

Shallow benthic environment at the Cretaceous/Paleogene (KPg) Boundary documented by abiotic and biotic data on the Pg Adria CP from NE Italy to South Dalmatia

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The research at the KPg boundary was resumed after 1980 following the publication of increased iridium (Ir) contents in deep sea environment at the KT boundary in the Gubbio profile. In 1982, higher Ir and carbon isotope anomalies ($\delta^{13}\text{C}$ -8‰ PDB) were documented within thin beds of peritidal lagoonal environment interrupted with hiatuses at Dolenja Vas (DV). Further research continued in the profiles of Padriciano 1, 2, Basovizza, Sopada, and Vremški Britof (TEWARI et al., 2007). In the DV profile, a 2–5 m thick horizon is also marked by a mercury (Hg) anomaly, which is interpreted as evidence of intensive volcanism (PALINKAŠ et al., 1996). Paleomagnetic analyses indicate CW[S1] rotation of 28° in the chron C29R. Stromatolites were recorded within the Danian limestones. The studied interval covers a time span of 40–200 kyr. Sphaerules found at Padriciano were interpreted as a proof of the meteorite impact. Benthic foraminifera, *R. liburnica* and *Fleuryana adriatica* were recognized in Maastrichtian. In the initial sedimentation after the KPg transition, algae were the most effective group, comprising *Decastroporella tergestina*, the Mexican species *Acroporella chiapasensis* (dasycladaceas), *Drobnella slovenica* (algae incertae sedis), and *Decastronema barattoloi* (cyanobacteria), and among foraminifers *Bangiana hanseni*. Parts of these features were confirmed also in the Sjekoš profile in Herzegovina (DROBNE et al., 2009).

KORBAR et al. (2017) discovered a continuous KPg boundary succession on the Hvar and Brač Islands, with 2 cm thick layers of red-brown clay interpreted as tsunamite. Planktonic foraminifera, shock quartz, high contents of K feldspars, pyroxene and elevated concentrations of PGE “in chondritic proportions” indicate a link to the Chicxulub asteroid impact.

Recently, the paper by A.N. SIAL et al. (2016) utilized Hg as a proxy for volcanism by studying four distal and two proximal sections in relation to the volcanic center of the Deccan traps, straddling the KPg boundary. Besides India (Maghalaya, Jhilmili), it was also identified in Højerup (Denmark), Bottaccione and Padriciano (Italy), Bajada del Jagüel (Argentina), and Dolenja Vas (Slovenia).

DROBNE, K. et al., 2009. In: PLENIČAR, M. et al. (Eds.), *Geology of Slovenia*, 303–372.

KORBAR, T. et al., 2017. *Terra Nova*, **29/2**, dx.doi.org./10.1111/ter.12257

PALINKAŠ, L. et al., 1996. In: DROBNE, K. et al. (Eds.). *The Role of Impact Proc.* 57–60.

SIAL, A.N. et al., 2016. *Cretaceous Research*, dx.doi.org./10.1016/j.cretres.2016.05.006

TEWARI, V.C. et al., 2007. *P.P.P.*, **255**, 77–86, dx.doi.org./10.1016/j.palaeo.2007.02.042