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### New combinations for six species belonging to *Cryptotympanini* Handlirsch (Hemiptera: Cicadidae), former members of the genus *Tibicen* Latreille, 1825

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**Abstract.** The generic status of several species formerly placed in the genus *Tibicen* is reconsidered based on the recent erection of new genera as well as historical evidence. *Subsolanus* Moulds, 2015 **syn. nov.** is shown to be a junior synonym of *Auritibicen* Lee, 2015. Six species are reassigned from *Tibicen* to appropriate genera based on morphological characteristics.

The genus *Tibicen* Latreille, 1825 has had a confusing past (see summary in Boulard & Puissant, 2014; Marshall & Hill, 2014; Sanborn, 2014a). A major factor in the confusion was the use of different species as the type species of the genus in Latreille (1825) (*Cicada plebeja* Scopoli, 1763) and Latreille (1829) (*Cicada haematodes* Scopoli, 1763), species that are currently classified in different subfamilies. This combined with the limited original descriptions led to confusion as to what taxa should be assigned to the genus. As a result, *Tibicen* became a convenient place to assign species when it was not known where else the species should be placed and species from all three of the current subfamilies were at one time or another classified in the genus *Tibicen*. Species have been transferred to correct genera over the years (e.g., Qi *et al.*, 2015) and new genera have been erected for species that should not have been assigned to *Tibicen* (e.g., Sanborn, 2014b) so the number of problem taxa within the genus has decreased but all questionably placed taxa are not yet eliminated.

Lee (2015) and Hill *et al.* (2015) recently described new genera for groups of species that were classified within *Tibicen* prior to the publication of these articles. However, not all species that should have been transferred to the new genera were reassigned in these publications. This work is an effort to clear up the taxonomy of *Tibicen* while simultaneously assigning species to their proper genera.

*Auritibicen* Lee, 2015 was erected for the *Tibicen* species from eastern Asia as was *Subsolanus* Moulds, 2015 (published in Hill *et al.* 2015). The species included by Hill *et al.* (2015) assigned to *Subsolanus* are identical to those included by Lee (2015) for *Auritibicen*. Therefore, *Subsolanus* Moulds, 2015 **syn. nov.** is a junior synonym of *Auritibicen* Lee, 2015 as Hill *et al.* (2015) was published 10 July 2015, 11 days after the 29 June 2015 publication date for the description of *Auritibicen* by Lee (2015) and thus *Auritibicen* has priority.

There is one North American species that is here reassigned to *Hadoa* Moulds, 2015 as it was not included in the list of species to be included with the erection of the genus. *Tibicen simplex* Davis, 1941 (= *Tibicen bifidus* var. *simplex* = *Tibicen bifida simplex* = *Tibicen bifidus simplex*) was originally described as a variety of *Tibicen bifidus* (Davis, 1916) (Davis, 1941). The subspecies was elevated to species status by Sanborn & Phillips (2011). Hill *et al.* (2015) reassigned what was the nominotypical species (*Hadoa bifida*) to the genus *Hadoa* with the formation of the genus and refer to *H. simplex* in some figures and in the text but the species was not identified as a new combination in the paper. This species is, therefore, here assigned officially to *Hadoa* to become *Hadoa simplex* (Davis, 1941) **comb. nov.** as it fulfills the characteristics of the genus, is so closely related to a species included with the formation of the genus, and was clearly meant to be included when the genus was formed.

One additional North American species has the potential to be classified in *Neotibicen* Hill & Moulds, 2015. *Tibicen variegatus* (Fabricius, 1794) (= *Tettigonia variegata* = *Tettigonia variata* (sic) = *Cicada variegata* = *Cicada variegata* var. \_ Germar, 1830 = *Tibicen variegata*) was considered a *nomen dubium* species by Sanborn and Heath (2012). If it is considered to be a valid species, it should be reassigned to *Neotibicen* to become *Neotibicen variegatus* (Fabricius, 1794) **comb. nov.** as it shares the characteristics of several *Neotibicen* species (Davis, 1918; Sanborn and Heath, 2012).

*Tibicen bimaculatus* Sanborn, 2010, *Tibicen heathi* Sanborn, 2010, *Tibicen nigriventris* (Walker, 1858) (= *Cicada nigriventris* = *Rihana vitripennis nigriventris* = *Tibicen nigroventris* (sic) = *Diceroprocta nigriventris*), and *Tibicen*