

UPPER TRIASSIC PALAEOBIOTA FROM A MARINE KONSERVAT-LAGERSTÄTTE DEPOSITED DURING THE CARNIAN PLUVIAL EPISODE IN AUSTRIA

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Palaeobiota of fossiliferous sites known as Konservat-Lagerstätte are precious sources of palaeobiological information providing unique insights into palaeocommunities, food chains and dietary habits of marine ecosystems. A rich assemblage of various marine taxa from the lower Carnian Polzberg Konservat-Lagerstätte near Lunz am See (Northern Calcareous Alps, Lower Austria) is described for the first time in detail. The fossiliferous layers were deposited during the Julian 2 lb (*Austrotrachyceras austriacum* Zone, *Austrotrachyceras minor* biohorizon). The fine-laminated Reingraben Shales comprise abundant and well-preserved members of the marine Carnian food chain. Invertebrates with the bivalve *Halobia*, the ammonite *Austrotrachyceras* and the coleoid *Phragmoteuthis* dominate over vertebrate actinopterygian fishes. Fragile groups such as polychaetes and isopods are entirely preserved as soft body fossils. The diverse assemblage comprises ammonites (*Austrotrachyceras*, *Carnites*, *Sageceras*, *Simonyceras*), coleoids (*Phragmoteuthis*, *Lunzoteuthis*), bivalves (*Halobia*), gastropods (caenogastropods/heterobranchs), one echinoid, thylacocephalan arthropods (*Austriocaris*), crustaceans (the decapod *Platycheila* and isopods such as *Obtusotelson*, *Discosalaputium*), polychaetes (*Palaeoaphrodite* sp., eunicid polychaete), acylinopterygians (*Saurichthys*, *Polzbergia*, *Peltoleurus*, *Habroichthys*), cartilaginous fishes (*Acrodus*), coelacanth fish (“*Coelacanthus*”), a lungfish (*Tellerodus*), and a conodont cluster (*Mosherella*). Regurgitalites produced by large durophagous fish and coprolites produced by piscivorous actinopterygians accompany the Polzberg palaeobiota along with rare plant remains (*Voltzia*). The entire fauna of Polzberg and the excellent preservation of the specimens present a window into the Upper Triassic assemblage and palaeoenvironment during the so-called Carnian Pluvial Episode (CPE) in the early Mesozoic. The occurrence of the freshwater lungfish *Tellerodus* and the branchiopod *Eustheria*, a member of brackish to freshwater environments, points to the influence of occasional freshwater pulses or sediment transport events on the marine environment. The Polzberg palaeobiota was deposited during the global CPE, triggering the environmental conditions of the Polzberg Basin and resulting in the formation of the Reingraben Shales with the Polzberg Konservat-Lagerstätte.