

*Dorsilopha* Sturtevant 1942, 1.9% in the genus *Scaptodrosophila* Duda 1923, and 0.1% in the genus *Zaprionus* Coquillett 1901.

Our specific target was endosymbiont-free *D. melanogaster* isofemale lines. At this writing, we have tested 180 isofemale lines of which only four *D. melanogaster* lines were free of both *Wolbachia* and *Spiroplasma*.

References: Carson, H.L., and W.B. Heed 1983, *The Genetics and Biology of Drosophila*, Vol 3d: 2-31 (Ashburner, M., H.L. Carson, and J.N. Thompson, jr., eds), Academic Press, New York; Markow, T.A., and P.M. O'Grady 2006, *Drosophila, A Guide to Species Identification and Use*. Academic Press; Patterson, J.T., 1943, Univ. Texas Publ. 4313: 7-327.



### **A new geographical record for *Drosophila bifurca*.**

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The decades of the 1940s and 1950s marked an important era for the description and collection of species in the genus *Drosophila*. The University of Texas hosted the first multispecies *Drosophila* center where Sturtevant, Patterson, Carson, Wasserman, Throckmorton, Wheeler and Heed, among other great Drosophilists, deposited their extensive *Drosophila* collections through the years. Unfortunately in the last decade, exhaustive *Drosophila* collections had not been realized at a scale and dedication like before (Heed, personal communication).

Many of the original *Drosophila* stocks deposited in multispecies *Drosophila* Center, currently located at the University of California, San Diego, are only one of its kind. Several of these stocks have years, even decades, in laboratory culture. Now, with the exception of cosmopolitan or semi-cosmopolitan species, the addition of new species or collections to the *Drosophila* Species Stock Center is limited. Unfortunately these days, virtually none of scientific collections are contributed to the Center. In most cases, today's collectors only focus on their type species and deliberately they ignore those species that they cannot identify quickly.

*Drosophila bifurca* (repleta group, hydei subgroup) is an interesting case in the *Drosophila* Species Stock Center. This species has a great interest in the scientific community although it doesn't belong to the group of the genome project species. Males of *D. bifurca* produce the largest sperm in the animal kingdom (58 mm uncoiled) (Pitnick *et al.*, 1995). Therefore, there are numerous studies on sexual competition and spermatogenesis, among others, for this species (Bjork *et al.*, 2007; Luck *et al.*, 2007).

Little is known, however, about the *D. bifurca* ecology. In 1943, Patterson specified *D. bifurca* collections in Texas, Arizona, and Mexican states of Tamaulipas, Michoacán, San Luis Potosi, and Hidalgo. In the 1980's, Heed collected *D. bifurca* abundantly in on the sky island in Madeira Canyon, Arizona, at an elevation of 4,600-5,000 ft, where evergreen oaks, Alligator Juniper, and Mexican Piñon Pine were abundant (personal communication). Despite the wide distribution of this species, only two *D. bifurca* stocks are alive in the *Drosophila* Center. Both stocks were collected by Heed in 1993 and 2000 (on Hidalgo and San Luis Potosi, respectively).

In this brief communication note, I want to record a new *D. bifurca* distribution. In September and October 2010, over 20 one-liter baits were placed in the surrounding area of Topanga Canyon, California. All baits were made with rotten banana mixed with different tree saps. *Drosophila* collections were made in the morning between 8:30 and 10:30 am. During the collection

period, the Topanga Canyon undergoes drastic temperature changes. Some days, the temperature was 55°F while other days, the temperature reached 99°F.

Over 2,000 *Drosophila* individuals were collected. Approximately 90% of the collection corresponded to *D. simulans*. The rest of the individuals in the collections, mostly males, were from the follow species: *D. melanogaster*, *D. pseudoobscura*, *D. mainlandi*, *D. mercatorum*, *D. funebris*, *D. immigrans*, *D. repleta*, *D. suzukii*, and *D. persimilis*.<sup>\*</sup> Nevertheless, four *D. bifurca* individuals were located at 34.08014N, -118.579516W. Three drowned males and one female alive were transported to the laboratory. Once in the lab, I checked external anatomy. Along with other external characteristics like the pollinose pleurae, yellowish-brown legs, eight rows of acrostical hairs, and one prominent oral bristle, I recognized the very long and strongly curved hairs on the medial side of males' fore tarsi. In addition I made the male genitalia dissections and I compared them to those presented by Vilela (1983): the epandrium had 11 lower and two upper bristles, the surstylus had 11 primary teeth, and the aedeagus was big and strongly bow-shaped. I confirmed that all individuals correspond to *D. bifurca*. The female was isolated in a vial. Unfortunately, after 13 days, she did not lay eggs. This is, therefore, the first *D. bifurca* record in California. Also, this is the first record for the pest cherry-associated *D. suzukii* in the Topanga Canyon area.

<sup>\*</sup>Identification of this species was based on the morphology presented by Rizki (1951).

References: Bjork A., R. Dallai, and S. Pitnick 2007, Biol Lett. 3(5): 517-519; [Luck, N.](#), B. [Dejonghe](#), S. [Fruchard](#), S. [Huguenin](#), and D. [Joly](#) 2007, [Genetica](#)130(3): 257-265; Pitnick, S., G.S. Spicer, and T.A. Markow 1995, Nature 375: 109; Rizki, T.M., 1951, PNAS 37: 156-158; Vilela, C.R., 1983, Revta. bras. Ent. 27: 1-114.

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