

nature they may be called as ambilyosomes.

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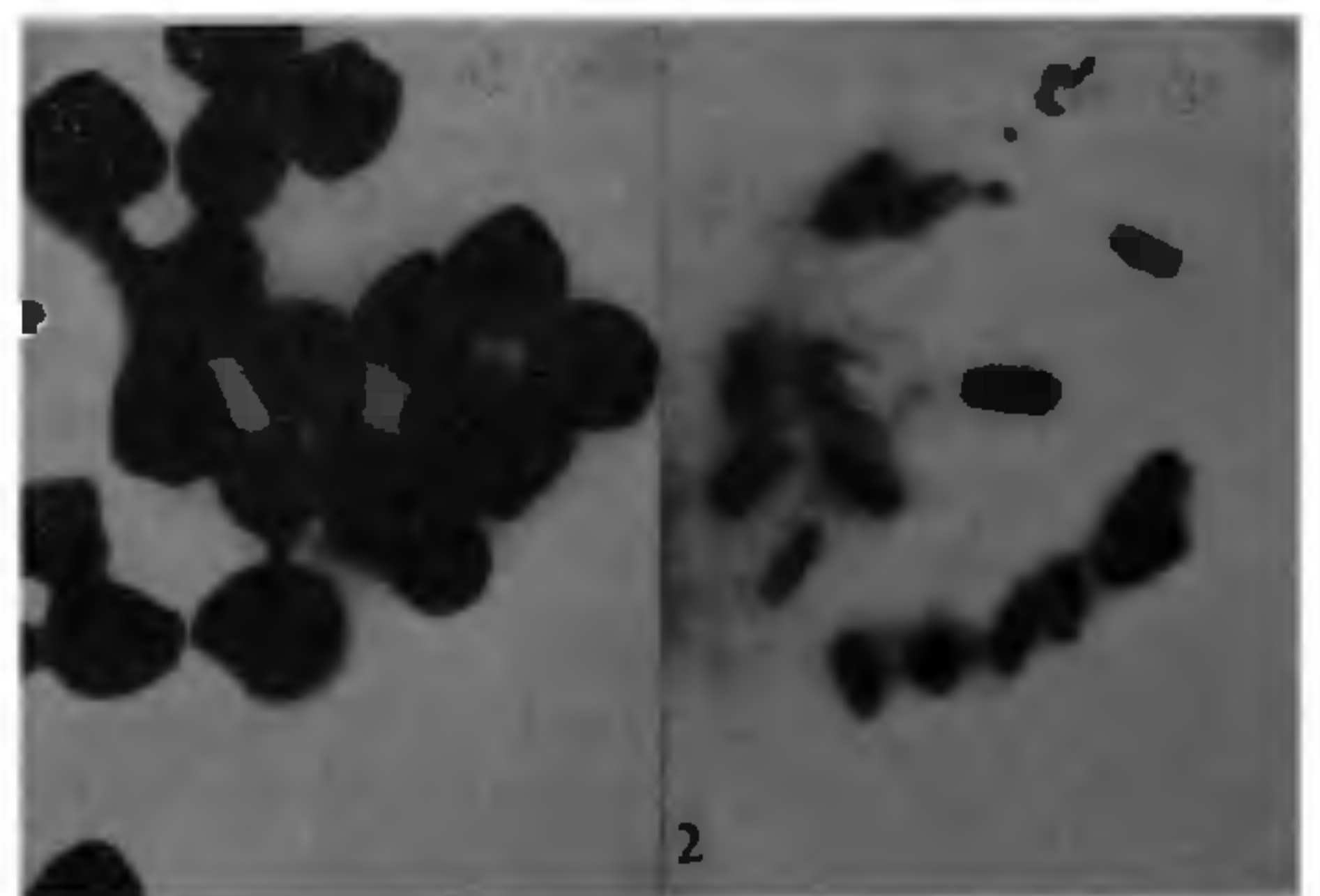
NUCLEAR POLYHEDROSIS OF *SESAMIA INFERENS* (NOCTUIDAE: LEPIDOPTERA) THE PINK STEM BORER OF RICE

