The complete mitogenome of an undescribed clam shrimp of the genus *Gondwanalimnadia* (Branchiopoda: Spinicaudata), from a temporary wetland in Central District, Botswana

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Spinicaudatan species are an order of freshwater crustaceans commonly known as spiny clam shrimps. These large branchiopod crustaceans occur exclusively in seasonally astatic aquatic habitats (Brendonck et al. 2008). Similar to other branchiopods, clam shrimp rapidly attain sexual maturity and within short hydroperiod windows, produce dormant eggs that can withstand dry periods (Brendonck et al. 2008; Rogers 2009). They are thought to be omnivores with diets consisting of detritus, plankton and algae (Hethke et al. 2019). Gondwanalimnadia spp. belong to the Limnadiidae (Weeks et al. 2012; Rogers et al. 2016), a family in the order Branchiopoda: Spinicaudata, from a temporary wetland in Central District, Botswana. Raw sequences were assembled into a single circular genome with a total length of 15,663 bp. Thirteen protein-coding genes, 22 tRNAs, and 2 rRNAs were identified using the MITOS pipeline. The mitogenome’s GC content is 33.52%. Phylogenetic analysis using protein-coding genes confirmed that Gondwanalimnadia sp. is closely related to another member of the Limnadiidae, Limnadia lenticularis. Spinicaudatan species obtained from Botswana, and investigate its phylogenetic placement among several other brachiopods. Here, we report the mitogenome of an undescribed Gondwanalimnadia species from Botswana. Raw sequences were assembled into a single circular genome with a total length of 15,663 bp. Thirteen protein-coding genes, 22 tRNAs, and 2 rRNAs were identified using the MITOS pipeline. The mitogenome’s GC content is 33.52%. Phylogenetic analysis using protein-coding genes confirmed that Gondwanalimnadia sp. is closely related to another member of the Limnadiidae, Limnadia lenticularis. Spinicaudatan species obtained from Botswana, and investigate its phylogenetic placement among several other brachiopods. Here, we report the mitogenome of an undescribed Gondwanalimnadia species from Botswana. Raw sequences were assembled into a single circular genome with a total length of 15,663 bp. Thirteen protein-coding genes, 22 tRNAs, and 2 rRNAs were identified using the MITOS pipeline. The mitogenome’s GC content is 33.52%. Phylogenetic analysis using protein-coding genes confirmed that Gondwanalimnadia sp. is closely related to another member of the Limnadiidae, Limnadia lenticularis.
Effective Sample Size (ESS) were visually inspected in Tracer v1.7 (Rambaut et al. 2018). The phylogenetic tree was visualized in FigTree v1.4 (Rambaut and Drummond 2012), placing the uncharacterized *Gondwanalimnadia* sp., along with another limnadiid (*Limnadia lenticularis*), in a monophyletic clade with cladoceran and notostracan representatives (Figure 1).

**Disclosure statement**

The authors declare that there is no existing competition and/or financial interest. Therefore, opinions, findings, conclusions or recommendations expressed in this material are owned by the authors.

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