	50°28.3'N 01°00.1'W	50°27.9'N 00°59.5'W	
4	6	3	30	50°28.8'N 01°14.5'W	50°28.5'N 01°12.4'W	
5	8	2	25	50°28.0'N 01°12.0'W	50°27.3'N 01°13.0'W	
6	8	2	45	50°26.8'N 01°13.2'W	50°27.3'N 01°12.9'W	
7	9	3	20	50°24.1'N 01°15.7'W	50°23.5'N 01°17.0'W	
8	9	3	55	50°23.9'N 01°08.9'W	50°25.0'N 01°10.8'W	3 dredge hauls near hauling position
9	10	5	10	50°17.4'N 01°57.6'W	50°19.4'N 01°54.3'W	
10	10	2	10	50°17.6'N 01°53.5'W	50°18.2'N 01°54.7'W	1 dredge haul near hauling position
11	12	3	35	50°07.4'N 04°46.7'W	50°10.0'N 04°46.9'W	
12	12	0	55	50°10.0'N 04°47.0'W	50°11.4'N 04°46.8'W	
13	12	4	00	50°12.6'N 04°39.0'W	50°10.9'N 04°39.2'W	
14	13	3	40	49°36'N 04°42'W	49°39'N 04°41.5'W	Heavy swell
15	13	4	30	49°40.5'N 04°39'W	49°38.3'N 04°37'W	
16	14	1	35	50°15.1'N 04°12.4'W	50°15.6'N 04°12.8'W	
17	14	1	40	50°11.0'N 04°19.8'W	50°11.1'N 04°19.2'W	
18	15	2	45	50°15.0'N 04°26.4'W	50°15.3'N 04°27.8'W	
19	15	1	30	50°16.1'N 04°42.9'W		Hit rock. Weak links parted. Sledge recovered.
20	15	2	50	50°11.0'W 04°38.8'W	50°09.4'N 04°38.4'W	
Total		56	10			



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AREAS INVESTIGATED BY TV SLEDGE, May 1984

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