



A new large-sized flat bug from mid-Cretaceous Burmese amber: *Cretozemira gregori* sp. nov. (Hemiptera, Heteroptera, Aradidae)

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Twelve genera and 20 species of Aradidae are reported and described to date from the mid-Cretaceous amber deposits of Kachin State (Northern Myanmar) (Ross, 2024).

Genus *Cretozemira* was erected for a single female specimen, *C. elongata* sp., recovered from a Burmese amber inclusion. The present female specimen shares the essential characters of *C. elongata* sp. (large size, elongate oval abdomen without lateral connexival expansions, long multispined head structure, slender antennae, structure of terminal segments and no metathoracic scent glands) and is therefore assigned to *Cretozemira*, thereby adding a second species to the genus: *C. gregori* sp. nov.

When proposing *Cretozemira* gen.nov. (Heiss, 2023) the description of head structures was incomplete as this part was damaged and obscured. In *C. gregori* sp. nov. they are well visible and described here. Thus, these additional characters are also valid for the genus.

Material and methods. The Burmese amber specimen from Kachin province upon which this study is based, is of mid-Cretaceous age [c. 100 Ma (Shi *et al.*, 2012)]. It is deposited as BUR-ARAD-11 in the collection of the author (CEHI) at the Tiroler Landesmuseum, Ferdinandeum. Measurements were taken with a micrometre eyepiece and are given in millimetres. Abbreviations: deltg = dorsal external laterotergite (connexivum) of abdomen.

Order Hemiptera Linnaeus, 1758
 Suborder Heteroptera Latreille, 1810
 Infraorder Pentatomomorpha Leston, Pendergrast & Southwood, 1954
 Family Aradidae Brullé, 1836
 Subfamily. Archearadinae Heiss & Grimaldi, 2002 (tentatively placed)
 Genus *Cretozemira* Heiss 2023

Cretozemira gregori sp. nov.

(Figs 1–3)

Etymology. This new taxon is dedicated to my son Gregor Heiss,

recognizing his understanding and support of my scientific studies and activities.

Diagnosis. Distinguished from the type species *C. elongata* by smaller size (13.5 mm vs. 15.0 mm), macropterous state (vs. submacropterous), lateral margins of paranota not dentate (vs. irregular dentation).

Description. (Fig. 1) Holotype. Female macropterous specimen embedded in an oval honey-coloured piece of amber (31 × 24 × 3 mm; Fig. 3B). Dorsal and ventral sides visible, thorax and sternum partly obscured by dark matter; legs except missing fore leg partly preserved but terminal parts of tibiae and claws missing; left antenna complete, segments III + IV missing of right antenna. Colouration yellowish brown. This specimen is designated as holotype and labelled accordingly, deposited at CEHI.

Head. (Fig. 2). 1.57 times longer than wide across eyes (2.35/1.50) narrow, long dorsally crested clypeus produced anteriorly, its dorsal parts and apex densely beset with spines, their length about the diameter of clypeus; eyes oval, laterally produced with an acute diverging preocular spine, this followed anteriorly by bispined antenniferous lobes with acute apices, the posterior spines wider, converging posteriorly; antennae slender 2.4 times as long as width of head, segment I shortest and pear-shaped, II–IV thinner, cylindrical and longer, anterior half of segment III widening toward apex; length of antennal segments 0.7/1.2/0.85/0.9; postocular lobes strongly converging to constricted neck region.

Pronotum. 1.67 times as wide as long (3.75/2.25); lateral margins curved anteriorly, anterolateral apices of expanded paranota acute, surface of disk flat but obscured. Scutellum not traceable; membrane transparent, only partly preserved.

Abdomen. Of oval outline, lateral margins of deltg II–VI rather smooth, VII with three small denticles, paratergites VIII lobate, posterior margin with three denticles.

Venter. (Fig. 3A) Rostrum arising from an open atrium, reaching anterior margin of mesosternum, rostral groove with carinate borders; sternites and ventral laterotergites II–VII marked by transverse sutures; spiracles II–VIII ventral, far from lateral margin; outer half of ventral (and dorsal) laterotergites II–VII longitudinally striate.



FIGURE 1. *Cretozemira gregori* sp. nov., general habitus. A, Holotype female, dorsal view. B, Ditto ventral view. Scale bars = 2 mm.

