Two new ancient species of cockroaches found in cave in Myanmar

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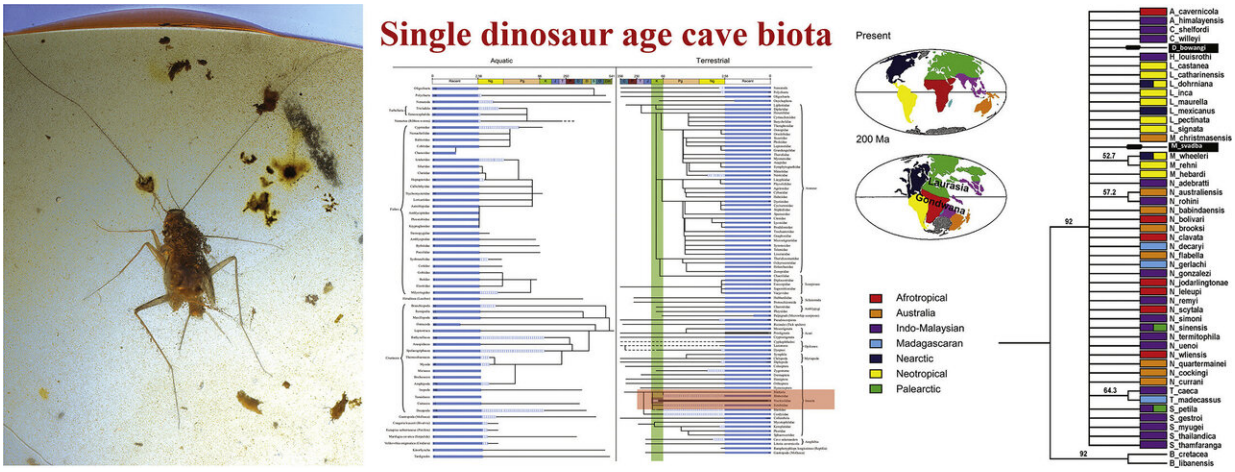

Credit: *Gondwana Research* (2020). DOI: 10.1016/j.gr.2020.01.002

An international team of researchers has identified two new ancient species of cockroach found in a cave in Myanmar. In their paper published in the journal *Gondwana Research*, the group describes their analyses of the two specimens, which were preserved in amber.

The two specimens were given the names Crenocticola svadba and Mulleriblattina bowangi and were placed in the Nocticolidae family—and both have been dated back to approximately 99 million years ago. The time frame puts them in the Cretaceous period—a time when dinosaurs were still alive. They were discovered among amber

deposits that had been removed from a mine in the Hukawng Valley, in Myanmar. The mine and its amber have been the subject of numerous studies. In this new effort, the researchers were provided with 110 tons of amber to study. Prior researchers had already dated the amber by dating volcanic rocks in the same location.

The researchers report that the cockroach specimens represent the only known dinosaur-age cave survivors and that they are were "exquisitely preserved." Study of the specimens using microscope photography revealed that they have many features common to modern cockroaches who live in caves. They have small eyes, for example, and small wings attached to small bodies They also have abnormally long antenna and shorter leg spines—all features that would make living in a dark cave easier.

The researchers were not able to explain how the cockroaches came to be embedded in amber, considering they were dug from a cave. They suggest it is possible that tree roots extended into the cave and dripped resin that trapped the cockroaches, preserving them for millions of years. They also suggest that the cockroaches may have fed on dinosaur guano in much the same way many modern cockroaches feed on droppings left by birds and bats. If that was the case, it may have helped the cockroaches migrate between caves. They note that more work is required to determine if the two new species they found survived the mass extinction that killed off the dinosaurs, and if so, whether they have modern relatives.

More information: Hemen Sendi et al. Nocticolid cockroaches are the only known dinosaur age cave survivors, *Gondwana Research* (2020). DOI: 10.1016/j.gr.2020.01.002