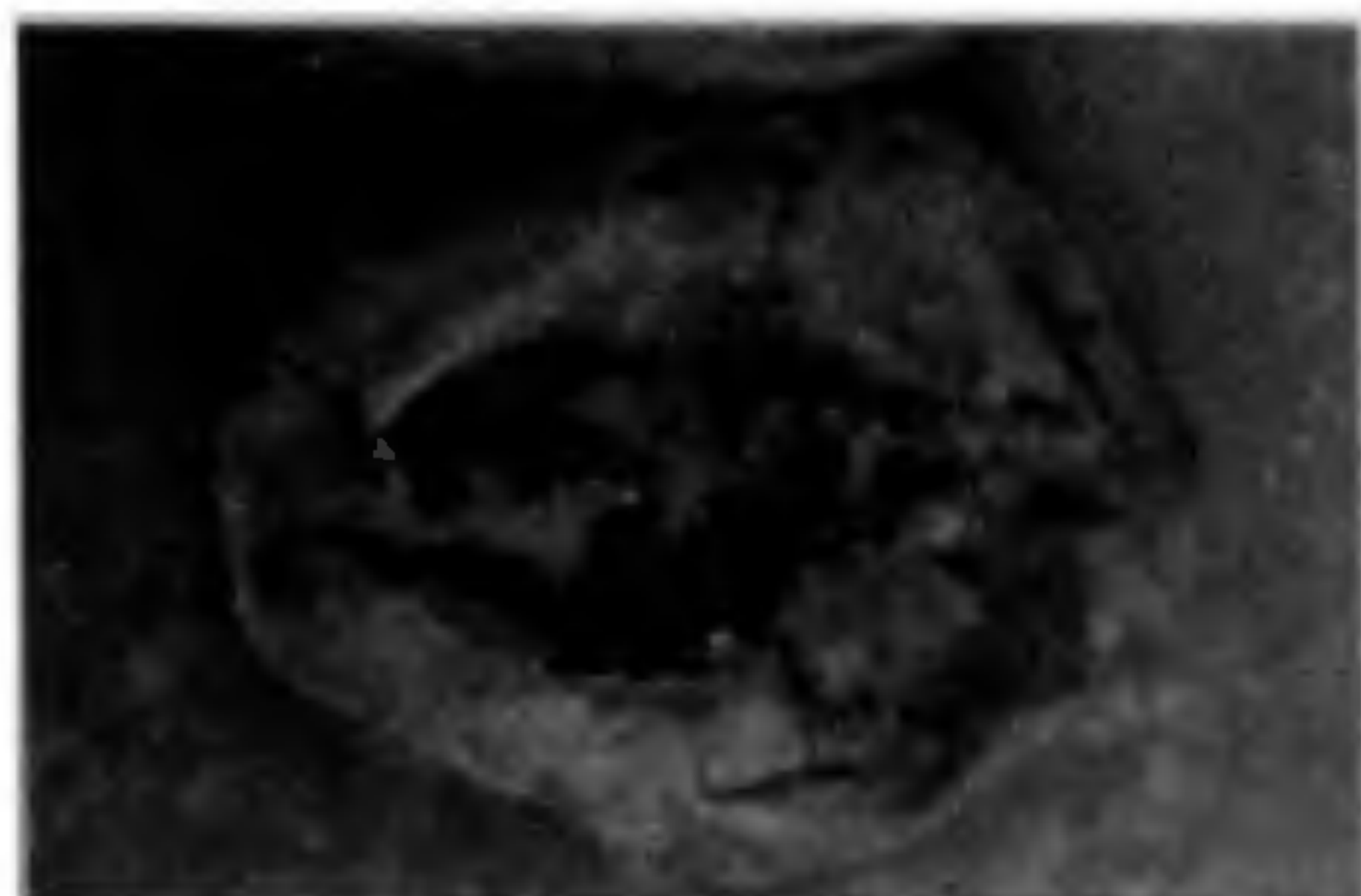


Carambola fruit fly: Can we prevent its entry into mainland India?

Carambola fruit fly (*Bactrocera carambolae* Drew and Hancock) is one of 52 species described under the *Bactrocera dorsalis* complex in Asia. Eight of them including *B. carambolae* are considered to be of economic importance¹. Carambola fruit fly is known to attack a wide range of fruits in the tropical and warm temperate regions of the world. In Asia they are widespread in Indonesia (Lombok, Sumbawa and probably Kalimantan), Malaysia (Peninsular and Sabah), southern Thailand² and Andaman Islands, India³. In the Andaman Islands they target many tropical edible minor fruits like rose apple, watery rose apple, water apple^{4,5} and have recently been found infesting jack fruit (to a lesser extent); guava, mango, papaya (to a lesser extent) and a wide range of forest fruits. However carambola, its principal host is not attacked by this fly on these islands³⁻⁵.

Interestingly, carambola fruit fly has not yet been recorded from mainland India³. Though Andaman Islands are completely cut off from the Indian mainland and placed remotely in the Bay of Bengal, they are well connected by both air and sea. On account of this, there is always a risk of unintended introduction of carambola fruit fly (or any other pests) into the mainland especially since there is practically no restriction on the movement of edible fruits, vegetables (and other food commodities) from the Andaman Islands into mainland India and vice-versa.



Carambola fruit fly maggots in papaya.

Being a tourist spot, increased air and sea traffic during the tourist season increases the risk of introduction of the pest. It may be pertinent to state here that the Indian mainland has already many destructive fruit fly species like *B. dorsalis* (Hendel), *B. caryeae* (both belonging to *dorsalis* complex); *B. zonata* (Bezzi), *B. correcta* (Saunders) and *B. latifrons* (Hendel) which seriously limit the cultivation of a variety of fruits and vegetables³. Under such circumstances, it is imperative to have strict quarantine at the ports of entry into both Andaman Islands and the Indian mainland. It may be noted that in March 1994 the Ministry of Agriculture, Guyana served a notice to the Caribbean Plant Protection Commission (CPPC) to be alert to prevent the unwanted introduction of the carambola fruit fly into Guyana, as a single specimen of the fruit fly had been recovered from one of the monitoring traps set up in the Sipartua region in the neighbouring country Suriname, where the carambola fruit fly had already established itself⁶. Introduction of the fly into Suriname in 1975 was either by tourists or through trade from Indonesia⁷.

Though the introduction of carambola fruit fly has little immediate impact on the cultivation of major fruit crops on



Carambola fruit fly maggots in a fruit of *Planchonina valida* (Bl.) Bl. – An endemic forest tree.

the mainland, the fly could undergo an expansion of its host range into other but more economically important fruit crops. Evidence that this may happen is already shown by the recurring infestations in *Manilkara zapota* and *Zizyphus jujube* in Suriname⁸. In the Andaman Islands, infestation to a considerable extent does occur on rare occasions in 'local' mangoes, though mango and guava are generally considered secondary hosts. Carambola fruit fly has so far been reared from 21 host fruits which include edible as well as wild ones in the Andaman Islands. In this context, it may be stated that papaya, one of the major fruit crops in Andaman Islands has been seen, though on rare occasions, to be infested by this fruit fly. However, the possibility that it will adapt to other major fruit crops cannot be ruled out.

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H. R. Ranganath, K. Veenakumari and G. Shyam Prasad, Central Agricultural Research Institute, Port Blair, Andamans 744 101, India.