

AGE AND GROWTH OF THE SQUID *SEPIOTEUTHIS LESSONIANA* IN N.W. LUZON, PHILIPPINES

M. C. BALGOS* and D. PAULY†

The statoliths of 33 *Sepioteuthis lessoniana* from Bolinao, north-western Luzon, Philippines, were examined microscopically for growth increments. The daily nature of the increments was verified for captive specimens (<6 cm) kept in a tank containing Alizarin solution and fed with shrimps previously soaked in Alizarin solution. The ages ranged from 30–40 days in juveniles (19–33 mm dorsal mantle length *DML*) to 62–132 days in adults (62–315 mm *DML*). The growth rates estimated (0.5 mm·day⁻¹ in adults) were much higher than those estimated by length-frequency analysis, but compatible with published estimates based on the statoliths of specimens sampled in Australia and Japan. The discrepancy between the results of length-frequency analysis and statolith ageing is attributed, at least in part, to underestimation of the age of older squid.

The bigfin reef squid *Sepioteuthis lessoniana* (Lesson, 1830) is an important fisheries species throughout much of its range, from central Japan and the Red Sea in the north, through South and South-East Asia, to Queensland, Australia, and North Island, New Zealand, in the south (Roper *et al.* 1984). In the Philippines, *S. lessoniana* is caught mainly by trawl (Hernando and Flores 1981). Regrettably, its contribution to the annual Philippine cephalopod catch of about 10 000 tons (Balgos 1990) is not known, owing to the lack of species-specific data.

The present contribution presents the results of a

study on the age and growth of *Sepioteuthis lessoniana* in the north-west of the Philippines (Balgos 1990).

MATERIAL AND METHODS

A total of 13 squid samples was obtained between 26 September 1988 and 10 October 1989 at the wetfish market at Bolinao, Pangasinan Province. The squid were caught mainly by jigging on reef flats at depths of about 2 m. The samples, consisting of a total of

Table 1: Frequency distribution of dorsal mantle length (*DML* = class midpoint) of *S. lessoniana* caught in Bolinao, north-western Philippines

<i>DML</i> (cm)	Number per collection date												
	28/9/88	15/10/88	21/11/88	20/12/88	17/1/89	20/2/89	25/3/89	14/4/89	16/5/89	17/6/89	22/7/89	18/8/89	10/10/89
7	1	5	4	1				2	2	1	1		7
9	7	39	17	19	7	21	3	15	5	20	17	17	24
11	13	20	23	10	7	32	9	16	19	27	23	35	15
13	19	10	12	8	14	33	18	26	29	17	28	25	21
15	17	14	2	7	13	13	11	20	30	8	25	14	13
17	6	2	4	1		4	3	17	14	12	11	10	16
19	7	4	1	3	2	3	4	6	6	5	4	5	7
21	2	1		2	5	2	3	1	5	6	1	4	
23	1							1	3		1	3	1
25						1	1	1	5	4			
27								1					
29													
31													
Total	73	95	64	51	48	109	52	106	118	101	111	113	104

* International Center for Living Aquatic Resources Management, MCPO Box 2631, 0718 Makati City, Philippines; currently Graduate College of Marine Studies, University of Delaware, USA. Email: miriam_balgos@hotmail.com
 † Fisheries Centre, 2204 Main Mall, University of British Columbia, Vancouver, British Columbia, Canada V6T 1Z4. Email: d.pauly@fisheries.com

