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The Spanish Shrimp Fishery on Flemish Cap (Division 3M) and Divisions 3LN in 2003

by

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Abstract

This paper shows data about catch, effort, catch-per-unit effort (CPUE) and size distributions of shrimp (*Pandalus borealis*) for Spanish commercial fishery in NAFO Divisions 3M and 3LN in 2003

Material and Methods

The information concerning to the Spanish shrimp fishery was taken from data collected by EU observers on board in the Spanish vessels. Also, two Spanish scientific observers for the Spanish Scientific Program were on board during the fishing period directed to shrimp at two of the vessels, providing information about fishing activity and carrying out biological sampling (length distributions).

Results

In all vessels the gear used was a simple trawl with bar spacing sorting grates. The hauls were mainly carried out in depths between 250 and 500 meters. The 85% of the effort (fishing hours) was carried out between 300 and 500 meters (Fig. 1).

The annual catch according to EU observers was 142 tons and 845 tons in NAFO Div. 3LN and 3M, respectively (Gonzalez *et al.*, 2004). The Table 1 shows the catches and yields of shrimp and discards of the main caught species by quarter, together with the distribution of effort (number of days and hours of activity estimated).

Although the annual mean CPUE (some lesser than 300 kg/h) were similar in the three Divisions, Flemish Cap (NAFO Div. 3M) showed the biggest yields in the second and third quarter with 410 and 317 kg/h, respectively.

The Table 2 and Fig. 2 show the length distribution by sexes of shrimp as percentage in the catches carried out in May during the 2003 year. The length distributions show a clear mode in males about 21 mm and two modes in females (23.5 and 25.5 mm, respectively). According to the results presented last year (del Río *et al.*, 2003), these modal lengths would corresponded roughly with the ages 4 for males and 5 and 6 for females.

References

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- GONZALEZ, F., J. L. DEL RÍO, A. VÁZQUEZ, H. MURUA, AND E. ROMÁN. 2004. Spanish Research Report for 2003. *NAFO SCS Doc.*, No. 9, Serial No. N4963, 24 p.

Table 1. Estimated catches (kg), effort and CPUE (kg/h) from UE and Spanish scientific observers by quarter of the Spanish trawl fleet directed to shrimp fishery in NAFO Div. 3LN and 3M in 2003.

DIVISION 3LN					
SPECIES	1st	2nd	3rd	4th	Total
Northern shrimp ¹	0	0	96298	45396	141695
Redfish			77		77
Greenland halibut			48	15	63
Witch flounder			39		39
Fishing days	0	0	11	7	18
Fishing hours	5	4	310	164	540
CPUE Shrimp (kg/h)	0	0	311	277	262
DIVISION 3M					
SPECIES	1st	2nd	3rd	4th	Total
Northern shrimp	13571	160017	455631	215944	845163
Redfish	40	3586	710	194	4530
Greenland halibut		64		15	78
White hake		50	20		70
Skates		5			5
Wolfish		276			276
Witch flounder		12			12
American plaice		5			5
Fishing days	3	16	58	39	116
Fishing hours	66	392	1436	1122	2979
CPUE Shrimp (kg/h)	206	409	317	192	284

¹ 97 % of the catches realized in Div. 3L

Table 2: Length distribution of Shrimp as percentage from sampled Spanish catches in May at Flemish Cap (NAFO Div. 3M).

Length (mm)	May	
	males	females
14	0.01	
14.5	0.01	
15	0.13	
15.5	0.16	
16	0.42	
16.5	0.46	
17	0.56	
17.5	0.80	
18	1.39	0.02
18.5	2.47	
19	4.34	
19.5	5.82	0.04
20	9.56	0.08
20.5	14.67	0.06
21	16.41	0.37
21.5	12.86	0.84
22	4.97	1.84
22.5	1.83	2.66
23	0.48	3.10
23.5	0.12	3.40
24		2.83
24.5		1.97
25		1.46
25.5		1.50
26		1.19
26.5		0.53
27		0.23
27.5		0.09
28		0.20
28.5		0.03
29		0.03
29.5		0.03
TOTAL (%)	77.48	22.52
Sampled catch (kg)	13280	
No. Sampled	2576	
No. Samples	11	

