

Notes on a small collection of Littorinidae from Somalia

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In two monographs Rosewater (1970, 1972) has given an excellent and up to date outline of the taxonomy and zoogeography of the family Littorinidae in the Indo-Pacific. Although extensive data concerning the distribution of the recognized taxa are given, no species are reported from the coast of Somalia, East Africa. Priolo (1969: 27), however, recently recorded *Littorina pintado* (Wood) from the neighbourhood of Mogadiscio.

In the collection of the Hebrew University of Jerusalem (HUJ) I have found several samples of intertidal molluscs collected in the neighbourhood of Mogadiscio and Merca, Somalia. These samples are rather small and probably not fully representative for the fauna of that area. Yet they give important data concerning the distribution of the Littorinidae along the East coast of Africa; publication of these data therefore seems justified.

Family Littorinidae

Genus *Littorina* Férussac, 1822

Subgenus *Littoraria* Gray, 1834

Littorina (*Littoraria*) *kraussi* Rosewater, 1970 (fig. 1)

1846 *Littorina glabrata* Philippi, Proc. zool. Soc. Lond. (1845): 140, not *Paludina glabrata* Pfeiffer, 1828 = *Littorina neritoides* (Linnaeus, 1758).

1970 *Littorina* (*Littoraria*) *kraussi* Rosewater, Indo-Pacif. Mollusca 2 (11): 444, pl. 325 fig. 23, pls. 341, 342.

Localities: Merca, leg. N. Vatno, 9 October 1937 (HUJ 30.001/19);

Mogadiscio, leg. P. Parenzan, 1939 (HJ 30.003/16 and Coen-HJ 30.028/19).

The Somalian shells correspond in all details with the description given by Rosewater (1970: 444). They are however rather small: the largest specimen is only 14.4 mm long.

The occurrence of *Littorina kraussi* near Merca and Mogadiscio might be an indication that Aden is a correct locality. Aden was mentioned by Rosewater (1970: 445) in his list of records, but omitted from the map which shows the distribution of *L. kraussi* (loc. cit.: 444, pl. 342). It is now known from localities along the entire East African coast, Aden, the Indian Ocean Islands, and from the southern parts of India to the Cocos-Keeling Islands.

Littorina (Littoraria) pintado pintado (Wood, 1828) (fig. 2)

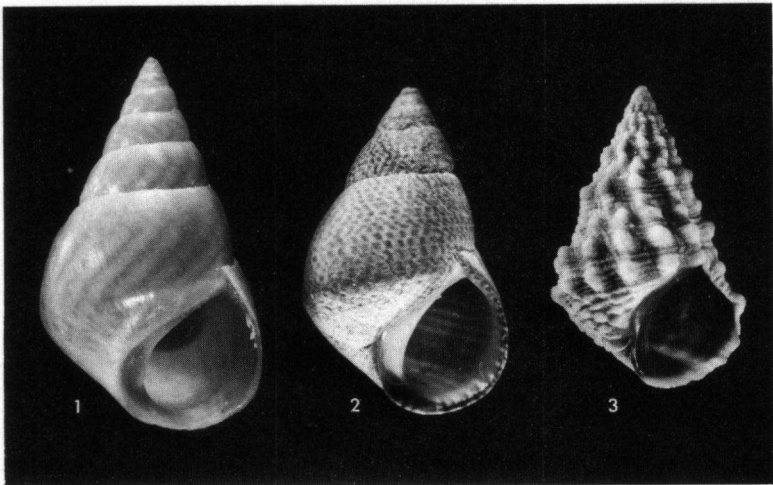
1828 *Turbo pintado* Wood, Suppl. Index Testac.: 20, pl. 6 fig. 34.

1848 *Littorina ambigua* Philippi, Abb. Besch. Conch. 3: 62, pl. 7. fig. 6.

1852 *Littorina serialis* Eydoux & Souleyet, Voy. Corv. Bonite, Zool. 2: pl. 7, fig. 6.

