

BULLETIN ZOOLOGISCH MUSEUM

 UNIVERSITEIT VAN AMSTERDAM

Vol. 8 No. 11 1982

DESCRIPTION OF *LINGULA TRANSLUCIDA* DALL

(BRACHIOPODA: INARTICULATA)

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ABSTRACT

The true identity of *Lingula translucida* Dall is established on the basis of current taxonomic characteristics (umbonal regions, muscle arrangement, mantle canals).

INTRODUCTION

The recent opportunity to see Dall's types enables us to establish the true identity of *Lingula translucida* Dall. Of the specimens, marked as types by Dall (1921), only those from Karachi, Pakistan, belong to *L. translucida*, whereas the specimens from Java and the Philippines are not conspecific with the former and may be related to *Lingula rostrum* (Shaw). Our opinion corroborates the suggestions previously expressed by Cooper (1973). Accordingly, the type material of *Lingula translucida* held by the U.S. National Museum (Washing-

ton, D.C.) is restricted to the specimens Cat. Nos. USNM 150706 and 332782, of which the former specimen is chosen herewith as lectotype.

Fourteen specimens of *L. translucida* were recently examined. They were sampled by Dr. Anthony Fernandez along the shore of Portonovo, India, after being washed ashore by cyclonic winds in 1979. Several specimens are deposited and preserved in the Zoological Museum of Amsterdam. They will be considered as hypotypes.

The original description of *L. translucida* by Dall (1921) is extended with a number of recently discovered taxonomic characters (Emig,

