

Bionomics and Importance of Two Species of *Chaetocnema* in Rice Yellow Mottle Virus Transmission in Lowland Rice in Tanzania

O.O. Banwo,^{*,1} R.H. Makundi,¹
R.S. Abdallah,² J.C. Mbapila³ and F.M. Kimmins⁴

Regular samplings were done of two important vectors in farmers' fields during the 1999/2000 and 2000/01 rice seasons at crop stages susceptible to rice yellow mottle virus (RYMV) on a traditional rice variety ('Supa') under rainfed lowland conditions to provide information on the bionomics and importance of these vectors in the disease transmission. The population of *Chaetocnema* sp. (nr. *varicornis* Jacoby) (Coleoptera: Chrysomelidae) was significantly higher in hotspot than non-hotspot areas. However, there was no significant difference in the *C. pulla* Chapuis population between these two areas. In general, the *Chaetocnema* sp. population was higher than that of *C. pulla*, and both vectors reached the peak of their population at 63 days after planting. Early planting in the hotspot areas is suggested as a disease management strategy. Both vectors are naturally infective and *Chaetocnema* sp. proved more efficient than *C. pulla* in the transmission of RYMV.

KEY WORDS: Bionomics; *Chaetocnema* sp.; *Chaetocnema pulla*; epidemiology; hotspot; vectors; non-hotspot; rice yellow mottle virus; lowland rice.

Received July 19, 2001; received in final form Nov. 27, 2001; <http://www.phytoparasitica.org> posting Dec. 10, 2001.

¹Sokoine University of Agriculture, Morogoro, Tanzania (e-mail: banwo@hotmail.com). *Author for correspondence.

²Tropical Pesticides Research Institute, Arusha, Tanzania.

³Agricultural Training & Research Institute, Ifakara, Tanzania.

⁴Natural Resources Institute, Chatham, Kent ME4 4TB, UK.