

STUDIES ON MOLLUSCA OF SAURASHTRA COAST - II (PELECYPODA)

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The paper deals with the proximate composition of *Crasostrea graphoides*, *C. cucullata*, *Placenta placenta*, *Pinna vexillum*, *P. bicolor*, *P. atropurpurea*, *Solen truncatus* and *Pitar erycina*. Seasonal variations in water, protein, salt and ash in the meat of *C. graphoides*, *C. cucullata* and *P. placenta* are reported. Percentage of meat is high in *S. truncatus* and low in *C. graphoides*, *C. cucullata* and *P. erycina*. Most of these species contain higher moisture than gastropods.

INTRODUCTION

Only limited information is available on bivalve tissues (Abdul Rahaman, 1965; Saraswathy and Balakrishnan Nair, 1969; Chinnamma, Choudhuri and Pillai, 1970; Suryanarayanan and Alexander, 1972; Shah, Sastry and Bhatt, 1973; Chinnamma George, 1974; Sibsankar Gupta and Govindan, 1975). In a previous paper in this series (Sarvaiya, 1977) proximate composition of amphineura and gastropoda has been reported.

MATERIALS AND METHODS

Fifty three individual samples of *C. graphoides*, 72 of *C. cucullata*, 153 of *P. placenta*, one each of *P. vexillum*, *P. bicolor*, *P. atropurpurea*, 10 of *S. truncatus* and four of *P. erycina* were collected from

various centres of the Gulf of Kutch (Table I and II) from February 1975 to March 1976. Live specimens were brought to the laboratory either immersed in seawater or in gunny bag.

Specimens were weighed after washing and removing adhering water with filter paper. The length of each specimen was measured using the method described by Kundu (1965). The shell was opened by severing the adductor muscle and the meat was used for the study.

The meat was weighed and analysed for moisture, protein, salt and ash by the methods described in a previous paper in this series (Sarvaiya, *op. cit.*).

RESULTS AND DISCUSSION

C. graphoides, *C. cucullata* and *P.*

TABLE I

PHYSICAL CHARACTERISTICS OF PELECYPODA OF SAURASHTRA COAST

Species	Season	Size range (mm.)		Fresh weight with shell (g.)	Percentage of	
		Length	Width		Shell	Meat
<i>Crassostrea graphoides</i> (1) (Newton and Smith)	Pre-monsoon (Feb. to May)	42—200 (94)	32—121 (70)	17.5—436.0 (117.8)	76.7—79.7 (78.8)	4.1—16.6 (8.4)
	Monsoon (July to Sept.)	75—150 (113)	47—98 (75)	70.0—505.0 (200.6)	78.0—80.1 (79.4)	4.1—14.4 (7.5)
	Post-monsoon (Oct. - Nov.)	56—141 (97)	40—133 (76)	20.0—451.0 (153.3)	78.8—79.6 (79.2)	3.5—12.7 (6.7)
<i>Crassostrea cucullata</i> (2) (Born)	Pre-monsoon (Feb. to May)	40—117 (57)	30—72 (44)	7.2—85.9 (28.3)	79.0—80.0 (79.5)	5.4—12.2 (7.6)
	Monsoon (July to Sept.)	35—58 (49)	25—55 (39)	10.0—31.9 (19.0)	79.3—82.0 (81.0)	3.7—8.7 (6.3)
	Post-monsoon (Oct. - Nov.)	32—90 (57)	25—80 (45)	8.0—82.0 (28.6)	78.0 (81.2)	6.8—11.5 (9.1)
<i>Placenta placenta</i> (3) (Linn'e)	Pre-monsoon (Feb. to May)	90—150 (115)	80—150 (117)	42.3—162.1 (79.1)	72.7—85.6 (77.0)	6.9—19.9 (12.9)
	Monsoon (July to Sept.)	80—155 (121)	80—153 (121)	30.0—197.0 (96.0)	77.7—85.3 (80.3)	8.2—20.8 (13.2)
	Post-monsoon (Oct. - Nov.)	95—117 (109)	100—133 (114)	46.0—118.0 (55.8)	77.8—87.3 (81.2)	7.8—20.0 (13.4)

- (1) Centre of collection: Poshetra (Lat. 22°25'N Long. 69°12'E)
Balapur (Lat. 22°27'N Long. 69°08'E)
- (2) Centre of collection: Poshetra (Lat. 22°25'N Long. 69°12'E)
Balapur (Lat. 22°27'N Long. 69°08'E)
- (3) Centre of collection: Poshetra (Lat. 22°25'N Long. 69°12'E)

Note:— Figures in parantheses are mean value.

