

FORAMINIFERA FROM THE CRETACEOUS OF SOUTH-LIMBURG, NETHERLANDS XLV.

DYOCIBICIDES KUNRADENSIS nov. spec.

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Dyocibicides only is known from the Tertiary tillnow.

Topotypic material of the type-species, *Dyocibicides biserialis* Cushman and Valentine (Contr. Dept. Geol. Stanford Univ., vol. 1, 1930, p. 30) shows a test which begins with a typical *Cibicides* coiling, characterised by the difference in size of the pores on both sides, at the spiral side with small pores, at the more inflated side with distinctly larger pores. That difference is not continued in the biserial chambers; here both sides show distinct pores. The last-formed chamber shows an aperture with lip at the inner suture of the last formed chamber.

In the Kunrade Chalk (Kunderberg, Bryozoic bed in the quarry Schunck) a *Dyocibicides* was detected, often in numerous specimens, which

in the younger stages is a true *Cibicides*, but for the same difference in pore-diameter of both ventral and dorsal sides. Then the biserial part begins, not differing from that stage of the type-species (Miocene to Recent) from the Caribbean region, but for slightly more inflated chambers; the pores of the biserial part are those of the inflated side of the young stage, viz. coarse scattered pores. Quite the same species, mostly with one side flattened, occurs in the basal sediment of the Me, so that this species, which scarcely is to be distinguished from the type species, and which I herewith name *Dyocibicides kunradensis* nov. spec., once more strongly points to a Dano-Paleocene age of the Kunrade Chalk. Moreover, no *Dyocibicides* is known from the Cretaceous, and the identity of the Kunrade Chalk with the upper layers of the Tuff-Chalk complex once more is proved; since the Me forms the transitional layer, in its fauna as well as in its position, with the overlying Lower Paleocene, the Kunrade Chalk must be even somewhat younger than the Md, where the species was not found.

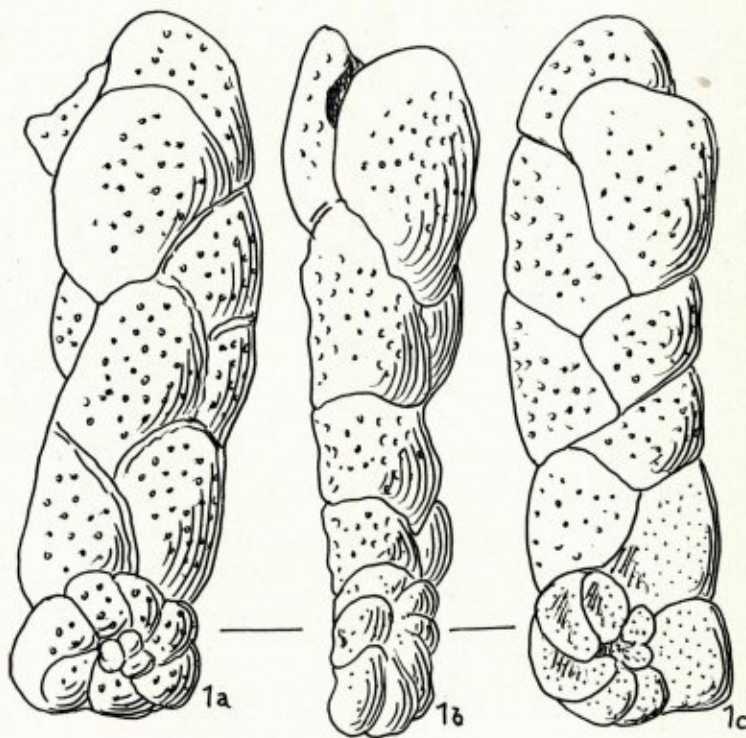


Fig. 1. *Dyocibicides biserialis* Cushman en Valentine. Southern California, shore-sand; recent, type of the genus; a, dorsal, c, ventral side. $\times 115$.

