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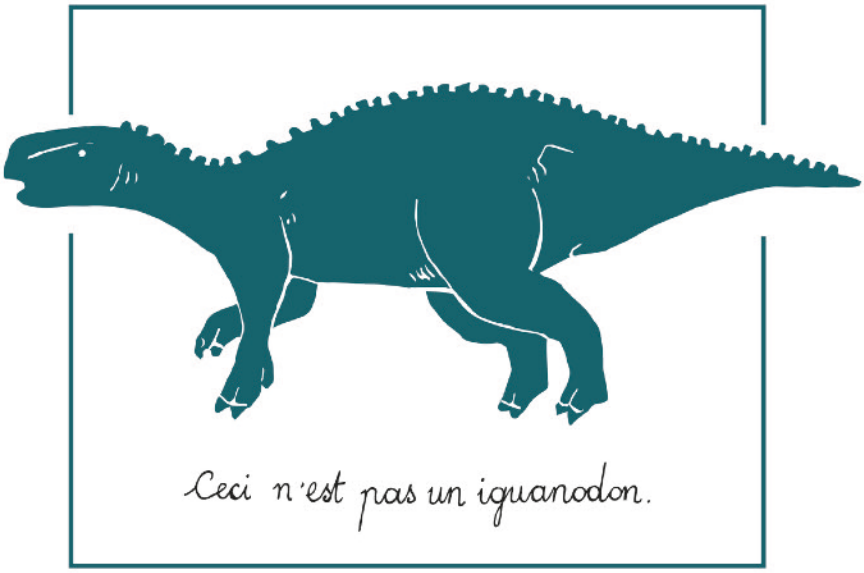

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TAPHONOMY OF THE DINOSAUR BONE BEDS FROM THE MIDDLE JURASSIC OF KULINDA (SOUTHEASTERN SIBERIA)

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The Kulinda locality, situated in south-eastern Siberia, has yielded differently preserved remains of the neornithischian dinosaur *Kulindadromeus zabaikalicus*. The fossil assemblage includes bones and soft tissues, with integumentary structures interpreted as primitive feathers. Recent combined U-Pb and palynological analyses showed that *Kulindadromeus* is Middle Jurassic – probably Bathonian – in age, pushing back the first palaeontological evidence of feathers within the dinosaur clade. Our current study aims at understanding the taphonomy and paleoecology of the locality.

At Kulinda, the stratigraphic section consists of a succession of immature deposits interpreted as greywackes and arenites, composed of volcanic and plutonic clasts derived from nearby igneous sources. Three major monospecific bone beds are intercalated within these deposits and display distinct modes of preservation, with (1) abundant soft tissues – skin and feathers – in close association with articulated bones, (2) few soft tissues and disarticulated bones, and (3) the lack of soft tissues and epigenized disarticulated bones.

The macrofloral and palynological assemblages are characteristic of a pioneer vegetation, including mosses, liverworts, ferns and horsetails. Gymnosperms, in particular pteridosperms, pinaceae and podocarpaceae, are equally represented. This assemblage suggests a rather humid and temperate environment in the region during the Middle Jurassic. The absence of paleosol and root traces in the deposits suggest that sedimentation rates were too fast for the establishment of stable plant communities and pedogenesis. The locality was characterized by a harsh and unstable environment, which may explain the presence of very few vertebrate taxa.