

Fossilized insects show signs of stasis and rapid burial!

Johan Kruger

The earliest record of fossilized copulating insects has recently been unearthed in China (see figure 1)¹ in sediments from the Middle Jurassic.² While much is known of the reproductive behaviour of extant (still in existence) insects, examples of fossilized mating individuals (i.e. showing ‘behaviour’) are very rare. Of 33 reported cases in the entire insect fossil record (e.g. fireflies, mosquitoes, plant hoppers, leaf hoppers, water striders, bees, and ants),³ 27 were preserved in amber (fossilized tree resin), with only six found in compression fossils,⁴ including the one examined here.⁵ This new find replaces the previous oldest specimen of a pair of non-biting midges⁶ (true flies) discovered in amber from the Early Cretaceous.⁷

Taxonomy

The insects are described in the study as a new species, *Anthoscytina perpetua*, belonging to the Proceropidae, an extinct family in the superfamily of frog hopper, Cercopoidea. Although fossil evidence for this superfamily is non-existent during the Late Cretaceous, it has been hypothesized that the five existing extant families ‘evolved’ from the Proceropidae.⁸

Metamorphosis

Of worldwide distribution, these tiny hemipteran insects⁹ get their name from hopping around on plants, much like small frogs. Lacking complete

metamorphosis (i.e. egg, larva, pupa, and adult stages), they are best known for a nymph stage (spittlebugs), where the body is covered with frothed plant sap resembling spit, mostly for protection from enemies and desiccation.

Design feature

Incidentally, ‘toothed gears’ were recently discovered in the nymph stage of plant hoppers,¹⁰ insects closely related to frog hoppers. Clearly a design feature, this mechanical gear system enables the jumping legs of the nymph to push off almost simultaneously, in the process preventing lopsided jumps which would cause the insect to spin out of control.

Morphology and behaviour

The fossil of the two frog hoppers showed belly-to-belly mating position (figure 1), with the male’s reproductive organ inserted into the female copulatory structure. Due to possible taphonomic effects, the authors pointed out that side-by-side mating position, as in extant frog hoppers, cannot be ruled out.¹¹ With modern frog hoppers mating side by side *or* belly to belly, depending on whether they are on a flat surface or clinging to a vertical stem (figure 1), this would make good sense. Based on a large number of paratypes, it was further concluded that male and female genitalia show distinct symmetric structures.¹² Another significant observation was that two abdominal segments (8 and 9) in the male insect were significantly ‘twisted and flexed’, more or less into a ‘disarticulated’ state.

Rapid burial and lack of change

With the aforementioned in mind, two obvious implications of this scientifically significant study is the quality of the fossil preserved, which

points to *rapid burial*. Also, having remained essentially unchanged over the alleged 165 Ma, the mating position and overall behaviour, as well as genital symmetry, is a distinct sign of *stasis*.¹³

The preservation of several minute morphological details makes sense only if the insects were entombed abruptly in lots of water-borne sediments (consistent with a biblical global Flood—see Genesis 7:11). This would cut off oxygen supply and prevent decay over time, indicating the likelihood of recent, not millions of years ago, burial. From the overall picture, one can envisage the wringing abdomen of the male instantly ‘frozen in time’ during copulation, which would explain the ‘twisted and flexed’ segments in the fossil in its ‘disarticulated’ state. Of course this would equally apply to the male reproductive organ still inserted into the female copulatory structure, as well as the intact mating position.

Similar rapid preservations were observed in other insects. Tympanal structures were documented in crickets and katydids fossils which are “virtually identical to those seen in modern representatives”. These indicate that not only were the insects “equipped with hearing from the beginning, but ... were buried rapidly in the recent past—not millions of years ago”.¹⁴ Even this did not prevent ongoing evolutionary speculations, including how insect hearing likely ‘evolved’ over eons of time.¹⁵

In a carnivorous ant lion, the colour patterns on the wings were almost perfectly preserved. So how would that be possible in an allegedly 120-Ma-old insect? In an effort to answer this, the article concluded that “rapid burial and oxygen-free conditions are thought to be important”.¹⁶ With billions of ‘fast fossils’¹⁷ in sedimentary layers around the world the rule rather than the exception, we concur with this conclusion!

