However, administration of the same quantity of insulin, one hour prior to glucose load, produced less significant increase in the glycogen content of the hepatopancreas ($P<0{\cdot}05$), but a statistically significant increase in the foot muscle ($P<0{\cdot}01$). Injection of a higher dose of insulin (50 IU/Kg BW) an hour prior to the glucose load resulted in a significant increase in the glycogen content of both the tissues ($P<0{\cdot}01$).

It is inferred from our observations that in *C. belangeri*, a single low dose of insulin has not significantly altered the blood glucose level, whereas, insulin followed by a glucose load elicited significant changes in the blood sugar level, the magnitude of which run parallel to the dose of administered insulin. Further, mobilization of blood glucose for incorporation into glycogen in the foot muscle and hepatopancreas is enhanced by a higher dose of insulin. By *in vitro* experiments it has been shown that the rate of glycogen incorporation in isolated rat diaphragm muscle is directly related to the extra cellular glucose and the availability of Insulin[5]. The behaviour of insulin appears to be similar in promoting glucose utilization both in vertebrates and in a highly organized invertebrate like *C. belangeri*.

Studies by Sukumaran and Sriramulu[6] in *C. belangeri* suggest the existence of a dual mechanism, one influencing hyperglycemia and the other hypoglycemia in the regulation of carbohydrate metabolism. The present study also gives credence to such an idea and points out to the necessity for identifying and characterising the homologues of pancreatic β cells, possibly in the digestive tract. It is worth mentioning here that in a few gastropod molluscs, *Buccinum undatum*, *Pecten maximus* and *Eledon cirata* evidence has been presented for the occurrence of homologues of pancreatic β cells in the digestive tract and the production of insulin-like substances, Davidson *et al*[7] and Boquist *et al*.[8]

Department of Zoology,
Annamalai University,
Annamalainagar,
August 29, 1977.

R. K. RAJAN.
VIJAYAM SRIRAMULU.

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FIRST RECORD OF HOST PLANTS AND ADDITIONAL DISTRIBUTION OF *NYSIUS INCONSPICUUS* DISTANT (LYGAEIDAE: HETEROPTERA)

DISTANT (1903) described *Nysius inconspicuus* from Bor Ghat[1] and later reported the same from Mysore[2]. It was reported, sucking the sap from the tender parts of the growing gingelly (*Sesamum indicum*, Pedaliaceae) and to be injurious[3] to the crop. Recently the seedlings of gingelly in Tindivanam (Tamil Nadu) were severely infested by this lygaeid bug. *N. inconspicuus* is reported only from the Oriental region and nothing is known of its other host plants or biology. Since gingelly is a cultivated crop and it is not grown throughout the year, it was desirable to search for alternative host plants of this bug. During the present study it was found feeding and breeding on *Aerua tomentosa*, *Amaranthus beng.alensis*, *Amaranthus viridis*, *Celosia argentea* (Amaranthaceae), *Ageratum conyzoides* (Compositae), *Euphorbia hirta* (*Euphorbiaceae*) and *Mollugo* sp. (Aizoaceae). The bug shows preference to Amaranthaceae and *Aerua tomentosa* is the most preferrel host plant. Large populations of this bug are noticed during the months of August–October and heavy incidence was recorded from Cuddalore, Kodaikanal, Madras, Mahabalipuram, Periyakulam, Tindivanam, Villupuram, Vercaud (Tamil Nadu); Pondicherry, Mysore, Seringapatam, (Karnataka) and Palghat (Kerala).

Central Institute for Cotton Research,
Regional Station,
Coimbatore 641 003, *August* 26, 1977.

K. THANGAVELU.

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