

**OCCURRENCE OF TWO VIRUS DISEASES IN *PERICALLIA*
RICINI FABR. (ARCTIIDAE, LEPIDOPTERA)**

The black headed hairy caterpillar, *P. ricini* is a polyphagous pest feeding on a variety of crop plants like cotton, castor, banana, cucurbits, sunflower etc. During July 1972 many dead and dying larvae were found on castor plants in the college farm at Vellayani. Microscopic examination of haemolymph and tissue smears of these larvae revealed the presence of a nuclear polyhedrosis virus in some of them and a granulosis virus in some others. A few specimens contained inclusion bodies of both the nuclear polyhedrosis and granulosis indicating double or mixed infection. The pathogenicity of these two types of viruses was confirmed separately in further laboratory tests. The present paper is the first record of a nuclear polyhedrosis and granulosis from *P. ricini*.

The larvae infected with the nuclear polyhedrosis virus appeared normal for 4 to 5 days, thereafter showing loss of appetite and sluggishness. Feeding stopped almost completely 2 to 3 days before death. Towards the advanced stages, the larvae turned black in colour. The period from ingestion of the virus to death was generally 6 to 10 days. The cuticle was very fragile which ruptured on the slightest pressure liberating the liquefied internal tissues. The dead larvae were found either hanging head downwards characteristically from the foliage or lying over the leaf surfaces. Pupal mortality due to virus infection was also observed occasionally. The polyhedra (Fig. 1) varied considerably in size and shape. The virus particles were rod shaped and occurred singly and in groups.

The signs and symptoms exhibited by the larvae infected by the granulosis virus resembled closely to those of nuclear polyhedrosis except that extreme liquefaction of the internal tissues and rupture of the cuticle were lacking. The body was often slightly bloated, yet soft with intact integument. The larvae died in 8 to 12 days. Upon dissection the fat body appeared highly enlarged and opaque white in colour. The haemolymph was turbid in the early stages of infection and white in advanced stages. The granules appeared roughly oval in outline and each granule contained a single virus rod (Fig. 2).

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