

## Scientific Note

### Delayed, or prolonged, emergence of three uncommon California Buprestidae (Coleoptera)

Three rarely-collected small buprestid species have, in recent years, emerged from wood collected at localities in southeastern California. In all cases the wood was collected in 2003, and yet many of the specimens did not emerge until two or more years after the wood had been cut and returned to the lab in Sacramento. The wood is kept in large translucent plastic bins with solid white plastic lids in a large screened enclosure open to the outside and exposed to daily extremes of temperature and insolation. The wood has been removed and completely soaked with water once a year at the beginning of summer. The fact that adult specimens continue to emerge three or more years after the wood was collected suggests that these species are capable of remaining in the wood, continuing a slow larval development or a prolonged pupal diapause, and/or there is the possibility that one or more of these species will mate within the rearing bin and lay eggs for successive infestation and subsequent emergence. Previous notes on rearing and/or delayed emergence are by Beer (1949), Erwin (1965) and Linsley (1943).

**Tribe Xenorhipidini Cobos 1986**  
**Subtribe Xenorhipidina: Hołyński 1988**  
***Hesperorhipis* Fall 1930**

*Hesperorhipis* Fall 1930:74.

**Type species:** *Hesperorhipis albofasciata* Fall 1930 (fixed by original monotypy).

This genus of small, sexually dimorphic and dichromatic buprestids is currently awaiting revision for the four species and two subspecies placed therein. Adults are rarely collected but often obtained through rearing. Until the completion of a revision, identification is uncertain without a modern interpretation of species definition nor limits. Nearly all citations subsequent to the respective original descriptions are listings in catalogs or checklists. Linsley (1936) wrote about the presumed second specimen of the type species, yet even that identity is likely in error. The following two rearing accounts are listed under the names of two subspecies which are based upon original descriptions and illustrations; the eventual revision may conclude that these notes belong to different species or subspecies.

***Hesperorhipis hyperbola californica* Knull, 1947**

No biological information about this subspecies has been published. On 4.vii.2003, I collected branches from a dead *Prunus fasciculata* (Torrey) A. Gray in extreme SE San Diego County. I had no idea if the branches were infested, nor by what, if anything. Two specimens were found in the rearing container in early August 2005. In early June of this year the container was first checked and found to contain upwards of 500 specimens. Shortly thereafter the wood was soaked, returned to the rearing container and thereafter checked weekly. Specimens emerged only during the following two weeks of early July 2007.

*Specimens examined.* California, San Diego Co., vic. In-Ko-Pah, N32°38'37" W116°06'34", emerged from dead twigs and branches of a single *Prunus fasciculata* (**new larval host**) collected 4.vii.2003. Two specimens emerged during the week of 7.viii.2005; 500+ emerged 12–26.vi.2007; 63 spms. emerged during the week of 3.vii.2007; 17 spms emerged during the week of 10.vii.2007. No specimens have emerged thereafter.

*Hesperorhipis mirabilis albopennis* Knull 1951

No biological information about this subspecies has been published. An enormous series ( $\pm$  600 specimens) of both sexes has emerged from small branches I collected along the eastern flank of the Salton Sea in southern California in early July 2003. What surprises me is that adults continued to emerge, although in ever-diminishing numbers, three years after the wood was collected, which is probably four years or more after the branches were first infested.

*Specimens examined.* California, Imperial Co. vic. Frink Springs, 33°21'55" N 115°38'40" W emerged from dead twigs and branches of a single dead *Prosopis glandulosa* var. *torreyana* (L. Benson) M. Johnson (Fabaceae) (**new larval host**) collected on 3.vii.2003. Specimens began emerging by mid-July 2003 and continued through late-August 2006. No specimens emerged in 2007.

**Subtribe Trichinorhipidina Bellamy 2006**

*Trichinorhipis knulli* Barr 1948 (Fig. 1)

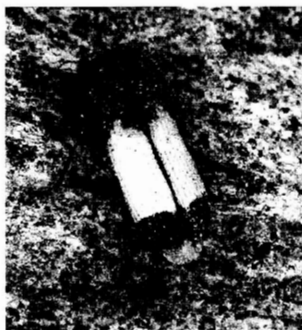


Figure 1. *Trichinorhipis knulli*, male, emerged 9.viii.2007, ex *Simmondsia chinensis*.

This very rarely collected species (only three field-collected adult specimens to date *vide* Barr 1948; Nelson 1962; Bellamy 1982), was discussed by Nelson et al. (1981) in relation to specimens reared from *Simmondsia chinensis* (Link) C. K. Schneid (Simmondsiaceae). Others (e.g., Rob Velten, Dave Verity) and I have subsequently reared specimens from the same host.

*Specimens examined.* California, Imperial Co., Mountain Springs, N32°40'40" W116°05'52" emerged from dead twigs and branches of *Simmondsia chinensis* collected on 30.viii.2003 emergence dates: 3 ♂♂ 17.vii.2005; 2 ♂♂, 2 ♀♀ 16.viii.2006; 1 ♀ 23.viii.2006; ; 2 ♂♂, 1 ♀ 9.viii.2007.

*Comments.* One female emerging on (or near) 16.viii.2006 was found dead with the ovipositor fully exserted. Some females will partially exsert their ovipositors in the killing jar, but to find a dead female with the ovipositor fully exserted at the bottom of the rearing container suggests that she may have been laying eggs just prior to her death.

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