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Young Northern Shrimp (*Pandalus borealis*) Index for Flemish Cap (Division 3M) 2002

by

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**Abstract**

Indices for shrimp age 2 and 3 yr caught in larval bag on Flemish Cap in June 2002 were estimated to 913 and 2557 mill., respectively. Year-classes 1999 seems to be at a relatively strong level, as indicated in last year survey (Nicolajsen and Brynjolfsson, 2001), whereas the 2000 year-class is comparatively weak.

**Material and Method**

A laval 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 2002 is shown in Tab. 1. Length distribution for the total young northern shrimp stock for this period is shown in Fig. 1. Age distribution for the period 1998-2002 is shown in Table 2 and Fig. 2.

**Reference**

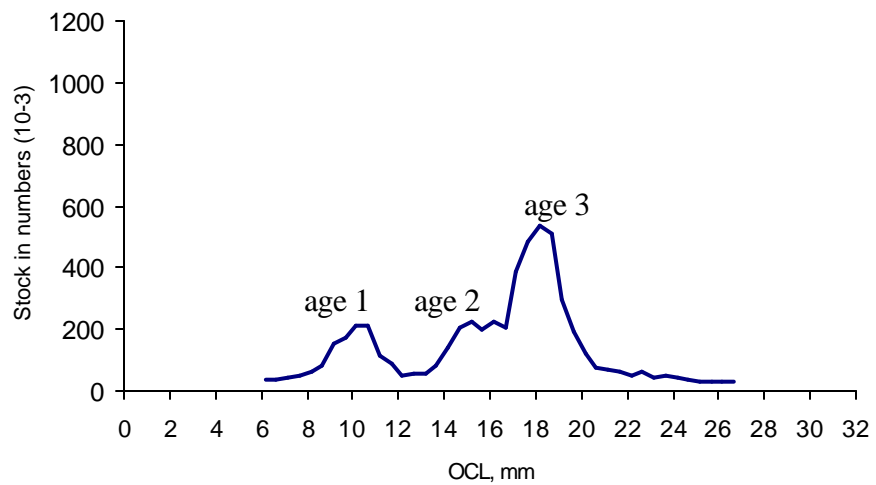
Nicolajsen, Á. and S. Brynjolfsson. 2001. Young Northern Shrimp (*Pandalus borealis*) Index for Flemish Cap (Division 3M) 1998-2001. NAFO SCR Doc. 01/187. 8 p.

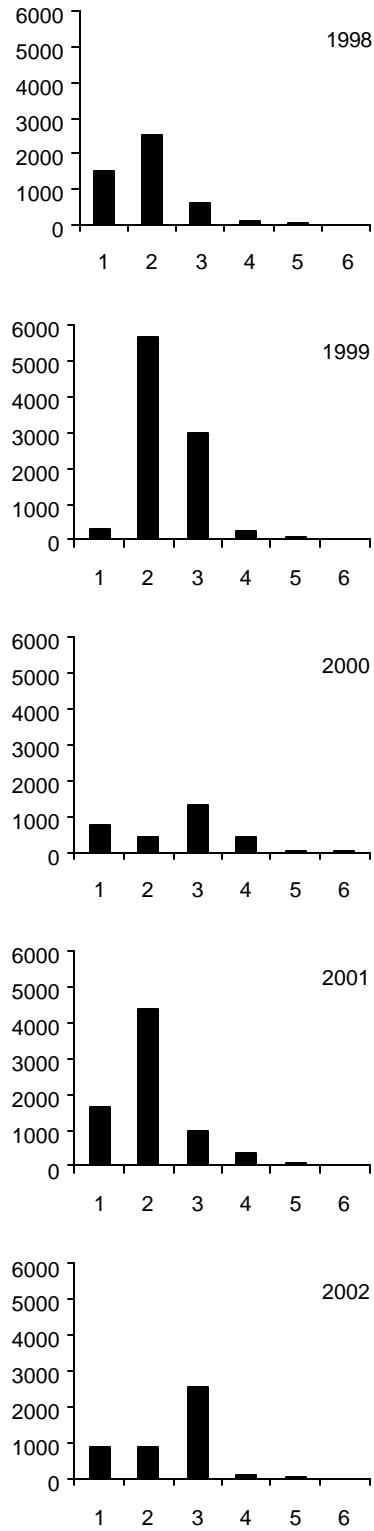
**Table 1** Young shrimp in numbers (mill.) at length by strata and total, Flemish Cap (NAFO Div. 3M) in June 2002.

