Co-occurrence of *Metoicoceras geslinianum* (d'ORBIGNY) and *Vascoceras cauvini* CHUDEAU (Cretaceous Ammonoidea) in the southern Negev (Israel) and its stratigraphic implications

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with 4 figures and 1 table

Abstract. *Metoicoceras geslinianum* (d'ORBIGNY), an Upper Cenomanian indicator in Boreal faunas occurs in the 'Kanabiceras' Zone of Israel, associated with *Vascoceras cauvini* CHUDEAU, a widely recorded Tethyan index fossil that has generally been regarded as Lower Turonian. This provides the first direct evidence for the Cenomanian age of part of the Lower Turonian in Tethys, as well as the undoubted occurrence of true vascoceratids in the late Cenomanian.

1 Introduction

Regional differentiation of Boreal and Tethyan ammonite faunas results in interregional correlation problems at several levels in the mid-Cretaceous. These problems are particularly acute around the level of the Cenomanian-Turonian boundary, due to the virtual absence of the predominantly Tethyan vascoceratids in Boreal faunas and a similar absence or rarity of key Acanthoceratinae, Euomphaloceratinae and Mammitinae at critical levels in Tethyan sequences. Several authors have attempted correlations around this boundary on indirect or disputed evidence: BERTHOU & LAUVERJAT (1974 a, b, 1975, 1978 a, b) and LAUVERJAT & BERTHOU (1974) have, in a series of papers, suggested that the 'Lower Turonian' *Vascoceras gamai* Zone of the Iberian Peninsula was actually Upper Cenomanian on the basis of benthic foraminifera present, whilst MOJICA & WIEDMANN (1977) have firmly refuted this view. KENNEDY & JUIGNET (1977) redescribed *Ammonites diartianus* (d'ORBIGNY) showing it to be a *Vascoceras* and inferring it to be Upper Cenomanian, although admitting the holotype to be a reworked phosphate in younger sediment. COOPER (1979), unwilling to accept Cenomanian *Vascoceras*, made it type species of a new genus, *Provascoceras* COOPER, 1979.

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