

## First North American occurrence of hairy cicadas discovered in the Cenomanian (Late Cretaceous) of Labrador, Canada

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*Acta Palaeontologica Polonica* 65 (1), 2020: 85-98 doi:<https://doi.org/10.4202/app.00669.2019>


We report the discovery of *Maculaferrum blaisi* gen. et sp. nov, the first occurrence of the family Tettigarctidae, informally known as hairy cicadas, in North America. *Maculaferrum blaisi* is part of a new collection assembled during recent fieldwork in the Redmond Formation, Labrador, Canada, near Schefferville. It consists in a single isolated forewing whose venational characters allow a classification to Tettigarctinae at the subfamily level. Classification at a higher level remains uncertain since it displays a combination of characters supposedly unique to tribes Protabanini, Meunierini, and Tettigarctini. Thus, this discovery adds credence to suggestions of a revision of the definitions of these tribes since they seem to be based on many convergent or plesiomorphic characters. Remnants of a spotted pattern on the wing membrane and probable setae along some veins are also preserved. Observations of the holotype's fine anatomical characters have been facilitated by the use of Reflectance Transformation Imaging (RTI), an emerging method for the visualization of compression and impression fossils. Considering that the estimated age of the Redmond Formation is the Cenomanian (Late Cretaceous), the discovery of *M. blaisi* contributes to a very recent expansion of the tettigarctid fossil record that fills a gap between Early Cretaceous and Cenozoic genera. It suggests that hairy cicadas maintained a global distribution and thrived in a variety of climate regimes well into the Late Cretaceous, and that their competitive exclusion by singing cicadas occurred definitely closer to the end of the Cretaceous, or even during the Cenozoic. This discovery is only the start of a thorough description of the recently expanded entomofauna in the Cretaceous of Labrador.

**Key words:** Insecta, Cicadoidea, Tettigarctidae, Cretaceous, Cenomanian, Redmond Formation, North America.

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