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Weight-length relationship of northern shrimp (*Pandalus borealis*) on Flemish Cap (Div 3M) and the Nose of the Bank (Div 3L) for some periods in 1993-1995.

by

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INTRODUCTION

Several authors have reported on the wight-length relationship in the northern shrimp on Flemish Cap (Skúladóttir & Einarsson 1993, Nicolajsen 1994). This paper presents results from analyses of new material from Flemish Cap and reanalyses of old material from Flemish Cap and the Nose of the Bank.

MATERIALS AND METHODS

Faroese observers monitored Faroese fishing vessels on Flemish Cap (NAFO Div 3M) and on the Nose of the Bank (NAFO Div 3L) in different periods in 1993-1995 and collected biological samples of shrimp for analysis in laboratory.

The shrimp oblique carapace length (OCL) was measured by vernier callipers to the nearest half mm and weighted by electronic scale in g with 2 decimals. The material was grouped into areas, years, quarters and whether the specimen were ovigerous or not. Number of specimens in each category is shown Tab. 1. In each category the parameters a and b for the ideal growth curve for alometric growth ($Weight = a \cdot OCL^{b}$) were calculated (Tab. 1). The curves are plotted together with scatter plot of observations in Figs. 1 and 2.

RESULTS

There is little variation in the curves within each non-ovigerous/ovigerous category while the difference between these categories are 2-3 g in the size category 25-30 mm.

REFERENCES

NICOLAJSEN, Á. 1994. Growth and reproduction in northern shrimp on Flemish Cap (division 3M) and the Nose of the Bank (division 3L) in September 1993-May 1994. *NAFO Scientific Council research documents*, 94/77, 15 p.

SKÚLADÓTTIR, U., and S. EINARSSON. 1993. The Icelandic shrimp (*Pandalus borealis*) fishery at the Flemish Cap in 1993, with a preliminary analysis of age structure. *NAFO Scientific Council research documents*, 93/101, 9 p.

GROUP	Area	Flemish Cap (NAFO Division 3M)										Nose of the Bank (3L)	
	Year	1993	1993	1993	1993	1993	1993	1995	1995	All	All	1994	1994
	Quarter	2nd	2nd	3rd	3rd	4th	4th	4th	4th	All	All	1st	1st
	Ovigerous	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
PARAMETER	a	0,000803	0,000479	0,000682	0,001870	0,000751	0,000737	0,000948	0,000917	0,000692	0,001097	0,002941	0,001731
	b	2,911	3,118	2,958	2,684	2,932	2,971	2,838	2,905	2,954	2,849	2,506	2,744
	n	156	44	720	818	362	367	278	100	1516	1329	374	151
	r^2	0,96	0,70	0,98	0,83	0,97	0,78	0,95	0,92	0,98	0,83	0,90	0,90

Table 1 Parameter values in the von Bertalanffy growth equation by area, year, quarter, and non-ovigerous/ovigerous group for NAFO Div 3M and 3L for different periods in 1993-1995.

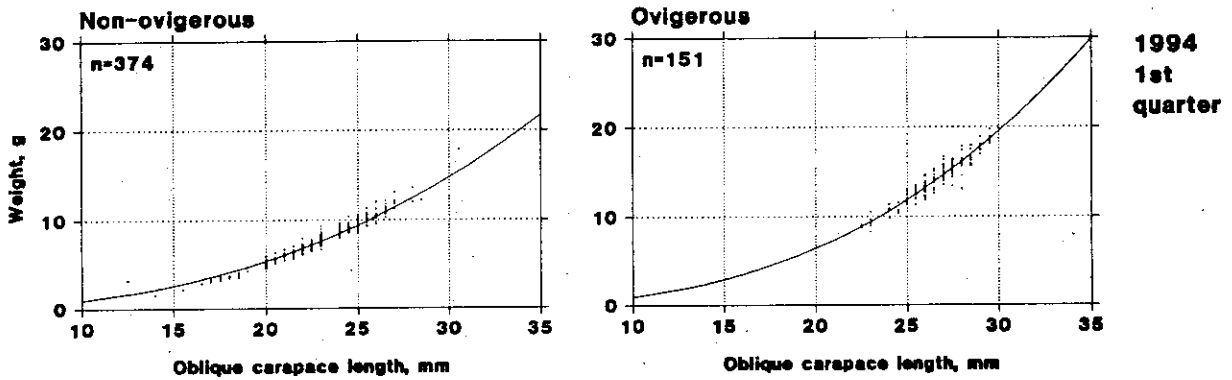

Figure 1 Whole shrimp weight-OCL relationship by year, quarter, and non-ovigerous/ovigerous group for NAFO Div 3L for 1st quarter in 1994.