1969 *Littorina (Littorinopsis) pintado* (Wood), Priolo, Atti Accad. gioenia Sci. nat. (7) 1 : 27.

1970 *Littorina (Littoraria) pintado pintado* (Wood), Rosewater, Indo-Pacif. Mollusca 2 (11): 447, pl. 325 figs. 15-16, pl. 346 figs. 1-12, pls. 347-348.



Figs. 1-3. Littorinidae from Somalia. 1, *Littorina (Littoraria) kraussi* Rosewater, Mogadiscio (HJ 30.003), length 13.7 mm. 2, *L. (Littoraria) p. pintado* (Wood), Mogadiscio (HJ 30.004), length 11.7 mm. 3, *Nodilittorina (N.) natalensis* (Philippi), Merca (HJ 30.002), length 10.5 mm. Photographs A. Niv.

Locality: Mogadiscio, leg. P. Parenzan, 1939 (HUI 30.004/1).

Although only a single specimen has been collected, it confirms the record of Priolo (1969: 27) who mentions it too from Mogadiscio. The occurrence of *L. p. pintado* near Mogadiscio is rather interesting as it extends its range along the coast of East Africa from 26°S (Delagoa Bay, Mozambique) to 2°N. Records from the intermediate region, i.e. Tanzania and Kenya, are, however, wanting. The discontinuous distribution of *L. p. pintado* is rather peculiar: East Africa to Mauritius, and Western Pacific from Japan through the North Pacific Islands to Hawaii.

Genus *Nodilittorina* von Martens, 1897

Subgenus *Nodilittorina* sensu stricto

Nodilittorina (Nodilittorina) natalensis (Philippi, 1847) (fig. 3)

1847 *Littorina natalensis* Philippi, Abb. Besch. Conch. 2 : 160, pl. 3 fig. 4.

1970 *Nodilittorina (Nodilittorina) natalensis* (Philippi), Rosewater, Indo-Pacif. Mollusca 2 (11): 489, pl. 376 figs. 1-6, pl. 377.

Localities: Merca, leg. N. Vatno, 9 October 1937 (HUI 30.002/17); Mogadiscio, leg. P. Parenzan, 1939 (HUI 30.005/8 and Coen-HUI 30.029/11).

This typically East African species is known from the Cape of Good Hope in the South to Aden in the North.

From a zoogeographical viewpoint it is interesting to realize that in Somalia two different fauna provinces meet. The North coast, from Zeila to Cape Guardafui, is strictly spoken still a part of the Erythraean province, while the East coast, from Cape Guardafui down to Chamboni, forms the northernmost part of the East African province. It is, however, rather questionable whether Cape Guardafui forms indeed a natural boundary between both regions.

All material mentioned in this paper and that of Priolo (1969) was collected along the East coast (fig. 4). From table 1 it is clear that the Somali species all belong to the East African province. Although *Littorina kraussi* and *Nodilittorina natalensis* have been reported from Aden, their absence in the Red Sea shows that they have to be considered invaders into the Erythraean province. On the other hand, the two species belonging to the subgenus *Granulilittorina*, which are found to occur abundantly in the Red Sea, but less common in the Gulf of Aden, have not been recorded from East Somalia. However, more material from additional localities is necessary to ascertain whether Erythraean species are absent in East Somalia.

