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# Marine life captured in amber - exceptional preservation of small aquatic isopod larvae in Cretaceous amber from France

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Isopod crustaceans are commonly referred to as woodlice; however, terrestrial isopods (Oniscidea) are only one of many evolutionary successful lineages of this group of malacostracan crustaceans. A major share of isopod diversity is represented by the marine forms. Among marine isopods a large variety of ecological strategies has evolved, ranging from the adaption to deep sea environments to a strictly parasitic lifestyle. How and when parasitism evolved within isopods is still subject to recent investigations. Within the parasitic isopods, the group Epicaridea represents still a special case: While most isopods and their relatives have offspring that resembles the adult in most aspects, epicarideans show at least three distinguishable larval phases, each characterized by a distinct morphology and lifestyle. One of these stages (the cryptoniscium larva) is now investigated in detail from a Cretaceous amber site in France (Vendée). Besides one occurrence in Miocene amber from Mexico this is only the second and thus oldest record of body fossils for this animal group. With the help of high-resolution composite fluorescence microscopy, we shed light on the morphology of these very small animals. Although the body length of the fossil larvae does not exceed 0.5 millimetres, delicate structures like single sensory setae can be visualized. Our investigations contribute important insights into the developmental biology and ecology of these 90 million years old crustaceans and may help to further elucidate the evolution of parasitic strategies in isopods.

* Speaker