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Charter Vessel MV *Radiant Star* LK 71

Charter Cruise 2701H

REPORT

26 November - 10 December 2001

Personnel

K Coull	(In charge)
L Bullough	NAFC
D Reilly	NAFC

Fishing Gear

Vessel's own dual purpose trawl fitted with light rockhoppers, fitted with a 20 mm internal liner.

Objectives

To undertake a survey around the Shetland Isles in order to:

1. To re-determine the inshore nursery areas for various demersal and pelagic fish.
2. To obtain additional knowledge on benthic species in the survey area.

Narrative

Ken Coull travelled from Aberdeen on the morning of 26 November to join the vessel in Scalloway. Sailing was delayed until midday due to the late arrival of equipment from the ferry operators. Two hauls were carried out in the vicinity of Burra Haaf and North Channel before the vessel proceeded to the St Magnus Bay area. Due to the presence of large numbers of creels deployed, some difficulty was found in locating suitable ground for towing in the vicinity of Papa Stour. With strong westerly winds forecast for several days the vessel moved overnight to Sullom Voe where access to relatively sheltered waters in Yell Sound and the north east coastline of Shetland could be worked. Fishing operations continued uninterrupted until the morning of 30 November when the net was badly damaged in Gloup Voe. The vessel returned to Sullom Voe to allow the crew to mend the net in time for resuming work the following morning. With stations off the north east coastline of Shetland being completed on the evening of 2 December the vessel docked at Lerwick where Davy Reilly replaced Luke Bullough for three days. With severe south easterly winds restricting work on 3 December to inshore waters north of Bressay, the opportunity was taken to carry out sampling at stations at various depths in close proximity to one another. Having completed the stations off the south east coast of Shetland, two hauls were carried out at Fair Isle before the vessel moved on to Scalloway on the night of 6 December. With south easterly gales forecast for the following day the opportunity was taken to cover the area south of Scalloway as far as Fitful Head and then move on to the stations on the Rona's Voe region. An improvement in the weather permitted the vessel to carry out three trawls in the waters around Foula before

moving on to stations off Vaila and Skelda Ness. A further four hauls were done in the voes west of Scalloway to complete the survey area. The vessel docked in Scalloway on the afternoon of 10 December, with Ken Coull returning to Aberdeen the following morning.

Results

The survey area was well covered with a total of 90 stations being sampled with only one being recorded as a foul haul due to severe gear damage. Table 1 provides a summary of number of species and total number of fish caught at each station, along with details of duration of tow and distance covered. It can be seen that areas on exposed coastlines, generally resulted in low catches of fish while several well sheltered voes produced catches with large numbers of juvenile fish. A detailed report on the results from this survey will be produced in conjunction with the results from three other surveys carried out at the same time in waters off the west coast of Scotland.

Biological data and samples were collected from a total of 448 fish, with 448 being sampled for stomach content analysis, 416 for age determination and 283 for DNA analysis. A further 40 specimens were frozen for parasite analysis back in the laboratory.

The cooperation and assistance received from the crew of the *Radiant Star* contributed greatly to the coverage obtained.

K A Coull
11 January 2002

Table 1. Radiant Star - Inshore Survey 2001.

Haul No.	Location	Number of species	Total number of Fish (standard 15 minutes)	Duration of tow	Distance covered(m)
1	Burra Light	13	1057	16	1287
2	East Hildasay	18	2426	15	1271
3	Voe of Sharraness	13	422	15	1175
4	Linga	18	1252	15	1207
5	Olna Firth	14	8364	15	998
6	Muckle Roe	12	450	12	885
7	Ura Firth	11	198	15	1280
8	Ollaberry	14	586	15	1110
9	Collafirth	18	2861	15	1090
10	Burra Voe	11	497	15	1200
11	Lanyar	10	41	15	1210
12	Point of Bugarth	10	1539	15	1040
13	West Sandwick	9	192	15	1200
14	Head of Brough	9	140	15	1390
15	Bigga	6	25	15	1260
16	Orca Voe	8	27	15	1130
17	Orfasay	0	0	5	306
18	Otters Wick	14	279	15	1080
19	W. Colgrave Sound	10	31	15	1020
20	Harold's Wick	3	14	12	884
21	Nor Wick	10	231	13	910
22	Skaw	6	83	15	1060
23	Burra Firth (Flugga)	4	331	15	1310
24	Orknagable	8	29	15	1060
25	Gloup Voe	0	0	2	0
26	Fish Holm	11	488	15	1150
27	Lunna Ness	14	5300	13	969
28	Lamb Hoga	14	423	15	1220
29	Wick of Tresta	7	96	15	958
30	Wick of Gruting	6	116	15	1110
31	East Daaey	14	1067	15	1090
32	Basta Voe	13	738	15	1230
33	Dales Voe	12	3149	15	1060
34	Swining Voe	13	8972	15	1080
35	Linga Sound	5	24	15	1140
36	Vidlin Voe	11	586	15	1050
37	Dury Voe	11	1249	15	1210
38	Nesting Bay	9	102	10	714
39	Aith Voe	8	508	13	896
40	Voe of Cullingsburgh	8	63	15	1140
41	Point of Pundsgeo	12	163	15	1180
42	North Sands	9	72	10	785
43	Score Head	11	1222	15	1254
44	NW Score Head	13	134	15	1180
45	Rova Head	8	207	15	1090
46	Kebister Ness	12	233	13	931
47	Dales Voe (S)	9	213	10	670
48	Cat Firth	11	1449	10	700
49	Wadbister Voe	10	911	10	783
50	Lax Firth	9	408	9	586
51	South Whalsay	5	485	10	850

Haul No.	Location	Number of species	Total number of Fish (standard 15 minutes)	Duration of tow	Distance covered(m)
52	Bight of Stayaness	8	348	15	1030
53	Stany Hop	12	457	15	1310
54	Bressay Sound	8	439	15	1120
55	South Sands	10	88	15	1300
56	The Skeo	9	78	10	710
57	Holm of Helliness	7	23	15	1170
58	North Moussa	5	12	15	983
59	Gulberwick	5	114	15	1100
60	Moussa Sound	2	19	15	828
61	Levenwick	8	349	15	1130
62	South Voe	6	27	10	655
63	Grutness	9	58	15	1130
64	East Fair Isle	9	236	15	1150
65	West Fair Isle	8	284	15	0
66	Hamnavoe	9	189	12	1120
67	Kella Ness	8	38	15	1230
68	West Colsay	7	32	8	674
69	St Ninians Bay	5	119	10	808
70	Bigton Wick	7	518	6	376
71	Trink	5	9	15	1290
72	N Cliff Sound	18	3154	12	969
73	S Cliff Sound	13	1080	15	1140
74	Whale Firth	5	14	10	720
75	W Ramna Stacks	5	41	15	1210
76	Inner Rona's Voe	9	3036	15	1170
77	Outer Rona's Voe	10	232	15	1200
78	Brae Wick	9	395	15	1240
79	Papa Stour	7	30	15	1130
80	East Foula	2	155	15	1330
81	NW Foula	4	44	15	1120
82	SW Foula	5	21	15	1290
83	Wats Ness	4	12	15	1220
84	Gruting Voe	8	3237	15	1130
85	Vaila Sound	6	367	11	708
86	Skelda Ness	13	1339	15	1100
87	Whiteness Voe	14	2371	15	1200
88	Weisdale Voe	15	13880	15	1280
89	Sandsound Voe	12	6696	10	791
90	Sand Voe	12	2484	15	1230

Radiant Star (LK 71) - Inshore Survey Trawl Positions

