

Working Document

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Age-length keys and growth parameters for the four-spot-megrim (*Lepidorhombus boscii*) caught in the portuguese fisheries.

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Data presented in this working document is an effort to provide more information on the biology of the four-spot-megrim (*Lepidorhombus boscii*) caught in the portuguese fisheries.

The fish used for this work was obtained along the portuguese coast by the R/V "Noruega" from INIP. We used data from January and July 1990, July 1991 and October 1992 bottom trawl surveys to produce three age-length keys (combining females and males) and we used Fishparm software to compute three sets of growth parameters, with separated sexes, for 1990, 1991 and 1992.

Growth parameters and age-length keys were estimated based on otolith interpretation. Only consistent age readings were considered for this work, discordant interpretations were discarded.

On the next pages we present 1990, 1991 and 1992 **age-length keys** and **age composition** of the respective bottom trawl surveys.

We also present, sexes apart, the **growth parameters**, **age-length tables** and **growth curves** for 1990, 1991 and 1992 samples.

Data from other surveys and from commercial catches is being prepared.

(*) In colaboration with INIP.

AGE-LENGTH KEY AND AGE COMPOSITION OF BOTTOM TRAWL SURVEY-
Lepidorhombus boscii-females+males January and July 1990, mesh
 20.

LENGTH(cm)	TOTAL FISH	AGE								OTOLITHS READ
		1	2	3	4	5	6	7	8	
11	4	3								3
12	5	4	1							5
13	6	6								6
14	17	10	2							12
15	35	12	3							15
16	27	12	3							15
17	15	4	5							9
18	17	5	8							13
19	13		7	1						8
20	10		7	2						9
21	7		4							4
22	5		3	1						4
23	7			2	1					5
24	5		2	1						3
25	7		1	1	2					4
26	3									0
27	1				1					1
28	3									0
29	1									0
30	8				5					5
31	1									0
32	0									0
33	0									0
34	0									0
35	0									0
36	0									0
37	2									0
total	199	56	46	8	9	0	0	0	0	121

AGE COMPOSITION(%)								
1	2	3	4	5	6	7	8	TOTAL
48.9	37.6	6.1	7.5	0.0	0.0	0.0	0.0	100.0

AGE-LENGTH KEY AND AGE COMPOSITION OF BOTTOM TRAWL SURVEY-*Lepidorhombus
boscii*- females+males JULY 1991, MESH 20

LENGTH (cm)	TOTAL FISH	AGE											OTOLITHS READ
		1	2	3	4	5	6	7	8	9	10	13	
11	1		1										1
12	1		1										1
13	0												0
14	12	7	5										12
15	13	5	8										13
16	15		14										14
17	18		14	3									17
18	22	6	14										20
19	19		9	8	1								18
20	16		5	8	3								16
21	14		6	5	2								13
22	11			9	2								11
23	11		2	4	5								11
24	16		1	4	5	5							15
25	12			1	4	3	1						9
26	12			1	3	3	3						10
27	7				2	2	3						7
28	10				3		3	3					9
29	11					3	6	1					10
30	10						1	5	1	1			8
31	4						3		1				4
32	2								2				2
33	2					1			1				2
34	1								1				1
35	4							1		2	1		4
42	1											1	1
total	245	18	80	43	30	17	20	10	6	3	1	1	229

AGE COMPOSITION (%)

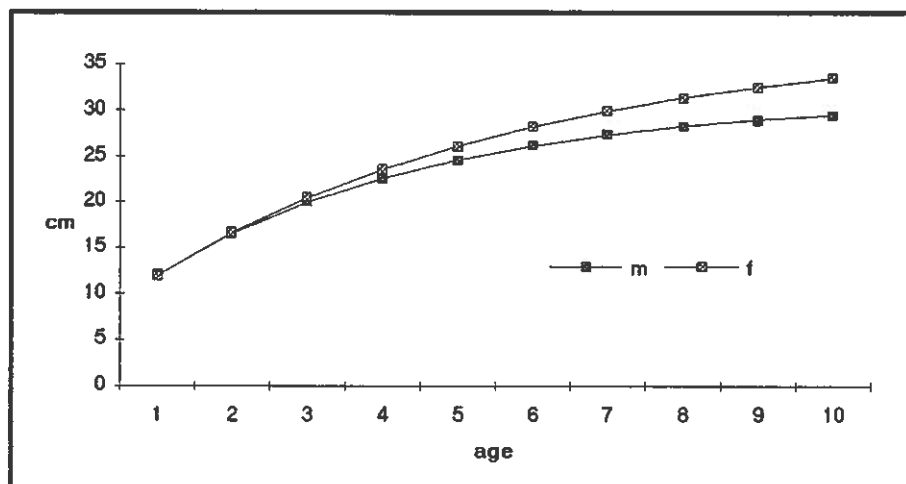
1	2	3	4	5	6	7	8	9	10	13	TOTAL
7,6	34,4	18,3	13,4	7,9	9,0	4,8	2,6	1,3	0,4	0,4	100

