

TABLE I

Proportion of fed larvae to fed nymphs of *Hyalomma* species dropped from different hosts following the release of larvae.

Hosts	Tick species					
	<i>H.a. anatolicum</i>	<i>H. dromedarii</i>	<i>H.m. isaaci</i>	<i>H. brevipunctata</i>	<i>H. hussaini</i>	<i>H. kumari</i>
White mouse	25 : 0 * (550) **	62 : 0 (600)	12 : 0 (1600)	1944 : 1 (4000)	994 : 17 (1600)	1338 : 0 (3300)
Spiny mouse	ND	ND	ND	90 : 0 (600)	354 : 0 (700)	50 : 0 (400)
Common Indian rat	No larvae fed (200)	ND	No larvae fed (200)	3515 : 83 (3700)	2068 : 3 (5240)	2273 : 118 (3000)
Guinea pig	1770 : 328 (4450)	386 : 352 (1500)	0 : 39 (3200)	3067 : 0 (4680)	13 : 0 (1680)	671 : 0 (1000)
Rabbit	15 : 911 (4000)	728 : 304 (2650)	0 : 308 (4000)	3 : 0 (1000)	73 : 0 (2300)	967 : 0 (2000)
Chicken	813 : 278 (2150)	121 : 20 (900)	0 : 352 (1700)	382 : 0 (800)	25 : 0 (1450)	38 : 0 (1000)
Cow calf	626 : 532 (4400)	No larvae fed (1200)	0 : 37 (1300)	No larvae fed (4200)	9 : 0 (2500)	ND

*Number of fed larvae : No. of fed nymphs dropped. ** Approximate number of larvae released for feeding. ND = Not done.

During the course of their evolution from a three-host to a two-host and one-host feeding pattern, ixodid ticks have perhaps changed many hosts. The present study indicates that the feeding pattern in species of the genus *Hyalomma* is still in the process of evolution.

24 December 1981

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BARNEA MANILLENSIS (PHILLIPI) (BIVALIA : PHOLADIDAE) - A NEW RECORD FOR INDIA

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PHOLADES, commonly known as piddocks have long been known for the destruction of submerged wood, hard clay, lime stone, brickworks, rock and even plastics, by boring into these materials¹⁻⁷. The financial loss caused by boring molluscs probably exceeds the amount realised from the use of molluscs for food and for other purposes⁸. Boring pholades in certain localities are as destructive as teredinids on account of their ability to destroy a wide variety of substrata.

Five species of pholades namely, *Martesia striata*, *Martesia fragilis*, *Martesia* sp. (*M. obtecta*?), *Xylophaga* sp. and *Barnea birmanica* have so far been known as pests of wood along the coasts of India^{7,9,10}. Among them, the first two species have been studied in considerable detail. *M. striata* is an ubiquitous species along the Indian coasts and *M. fragilis* is reported as a species that bores into floating timber in some localities¹⁰. *Martesia* sp. was first reported from the Talapady mangroves (Mangalore) recently as boring into living prop roots⁷. It has subsequently been collected from several backwater localities along the West coast of India and has now been tentatively identified as *Martesia obtecta*¹¹. Except for a note on the occurrence of wood boring *Xylophaga* sp. in the Bay of Bengal¹² nothing is known regarding this species and *Barnea birmanica* has been reported from the Pichavaram mangroves, southeast coast of India¹³. The present note reports the occurrence of *Barnea manillensis* (Philippi) which hitherto has not been recorded from Indian waters.

Six living specimens of *Barnea manillensis* were collected from a water-logged piece of wood at Sanghumughom, Southwest coast of India on 4 December 1978. The generic diagnosis as *Barnea* Risso was made based on the following characteristics. Shell white, elliptical in outline, anteriorly beaked; accessory plate consisting of a simple calcareous protopax; simple umbonal reflection; and, sculpture over the shells consisting of concentric ridges and radial ribs.

Specific diagnosis as *B. manillensis* (Philippi)¹⁴ has been based on shell having valves which are strongly beaked anteriorly, and rounded; posteriorly; sculpture over the entire surface of the shell; large pedal gape; and, simple lanceolate protoplax (figure 1). Siphons were in extended condition at the time of collection. Inhalent and exhalent siphons are united and covered over with a papillose sheath. *B. manillensis* was described from Manila, Philippines and it is widespread in the Indo-Pacific¹¹. Species of the genus *Barnea* bore into a wide variety of substrata such as loose sand, clay, rock and wood¹.