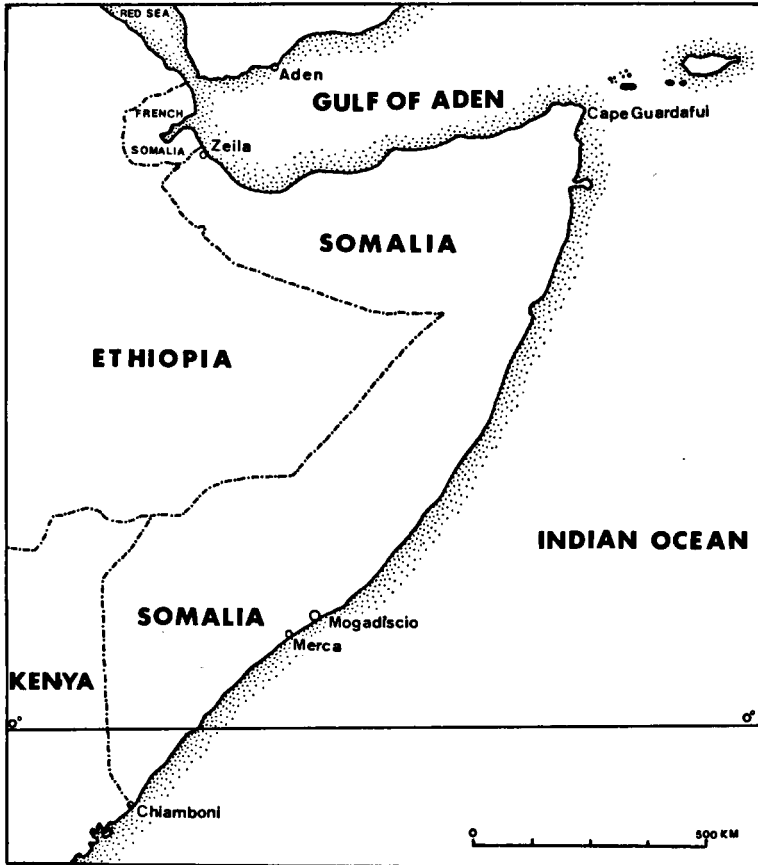


Fig. 4. Map showing the position of the various localities mentioned in the text.

On the other hand one may also ask: Do East African species live along the North coast of Somalia? As long as we have not seen any material we can only guess. However, table I shows that we may expect East African representatives to occur too.

How little known the littoral fauna of Somalia still is, shows the absence of records of *Littorina (Littorinopsis) scabra* (Linnaeus, 1758). This species is found almost everywhere throughout the whole Erythraean region, while it is also known from all other East African countries.

	East African				Erythraean		
	Mozambique	Tanzania	Kenya	East Somalia	North Somalia	Aden	Red Sea
Genus <i>Littorina</i> Férussac							
Subg. <i>Littoraria</i> Gray							
1	<i>L. (L.) kraussi</i> Rosewater	x	x	x	x	-	x
2	<i>L. (L.) pintado pintado</i> (Wood)	x	-	-	x		
Subg. <i>Littorinopsis</i> Mörch							
3	<i>L. (L.) scabra scabra</i> (Linnaeus)	x	x	x	-	-	x x
Subg. <i>Austrolittorina</i> Rosewater							
4	<i>L. (A.) africana</i> (Philippi)	x					
Genus <i>Nodilittorina</i> von Martens							
Subg. <i>Nodilittorina</i> s. str.							
5	<i>N. (N.) natalensis</i> (Philippi)	x	x	x	x	-	x
Subg. <i>Granulilittorina</i> Habe & Kosuge							
6	<i>N. (G.) millegrana</i> (Philippi)					-	x x
7	<i>N. (G.) subnodosa</i> (Philippi)					-	- x

Table 1. Littorinidae from the East African and Erythraean fauna provinces. x, recorded by Rosewater (1970), Shopland (1902) or present paper: -, not yet recorded so far.

We may conclude that the distribution of species belonging to the family Littorinidae along the coast of Somalia is still little known; especially records from North Somalia are wanting. All species collected along the East coast belong to typically East African Littorinidae. However, more material is necessary to demonstrate whether Cape Guardafui forms a natural boundary between the Erythraean and East African fauna provinces.

The discovery of *Littorina p. pintado* near Mogadiscio forms an important extension of its range in the western part of the Indian Ocean.

I am grateful to Mr. A. Niv (HUJ), who kindly helped in preparing the photographs.

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