

ON THE OCCURRENCE OF THE GREEN MUSSEL *PERNA VIRIDIS*
(LINNAEUS) IN ANDAMAN ISLAND

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ABSTRACT

Perna viridis (Linnaeus) is reported for the first time from Andaman waters. A brief description of the specimens with data on various measurements and total weight meat weight relationship are given.

Information on the molluscan fauna of Andaman and Nicobar Islands is scarce. In the published works on the molluscs of this area, Melvill and Sykes (1897, 1899, 1899a), Setna (1932), Winckworth (1933), Prashad and Rao (1934), Sastri (1939), Ray (1949) and Rajagopal and Rao (1974), no mention has been made of the occurrence of *Perna* from this Island. Present collection of *Perna viridis* adds one more genus to the list of molluscan forms from Andaman and Nicobar Islands. Eleven specimens of *Perna viridis* ranging from 65 to 230 mm in total length weighing 21 to 298 g (total weight and 10.5 to 84.2 (meat weight), respectively, were collected from Sippighat area near Port Blair during December 1976. As the present record of this species from Andaman waters is of distributional interest, a brief description of the specimen collected is given in this note.

Perna viridis (Linnaeus) (Fig. 1)

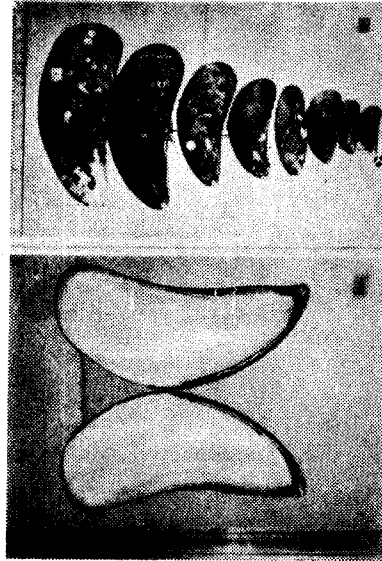
Mytilus viridis Linnaeus, 1758. *Syst. Nat.* Ed. X: 706; Hornell, 1921. *Madras Fish. Bull.*, 14 (6): 156, Gravely, 1941. *Bull. Madras Govt. Mus. New Ser. Nat. Hist. Sect.*, 5 (1): 35-37; Satyamurti 1956. *Bull. Madras Govt. Mus. New Ser. Nat. Hist. Sect.*; 1 (2) Pt 7:42; Kundu, 1965. *J. Bombay Nat. Hist. Soc.*, 62: 84-103; Menon *et al*, 1966. *Research Bull. (N. S.) Punjab Univ.*, 18:317; Rao, 1974. *CFRI Bulletin*, 25:5.

Mytilus samaragdinus Annandale, 1916. *Mem. Indian Mus.*, 5:350-360 (nec Chemnitz, 1985); Rai, 1932. *J. Bombay Nat. Hist. Soc.*, 35 (4): 826-847.

Perna viridis Silas, 1976. *CMFRI Bullentin*, 27:23.

This species is characterised by the presence of pitted residual ridge, the anterior portion of the foot retractor, and the absence of anterior adductor. The

shell is highly arched in the middle; posterior margin broadly rounded. Shell is covered with thick green periostracum. Anterior adductor absent. Posterior adductor and retractor impression widely apart, the latter almost in the middle position. The mantle edges are whitish and fimbriating without any papilla.



The maximum size of the specimen in the present collection was 230 mm and the minimum 65 mm. Measurements of total length, width, thickness and meat weight of eleven specimens were taken and total weight-meat weight percentage are given in Table 1. The same details of the green mussel collected from Madras Harbour and brown mussels from Vizhinjam are also given in Table 1. for comparison.

The species is widely distributed along the west coast of India. Kundu (1965) recorded this species from Gulf of Kutch. On the east coast of India, It is recorded from Pamban, Porto Novo, Pondicherry, Madras, Kakinada, Visakapatnam and Chilka lake. The present report extends the distribution of green mussel to Andaman waters.

Perna viridis (Linnaeus) has so far been referred in Indian literature as *Mytilus viridis* and *Mytilus smaragdinus*. A close examination of the present material and the specimens collected from Madras Harbour and the brown mussel specimens from Vizhinjam Bay has revealed that the mussels so far treated under genus *Mytilus* could be identified as species belonging to *Perna*. Kuriakose (1973, unpublished Ph.D thesis, University of Kerala) has also described two species of *Perna* from Indian coast, Viz *Perna viridis*, the green mussel, and a new species of *Perna*, the brown mussel. Soot-Ryen (1955) while

Table. 1. Total length, width, thickness, total weight, meat weight brown mussels

Total length in mm	Width in mm.	Thick-ness in mm	Andaman			Madras		
			Total weight in gms	Meat weight in gms	Meat weight percent	Total length in mm	Width in mm.	Thick-ness in mm
230	86	58	298.0	84.2	28.3	127	53	41
180	69	50	237.0	66.5	28.1	124	52	38
175	67	50	237.5	77.5	32.6	124	54	40
138	56	42	121.0	36.5	30.2	122	49	34
117	49	38	87.5	30.0	34.3	119	52	37
111	48	35	76.0	26.5	34.9	115	51	34
101	44	32	59.0	21.0	35.6	114	49	35
94	46	27	46.0	16.0	34.8	109	46	33
88	42	26	34.0	13.0	38.2	108	49	35
73	34	22	25.0	9.0	36.0	107	47	33
65	33	21	21.0	10.5	50.0	—	—	—

describing the characters of the genus *Mytilus* reported that this genus originally contained several very unlike shells now referred to different families, is restricted to those species which have the anterior position of the umbones, a small anterior adductor, elongate scars of the anterior retractor well behind the umbones, continuous scars of the large posterior and retractors and mantle margins with tentacles or pailae.

The present material from Madras differs from the green mussels collected from Madras mainly by the larger size, where as the essential features like position of adductor and the colouration are almost same. Davies (1970) reported the presence of *Mytilus viridis* of 150 to 22 mm length in Kakinada coast and suggested that these larger size could be due to either great age or higher growth rate. As the Andaman sample is very limited in number, it was not possible to ascertain the precise age of the mussels.

In the present material the meat-weight percent in relation to total weight of Andaman specimens ranged from 28.4 to 50, higher in small specimens and low in large specimens. In Madras specimens the meat-weight percent ranged from 37.7 to 50. In brown mussel from Vizhinjam the meat weight was higher in small specimens. It could be inferred that though the Andaman specimens attain a large size, corresponding increase in the meat weight is not attained.

and meat-weight percent of green mussels from Andaman and Madras and from Vizhinjam.

Vizhinjam								
Total weight in gms.	Meat weight in gms.	Meat weight percent	Total length in mm.	Width in mm	Thick-ness in mm.	Total weight in gm.	Meat weight in	Meat weight percent
110.0	40.5	36.8	117	48	35	52.5	18.5	35.2
94.5	37.0	39.2	113	50	35	61.0	24.0	39.3
98.5	39.5	40.1	112	48	34	53.0	19.5	36.8
79.5	30.0	37.7	106	47	33	49.0	15.5	31.6
95.0	41.5	43.7	105	46	35	44.5	16.5	37.1
87.0	41.0	47.1	103	46	32	51.0	18.0	35.3
81.0	35.5	43.8	100	47	36	60.5	21.5	35.5
70.5	34.5	48.9	100	44	32	44.5	17.0	38.2
78.0	32.5	41.7	76	38	24	26.0	11.5	44.2
64.0	24.5	38.3	75	35	21	15.5	8.0	51.6
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