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SESAMIA inferens Walker is a polyphagous insect pest infesting sugarcane, sorghum, finger millet and rice. During the course of laboratory rearing, larvae of *S. inferens* were consistently found dead in the insectary, due to polyhedrosis². Microscopic examination of the haemolymph and tissue smears revealed a large number of refractile polyhedral bodies which were negative to staining by Giemsa. Rice stem pieces dipped in partially purified polyhedral suspension, when fed to healthy laboratory reared test larvae, caused the infection. The infected larvae came out of the stems. As the disease intensified, the ventral side of the infected larvae turned whitish, starting from fifth segment of the body and gradually progressing

towards the end. Whitening was more prominent at the intersegmental membrane. The cadavers were dull white to light brown in colour. Larvae were seen either sticking to the inner surface of rearing-jar or hanging by prolegs from its top. The integument was very fragile and easily ruptured, liberating the liquefied body contents. The test larvae died in 3-5 days.

The dead larvae decomposed in distilled water for one month was centrifuged by alternate low (1000 g) and high (5000 g) speed centrifugation for 10 and 20 min. respectively. Highly purified polyhedral suspension was obtained by sucrose 20 to 60% (w/v) density gradient. These polyhedra were placed on the 'Formvar'-coated grids and observed under Hitachi electron microscope with 50 kV operating voltage. The polyhedra were irregular in shape with an average size of 0.84 μm (figure 1). In order to locate the virions in the polyhedra, crystallized protein of polyhedra was selectively disaggregated by treatment with thioglycolate at pH 10 for 1 min. Dissolution was performed on the specimen holder ('Formvar'-coated grid). These preparations were stained with 3% uranyl acetate. Thioglycolate acted upon the polyhedral protein and dissolved the polyhedra liberating the virions from the polyhedral inclusions (figure 2). The virions were rod-shaped and measured 215 \times 35 nm. They were enveloped in bundles of 2 or 3 (figure 2). Two or more virions in a bundle were reported from nuclear polyhedroses of *Euproctis similis*³ and *Bellura gortynoides*⁴. After shedding of virus particles, the envelopes appeared spherical¹. The bundles appeared to be randomly distributed in the polyhedra.



Figures 1 & 2. 1. Polyhedral inclusions of *Sesamia inferens* nuclear polyhedrosis virus 2. Bundles of virions in dissolved polyhedron.

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GABBROIC ANORTHOSITE FROM TOGAMALAI AREA, COIMBATORE DISTRICT, TAMIL NADU.

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AN elliptical body of gabbroic anorthosite occurs at the top of the Togamalai hillock situated 3 km North-

Eastern of Tolampalaiyam Village (N 11° 11' and E 76° 50') and 32 km NW of Coimbatore Town. It is a homogeneous, medium grained, melanocratic, non-porphyrific rock comprising of plagioclase and 17% (by volume) of hornblende and other accessory minerals and hence it is classified as gabbroic anorthosite. There are angular inclusions of both leucocratic and melanocratic anorthosite amidst the gabbroic anorthosite. Further, satellite bodies of gabbroic anorthosites and typical anorthosites (8% volume of mafic content) are also found in this area. The description of the new occurrence of gabbroic anorthosite from this area will contribute to the comparative studies of similar occurrences of gabbroic anorthosites already reported from the neighbouring areas of Kerala¹, Karnataka² and Tamil Nadu³.

