

***Arenopsaltria nubivena***  
**(Cicadidae: Cicadinae: Cryptotympanini)**  
**from the Arid Regions of Central Australia**  
**and Southwest Western Australia**

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**ABSTRACT.** The genus *Arenopsaltria* is restricted to Australia, from which three species are described. Two, *A. fullo* and *A. pygmaea*, occur in coastal and subcoastal Western Australia; the third, *A. nubivena*, was thought to be restricted to the relatively small region from southeastern South Australia to northwestern Victoria, but is now known to occur much more widely into northeastern South Australia, southwestern Queensland, southern Northern Territory and with a possibly isolated population in southwestern Western Australia. The continuous buzzing calling song of *A. nubivena* is here documented from four well separated locations and is shown to be remarkably similar in temporal and other acoustic properties. The songs of *A. fullo* and *A. pygmaea* are also documented; both songs have a similar temporal structure, and both are distinct from the *A. nubivena* calling songs. MaxEnt modelling of the *A. nubivena* distribution can be linked by a climatic envelope in which the three most significant variables are precipitation variables, consistent with the currently known geographical distribution and emergence behaviour of this species in the warm to temperate margins of the arid zone, areas which experience sporadic and sometimes heavy summer rainfall events. Modelling of the estimated conditions at and since the Last Glacial Maximum (c. 22 ka), a period during which we expect to find the most significant contrast with the present-day distribution of *A. nubivena*, suggests an expanded distribution of this species during this period. Details of the geographic distributions will, however, be mediated by additional physical factors, such as dispersal barriers (e.g., the Nullarbor Plain), local interspecific interactions and other unsuitable habitats.

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The genus *Arenopsaltria* Ashton, 1921 is recorded only from Australia and currently has three described species. *Arenopsaltria fullo* (Walker, 1850), the type species of the genus, and *A. pygmaea* (Distant, 1904) are recorded from

along coastal regions of Western Australia between the Murchison River in the north and the Margaret River south of Perth. The third species, *A. nubivena* (Walker, 1858), is so far documented only from southeastern South Australia to the far

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