DESCRIPTION OF A NEW CUVILLIERINA SPECIES FROM THE MAESTRICHTIAN OF CIDE (NORTHERN TURKEY)

Cide Maestrichtian'nındaki Yeni Cuvillierina Türünün Tarifi

Ercüment Sirel
Mineral Research and Exploration Institute of Turkey, Ankara

ABSTRACT: Maestrichtian - Paleocene Foraminifera of the Cide Region (Central Northern Turkey) is shortly discussed and a new Cuvillierina species from the same area is described.

ÖZ: Cide Bölgesinin (merkezi kuzey Türkiye) Maestrichtien-Paleosen foraminiferterinin kısaca tartışması ve aynı bölgede bulunan yeni bir Cuvillierina türünün tanımlaması yapılmıştır.

INTRODUCTION

A project on the Northern Anatolian Fault Zone was carried out during 1970-71 in the Geological Mapping Department of the Mineral Research and Exploration Institute of Turkey. Mesozoic — Tertiary stratigraphy of the Cide area (Fig. 1) was investigated as a part of this project. Microfauna (Foraminifera) of a section ranging from Turonian- to Lower Eocene was studied by the author. In this paper the microfauna of a part of this section is shortly discussed and the description of a new Cuvillierina species from the same section is given.

MAESTRICHTIAN-PALEOCENE STRATIGRAPHY OF THE CİDE REGION

The upper part of the Maestrichtian strata consists of alternations of limestone and clayey limestone. Orbitoides sp., Lepidorbitoides sp. and *Siderolites* sp. occur predominantly in the limestones. *Cuvillierina sözerii* n. sp. is also found in the same beds. It occurs rather rareily except in the level from which the sample AN-O-245 (Fig. 2, Table 1) as taken, Clayey limestones are rich