TABLE II

COMPOSITION OF PELECYPODA OF SAURASHTRA COAST

Species	Collection centre	Size range (mm.)		Fresh weight with shells g.	Percentage of		Moisture% in meat	Composition of meat % (dry wt. basis)			
		Length	Maximum		Shell	Meat		Protein (NX6.25)	Salt (as NaCl)	Ash	
<i>Pinna vexillum</i> (Born)	Poshetra (Lat. 22°25'N Long. 69°12'E)	324	176	495.6	75.0	16.1	77.74	70.00	3.17	25.0	
<i>P. bicolor</i> (Gmelin)	Ajad Island (Lat. 22°23'N Long. 69°20'E)	170	115	69.0	74.9	18.4	81.58	55.13	3.87	18.0	
<i>P. atropurpurea</i> (Sowerby)	-do-	266	90	134.0	79.5	16.0	78.72	48.13	3.56	26.0	
<i>Solen truncatus</i> (Wood)	Gopi area (Lat. 22°28'N Long. 69°04'E)	70-92 (78)	18-26 (21)	7.0-18.0 (10.9)				81.49	84.00	4.60	10.8
<i>Pitar erycina</i> (Linn'e)	Gopi area, Baid Island (Lat. 22°28'N Long. 69°19'E)	47-87 (72)	41-80 (66)	12.7-131.0 (50.3)	47.4-54.6 (50.3)	12.4-19.1 (15.6)	78.93- 85.11	53.90- 54.78	6.84	9.2- 18.8	
	Aramda (Lat. 22°26'N Long. 69°02'E)										

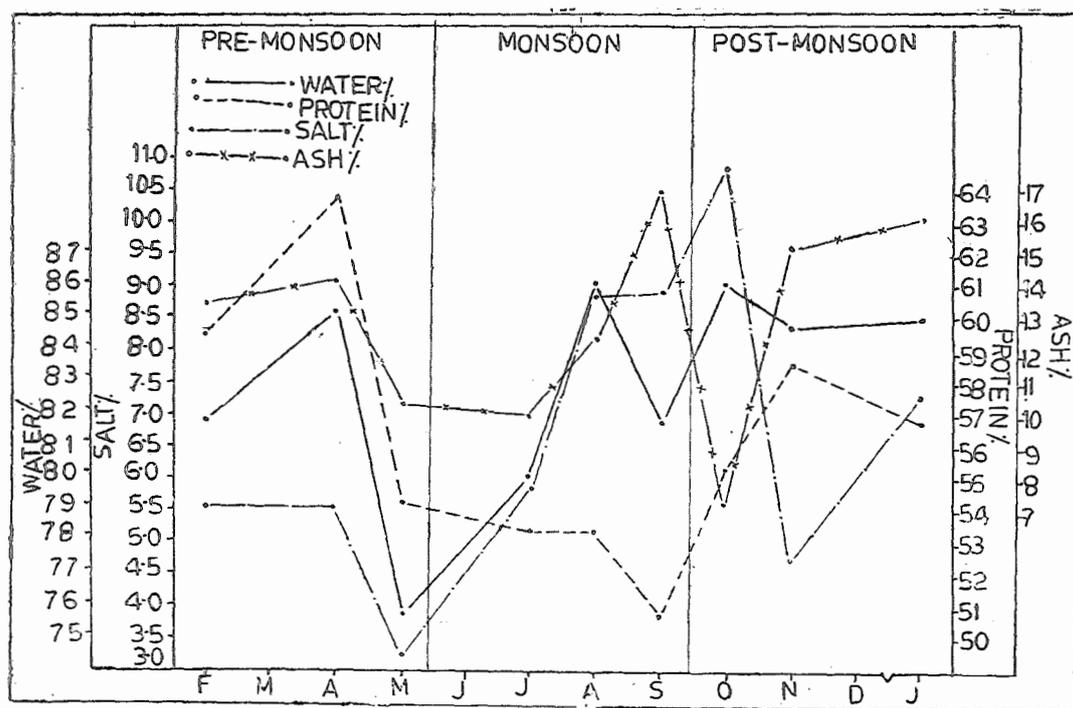


FIG. 3

Fig. 3

Monthly variations in percentage of water, protein, salt (as NaCl) and ash content in the meat of *Placenta placenta*. Percentage of protein, salt and ash have been given on dry meat weight basis.

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