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Deep-water fossorial shrimps from the Oligocene Kiscell Clay of Hungary: Taxonomy and palaeoecology

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We describe deep-water ghost shrimp assemblages from the otherwise well known Oligocene Kiscell Clay in Hungary. The described fossorial shrimps (Decapoda: Callianassidae and Ctenochelidae) include: *Ctenocheles rupeliensis* (younger synonym *Callianassa nuda*) and *Lepidophthalmus crateriferus* (younger synonym *Callianassa brevimanus*). The fossil material of the former species is assigned to *Ctenocheles* based on the morphology of the major cheliped, particularly the pectinate fingers, bulbous propodus, cup-shaped carpus and elongated merus. *Lepidophthalmus crateriferus* from the Oligocene of Hungary is the first unequivocal fossil record of the genus, which is distinguished in the fossil record on the basis of the presence of a meral blade and meral hook on the major cheliped. *Lepidophthalmus* is today known exclusively from shallow-water environments. The finding of a deep-water fossil representative of *Lepidophthalmus* therefore appears to be a reverse of the common pattern of groups shifting environments from onshore to offshore over geological time, as seen in many taxa. The presence of *Lepidophthalmus crateriferus* comb. nov. in the Kiscell Clay therefore suggests different ecological requirements for at least some populations of this genus in the geological past.

Key words: Decapoda, Callianassidae, *Lepidophthalmus*, Ctenochelidae, *Ctenocheles*, systematics, deep-water environment, Oligocene, Hungary.

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