The present record indicates that *B. manillensis* is active along the southwest coast of India, possibly in offshore and deeper regions. The wood from which these specimens were recovered appears to be a broken piece of catamaran. Besides *B. manillensis*, the wooden piece, also contained several specimens of *Martesia striata* and a few pairs of shells and pallets of the shipworm *Teredothyra smithi*.

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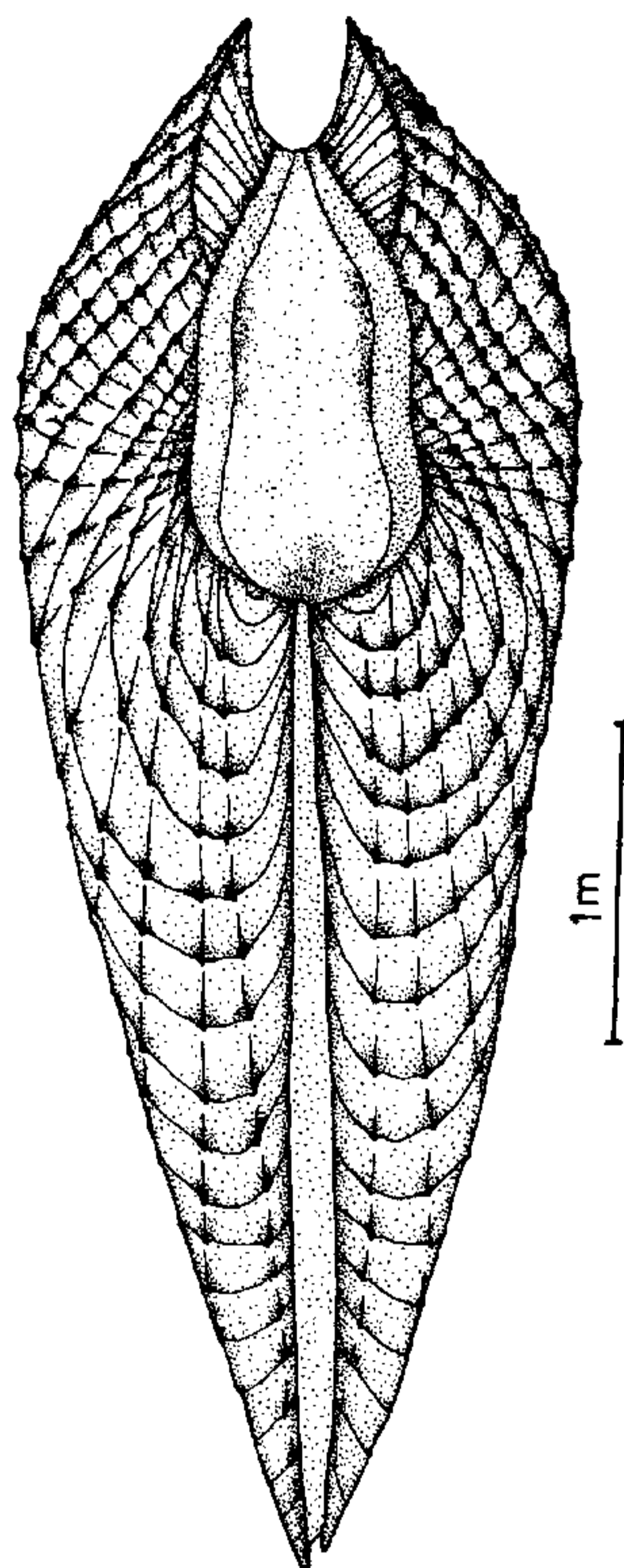


Figure 1. Dorsal view of *B. manillensis* showing the protoplax and sculpture over the valves.

