

determine the degree of genetic differentiation and reproductive isolation from the Mexican population of *D. desertorum*, as well as from *D. ritae* and *D. mathisi*.

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First record of *Zaprionus indianus* (Diptera: Drosophilidae) in the state of Espírito Santo, Brazil.

Culik, Mark P. Instituto Capixaba de Pesquisa, Assistência Técnica e Extensão Rural – INCAPER, Rua Afonso Sarlo 160, CEP 29052-010, Vitória, Espírito Santo, Brasil; E-mail: markculik3@yahoo.com

Zaprionus indianus Gupta, 1970 (Diptera: Drosophilidae), probably of African origin, is a potentially important pest of fruits that has recently been found in South America, where it was first recorded in São Paulo, Brazil, in 1999 (Vilela, 1999). Subsequently it has been recorded in the Brazilian states of Goiás, Minas Gerais, Rio Grande do Sul, Santa Catarina, and Tocantins (Castro and Valente, 2001; De Toni *et al.*, 2001; Marchiori, 2003; Marchiori and Silva, 2003; Mata *et al.*, 2004), as well as other parts of South America (Goni *et al.*, 2001). This note reports the presence of *Z. indianus* in the state of Espírito Santo, Brazil, where it was collected in September 2004, associated with ripe papaya which was used as a bait to attract flies present in the area of the collection site.

Because of the importance of *Z. indianus* as a potential pest (Vilela *et al.*, 2001), flies attracted to ripe papaya in a home garden located in Manguinhos, municipality of Serra, Espírito Santo, were collected during August and September 2004, to determine if *Z. indianus* was present in this region. Initial efforts to collect *Z. indianus* in traps such as those described by Marchiori and Silva (2003) were not successful although specimens that appeared to be this species were observed near ripe, rotting papaya fruit. In September 2004, ripe papaya fruit that had been cut open was placed on a bench (height ~0.5m) next to a mature papaya plant. After ~1 hour, flies attracted to the fruit were captured by quickly placing a plastic bag over the fruit and associated flies. In this way, 5 specimens of *Z. indianus* were collected using ripe papaya fruit as a bait in Manguinhos (20°11'34"S

40°12'34"W, altitude ~2 m), Serra, Espírito Santo, Brazil, on 12 September 2004. One live specimen was cultured with banana and produced ~30 progeny over a period of several weeks. Voucher specimens of the flies collected are deposited in the collection of INCAPER. The fact that the species was captured with little effort at a relatively small, isolated town in Espírito Santo suggests that the fly is common and is likely to be more widely distributed in the state.

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A comparative study of mating behavior and fertility in two wild types and two mutants of *Drosophila nasuta nasuta*.

Chyakumari and S.R. Ramesh. Drosophila Stock Center, Department of Studies in Zoology, University of Mysore, Mysore-570 006, India.

Mating behavior of *Drosophila* consists of specific actions, which are accompanied by orientation movements. These actions referred to as courtship displays are made up of several signals, which are performed sequentially. Mating occurs only if the female perceives these signals and reciprocates by exhibiting acceptance signals. In this way, mating behavior forms an important component, which enables a species to maintain its genetic integrity. Several investigations in *Drosophila* have clearly shown that sexual behavior is under genetic control (Spieth, 1983). Different components of sexual behavior have been analyzed in certain species of *Drosophila* (c.f., Sisodia and Singh, 1996). Further, the impacts of various mutations on selective mating and mating propensity have been analyzed in different species of *Drosophila* (c.f., Chatterjee and Singh, 1987). Though investigations on some fitness parameters in wild type and mutant strains of *D. n. nasuta* and *D. n. albomicans* have been made (Ashadevi and Ramesh, 2000; Ashadevi, 2001), different components of mating behavior have not so far been analyzed. In view of this, present investigations were undertaken to understand the degree of divergence in three components of prezygotic reproductive isolation, namely the courtship latency, courtship duration, copulation duration and postmating fitness (fertility) among wild type and mutant strains of *D. n. nasuta*.

For the present investigations we have employed two wild type strains namely Coorg (India; Stock no.201.001), Sy-I (Seychelles Island, Stock No. 201.006) and two mutant strains viz., *brown* and *Curly*. These stocks were obtained from Drosophila Stock Center, University of Mysore, Mysore, India. Uniformity was maintained with regard to temperature, space, amount of food,