ON THE POLLEN MORPHOLOGY OF THE GENUS *ADANSONIA* LINN.

NEETA VAISHAMPAYAN AND Y. N. SHARMA
Botany Department, Government Science College, Gwalior 474 002, India

INVESTIGATIONS regarding the application of palynological studies in the interrelationship among taxa, have been of interest in the recent years. Detailed systematic description of the pollen of *Adansonia digitata* L. (Bombacaceae) has not been published so far. Erdtman[3] has pointed out some characteristic features of pollen of this plant. The present study on the palynology of *Adansonia digitata* L. has been undertaken to see how far the data from this discipline would help in assessing the systematic position of this taxon.

Nair[4], De Campos[1], Dutta and Sen[2] and Nilsson and Robyns[5], gave palynological notes on the plants of Bombacaceae. Tsukada[7] made a detailed study on pollen morphology and identification of modern and fossil tropical pollen with special emphasis on Bombacaceae. The pollen grains of all the plants of Bombacaceae studied by those workers have characteristically reticulated exine wall except the genus *Patinoa*. The reticulum may either by homobrochate or heterobrochate.

The present study reveals that the grains are triporate (Fig. 1A) or tetraporate (Fig. 1B). The average size is $87{\cdot}5 \times 80{\cdot}5\,\mu$. Shape is Prolate spheroidal. Germinal pores are nearly circular in shape. The pores are peculiar in having a collar like thickening around them. The grains are marked by the presence of spinules, with blunt tips. Average height of the spinule is $3{\cdot}5\,\mu$. Nexine is much thicker than sexine. Thus the pollen grains of *Adansonia digitata* resemble those of Malvaceae which are characterized by spinate or spinulate exine wall (Nair[4] and Prasad[6]).

It is, therefore, suggested that *Adansonia digitata* be included in Malvaceae rather than in Bombacaceae on the palynological grounds.

