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The Greenland Fishery for Northern Shrimp (*Pandalus borealis*) in NAFO Divisions 3M and 3L 2003-2005

by

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**Abstract**

Greenland trawlers have participated in the fishery on Flemish Cap, Division 3M, since the fishery began in 1993, with a few exceptions in 2001 and 2004 (by mid-October). In 2000 a fishery on Grand Bank, Div. 3L was initiated and Greenland has participated in this fishery since, with one exception in 2001. This paper updates information on catch, catch rates and the geographical distribution for the Greenland fishery in Div. 3M and Div. 3L. No biological samples and no new information on by-catch and discard from the commercial shrimp fishery have been available since 2003.

**Introduction**

Based on weekly reporting to Greenland authorities by Greenland vessels the total catch on Flemish Cap from 2003 to 2005 amounted to 888 tons, 0 tons and 10 tons (by mid-October), respectively. On Grand Bank in 2003, 2004 and 2005 catches were reported to 672 tons, 296 tons and 292 tons, respectively.

Logbook records provided information on fleet performance to the Greenland Institute of Natural Resources.

**Materials and Methods**

Catch and effort data from individual fishing vessels as reported in vessels logs were analysed to show the distribution of catches, fishing effort and mean unstandardized catch rates. No biological samples and no new information on by-catch and discard from the commercial shrimp fishery have been available since 2003.

**Results**

**Reported catches till October 2005**

Nominal catches of shrimp and numbers of Greenland vessels participating in the Div. 3M and 3L fishery from 1993 to 2005 (up to mid-October) are:

	1993	1994	1995	1996	1997	1998	1999	2000		2002		2003		2004		2005	
	3M	3M	3M	3M	3M	3M	3M	3M	3L	3M	3L	3M	3L	3M	3L	3M	3L
Catch (tons)	3778	2275	2400	1107	105	853	576	1636	34	683	11*	888	672	0	296	10	292
No. of vessels	12	9	6	6	2	2	1	6	2	2	1	2	2	0	1	1	1

\* no logbooks

### Catch, effort and CPUE

Catch (tons), effort (hours) and catch rates in Div. 3M and Div. 3L divided in single trawl fishery (1) and twin trawl fishery (2) (effort in the twin trawl is corrected with a factor 2), as reported in vessel logs from 2000 to 2005 are:

#### 3M

Year	Month Trawl	April		May		June		July		August		September		December		Total 1+2
		1	2*	1	2*	1	2*	1	2*	1	2*	1	2*	1	2*	
2002	Tons	-	-	14	246	-	388	-	-	-	-	-	-	-	-	648
	Hours	-	-	21	890	-	1.490	-	-	-	-	-	-	-	-	2.401
	kg/hr	-	-	667	276	-	260	-	-	-	-	-	-	-	-	270
2003	Tons	-	-	-	-	-	29	7	466	-	320	-	-	-	15	837
	Hours	-	-	-	-	-	69	11	1.337	-	1.000	-	-	-	107	2.524
	kg/hr	-	-	-	-	-	420	636	349	-	320	-	-	-	140	332
2005	Tons	-	-	-	-	-	-	-	10	-	-	-	-	-	-	10
	Hours	-	-	-	-	-	-	-	35	-	-	-	-	-	-	35
	kg/hr	-	-	-	-	-	-	-	286	-	-	-	-	-	-	286

2\* Effort in dobbelttrawl is corrected with a factor 2

#### 3L

Year	Month Trawl	April		May		June		July		August		December		Total 1+2
		1	2*	1	2*	1	2*	1	2*	1	2*	1	2*	
2003	Tons	-	-	-	-	-	-	262	31	-	-	23	356	672
	Hours	-	-	-	-	-	-	112	14	-	-	17	412	555
	kg/hr	-	-	-	-	-	-	2.339	2.214	-	-	1.353	864	1.211
2004	Tons	-	-	-	-	-	-	-	-	9	287	-	-	296
	Hours	-	-	-	-	-	-	-	-	5	175	-	-	180
	kg/hr	-	-	-	-	-	-	-	-	1.800	1.640	-	-	1.644
2005	Tons	-	-	-	-	-	-	-	292	-	-	-	-	292
	Hours	-	-	-	-	-	-	-	162	-	-	-	-	162
	kg/hr	-	-	-	-	-	-	-	1.802	-	-	-	-	1.802

2\* Effort in dobbelttrawl is corrected with a factor 2

Annual catch and unstandardized catch rates (effort in twin trawl corrected with a factor 2) from the Flemish Cap fishery in the period from 1993 to 2003 are shown in Fig. 1. Overall catch rates decreased from 1993 until 1997, but increased again to record high value 2003. Unstandardized catch rates from Grand Bank has been high all years compared to Flemish Cap.