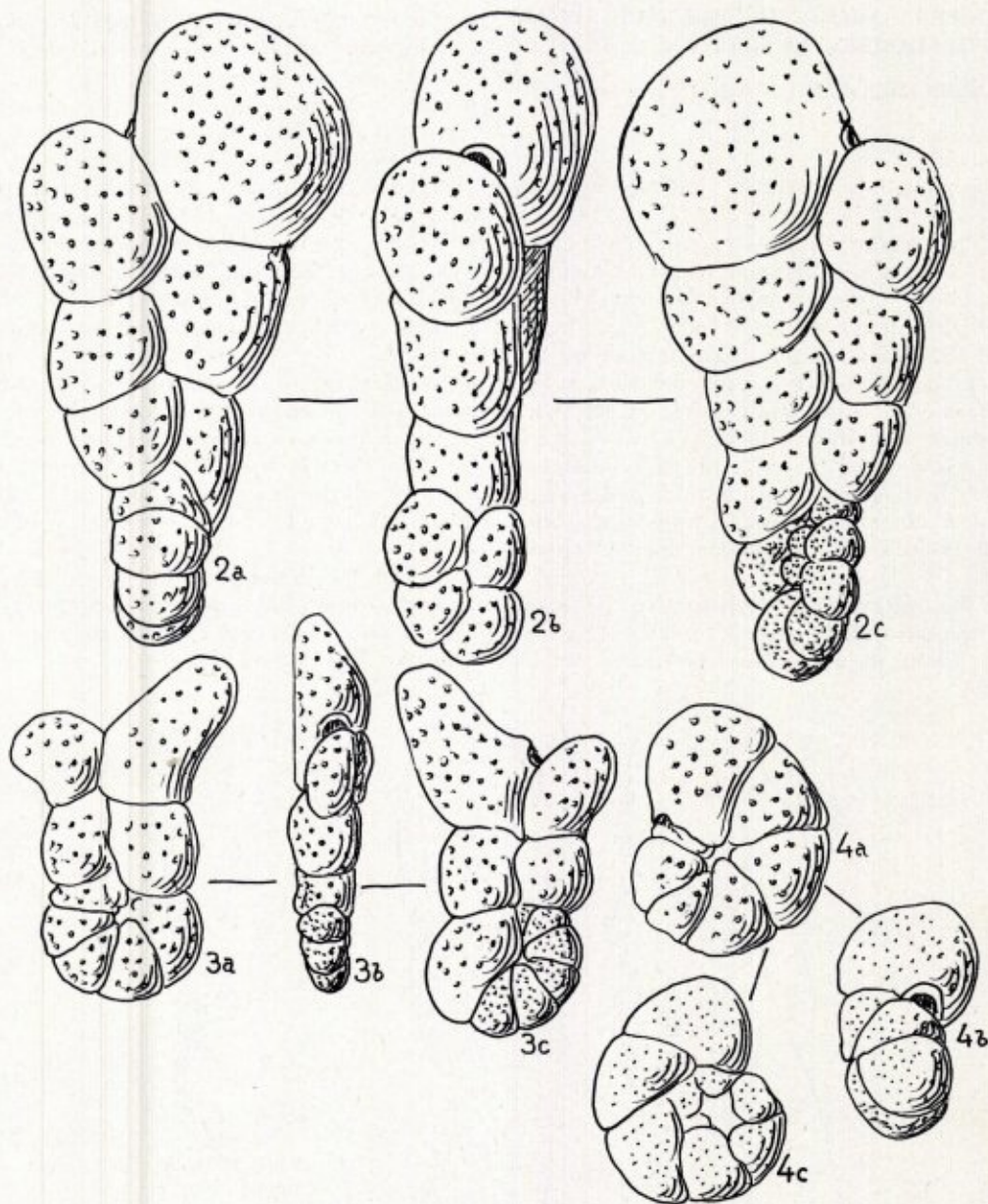


Fig. 2. *Dyocibicides kunradensis* nov. spec. Bryozoic layer of the quarry Schunck, near Kunrade. From three sides. $\times 115$.

Fig. 3. *Dyocibicides kunradensis* nov. spec. Kunderberg, 2,5 m from top. a, dorsal side; b, apertural face; c, ventral side. $\times 115$.

Fig. 4. *Dyocibicides kunradensis* nov. spec. Not yet outgrown specimen. Sample Hofker 729; quarry Curfs, near Houthem, lower Me. a, dorsal side; b, apertural face; c, ventral side. $\times 115$.