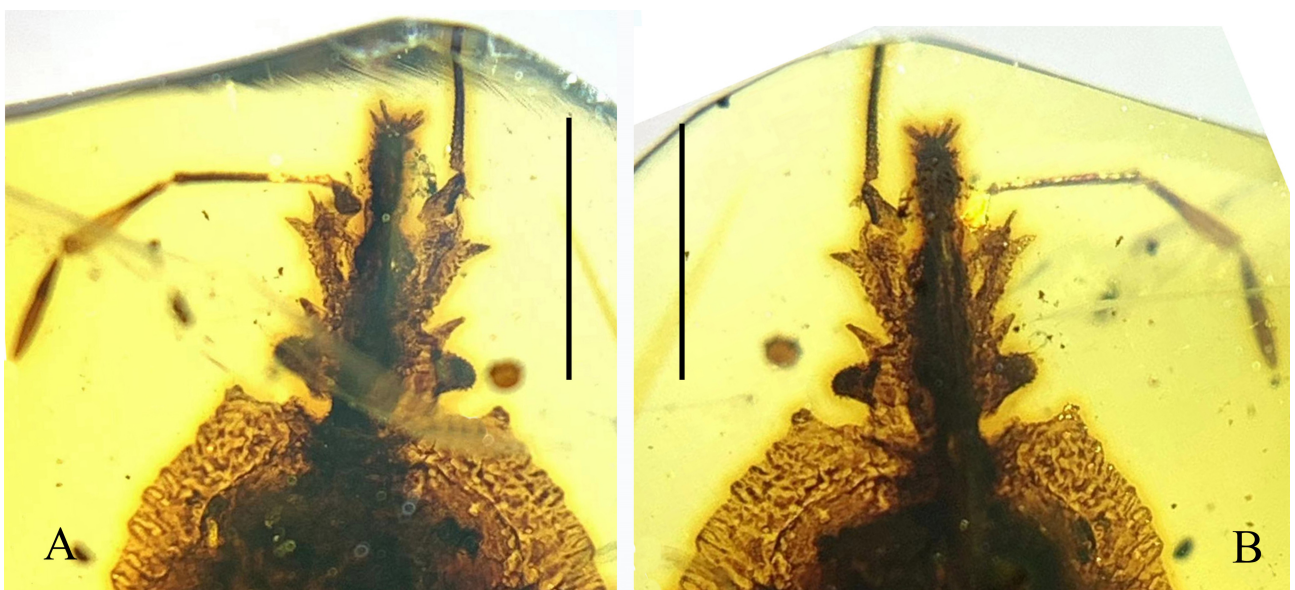


FIGURE 2. *Cretozemira gregori* sp. nov., head. A, Holotype female, dorsal view. B, Ditto ventral view. Scale bars = 2 mm.

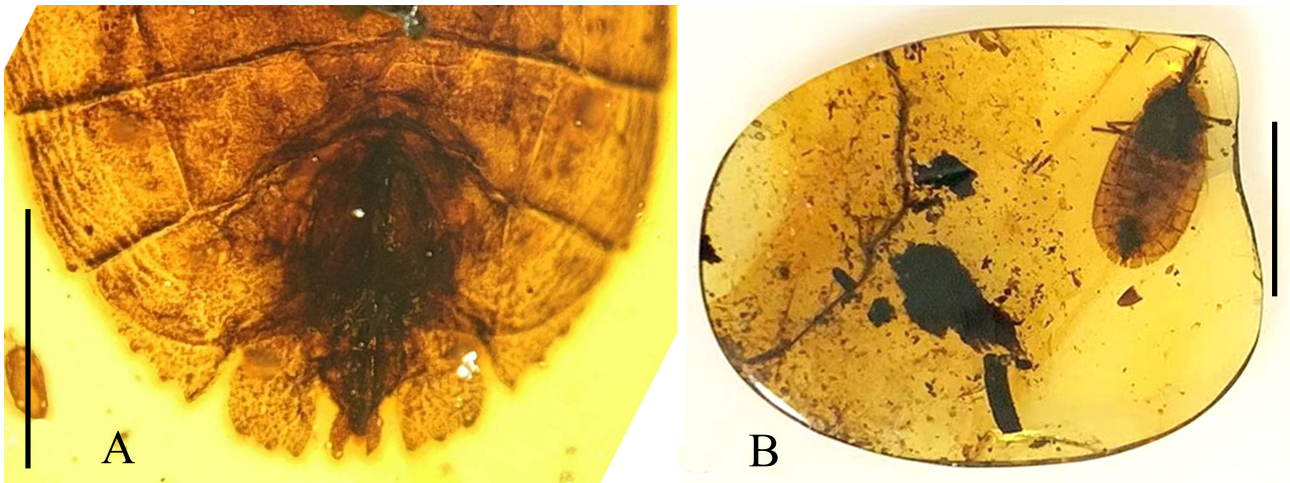


FIGURE 3. *Cretozemira gregori* sp. nov., holotype female. **A**, Terminal segments, ventral view. **B**, Amber piece with embedded specimen. Scale bars = 2 mm in **A**, 10 mm in **B**.

Legs. Slender, femora and tibiae cylindrical (damaged).

Measurements. Length of body 13.5 mm, length of antennae 3.65 mm, width of abdomen across tergite IV 5.60 mm, width of paratergites VIII 2.05 mm.

Discussion. This new species is one of the largest Burmese amber Aradid taxa described so far. Larger are two species of *Archemezira* Heiss & Chen, 2023 and the genotype of *Cretozemira*, *C. elongata*. It represents the second taxon assigned to *Cretozemira*, which is only reported from Cretaceous Burmese amber.

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References

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