### Geographical distribution of the fishery

Figures 2 and 3 show the geographical distribution of total catches in 2004 and 2005, respectively, as recorded in vessel logs. The fishery on Grand Bank has been conducted in the same area in the last two years.

### Conclusions

Unstandardized catch rates at Flemish Cap, NAFO Div. 3M have been increasing since 1999, and reached record high value in 2003. Despite of relatively high catch rates at Div. 3M very little attention has been paid by the Greenland fleet since 2003 (10 tons in 2005). One explanation is that the Greenland fleet has favourable fishing conditions in home water. Also, unstandardized catch rates at Grand Bank, NAFO Div. 3L has been very high all years compared with Div. 3M.

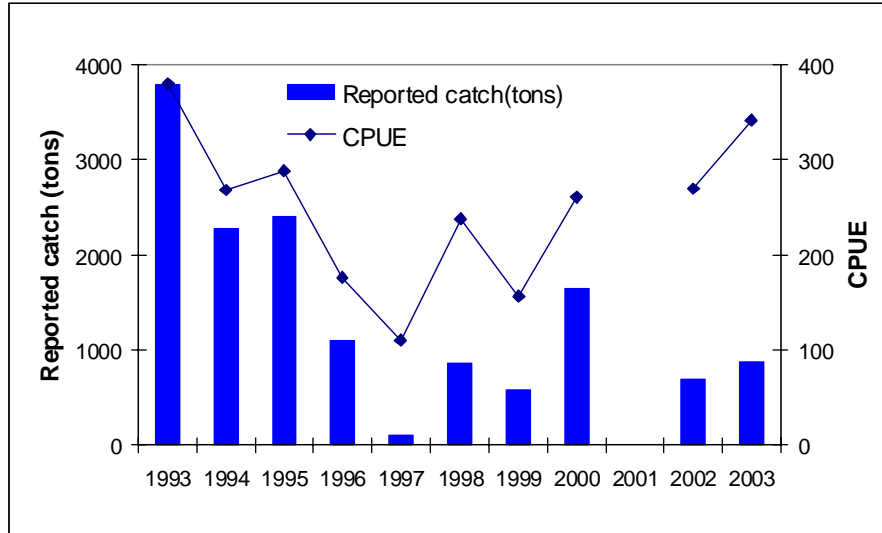


Fig. 1. Div. 3M: Total catch (tons) and CPUE (unstandardized kg/hour) from 1993-2003 (twin trawl is corrected with a factor 2).

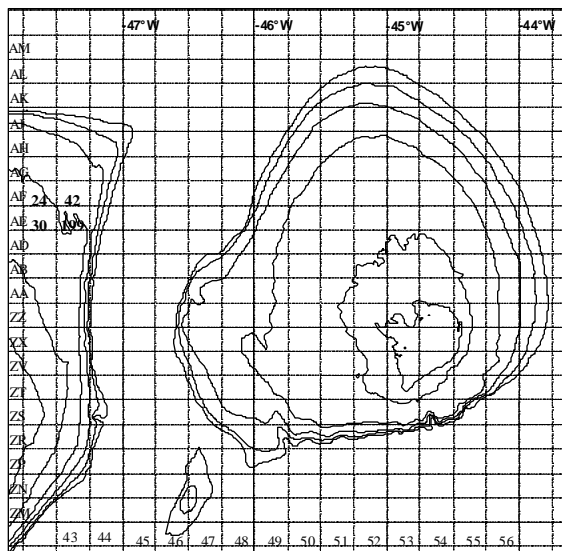


Fig. 2. Geographical distribution of shrimp catches (tons by statistical unit) in 2004 on Flemish Cap and Grand Bank.

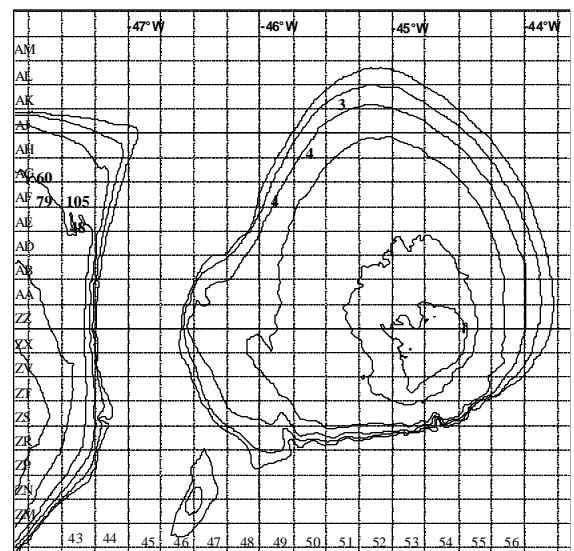


Fig. 3. Geographical distribution of shrimp catches (tons by statistical unit) in 2005 on Flemish Cap and Grand Bank.