



SCIENTIFIC COUNCIL MEETING – SEPTEMBER 2003

Young Northern Shrimp (*Pandalus borealis*) Index for Flemish Cap (NAFO Division 3M) 2003.

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Abstract

Indices for shrimp age 2 and 3 yr caught in larval bag on Flemish Cap in June 2003 were estimated to 1 337 and 468 mill., respectively. The 2000 year-class is weak, as indicated in last year survey (Nicolajsen and Brynjolfsson, 2002), and the 2003 year-class is below average.

Material and Method

A juvenile bag was mounted on the codend by the method used in Icelandic shrimp surveys. The shrimps were measured to the nearest 0.5 mm using Vernier calipers. The length distribution from each sample was divided by area swept for each station to get abundance per unit area (density) at length. Mean density at length was calculated for each strata and multiplied by strata area to get stock in numbers by strata before summing all strata by length. By using an Excel worksheet length distributions were separated into age groups by fitting by eye normal distributions to them.

Results

The stock in numbers by length and strata and total area for 2003 is shown in Table 1. Length distribution for the total young northern shrimp stock for this period is shown in Fig. 1. Age distribution for the period 1998-2003 is shown in Table 2 and Fig. 2. The 2001 year-class is below the average in this series.

Reference

NICOLAJSSEN, Á. and S. BRYNJOLFSSON. 2002. Young Northern Shrimp (*Pandalus borealis*) Index for Flemish Cap (Div. 3M) 1998-2002. NAFO SCR Doc., No. 161, Serial No. N4790, 4 p.

Table 1. Young shrimp in numbers (mill.) at length by strata and total, Flemish Cap (NAFO Div. 3M) in June 2003.

STRATA OCL, mm	13	14	15	16	17	18	19	20	21	22	23	Total
6.0	0	0	0	0	0	0	0	0	0	0	0	0
6.5	14	0	0	0	0	0	0	0	0	0	0	14
7.0	39	0	0	29	0	0	0	0	0	0	0	68
7.5	62	0	0	61	6	1	0	0	0	0	0	131
8.0	72	0	0	130	38	69	0	0	0	0	0	308
8.5	77	20	2	174	33	94	0	0	0	0	0	400
9.0	64	74	5	171	102	313	0	0	0	0	0	730
9.5	54	112	3	123	130	486	0	0	0	0	0	909
10.0	15	81	2	72	101	695	0	0	0	3	0	969
10.5	0	86	0	38	39	526	0	0	0	0	0	689
11.0	2	34	0	0	6	147	0	0	0	0	0	189
11.5	0	0	0	2	3	40	0	0	0	0	0	44
12.0	0	3	0	2	2	19	0	0	0	0	0	25
12.5	2	0	0	16	3	7	0	0	0	0	0	28
13.0	7	8	0	35	2	1	0	0	0	0	0	53
13.5	9	14	2	70	8	16	0	0	0	0	0	118
14.0	17	18	0	51	9	30	0	0	0	0	0	126
14.5	21	75	5	61	24	48	0	0	0	0	0	233
15.0	12	72	3	38	24	61	0	0	0	3	0	213
15.5	30	54	0	29	20	64	0	0	0	0	0	197
16.0	47	58	2	15	31	56	0	0	0	0	4	213
16.5	8	60	2	10	36	40	0	0	0	12	2	170
17.0	7	22	0	7	17	41	0	0	0	3	2	99
17.5	10	17	2	8	13	15	0	0	0	3	2	69
18.0	5	17	2	22	13	4	0	0	0	9	0	71
18.5	2	11	2	15	6	9	0	0	0	3	2	49
19.0	2	22	2	18	16	32	3	0	0	0	0	93
19.5	5	12	0	16	17	14	0	0	0	0	2	67
20.0	7	11	0	13	31	19	0	0	0	3	4	88
20.5	5	6	0	6	25	12	0	0	0	6	8	69
21.0	5	15	2	5	19	13	3	0	0	15	6	83
21.5	3	11	0	2	16	12	0	0	0	12	6	61
22.0	5	6	2	3	6	9	3	0	0	18	4	56
22.5	2	2	0	3	3	6	0	0	0	6	4	26
23.0	0	8	3	3	3	1	3	0	0	0	0	22
23.5	5	2	0	0	2	0	0	0	0	0	2	10
24.0	0	0	0	0	3	0	0	0	0	0	0	3
24.5	0	0	0	0	2	0	0	0	0	0	0	2
25.0	0	0	0	0	2	0	0	0	0	0	0	2
25.5	0	0	0	0	0	0	0	0	0	0	0	0
26.0	0	0	0	0	0	0	0	0	0	0	0	0
26.5	0	0	0	0	0	0	0	0	0	0	0	0
Total	598	930	40	1249	811	2901	11	0	0	97	49	6685

Table 2. Stock in numbers from juvenile bag for age groups 1-6 for 1998-2003.