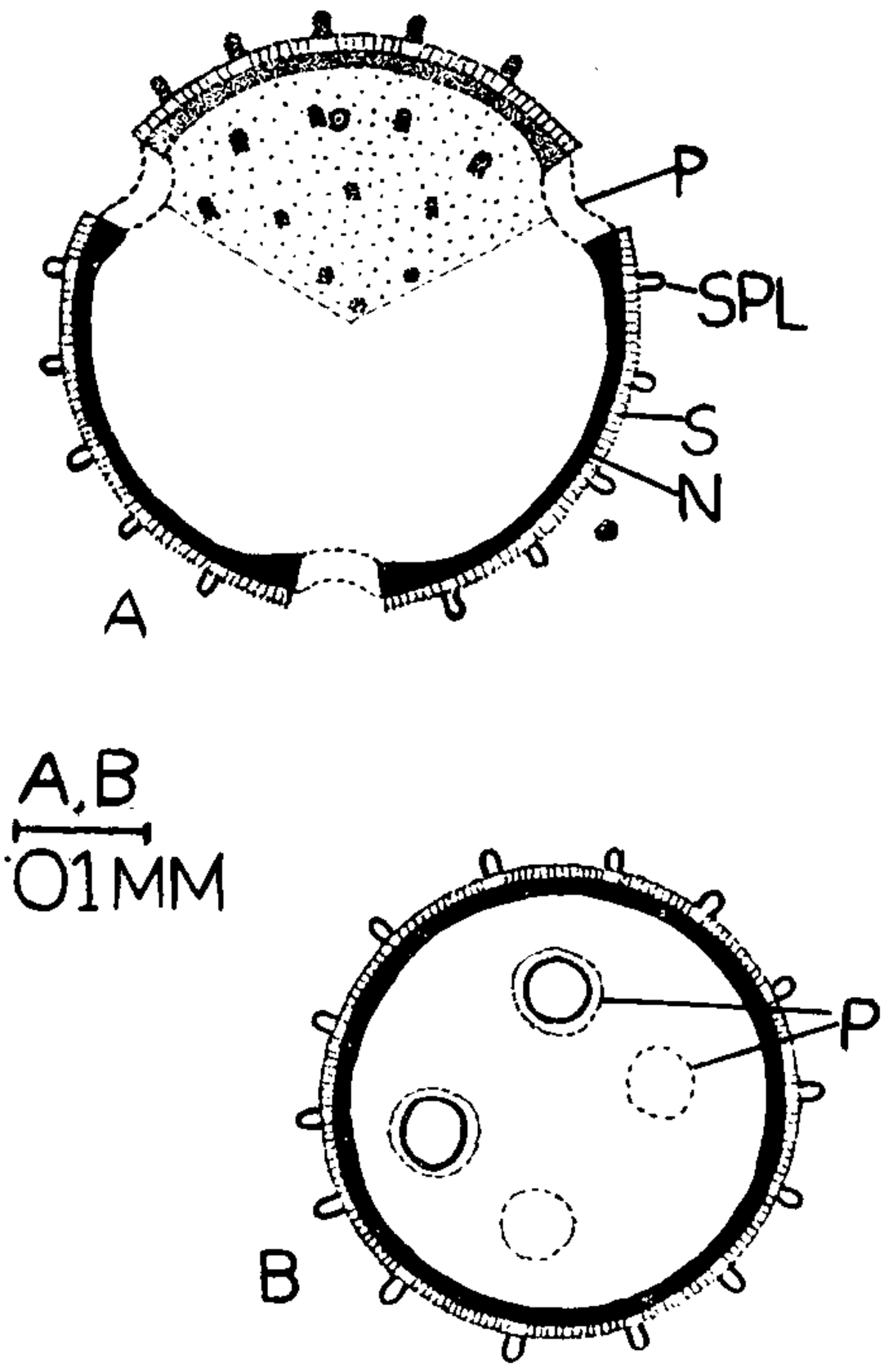


FIG. 1 A. Pollen grain of *Adansonia digitata* in polar view (Triporate). (P-Germinal pore; SPL-spinule on exine wall; S-sexine; N-nexine). B. Schematic representation of Tetraporate grain in oblique view (P-Germinal pore).

The authors are thankful to Prof. S. W. Khandekar, Head, Botany Department, Government Science College, Gwalior, for providing necessary facilities and one of us (N.V.) to U.G.C. for financial assistance.

March 26, 1981

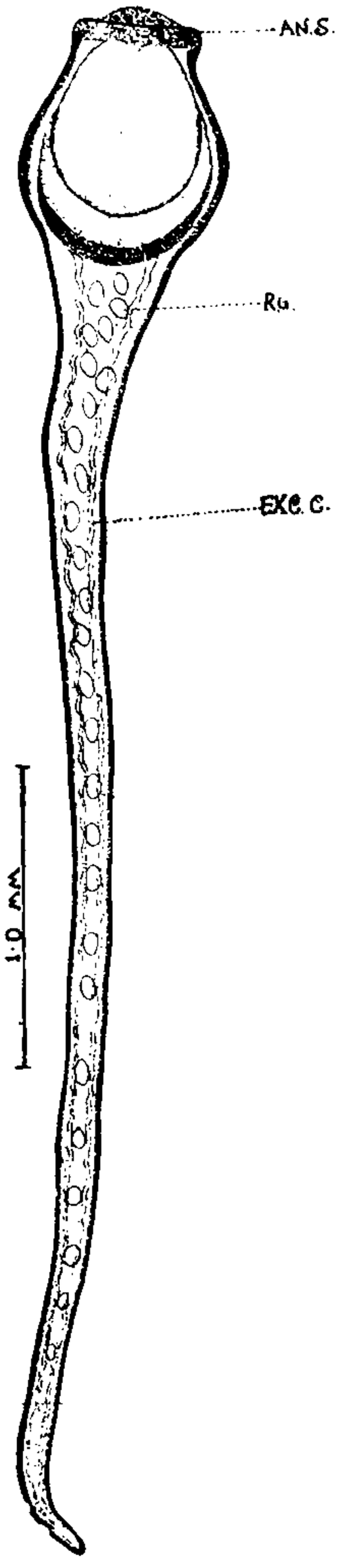
1. De Campos, *Rev. Brasil. Biol.*, 1962, **22**, 307.
2. Dutta, R. M. and Sen, S. N., *Proc. Indian Sci. Cong.*, 1967, p. 325.
3. Erdtman, G., *Pollen Morphology and Plant Taxonomy Angiosperms*. Hafner Publishing Company, New York, 1952, p. 75.
4. Nair, P. K. K., *Bull. Natl. Bot. Gardens*, 1962, No. 63.
5. Nilsson, S. and Robyns, A., *Pollen et Spores*, 1975, **17**, 59.
6. Prasad, S. S., *J. Indian Bot. Soc.*, 1963, **42**, 463.
7. Tsukada, M., *Pollen et Spores*, 1964, **6**, 393.