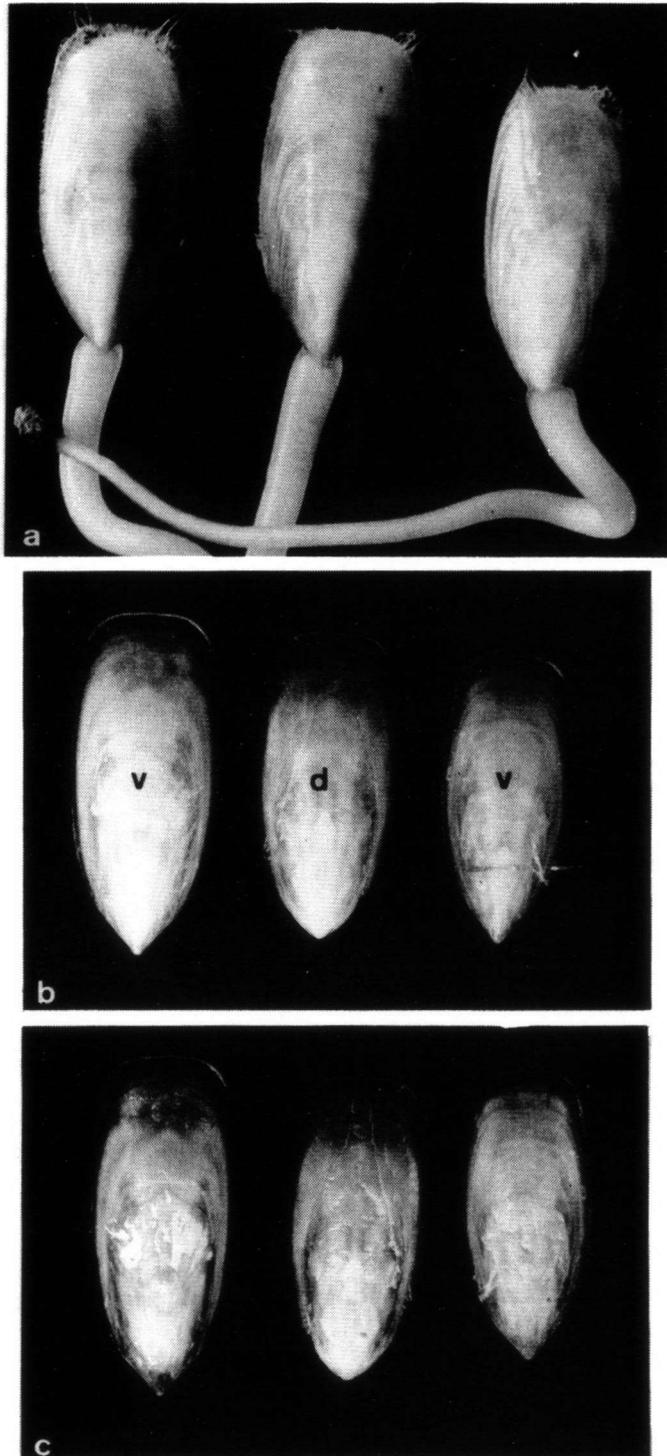


Fig. 1. *Lingula translucida*: a, view of complete animals; b, Exterior view of dorsal (d) and ventral (v) valves; c, Interior view of dorsal (d) and ventral (v) valves.

1977, 1979; Emig, e.a., 1978).

DESCRIPTION

The characteristics of *Lingula translucida* from Porto-Novo (India) are as follows:

The shell is oblong-elongate, has parallel lateral margins, sharp beaks, and straight anterior edges (Fig. 1). The external surface of the shell valves is smooth, but growth lines are slightly indicated.

The shell is translucent, whitish, according to the degree and extent of calcification, which is variable. The lateral margins are coloured more or less ruddy-brownish. Often the growth-lines of the distal part are beige underlined.

The length of the shell is about twice the width. The shell dimensions of 14 specimens are shown in Table I: the mean of W/L falls outside the published ranges for *Lingula anatina* Lamarck, *L. rostrum*, *L. reevei* Davidson (about 0.43 to 0.46), but the range of W/L comes close to those of the above cited species. Yet, as was demonstrated by Chuang (1962) and Hammond & Kenchington (1977), these measurements cannot be taken as evidence of significant taxonomic difference.

The umbonal beaks of both valves (Fig. 2) are sharper than in all other *Lingula* species (see Emig, 1978, 1979; Emig & Le Loeff, 1977; Emig & Hammond, 1981). The interior part of the umbonal regions comes nearest to that of *L. anatina*, from which it differs by a longer and stronger slope of the beak of the dorsal valve, and by a longer pedicular groove with some reddish lines (Fig. 2).

The arrangement of the musculature (Fig. 3) shows similarities with that of *L. anatina* but

differs by a lower position of the oblique muscles on the dorsal side, by a closer position of the oblique muscles on the ventral side (which on the right has a small impression), and by a convexer body muscle line on the right side.

The mantle canals are straight elongate on both the ventral and dorsal sides (Fig. 3), while in *L. anatina* those of the ventral side are slightly curved (Emig, 1979; Cals & Emig, 1979).

The peduncle is whitish in colour. No pallear pigmentation is observed.

CONCLUSIONS

The identity of *Lingula translucida* Dall has been established particularly through the main taxonomic features (umbonal regions, muscle arrangement, mantle canals) which permit to distinguish this species from the other *Lingula* species. The genus *Lingula* now contains seven well-defined species.

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Table I. Measurements of shell (in mm) of 14 specimens of *Lingula translucida*.