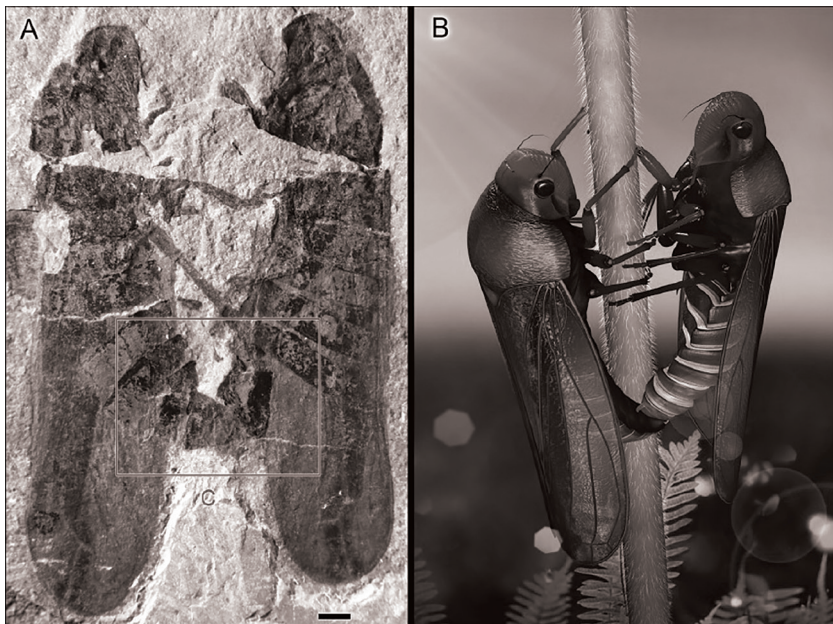


Figure 1. Fossilized copulating froghoppers from the Middle Jurassic (A), and reconstruction of a possible mating position (B) (from Li *et al.*¹)

Stasis in form and function

The authors did not comment on why the morphology and behaviour of froghoppers have remained essentially the same over the alleged 165 Ma. Confronted from time to time with fossil evidence of extinct creatures very similar to living relatives, evolutionists have attempted to solve this conundrum in various ways. Punctuated equilibrium¹⁸ is one, evolutionary stasis another.

In a study involving a number of species of extant army ants and their fossil counterparts,¹⁹ the anatomy and behaviour were so similar that one of the conclusions was that all army ants must have come from a single source! This is contrary to the specialist view that the ancestor of army ants lived around 100 Ma ago, and that these ants originated several times on different continents. The author noted the lack of evolutionary change (stasis) between fossil and living forms over this alleged long timespan, but then attributed the absence of change to long-term ‘evolutionary stasis’, an oxymoron, if there ever was one.²⁰ As pointed out

before, it would therefore seem that “the most fundamental fact of the evolutionary theory of change is that everything stays the same!”²¹

Conclusions

Combining observations of rapid burial and stasis, it can be concluded that the finely preserved fossils of the froghoppers speak clearly of abrupt entombment in water-borne sediment, consistent with the biblical account of a world globally engulfed with water about 4,500 years ago (Genesis 6–9). Creatures having been made to always reproduce “after their own kind” (Genesis 1; Leviticus 11); stasis therefore confirms Genesis’ claims that God created all insects on Day 5, around 6,000 years ago (Genesis 1:21).

References

1. Li, S., Shi, C., Wang, C., Pang, H. and Ren, D., Forever love: the hitherto earliest record of copulating insects from the middle Jurassic of china, *PLoS ONE* 8(11): e78188 DOI: 10.1371/journal.pone.0078188, 2013.
2. In the evolutionary scheme of things, around 167 Ma ago.

3. Boucot, A.J. and Poinar, Jr., G.O., Fossil behaviour compendium, CRC Press, Boca Raton, pp. 147–152, 2010.
4. Fossils preserved in sedimentary rock that has undergone physical compression. This often leads to fossil distortion, one of the reasons why firmer plant tissues generally are more likely to be preserved.
5. Of the more than 1,200 paratype specimens examined in the study, only this particular one displays ‘mating behaviour’.
6. Boucot, A.J., *Evolutionary Paleobiology of Behaviour and Coevolution*, Elsevier, Amsterdam, p. 385, 1990.
7. Allegedly around 125 Ma ago.
8. Wang, B., Szewo, J. and Zhang, H.C., New Jurassic Cercopoidea from China and their evolutionary significance (Insecta: Hemiptera), *Palaeontology* 55:1223–1243, 2012.
9. Belonging to the insect order, Hemiptera, also known as ‘true bugs’.
10. Sarfati, J., Toothed gears in jumping insects; creation.com/toothed-gears-jumping-insects, 2013.
11. The mating pair may have been pressed down by the weight of sediment during fossilization.
12. Having the same proportions.
13. Lack of substantial change shown in a species over its alleged millions of year evolutionary history.
14. Coppedge, D., Fossil insect ears—deaf to evolution, *Creation* 34(3):23, 2012; creation.com/fossil-insect-ears.
15. 50-Ma-old cricket and katydid fossils hint at the origins of insect hearing; physorg./news/2012-01-million-year-cricket-katydid-fossils.html, accessed 16 December 2012.
16. Catchpoole, D., Seeing the pattern; creation.com/seeing-the-pattern, 2006.
17. Wieland, C., Fast fossils, *Creation* 19(4):24–25, 1997; creation.com/fast-fossils.
18. According to Gould & Eldredge (1993), “Many leading evolutionary theorists ... have been persuaded by punctuated equilibrium that the maintenance of stability [i.e. stasis] within species must be considered as a major evolutionary problem.”; creation.com/gould-stasis-a-problem.
19. Brady, S.G., Evolution of the army ant syndrome: The origin of long-term evolutionary stasis of a complex of behavioural and reproductive adaptations, *Proceedings of the National Academy of Science* 100(11):6575–6579, 2003.
20. Bell, P., Evolutionary stasis: Double-Speak and Propaganda, *Creation* 28(2):38–40, 2006; creation.com/evolutionary-stasis.
21. Parker, G., *Creation: Facts of Life*, Master Books, Green Forest, AR, p. 188, 2006.