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The Fossil Ricinuleids

Ricinuleids hold the distinction of being the only extant chilicerate order first described from a fossil (*Curculioides ansticii* Buckland 1837). Rediscovery of the 'lost' holotype of *C. ansticii,* together with the enormous increase in data on extant ricinuleids in recent years, prompted restudy of the fossils. Twelve fossil specimens, occupying three genera, are known from the Upper Carboniferous of Great Britain and the United States. Most of the characteristic morphological features of ricinuleids, as described from the three extant genera, are clearly recognizable in the fossils, indicating little change in the basic body play over 300 M years. Two additional characters of fundamental importance for constructing a cladogram of the group, however, are evident in the fossils. First, one extinct genus, *Curculiodes,* did not bear dorsal abdominal sclerites, but instead had a more flexible abdominal cuticle bearing tubercles and a prominent median longitudinal line or a sulcus: these features are considered to reflect a basic dichotomy of the group. Second, the extinct genera bore two pairs of eyes on the carapace, in similar positions to those occupied by translucent areas of cuticle in, for example, *Cryptocellus.* This confirms the prediction of a number of authors that the translucent areas on the carapace of Recent ricinuleids represent the vestiges of two pairs of eyes. Dorsal abdominal sclerites and vestigial eyes are thus synapomorphies for clades within the Ricinulei and are not diagnostic for the whole group.

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