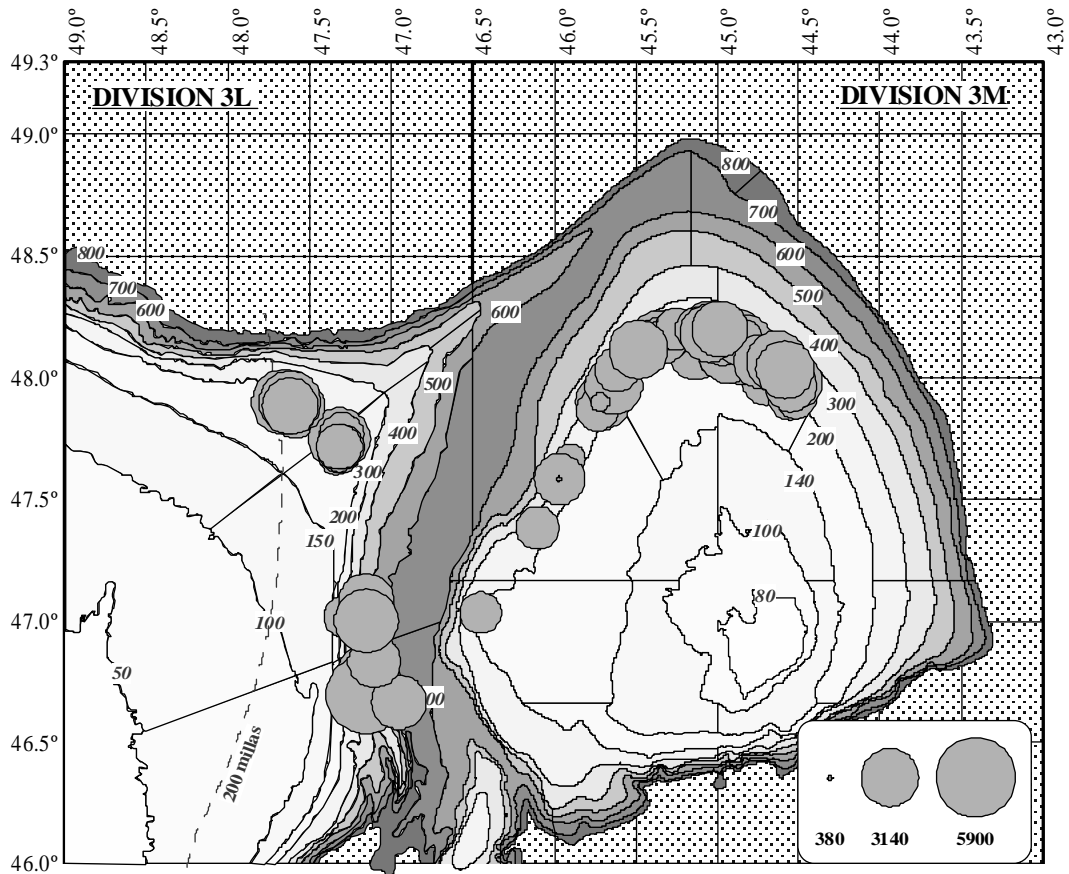


Fig. 1. Geographical location and distribution of Spanish catches (kg) in NAFO Div. 3M and 3L in 2003.

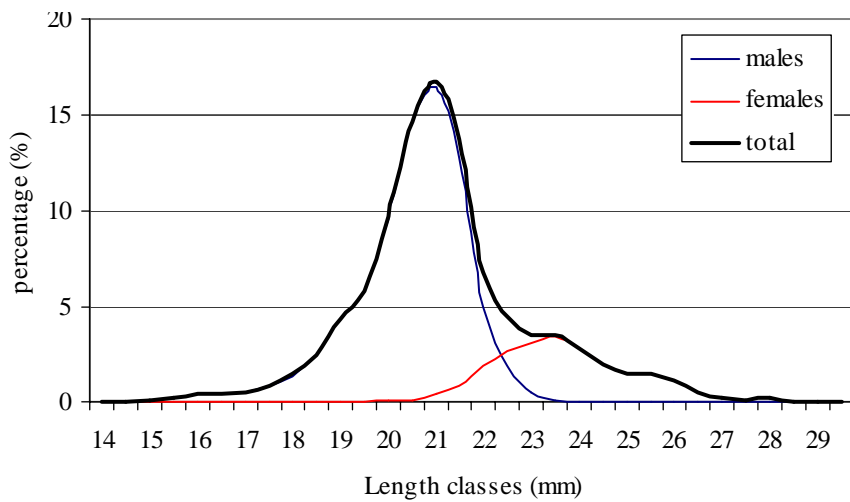


Fig. 2. Size distribution (carapace lengths) by sexes of shrimp as percentage from catches sampled in May of 2003 in NAFO Div. 3M.