

R1/6

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FRV *Clupea*

Cruise 1202C

## REPORT

8-19 August 2002

### Personnel

C G Davis (In charge)  
F N Burns  
Y McMurchie (MSc Student)

### Objectives

1. To determine the distribution and relative abundance of sandeel on inshore fishing grounds around the Shetland Isles and Fair Isle. With particular emphasis on *Ammodytes marinus* and *Gymnammodytes semisquamatus*.

**Out-turn days per project:** 12 days, MFO1TA

### Narrative

Scientific staff joined *Clupea* in Fraserburgh at 0950 hours on Tuesday 8 August. *Clupea* sailed from Fraserburgh at 1010 hours, heading for Sumburgh, on the southern tip of the Shetland Isles, where surveying commenced on the morning of 9 August. The survey continued, with no weather or gear related problems, until the morning of 18 August, when *Clupea* made for Fraserburgh, arriving there at 2100 hours the same day.

### Results

Between 9 and 18 August, a total of 54 valid hauls were made on commercial sandeel fishing grounds around the Shetland Isles and Fair Isle. All of the target grounds were surveyed on three occasions, during different time zones. Repeat tows were carried out at two historically important grounds (Mousa, Braeside,) to verify the poor results obtained there during the initial tows, undertaken at the beginning of the survey.

Catch rates of up to 4.7 tonnes per 30 minute haul were achieved at the Shetland grounds. What is interesting to note, is that of the 4.7 tonnes (per 30 min) caught in the largest haul, 2.9 tonnes of this consisted of *G. semisquamatus*. Over the last three years, there has been a marked increase in the numbers of *G. semisquamatus* seen on the grounds covered by this survey and for the first time, a number of 'O' group *G. semisquamatus* were caught this year.

Further analysis of the *G. semisquamatus* data gathered from recent years will be undertaken at the Laboratory.

Table 1 gives the catch rate by time of day in kilogrammes, raised to a standard 30 minute haul for *A. marinus*. The catch rate for *G. semisquamatus*, in kilogrammes, raised to a standard 30 minute haul can be seen on Table 2.

A total of 1981 *A. marinus* were scored for age / length data.

The number at age for *Ammodytes marinus* caught per 30 minute haul are shown in Table 3.

The attached chart displays the sampling locations around the Shetland Isle and Fair Isle.

C G Davis  
30 October 2002

T1.

## A.marinus "Clupea" August 2002

Kg caught per 30 minute haul during different time periods

Fishing Ground	0700-1100	1100-1500	1500-1900	Total
East Fair Isle	<1	<1	<1	<1
West Fair Isle	<1	0	<1	<1
Grutnes	<1	2	<1	2
Voe	88	2	3	93
Boddam	133	31	370	534
Mousa	186	1370	505	2061
Braeside	2370	460	1828	4658
South Sands	29	403	229	661
Balta	<1	0	0	<1
Brekkin	<1	<1	108	108
Fethaland	17	<1	28	45
Sands Voe	1783	146	540	2469
North Foula	18	1	8	27
South Foula	1111	904	1918	3933
Ham O Foula	0	73	38	111
Trink	<1	114	23	137
Mousa (repeat)	194	1240	1825	3259
Braeside (repeat)	44	1166	357	1567
				19665

**G.semisquamatus "Clupea" August 2002**

**Kg caught per 30 minute haul during different time periods**

Fishing Ground	0700-1100	1100-1500	1500-1900	Total
East Fair Isle	0	4	<1	4
West Fair Isle	0	<1	0	<1
Grutnes	0	2	<1	2
Voe	49	8	2	59
Boddam	283	200	225	708
Mousa	24	42	12	78
Braeside	222	3932	2869	7023
South Sands	2	10	<1	12
Balta	<1	<1	<1	<1
Brekkin	<1	9	404	413
Fethaland	4	<1	<1	5
Sands Voe	2	101	55	158
North Foula	<1	<1	13	13
South Foula	9	38	217	264
Ham O Foula	<1	10	9	19
Trink	0	8	<1	8
Mousa (repeat)	86	1021	65	1172
Braeside (repeat)	334	24	833	1191
				11129

T3.

Ammodytes marinus.Clupea August 2002Catch rate by age / ground

GROUND	AGE										
	0	1	2	3	4	5	6	7	8	9	10
S.Sands	284493	0	0	0	0	0	0	0	0	0	0
B.Side	1663288	18331	14981	18355	11435	11309	515	1993	0	0	0
Mousa	700570	2780	0	4899	882	207	206	0	0	0	0
Voe	3878	223	605	4935	1174	880	154	0	0	0	0
Boddam	234148	1695	2600	8040	1003	0	0	0	0	0	0
Grutnes	18	11	33	102	31	16	8	0	0	0	0
E.F.Isle	1	0	0	2	0	1	0	0	0	0	0
W.F.Isle	0	0	0	3	0	1	1	1	0	0	0
Trink	12738	316	744	9258	800	705	0	0	0	0	0
S.Foula	1545909	12141	14768	18830	16672	0	0	0	0	0	0
H.Foula	41725	5261	983	1218	1237	793	116	116	0	0	0
N.Foula	16197	1142	0	69	91	61	5	0	0	0	0
S.Voe	927123	73783	12439	344	0	344	0	0	0	0	0
F.Land	9503	2495	352	380	1	144	29	28	0	0	0
Brekkin	5	972	689	583	585	782	955	221	104	53	13
Balta	9	2	0	0	0	0	0	0	0	0	0
Mousa (RPT)	858414	18485	13462	13409	2096	0	0	0	0	0	0
B.Side (RPT)	652201	3352	1277	1415	735	252	0	0	0	0	0
Total for class	6950220	140989	62933	81842	36742	15495	1989	2359	104	54	13
Year Class	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992