	Length	Width	W/L
Range	19-38	9-17	0,44 - 0,53
Mean	24,4	11,7	0,48

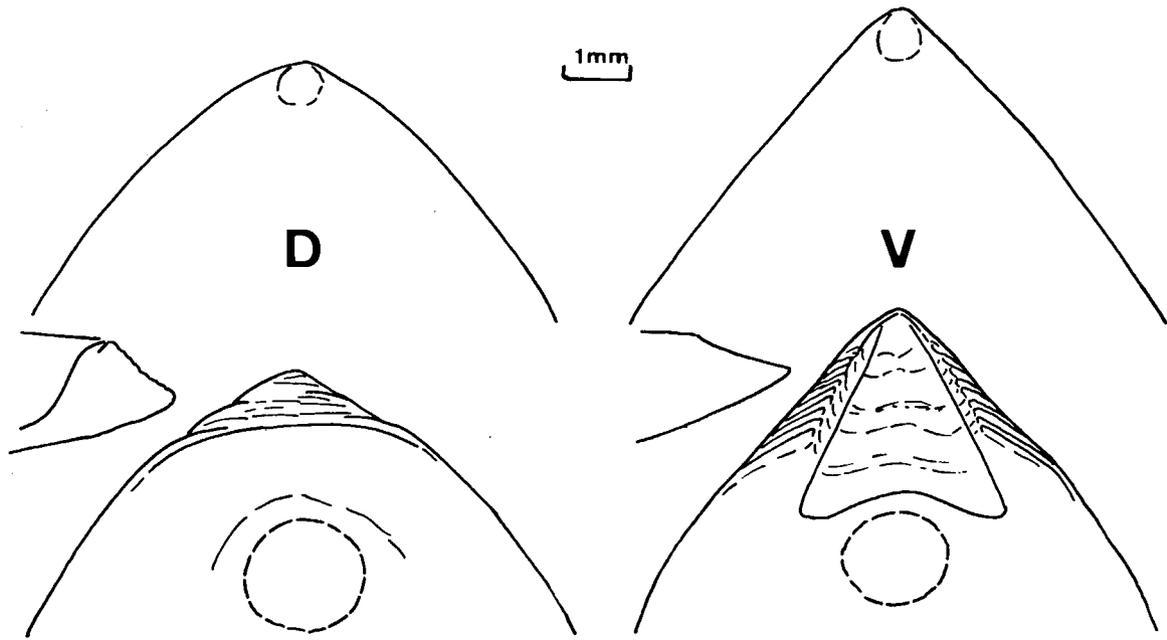


Fig. 2. *Lingula translucida*: Exterior, interior and section views of the umbonal regions of a dorsal (D) and ventral (V) valve.

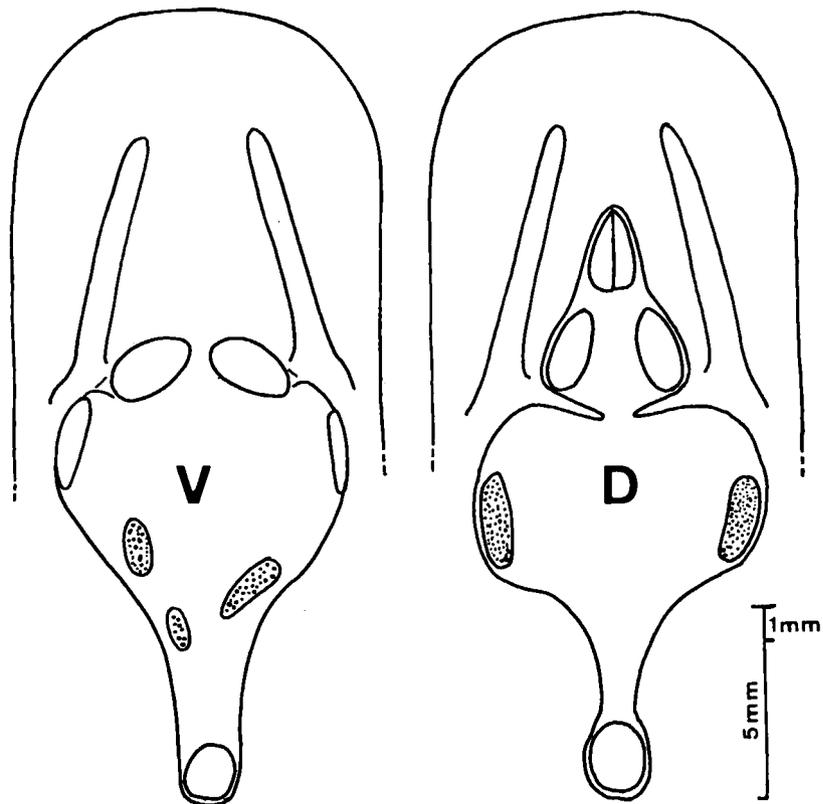


Fig. 3. *Lingula translucida*: arrangement of the musculature and disposition of the two main anterior mantle canals (V: ventral side; D: dorsal side). The impression of the oblique muscles are punctuated (see text).

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received : 11.VI.1981
 distributed : 22.I.1982