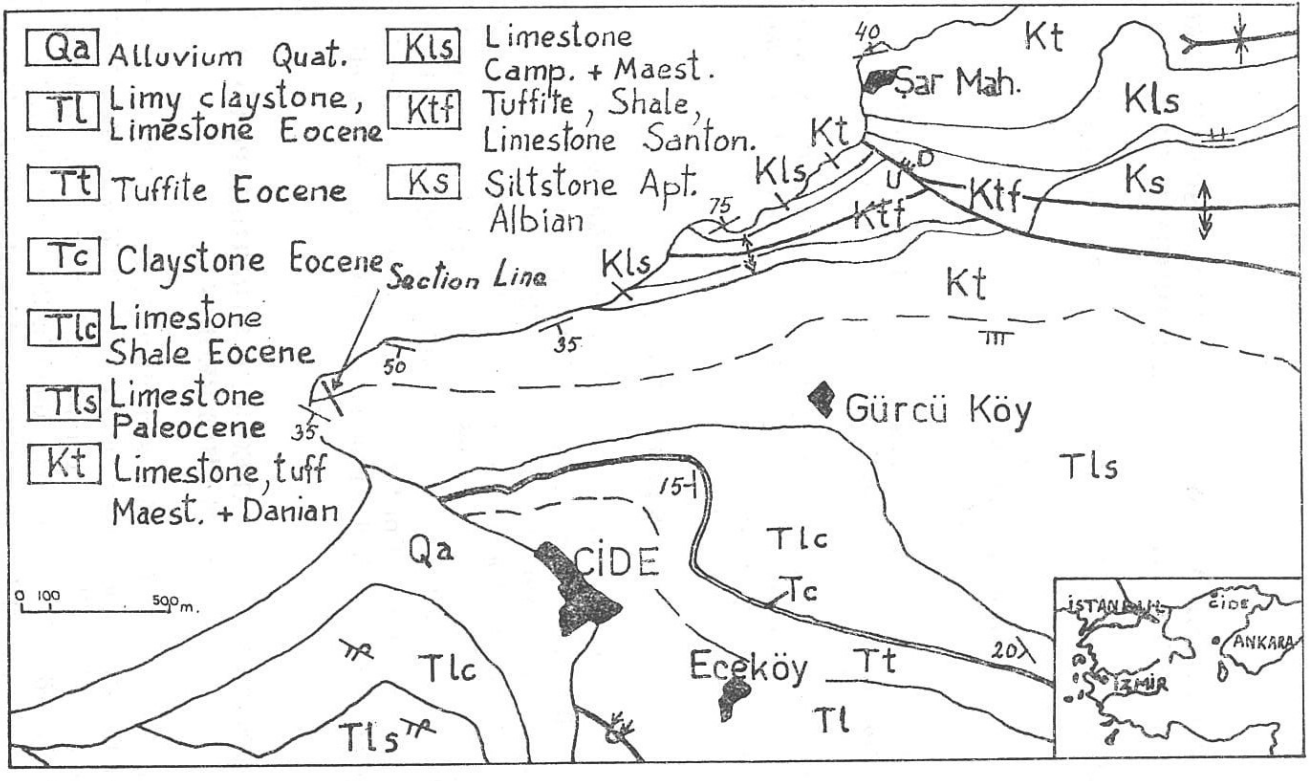

Figure 1 — Geological map of the Cide Region (mapped by Şükrü Uysal, Burhan Erdoğan, Fuat Şaroğlu). Scale 1/50.000

in Globotruncana. Globotruncana species are characteristic for Maestrichtian where form biozones. These zones are shown in Figure 2. Sample, numbered AN-O-255, marks the end of the Maestrichtian strata. The sequence continues upward conformably with clayey limestone beds containing primitive Globorotalies. These clayey limestone strata with Globorotalia pseudobulloides (Plummer), Globigerine triloculinoides Plummer, Heterohelix sp. can be assigned to Danien. A conglomerate containing well rounded limestone pebbles of lower Senonian, Maestrichtian and Danian ages separates Danian strata from thick limestone beds of Paleocene age containing globorotalia pseudomenardii Bolli, Globorotalia cf. angulata White, Globigerina sp., Heterohelix sp. The above mentioned conglomerate suggests a slight disconformity. It is interesting to note that the conglomerate occurs between Danien and Paleocene but not between Maestrichtian and Danian.

TABLE I

Specimen no.	Foraminifers
AN-O-260	Globorotalia pseudomenardii Bolli Globorotalia cf. angulata (White) Globigerina sp.
AN-O-259	Orbitoides sp. Siderolites sp. Globotruncana sp. Globorotalia sp. } in Pebbles
AN-O-257	Globorotalia pseudobulloides (Plummer) Globigerina triloculinoides Plummer
AN-O-255	Globotruncana elevata (Brotzen) Siderolites sp.
AN-O-254	Globotruncana stuarti (de Lapparent) Globotruncana contusa (Cush.) Siderolites calcitrapoides Lamarck Lepidorbitoides socialis (Leym.)
AN-O-251	Globotruncana stuarti (de Lapparent) Siderolites calcitrapoides Lamarck Siderolites heraclea Arni