STRATA OCL, mm	13	14	15	16	17	18	19	20	21	22	23	Total
6.0	5	0	0	0	0	0	0	0	0	0	0	5
6.5	3	0	0	0	0	2	0	0	0	0	0	4
7.0	13	0	0	0	0	0	0	0	0	0	0	13
7.5	11	0	0	0	9	3	0	0	0	0	0	23
8.0	8	0	0	0	12	12	0	0	0	0	0	32
8.5	20	0	0	2	18	11	0	0	0	0	0	51
9.0	41	0	0	0	46	36	0	0	0	0	0	122
9.5	42	0	0	3	46	55	0	0	0	0	0	145
10.0	73	0	0	3	54	54	0	0	0	0	0	185
10.5	85	0	0	0	53	43	0	0	0	0	0	182
11.0	41	2	0	0	17	27	0	0	0	0	0	86
11.5	18	0	0	3	19	19	0	0	0	0	0	59
12.0	7	0	0	0	8	5	0	0	0	0	0	20
12.5	15	0	0	3	7	0	0	0	0	0	0	25
13.0	8	0	0	5	9	5	0	0	0	0	0	27
13.5	19	2	0	8	11	12	0	0	0	0	0	53
14.0	45	11	4	2	30	21	0	0	0	0	0	112
14.5	51	30	4	11	37	40	0	0	0	0	0	173
15.0	31	39	7	5	46	65	0	0	0	0	0	192
15.5	32	36	17	8	34	43	0	0	0	0	0	171
16.0	35	38	23	11	42	47	0	0	0	0	0	197
16.5	36	23	30	29	33	21	0	0	0	0	0	173
17.0	74	53	64	42	48	62	0	10	0	0	0	354
17.5	90	98	71	55	75	63	0	0	0	0	0	453
18.0	91	127	98	36	79	68	1	5	0	0	0	505
18.5	77	109	115	39	63	68	6	0	0	0	1	478
19.0	41	63	67	23	25	41	3	0	2	0	1	266
19.5	14	51	15	29	16	22	7	3	0	0	3	162
20.0	11	20	23	15	12	8	0	0	0	0	0	89
20.5	2	4	13	8	4	7	1	2	0	0	3	44
21.0	4	8	2	6	9	5	1	2	2	0	0	38
21.5	4	8	2	8	7	3	0	2	0	0	0	33
22.0	2	2	0	3	12	2	0	0	0	0	1	22
22.5	2	0	2	3	13	2	0	0	2	0	6	29
23.0	0	2	0	2	7	2	0	2	0	0	0	14
23.5	0	2	0	6	2	0	0	3	0	0	3	17
24.0	2	0	0	2	2	0	1	0	0	0	3	10
24.5	0	0	0	2	0	0	0	0	0	0	3	5
25.0	0	0	0	0	0	0	0	0	0	0	0	0
25.5	0	0	0	2	0	0	0	0	0	0	0	2
26.0	0	0	0	0	0	0	0	0	0	0	1	1
26.5	0	0	0	0	0	0	0	2	0	0	1	3
Total	1047	727	558	374	902	872	22	30	6	0	28	4566

**Table 2.** Stock in numbers from juvenile bag for age groups 1-6 for 1998-2002.

Age	1998	1999	2000	2001	2002	Average
1	1499	288	773	1632	913	1021
2	2532	5683	456	4377	913	2792
3	628	2972	1349	964	2557	1694
4	138	223	439	371	137	262
5	29	91	26	74	46	53
6	12		29			8
Total	4839	9257	3072	7418	4566	5830

**Figure 1.** Length distribution of young shrimp stock component on Flemish Cap (Div. 3M) in 2002.



**Fig. 2.** Age distribution of young shrimp stock component on Flemish Cap (Div. 3M) in 1998-2002.