

close to the motorway at the Balaton lake in Hungary (not established). Thus, the countries of Eastern Mediterranean (Levant) seem to be currently at least as endangered as is central Europe.

Precariousness of the predictions concerning the spreading of colonizing species can be illustrated also by the following fact: drosophilid *Chymomyza amoena* (Loew), a previously detected invader, was found in Europe for the first time in 1975, and soon afterwards (1980) it was collected in Serbia. Until now *C. amoena* has invaded most European countries and the western part of Asian Russia up to the Altay Mts. (Máca and Bächli, 1994; Sidorenko and Ivannikov, 2001; detailed information on the distribution see Bächli, 2014), nevertheless it has not been as yet ascertained in Greece, although at least some parts of this country are reasonably well explored (Máca, 2011).

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First report of Drosophilid diversity in an ecotone adjoining Bannerghatta National Park (Karnataka, India).

Dilip A.S., D.S. Pranesh Sujaymeendra¹, R. Alexander, K. Avinash, S. Phalke, and M. Jayashankar^{*2}

A Rocha India; Taralu Field Study Centre, #257, Taralu Estate, Taralu Post, Uttarahalli, Bengaluru South Bengaluru- 560082; ¹Jubilant Biosys, Yeshwanthpur, Bengaluru; ²Department of Entomology and Nematology, Indian Institute of Horticultural Research, Bengaluru -560 089 and Research Advisor, A Rocha India; *Correspondence: jay81zoology@gmail.com.

Drosophila species are thought to have a role as biological indicators of habitat change (Parsons, 1991) and are used as models to study the biological effects of global warming (Francisco Rodríguez-Trelles *et al.*, 1998). *Drosophila* actually means "lover of dew", hence its cosmopolitan distribution is limited by availability of water and temperature. The fruit flies live primarily on rotting plants and fruits and oviposit on unripened/slightly ripened fruit ensuring primary food supply for the newly hatched maggots. Coincidentally this habit of the flies has made them major pests (Demerec, 1950; Lutz, 1948; Wilson, 1999; In Miller, 2000; CABI, 2014).

Forests serve as excellent ecosystems for Drosophilid diversity world over and there are numerous records in India (Upadhyay and Singh, 2006; Guru Prasad and Pankaj Pathak, 2011; Harini and Pranesh, 2011). During the present study a preliminary effort to record the species diversity of drosophilids was undertaken in the Taralu village (10° 17'–10° 19' N; 76° 39'–76° 44' E) adjacent to the Bannerghatta National Park (BNP) south of Bengaluru, Karnataka, India. Despite its proximity to BNP and dense vegetation no records of drosophilids are available nor has any species inventory been undertaken. Hence, a preliminary study to record the drosophilid diversity was undertaken during the summer months of April and May, 2014. The traditionally followed bottle trapping was used with a smash of ripened fruits of *Musa paradisca* (Banana), *Pyrus malus* (apple), and *Punica granatum* (pomegranate) were used as baited traps. On a first time experimental basis four such traps were tied to twigs of trees 5 feet above the ground and left open in an

orchard at random positions with equidistance. The trapped flies were carefully extracted after securing the mouth of the traps with a cotton cloth and preserved in 70% alcohol. Four successive collections were done in the following week. The species identification was made according to taxonomic groups by employing several keys of Sturtevant (1927), Patterson and Stone (1952), Throckmorton (1962), and Bock and Wheeler (1972).

Table 1. Sub genus of the species recorded at Taralu.

Sl. No.	subgenus	Species
1		<i>D. takahashii</i>
2		<i>D. melanogaster</i>
3		<i>D. ananassae</i>
4	Sophophora	<i>D. bipectinata</i>
5		<i>D. nagarholensis</i>
6		<i>D. malerkotliana</i>
7		<i>D. rajashekari</i>
8	Melanogaster	<i>D. immigrans</i>
9	Zaprius	<i>Phorticella striata</i>

Nine species of *Drosophila* were recorded in the present bait trapping studies (Table 1). The trap count of species in the order of percent traps *P. striata* (29 %) > *D. rajashekari* (21%) > *D. malerkotliana* (13%) > *D. bipectinata* (9%) > *D. melanogaster* (8%) > *D. nagarholensis* (7%) > *D. ananassae* (5%) > *D. immigrans* (4%) > *D. takahashii* (3%). *P. striata* and *D. bipectinata* were recorded all through the observation period. The latter is a non-drosophilid genus of family Drosophilidae which is endemic to South India (Sajjan and Krishnamurthy, 1975). A rich diversity index (Simpson_1-D = 0.82) was obtained; however, moderate richness and the evenness of the community was obtained (Shannon_H = 1.94) from the analysis using PAST software (version 3). Ecodistributional analysis of

Drosophila implies the biodiversity of *Drosophila* of a given locality and also the principles underlying adaptive radiation and central mechanisms involved in speciation (Hegde *et al.*, 2001; Guru Prasad and Hegde, 2010). In this regard the present report is a first time record of drosophilid diversity from the selected study area. The results certainly need to be related to the proximity of the study area to the Bannerghatta National Park (BNP) one of the last largest remaining scrub forests of the country, placed on the confluence of the Eastern and the Western Ghats (Varma *et al.*, 2009). Hence, future studies on eco-dynamics including drosophilid diversity of the entire region is relevant and needs to be undertaken.

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Comparison of *ebony* gene from three *ebony* mutants.

Rossi, Fabiana, Luis A. Quesada-Allué, and Martín M. Pérez. Department of Biological Chemistry, FCEyN, University of Buenos Aires, IIBBA CONICET, and Fundación Instituto Leloir, Patricias Argentinas 435, Buenos Aires 1405, Argentina; mperez@leloir.org.ar.

Drosophila melanogaster ebony mutant is easily recognizable by its black pigmentation instead of the normal brown color of the wild type strains. This mutant is defective for the synthesis of β -alanyl derivatives