ON *CEPHALOBOTHRIUM* LARVA (CESTODA : LECANICEPHALIDEA) IN THE MARINE CRAB, *CHARYBDIS (CHARYBDIS) CRUCIATA* OF WALTAIR

K. J. CHANDRA AND K. HANUMANTHA RAO
Zoology Department, Andhra University
Waltair 530 003, India

COMPLETE life cycle data on members of the order Lecanicephlidea (Cestoda) which are parasitic exclu-

sively in Elasmobranch fishes, are lacking, and no study has yet been made of full development of these tapeworms. Wardle and McLeod[1] and Yamaguti[2] made no reference to their development or larval stages. There are reports on the larvae of lecanicephalidean genera, *Lecanicephalum*, *Tylocephalum* and *Polypocephalus* recovered from molluscs and crustaceans[3–7]. However, there is as yet no report on the larva of *Cephalobothrium* sp. It is therefore of interest to report a larva of this genus encountered in the crab, *Charybdis* (*Charybdis*) *cruciata* (Leene, 1938) from Waltair coast.



1

FIG. 1. Larva of *Cephalobothrium* species. AN.S.—Anterior sucker; R.G.—Refringent granules; EXC.C.—Excretory canals.

During 1978–1980, while examining molluscs and crustaceans for larval cestodes, nine specimens of *C.* (*C.*) *cruciata* were found infected. From each host 1–15 larvae were recovered. The larvae were found in the muscles or in the body cavity. When removed to sea water the worms were milky-white and showed active movements.

The larva has a scolex, followed by an elongated body. Total length 4·712–11·625 mm. Scolex with a large circular sucker 0·682–0·992 mm diameter. Internally, localized yellowish material enmeshed in muscle fibres could be seen in this region, while the unsegmented elongated body displayed numerous large, refringent granules. The excretory or osmoregulatory canals were seen running antero-posteriorwards (Fig. 1).

The present report on the lecanicephalid larva in the muscle and body cavity of the *crab C.* (*C.*) *cruciata* establishes this decapod as a possible intermedite host.

One of us (K.J.C.) thanks the Ministry of Education and Culture, New Delhi, for financial assistance and also the Bangladesh Agricultural University, Mymensingh, for granting study leave.

May 19, 1981.

1. Wardle, R. A. and McLeod, J. A., *Zoology of Tapeworms*, The University of Minnesota Press, 1952.
2. Yamaguti, S., *Systema Helminthum.* Vol. II. *The Cestodes of Vertebrates*, Interscience Publishers, 1959.
3. Fuhrmann, O., *Kukenthal's Hanbuch Der Zoologie*, 1930–1931, **2**.
4. Cheng, T. C. and Rifkin, E. J., *Invertebrate Pathol.*, 1968, **10**, 65.
5. —, *Ibid.*, 1975, **26**, 395.
6. Reimer, V. L. W., *Angwe. Parasitol.*, 1975, *Jg.* 16, H. 1.
7. Cake, E. W. Jr., *Proc. Helminthol. Soc. Wash.*, 1976, **43**, 160.