

Palaeontology. — *On a new genus of arenaceous foraminifera from the Cretaceous of Texas.* By F. KEIJZER. (Communicated by Prof. L. RUTTEN.)

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In 1934 the Geological Institute of the University of Utrecht received from Dr. P. M. ROGGEVEEN, together with a collection of fossils from Texas, a slide containing a number of foraminifera, and labelled: "Texas, W. of Austin, surface sample Walnut". The latter specimens could not be specifically identified, or even be placed in an existing genus. They are described here as belonging to a new genus:

Coskinolinoides nov. gen.

Genotype: *Coskinolinoides texanus* n. sp.

Test conical, arenaceous, many chambered. Early portion a trochoid spire, starting with 4 chambers in a whorl, later becoming uniserial. Uniserial chambers, and possibly also later chambers of spiral portion subdivided by radial septa. Aperture of the spiral portion at the inner margin of the last-formed chamber. Aperture of uniserial portion consisting of rounded pores in the central area of the roof of the last-formed chamber.

Occurrence: Lower Cretaceous (Walnut formation = lower middle Albian), Texas, U.S.A.; ?Lowermost Cretaceous (Valanginian), Southern France.

According to its plan of growth, the genus belongs in the family of the *Valvulinidae* (2, p. 114; 3). Within this family it shows affinities with the group *Lituonella-Coskinolina-Dictyoconus* in the general shape of the test, radially partitioned uniserial chambers and apertural characters. Moreover it shows a slight tendency toward developing a marginal trough and perforated central shield (compare fig. *d* with 3, p. 171, f. 1), but no evidence could be found of the presence of vertical pillars between the floors and roofs of the uniserial chambers. The absence of pillars is the only characteristic, which definitely separates it from *Coskinolina* (3, p. 186). Other differences of the genotype of *Coskinolinoides* with species of *Coskinolina* are only gradual and may have no general value, e.g. the smaller size of the specimens, and the smaller number and relatively greater length of the radial septa in the uniserial chambers.

Superficial resemblance exists with *Liebusella* (3, p. 162), but the latter differs in the shape of the uniserial chambers and apertural characters.

Small, conical, arenaceous foraminifera, described and figured by PFENDER (5, p. 237, pl. XIV, f. 6, pl. XV, f. 4) may possibly also be referred to *Coskinolinoides*. These occur in Southern France in limestones of lowermost cretaceous age, together with *Dictyoconus walnutensis* (CARSEY). They are refigured here (fig. *i, j*).

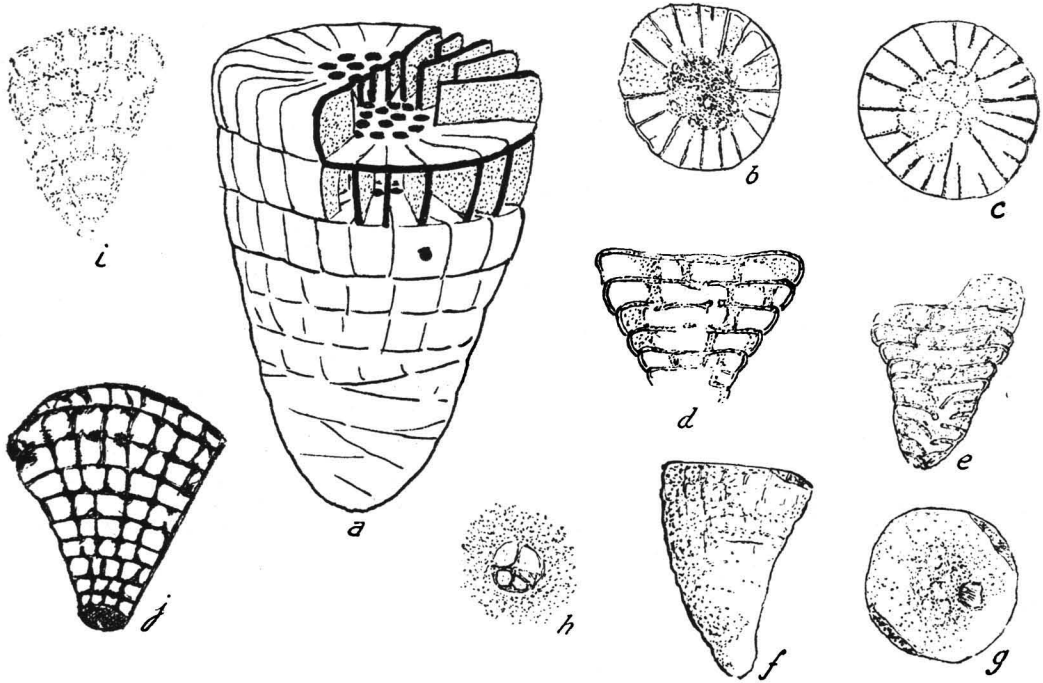
Mention of small, conical foraminifera from the lower Cretaceous of Louisiana is made by CUSHMAN (2, p. 174, as *Orbitolina*) and by GALLOWAY (4, p. 204, as *Coskinolina*), but the author failed to find any description of such forms. They have not been listed by VAUGHAN (7). Neither could any clue be found in the handbooks on the paleontology and geology of Texas (1,6). This was rather surprising, as our specimens were in one collection with slides, containing picked faunal assemblages, composed of well-known characteristic species, from other cretaceous formations of Texas.

Coskinolinoides texanus n. sp.

Since the genus is based on a single species, the description would merely recapitulate that given for the genus, and only the following data of specific importance are added here:

Test small, conical, apex often somewhat bent to one side. Height up to 0.43 mm; the diameter at the base may equal the height, but is generally a little less. Number of uniserial chambers up to 6; height of uniserial chambers about 55μ ; diameter of apertural pores about 15μ ; thickness of wall, septa, roofs and floors 10μ .

While no section gave conclusive evidence about the earlier chamber-arrangement, one specimen with a broken apex showed the early chambers forming a whorl of 4 chambers.



Explanation of figures: a: Schematized reconstruction of *Coskinoloinoides*, showing structure of younger chambers; b—h: *Coskinoloinoides texanus* (b, c: horizontal sections; d, e: vertical sections; f: side view; g: apertural view; h: broken apex, showing arrangement of early chambers; b—g $\times 65$); i, j: ?*Coskinoloinoides* sp. sp., redrawn after PFENDER l.c. 1938 (i $\times 120$; j $\times 40$).

LITERATURE:

1. ADKINS, W. S., Handbook of Texas Cretaceous Fossils. Univ. Texas Bull. 2838 (1928).
2. CUSHMAN, J. A., Foraminifera. Their Classification and Economic Use. CUSHM. Lab. Foram. Res. Spec. Publ. 4 (1933).
3. ———, A Monograph of the Foraminiferal Family Valvulinidae. Ibid. 7 (1937).
4. GALLOWAY, J. J., A Manual of Foraminifera. J. F. Kemp Mem. Ser. Publ. 1 (1933).
5. PFENDER, J., Les Foraminifères du Valanginien provençal. Bull. Soc. Géol. Fr. (5), vol. 8, p. 231—242 (1938), pls. XIII—XVI.
6. SELLARDS, E. H., ADKINS, W. S., PLUMMER, F. B., The Geology of Texas, vol. I, Stratigraphy. Univ. Texas Bull. 3232 (1932).
7. VAUGHAN, T. W., The Foraminiferal genus Orbitolina in Guatemala and Venezuela. Proc. Nat. Acad. Sc. vol. 18, no. 10, p. 609—610 (1932).