

Cretaceous seeds interpreted as insect eggs

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Small seeds of angiosperms resemble particular insect eggs in their shape and size. In the fossil record, insect eggs may easily be misinterpreted as seeds, because of their similar morphology and preservation. Both insect eggs and angiosperm seeds are often preserved as charcoal. *Palaealdrovanda splendens* Knobloch et Mai from the South Bohemia Basins was originally described as a fossil seed, closely related to the extant carnivorous plants *Aldrovanda vesiculosa* (Droseraceae). *Knoblochia cretacea* Heřmanová et al. from the Late Cretaceous of Austria, Czech Republic and Poland was originally described as an angiosperm seed of the family Stemonaceae. However, reinvestigation of both these fossils shows that *Palaealdrovanda* and *Knoblochia* are insect eggs (HEŘMANOVÁ & KVAČEK, 2010, HEŘMANOVÁ et al., 2013).

During investigations of Late Cretaceous vertebrate localities from the Hațeg Basin (Romania), new fossils were found that were not the vertebrate remains for which the locality is known. Detailed studies revealed that these fossils show morphological similarities to insect eggs.

Another possible insect egg is *Costatheca diskoensis*, described from a number of Late Cretaceous localities from Central Europe (BATTEN & ZAVATTIERI, 1996). In contrast to *Palaealdrovanda* and *Knoblochia*, it is preserved as cuticle.

Common characters of fossil insect eggs are: surfaces showing rectangular cells in rows, and projections on both ends of the fossils. The projections, sometimes surrounded by a rim, resemble an operculum at one end and a posterior polar mound. Such projections are also seen in recent Phasmatodea. The structure of rectangular cells in rows resembles the chorion of Lepidoptera. Due to the large number of extinctions among insects since the Cretaceous, their systematic affinity remains open.

BATTEN, D.J. & ZAVATTIERI, A.M., 1996. Cretac. Res., **17**, 691–714.

HEŘMANOVÁ, Z. et al., 2013. Cretac. Res., **45**, 7–15.

HEŘMANOVÁ, Z. & KVAČEK, J., 2010. J. Natl. Museum (Prague), Nat. Hist. Ser., **179**, 105–118.