AGE-LENGTH KEY AND AGE COMPOSITION OF BOTTOM TRAWL SURVEY - <i>Lepidorhombus boscii</i> - FEMALES+MALES OCTOBER 1992, MESH 20													
LENGTH cm	TOTAL FISH	AGE											OTOLITHS READ
		1	2	3	4	5	6	7	8	9	10	14	
11	?												0
12	?	3											3
13	?	8											8
14	?	25											25
15	?	52	4										56
16	?	17	14										31
17	?	6	30										36
18	?	7	16	3									26
19	?	2	22	15									39
20	?		11	16	1								28
21	?		4	13									17
22	?		5	18	11	1							35
23	?			9	6	2							17
24	?			5	10	3							18
25	?			4	3	1	2						10
26	?			1	8	2	1		1				13
27	?			1	4	2	2	2					11
28	?					2	4	3	1				10
29	?					3	2	3					8
30	?						2	1	1				4
31	?						2	4	1				7
32	?						1		1				2
33	?							1	1	1			3
34	?												0
35	?										1		1
37	?								1				1
44	?												1
total	?	120	106	85	43	16	16	14	7	1	1	1	410

AGE COMPOSITION (%)												
1	2	3	4	5	6	7	8	9	10		14	total
27,9	26,4	21,2	10,7	4,0	4,0	3,5	1,5	0,2	0,2		0,2	100

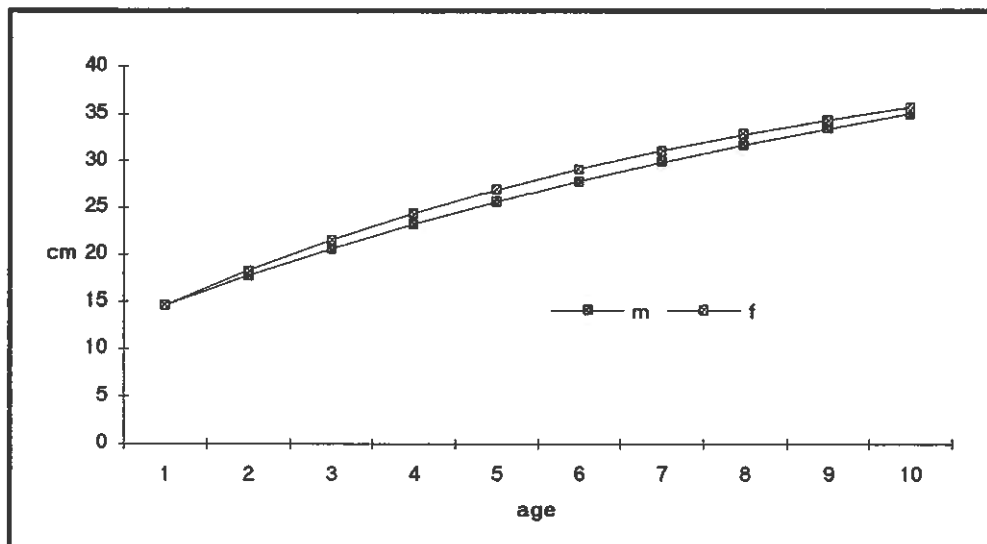
von Bertallanfy growth parameters 1990					
males			females		
l_{∞}	k	t_0	l_{∞}	k	t_0
31,26	0,2655	-0,8232	37,67	0,2001	-0,9071

t	lt males	lt females
1	11,99	11,95
2	16,48	16,61
3	19,93	20,43
4	22,57	23,55
5	24,59	26,11
6	26,15	28,21
7	27,34	29,92
8	28,25	31,33
9	28,95	32,48
10	29,49	33,42



von Bertallanfy growth parameters 1991					
males			females		
l_{∞}	k	t_0	l_{∞}	k	t_0
53.13	0.0838	-2.845	45.92	0.1246	-2.074

t	lt males		lt females
1	14.63		14.61
2	17.72		18.27
3	20.57		21.51
4	23.19		24.37
5	25.59		26.90
6	27.81		29.12
7	29.84		31.09
8	31.71		32.83
9	33.43		34.36
10	35.02		35.71



von Bertallanfy growth parameters 1992					
	males			females	
l_{∞}	k	t_0	l_{∞}	k	t_0
34.31	0.189	-2.061	49.45	0.1047	-2.599

age	lt males		lt females
1	15.07		15.52
2	18.38		18.89
3	21.12		21.93
4	23.39		24.66
5	25.27		27.13
6	26.83		29.35
7	28.12		31.34
8	29.18		33.14
9	30.06		34.76
10	30.79		36.22