Geology

The main gabbroic anorthosite body is found amidst amphibolite (figure 1). The amphibolite is rich in hornblende and plagioclase. It has a core of hypersthene bearing pyroxenite or of olivine-rich peridotite. West of Tolampalaiyam and south-west of Sundakorai, the amphibolite has accessories of garnet and

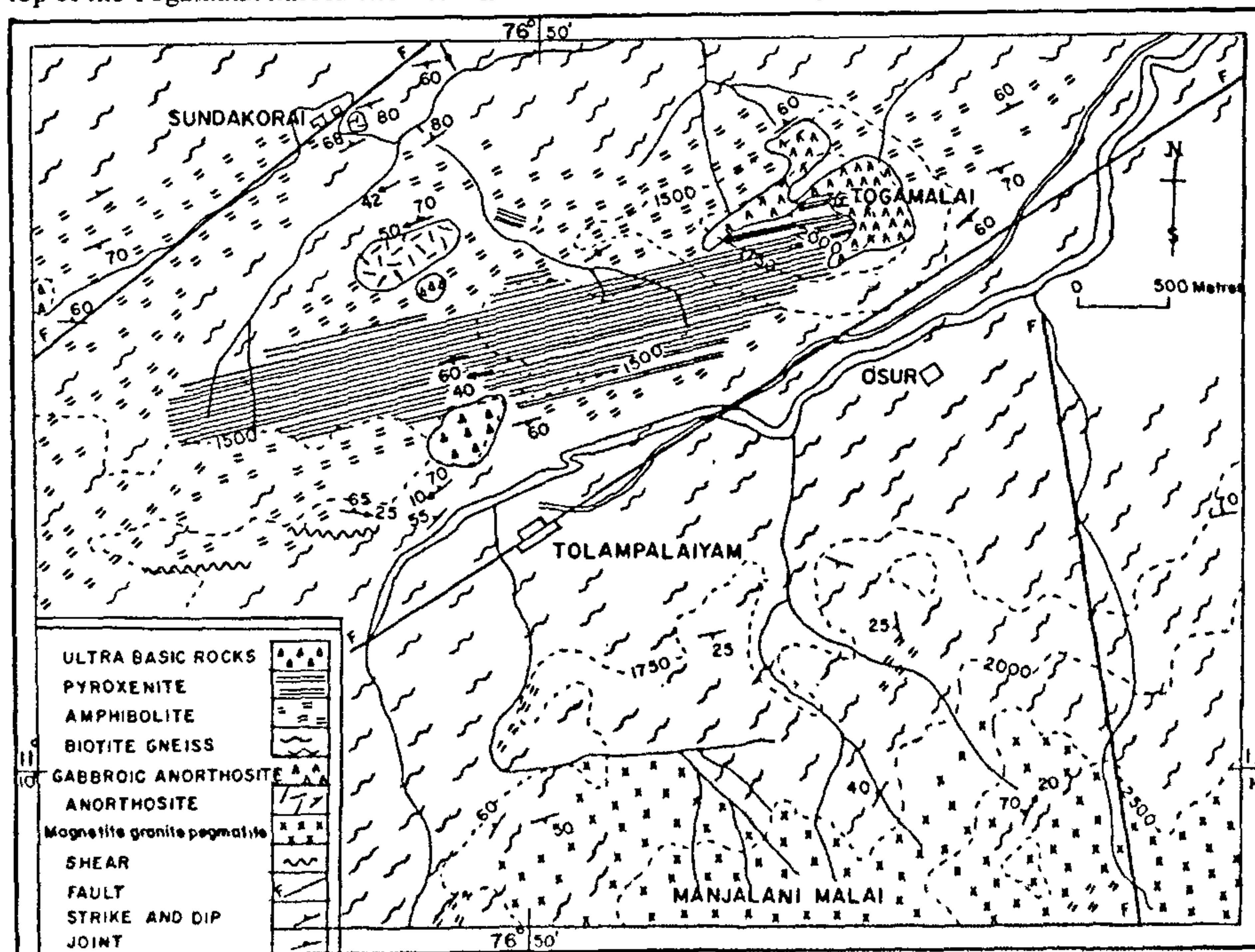


Fig. 1. Geological map of Togamalai, Tolampalaiyam, Coimbatore District, Tamilnadu.