hypothesis that the migration differences observed for both enzymes are each controlled by a single locus with 2 codominant alleles. For IDH, these alleles are Idh^{100} and Idh^{93}. For MDH, they are Mdh^{100} and Mdh^{109}. The heterozygotes for the two alleles at the Idh and Mdh loci had an intermediate band in addition to the parental ones, indicating that IDH and MDH isozymes are dimers.

We also noted the presence of other rare variants for IDH and MDH which could be codominant with the other alleles of each enzyme. □

Oviposition of brown planthopper (BPH) on some common weeds, wild rices, and rotation crops

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BPH *Nilaparvata lugens* Stål usually lays its eggs in small groups inside the leaf sheath and midrib of rice plants by making an incision and inserting eggs inside the tissues.

We studied BPH oviposition on 52 common rice weeds, 17 wild rices, and 21 crop plants in no-choice tests. Five pair of 1-wk-old BPH adults were confined on young, potted test plants for 4 d. The test plants were examined for oviposition sites and egg hatching every day for 4 d after the first nymphs hatched. If nymphs did not appear, plants were examined with a microscope for unhatched eggs. We had the following results.

There was no oviposition on weeds *Chrysopogon aciculatus, Cynodon dactylon, Eleocharis dulcis, Fimbristylis bisumbellata, F. miliacea, Cyperus kyllingia, Scirpus articulatus, S. supinus, Alternanthera sessilis, Cleome viscosa, Eclipta alba, Euphorbia hirta, Gomphrena celosioides, Marsilea* sp., *Trianthema portulacastrum,* and *Vernonia cinerea.* There was also none on crop plants Indian mustard and East Indian lemon grass.

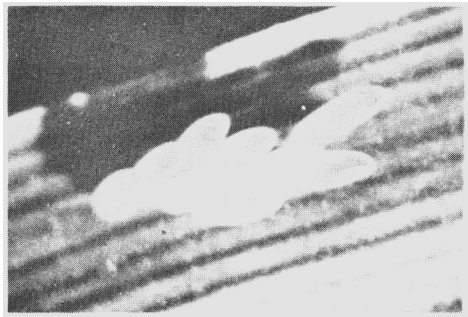
Oviposition was inside the leaf sheath tissue on the following: weeds *Brachiaria ramosa, B. distachya, Dichanthium caricosum, Digitaria ciliaris, Echinochloa colona, E. stagnina, Eragrostis gangetica, E. pilosa, E. tenella, Leersia hexandra, Leersia perrieri, Leptochloa panicea, Panicum repens, Paspalum scrobiculatum, Paspalidium flavidum, Pennisetum pedicellatum, Rottboellia exaltata,* and *setaria pallide-fusca;* wild rices *Oryza alta, O. australiensis, O. barthii, O. eichingeri, O. collina, O. glaberrima, O. grandiglumis, O. meyeriana* ssp. *granulata, O. latifolia, O. minuta, O. nivara, O. officinalis, O. perennis, O. punctata, O. ridleyi,* and *O. rufipogon;* and on crop plants wheat, barley, oats, finger millet, foxtail millet, koda millet, proso millet, little millet, and Japanese millet.

Oviposition was inside the stem tissue just below the flower head in the weeds *Cyperus compressus, C. difformis, C. distans, C. iria, C. rotundus,* and *C. tenuispica.*

The insect oviposited inside the tender stem tissue of the weeds *Bergia ammannioides, Commelina benghalensis, Heliotropium indicum, Hydrolea zeylanica, Ipomoea reptans, Ludwigia perennis,* and *Sphenoclea zeylanica;* and on crop plants maize, sorghum, pearl millet, peanut, mungbean, black gram, sunn hemp, and jute.

On crop plants sugarcane and napier grass, oviposition was inside the growing bud tissue.

The insect laid naked egg clusters on the leaf lamina of the weeds *Eleusine indica* and *Dactyloctenium aegyptium.* In these weeds the egg groups were deposited on the external surface of the leaf lamina in groups of 7-12, were visible (see figure), and hatched normally. This unusual behavior resulted in exposed eggs which may be available for predators, or contact with insecticides. Irrespective of the site and method of oviposition, all the eggs laid hatched normally at about the same time. □



BPH egg clusters on leaf lamina of a grass weed.

Occurrence of black bug in Tamil Nadu

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The black bug *Scotinophara lurida* was found in large numbers in 1984 Apr-Jul in Tiruchirapalli District, where about 4,000 ha of rices ADT36, Co 29, and BCPl are grown. There were more black bugs on ADT36 than on Co 29 and BCP1. The bug infested all varieties and caused bugburn in many fields. It infested the crop from 30 d after transplanting to harvest, during which time the population substantially increased. At late flowering stage the population averaged 20 bugs/hill.

Farmers indicated that black bug had regularly infested fields for 3 yr. In Jul-Sep, the insect infested about 800 ha. Farmers often don't see the bug because it lives at the base of the tillers.

Spraying 600 ml fenthion/ha controlled black bug. □

Gall midge (GM) ***Orseolia oryzivora*** **H & G in Zambia**

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GM has been reported in eight countries in Africa: Guinea Bissau, Senegal, Mali, Upper Volta, Ivory Coast, Nigeria, Cameroon, and Sudan. It is a localized pest of lowland irrigated rice except in Upper Volta where it is one of the most serious and widespread insect pests in irrigated and rainfed lowland rice.

In Apr 1984 IRRI and IITA organized a monitoring tour in Zambia and Tanzania. The tour group visited five rice projects in Zambia and observed GM in all lowland irrigated rice. GM incidence