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EOCENE CONTOURITES FROM THE ULTRAHELVETIC PREALPS (HAUTE-SAVOIE, FRANCE) : A CASE OF MIMIC RECYCLING

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This paper reports on the discovery of Eocene planktonic foraminifers within fine-grained limestones previously considered of Cretaceous age, and discusses its stratigraphic, sedimentologic and paleogeographic implications. Located at the SW end of the Thônes Syncline (Subalpine Chains, Haute Savoie), the Sulens Klippe regroups several slices of south-Helvetic and Penninic origin. The former present a continuous stratigraphic succession from late Jurassic to late Cretaceous and are unconformably overlain by Eocene shaly limestones and sandstones. Composed of dark calcilutites and shales, the "Formation gréso-glauconieuse" was up to now attributed to the Aptian. Several samples yielded a residual assemblage of well-preserved planktonic foraminifers dominated by Cretaceous genera such as *Rotalipora*, *Hedbergella* and *Ticinella*. However, the presence of rare, but unmistakable, spinose and globular globigerinids throughout the studied sections suggests a Tertiary age for the "Formation gréso-glauconieuse". The occurrence of *A. bullbrooki, G. pera, G.* aff. *frontosa*, and *A. broedermanni* more specifically indicates a middle Eocene age (P12-P14). This discovery indicates that a major disconformity separates the "Formation gréso-glauconieuse" from the underlying Cretaceous formations. The occurrence of pelagic deposits above and below the disconformity suggests that it was formed by submarine erosion. The "Formation gréso-glauconieuse" further exhibits three sedimentary facies: (1) a chaotic facies characterized by meter-sized blocks of Cretaceous age enclosed in a shaly matrix, and a regular succession including (2) thinly bedded, laminated calcarenites at the base, and (3) homogenous shales at the top. We interpret these facies as slump deposits, sandy contourites and muddy contourites respectively. We propose that the "Formation gréso-glauconieuse" was deposited in a tectonically active, fairly deep basin during the middle Eocene. Poorly or partly lithified Cretaceous material was reworked as slump deposits on the unstable margins of the basin. Active bottom-currents first prevented sedimentation and removed older strata from the basin floor. Gradual slowing-down of the currents, possibly related to sea-level fluctuation or change in basin shape, resulted in subsequent deposition of sandy and muddy material mimicking Cretaceous deposits, but containing a heterogenous assemblage of planktonic foraminifers. Besides rejuvenating the "Formation gréso-glauconieuse" by 70 million years and considerably reforming the stratigraphic succession of the Ultrahelvetic units from the Haute-Savoie, our results provide new insight into the paleogeography and the paleo-oceanography of the northern Alpine margin during the early Tertiary and emphasize the importance of reworked material in sedimentary processes.

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