
RECORD OF THE POLLINATING WEEVIL
ELAEIDOBUS KAMERUNICUS (FAUST) (COLEOPTERA : CURCULIONIDAE) IN OIL PALM PLANTATIONS OF KERALA

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The red oil palm *Elaeis guineensis* Jacq a native of West Africa, was introduced to several of the South East Asian countries such as Malaysia, Indonesia, India etc. In these countries, the inadequacy of pollination has been a major problem. Besides the low rate of fruit setting, sometimes lack of adequate pollination also results in bunch failure. Hence efforts are being made to evaluate the role of different species of insects visiting the male and female inflorescences of oil palm and to identify the ones which are beneficial pollinators. Recently certain curculionid weevils were observed in large numbers on the inflorescences in the oil palm plantations at this institute. These weevils were identified as *Elaeidobius (= Prosoestus) kamerunicus* (Faust) (Coleoptera: Curculionidae) belonging to the tribe Derelomini of the subfamily Erirrhini- nae (figure 1). A survey revealed the occurrence of the same in the oil palm plantations of Chithara, Kerala.

*E. kamerunicus*, one of the most important pollinating agents for oil palm in Cameroon, has been successfully introduced and established in oil palm plantations in Malaysia by the middle of 1981. Over the first seven months of 1982, bunch weight was 10% above the mean for the previous five years in Kluang and 35% above in Sabah. Total yield was 20% higher in Peninsular Malaysia and 53% higher in Sabah.

The weevils chew anther filaments of opened male flowers. When they crawl or move about on the spikelets the pollen grains adhere to their body and during their subsequent visits to the female inflorescences the pollen grains are deposited on the stigma of female flowers. When the weevils crawl over the male inflorescences a large amount of pollen grains are disbursed which are carried by wind.

Figure 1. *Elaeidobius kamerunicus* (×300).
The weevils are dark brown in colour. The males are 0.3 cm long and shorter than females (0.4 cm). During anthesis, the weevils are found congregating on the male inflorescences and the average population recorded per male inflorescence was 30,000 weevils (figure 2). They are only visitors on the female inflorescence. The average number of weevils visiting per inflorescence was 390/hr. The weevils are more active during morning hours.

The weevils lay eggs inside the spent male flowers. They were not found ovipositing in the female flowers. Field observations revealed that all the spent male inflorescences lodged different stages of the weevil. From a field collected spent spike up to 3,000 weevils emerged. Small emergence holes could be observed on the spikelets after the weevils emerged. Under laboratory conditions, the weevil completed its life cycle in 11–12 days.

The acceptability of the weevil for coconut and arecanut male flowers was studied under caged conditions. It was found feeding on the male flowers of both coconut and arecanut palms. However they did not oviposit on those flowers.

Detailed studies on the biology and the host range of the weevil and evaluation of its role as a pollinator in oil palm are in progress.

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A REPORT OF MONOHYBRID RATIO FOR ALBINO EXPRESSION IN BAMBUISA ARUNDINACEA (REITZ) WILLD

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DURING the studies on progeny trial in Bambusa arundinacea (Retz) Willd, certain interesting observations were made. In two out of thirteen families, albinos had been noticed. It was interesting that in both cases, normal plants along with albinos segregated in a simple Mendelian ratio of 3:1.

Mass flowering of B. arundinacea occurred during 1982–86 in many parts of Kerala and it received much attention because normally bamboos flower gregariously only at long intervals.

Seeds were collected from thirteen bamboo clumps from Kannara and Peechi area of Trichur District, for laying out a progeny trial. They were germinated and daily observations recorded. Among these, albinos were noticed in two families (Nos. 9 and 12) and their proportions were noted. There were 870 normal plants and 289 albinos in family No. 9 and 1097 normal plants and 353 albinos in family No. 12. The albinos survived only up to 12–16 days of germination. In both cases they segregated in a monohybrid ratio of 3:1 (table 1), as was observed in Himalayan Pine1 and Slash Pine2.

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