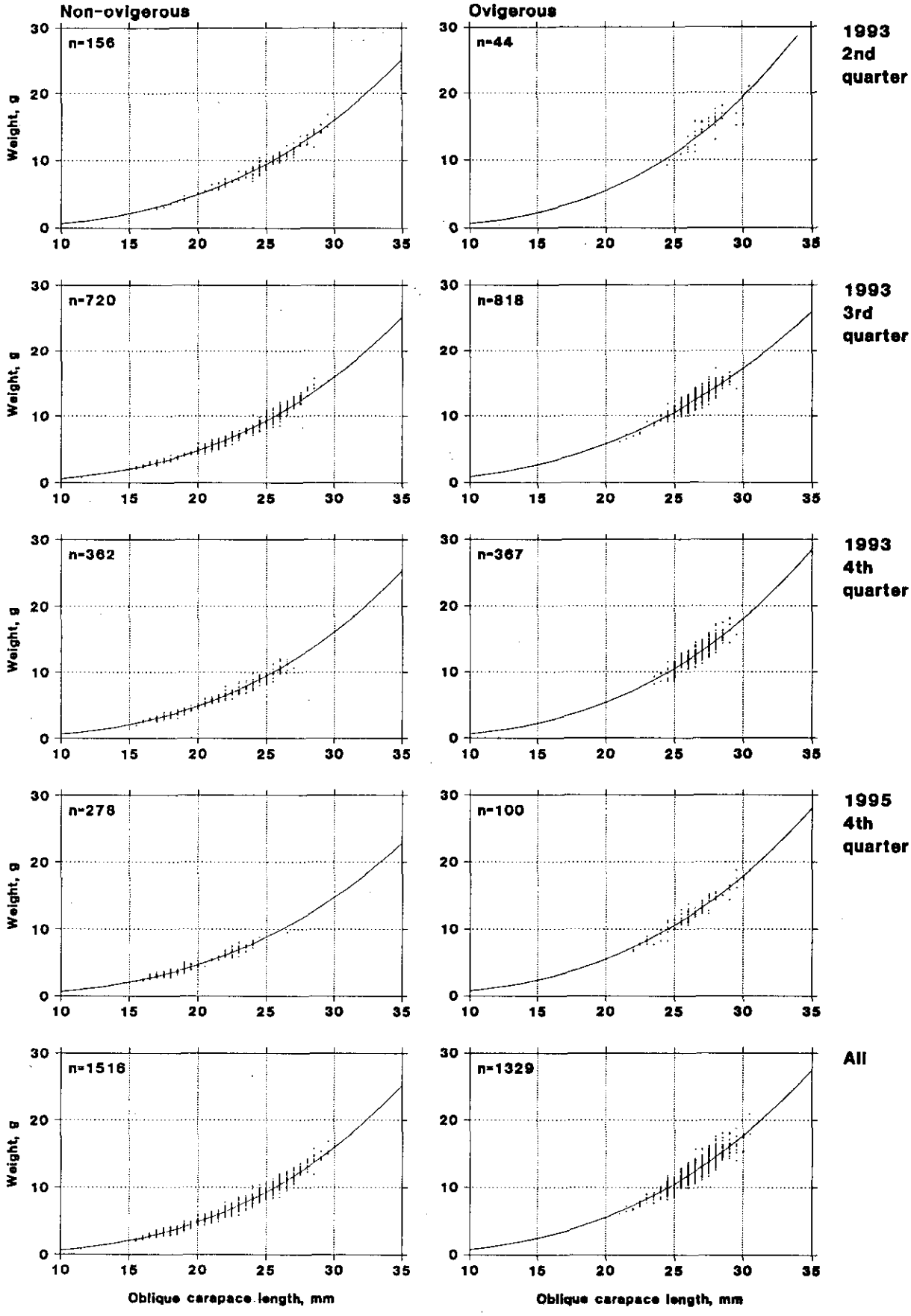

Figure 2 Whole shrimp weight-OCL relationship by year, quarter, and non-ovigerous/ovigerous group for NAFO Div 3M for different periods in 1993 and 1995.