aldolase activity in the present study. The accumulation of lactate in the early phase of denervation suggests its decreased conversion to pyruvate. In support of this diminished specific activity of NAD-LDH after one week of denervation was observed. However, from the second week onwards the lactate content was reduced and the LDH activity was increased significantly. Increased LDH activity indicates mobilization of lactate to pyruvate either into TCA cycle or transamination pathway. The above data clearly indicate that glucose oxidation is impaired through glycolysis during progressive denervation.

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THRUST OF THE OVIPOSITOR OF FRUIT FLY, *DACUS DORSALIS* HANDEL

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ALTHOUGH there are no significant differences in the absolute power of muscles in insects and vertebrates, the force with which insects are able to exert pressure has not been worked out in detail[1]. The jumping efficiency of various insects species have been analysed[2,3] but no efforts have been directed towards determining the pressure exerted by the ovipositors of insects specially of those which lay their eggs in fruits or barks of trees. The present communication reports the amount of pressure exerted by the ovipositor of fruit fly, *Dacus dorsalis* Handel for ovipositing its eggs in the fruit of guava (*Psidium guajava* L). It was shown that the maximum pressure which the fruit fly ovipositor exerts is around 180 kg/cm^2.

Fruit fly, *D. dorsalis* is a serious pest of guava[4]. For determining the pressure exerted by the ovipositor of the fruit fly the guava variety, *Allahabad Safeda*, was used. A total of 739 fruits were examined and their hardness measured by using Magness-Tylor pressure testor. The percentage infestation of fruit was determined by keeping the fruit separately in wire mesh containers till such time that the maggots could easily be detected. The hardness of the fruit varied and it could withstand pressure between 7 and more than 180 kg/cm^2. On this basis the fruit could be divided into six distinct categories (table 1). Each category had nearly equal percentage of fruit. The infestation by the fruit flies

Table 1 *Hardness and infestation of guava fruit fly D. dorsalis*

Pressure (kg/cm^2)	No. of fruits examined	No. of fruits infested	Per cent infestation
7–35	156 (21.1)	156 (21.1)	100
42–70	142 (19.2)	142 (19.2)	100
77–105	110 (14.9)	109 (14.7)	99
112–140	103 (13.9)	77 (10.4)	79
147–175	132 (17.9)	54 (7.3)	41
180 and above	96 (13.0)	8 (1.1)	8

Note: The hardness of the fruit was measured by using Magness-Tylor pressure tester; figures in parenthesis are the percentage of the total fruits examined.

ranged between 8 and 100% on the basis of fruit infestation in each of the above mentioned categories. It was, however, interesting to observe that the softer fruits were infested more than the harder fruit samples (table 1). From the results it was evident that the ovipositor of the fruit fly can exert a pressure more than 180 kg/cm^2. This is indeed a tremendous amount of force that is exerted by the fruit fly to lay its eggs. These results also contradict the commonly held view that the fruit flies lay their eggs on the small immature fruit[5]. From the observations made it appears that the fruit fly lays its eggs only after the fruits have been matured a little and have become soft and cannot withstand the pressure of 180 kg/cm^2.

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NEW RECORD OF THE NUCLEOPOLYHEDROSIS OF *TRABALA VISHNU* (LEFEVERE) FROM INDIA

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THE leppet-moth caterpillar, *Trabala vishnu* (Lefevere) (Lasiocampidae: Lepidoptera), distributed widely in Burma, China, East Indies, India, Java, Sri Lanka etc is a sporadic yet potentially destructive pest of forest and agricultural crop plants especially, castor, guava, gum tree, Indian almond, Indian rose, Java plum, pomegranate, rose apple, sal, surinam cherry, and yellow bells[1–5]. Five natural enemies reported so far, from *T. vishnu* include the eupelmid[6] egg parasite from Pantnagar in Uttar Pradesh, three larval parasites namely two braconids[7], *Microdus fumipennis* Cam and *Microdus tuberculatus* Cam and one dipteran[8], *Crossocosmia sericariae* Rondani from Calcutta in West Bengal and an unidentified bacterial disease[9] affecting its larvae and pupae at Bangalore in Karnataka. The present communication deals with the occurrence of nucleopolyhedrosis in the larvae of *T. vishnu* feeding on castor, *Ricinus communis* Linnaeus leaves, in the Punjab. This appears to be the first report of a nuclear polyhedrosis virus infection in this lasiocampid caterpillar, *T. vishnu* from India.

During investigations on the microbial infections of insect pests, a few dead and dying *T. vishnu* larvae were noticed infesting castor in Ludhiana district and exhibiting symptoms of a viral disease viz hanging their heads downwards while keeping their larval cadavers fixed to the castor leaves by their prolegs and at times releasing their cloudy-body contents from ruptured integuments (figure 1). The field collected wild populations of *T. vishnu* were maintained on fresh clean castor leaves in the laboratory, to detect any natural infection. Up to 10% natural incidence of this viral disease alone was detected during October and November. The progressive symptoms of the viral disease observed, included loss of appetite, sluggish movements, loosening of the hairy-tufts from their integuments coupled with stretching of intersegmental membranes, characteristic whitening of sterna and quite frequently the rupturing of integuments before their death. Some of the diseased larvae could crawl to the top of the rearing containers and hang themselves in typical downward positions with their