Age	1998	1999	2000	2001	2002	2003	Average
1	1499	288	773	1632	913	4680	1631
2	2532	5683	456	4377	913	1337	2550
3	628	2972	1349	964	2557	468	1490
4	138	223	439	371	137	134	240
5	29	91	26	74	46	67	56
6	12		29				7
Total	4839	9257	3072	7418	4566	6685	5973

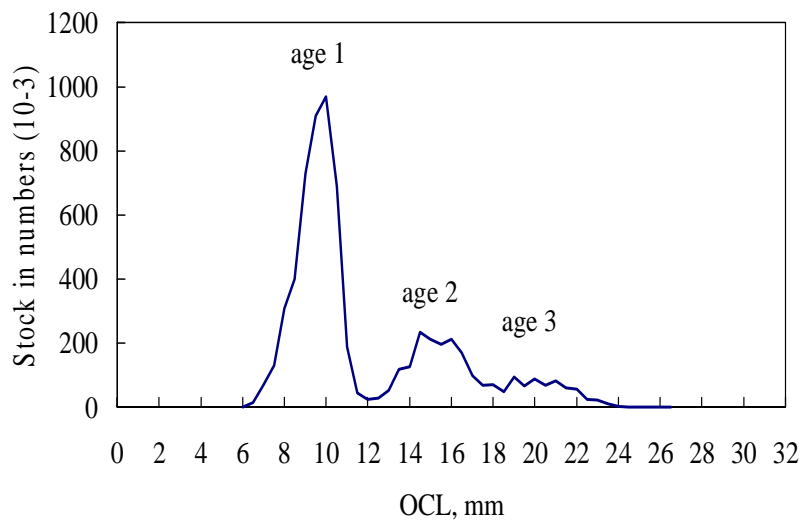


Fig. 1. Length distribution of young shrimp stock component on Flemish Cap (NAFO Div. 3M) in 2003.

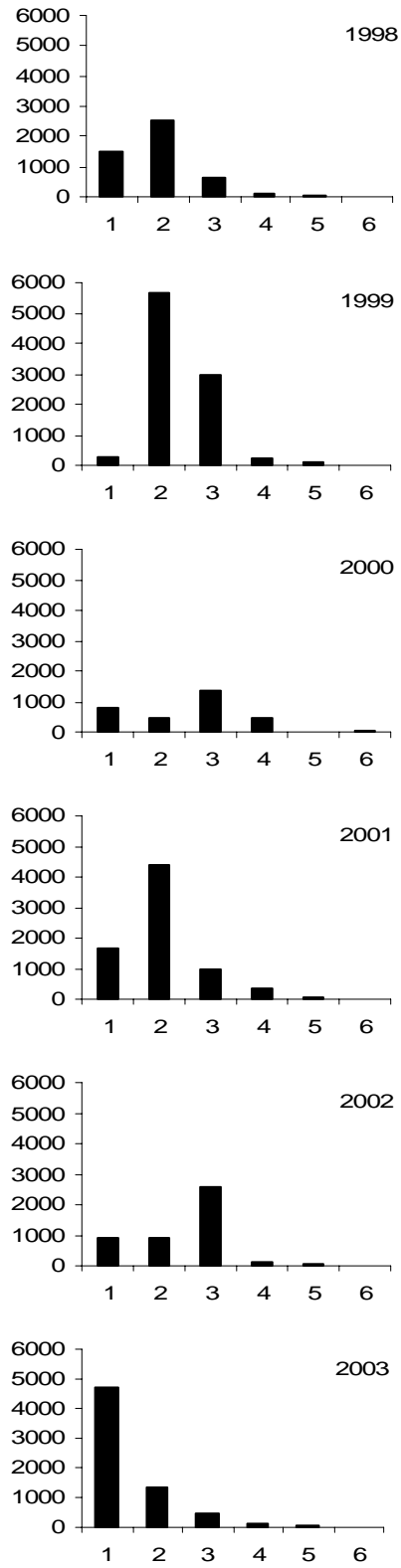


Fig. 2. Age distribution of young shrimp stock component on Flemish Cap (NAFO Div. 3M) in 1998-2003.