22 September 1981

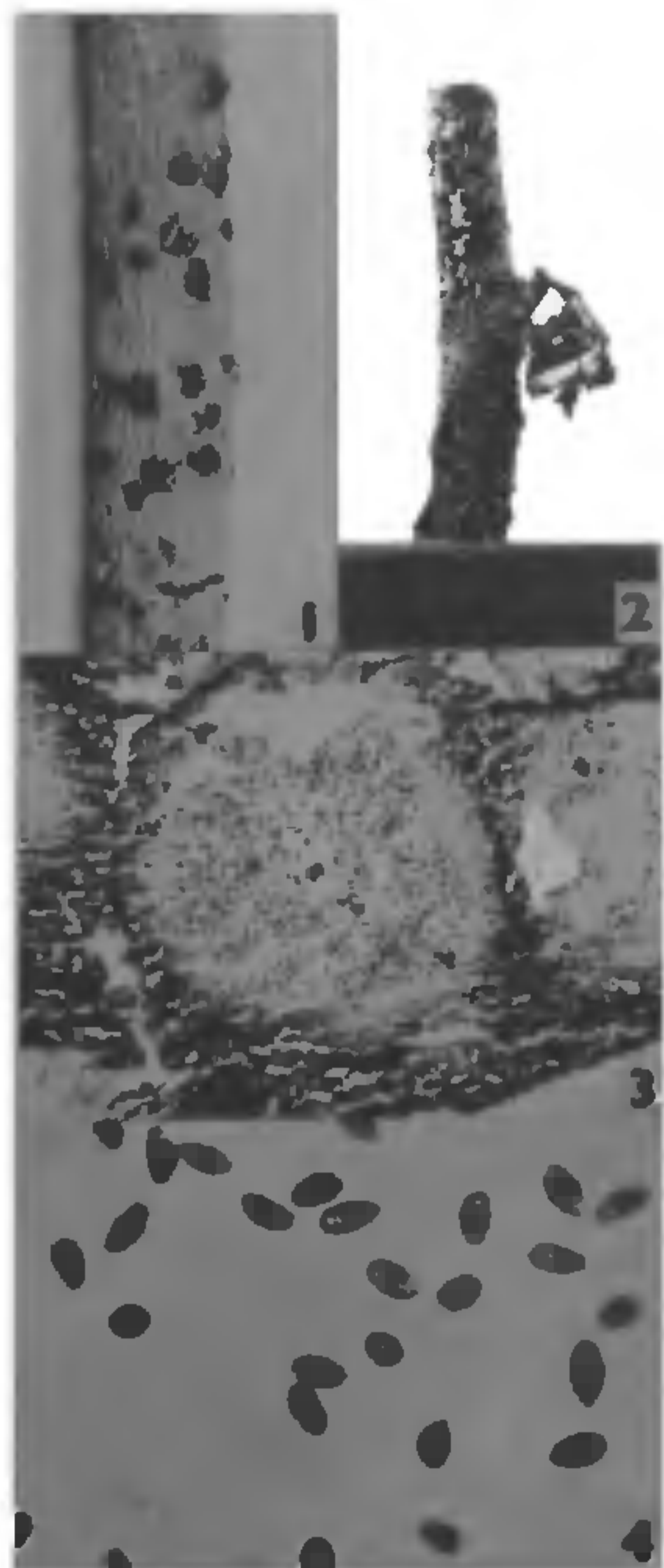
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A NEW RECORD OF *BOTRYODIPLODIA THEOBROMAE* PAT. ON *MORUS ALBA* L.

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DURING a recent survey of phytopathogenic fungi in the mulberry (*Morus Alba* L.) plantation around Bangalore, a severe infection was observed on a few sprouting stems of mulberry. The symptoms manifest in the form of greenish black lesions in the early stage and later produce black carbonaceous structure in



Figures 1-4. 1. Naturally infected stem. 2. Artificially inoculated sprouting stem. 3. Pycnidia. 4. Pycnospores.

groups. Isolation from the surface-sterilised diseased tissue on potato dextrose agar yielded a Sphaeropsidalean fungus which on examination appeared to be a species of *Botryodiplodia*.

Pathogenicity of the fungus was proved by artificially inoculating healthy sprouting stem with the isolates. Reisolates from the infected stem yielded the same fungus.

Colonies on potato dextrose agar, greyish brown to dark, pycnidia developed after 7-10 days, black, ostiolate, erumpent, stromata confluent, conidiophores, short hyaline measuring $7-15 \times 3 \mu\text{m}$ conidia dark and two-celled at maturity striated measuring $24 \times 12-16 \mu\text{m}$.

Based on the above description, the present isolate is identified as *Botryodiplodia Theobromae*, which has not been reported on mulberry so far¹. The culture has been deposited in the mycology division of IARI under No. 3065 and also at mycological collections, Bangalore University under No. 32.

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YELLOWING DISEASE OF *UROCHLOA PANICOIDES* BEAUV.

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DURING late kharif of 1980, yellows type of symptoms were observed on *Urochloa panicoides*, a common graminaceous weed in and around sugarcane fields in the Regional Research Station, University of Agricultural Sciences, Mandya, Karnataka, India. The disease was later continuously observed in this locality.

The leaves of infected plants showed slight yellow discoloration in the beginning and gradually as the disease advanced the leaves became completely white (figure 1). The leaves were reduced in size and the infected plants showed excessive sprouts from the nodes of basal portions. The internodes were shorter than normal. The panicles of the infected plants were shorter and sterile. The symptoms on *U. panicoides* resemble many yellows diseases¹⁻³.