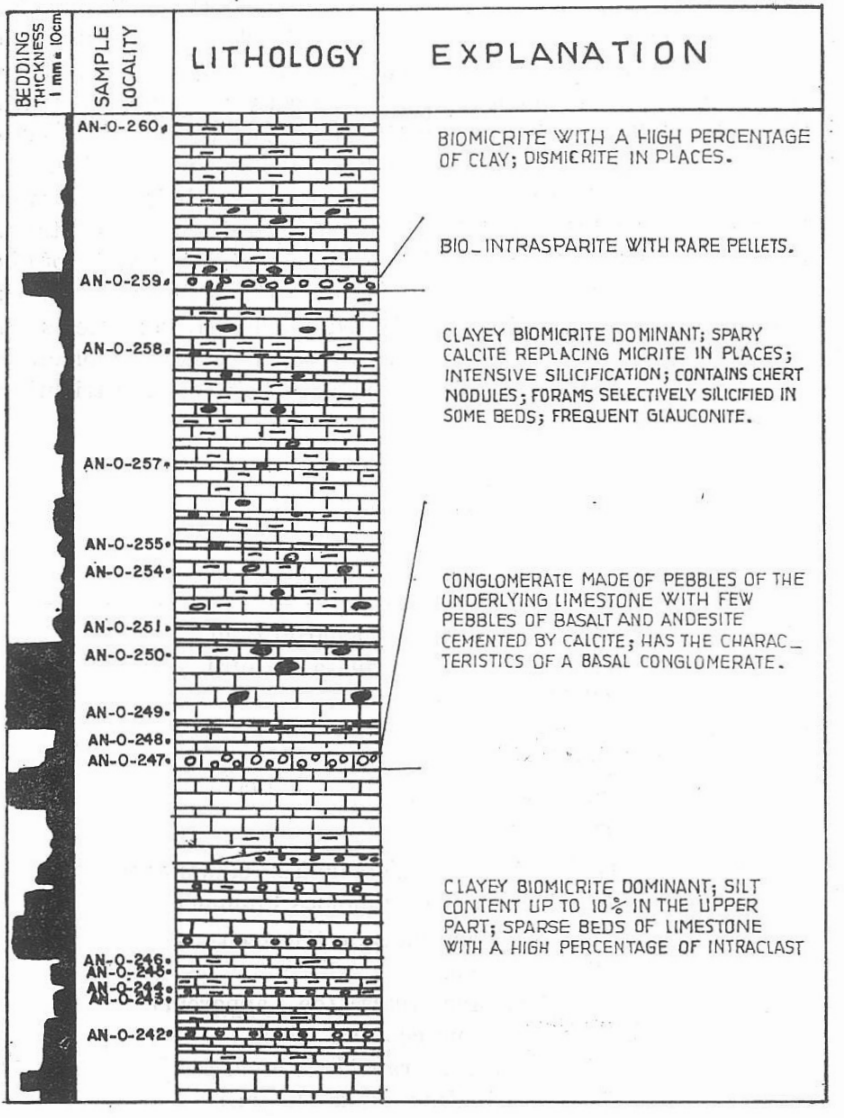

Figure 2 — Columnar Section (Location is shown in Fig. 1) (Şükrü Uysal and Zeki Akyol) Scale 1/1500.

AN-O-250	Globotruncana stuarti (de Lapp.) Zones Globotruncana elevata (Brot.) Globotruncana arca (Cushman)
AN-O-249	Siderolites calcitrapoides Lam. Siderolites heraclea Arni Lepidorbitoides socialis (Leym.)
AN-O-248	Globotruncana stuarti (de Lapp.)
AN-O-247	Orbitoides sp. Omphalocyclus sp. Lepidorbitoides sp.
AN-O-246	Globotruncana contusa (Cush.) Zone
AN-O-245	Cuvillierina sözerii n.sp. Lepidorbitoides minor (Schlumberger) Globotruncana stuarti (de Lapp.) Siderolites calcitrapoides Lam. Globotruncana contusa (Cush.)
AN-O-244	Globotruncana rozetta (Carsey) Orbitoides media (d'Arch.) Siderolites calcitrapoides Lam.
AN-O-243	Lepidorbitoides socialis Orbitoides media (d.Arch.) Omphalocyclus sp.

Table 1 — Forfaminifera content of the section presented in Fig. 2. (Locations of samples are shown in Fig. 2)

Family MISCELLANEIDAE Sigal 1952

Genus CUVİLLİERİNA Debourle 1955

Cuvillierina sözerii n.sp.

Pl. I. Fig. 1-6, Pl. II, Fig. 7-10

Derivatio nomvnis. — This species is dedicated to my colleague Mr. Biler Sözeri.

Diagnosis: Test free, discoidal and planispiral, coling involute, surface perforate and irregularly reticulate, hyaline calcareous test with perforate radial wall, 2-3 whorls, average diameter 2,75 mm., average central thickness 0,60 mm., proloculum very small and subspherical with a diameter of 65 y, spire very thick with alveolar

structure at its end, spire interval very large in the last whorl, septa double layered with intraseptal channell, irregular chambers with intercameral foramen, last four chambers big and very characteristic in shape.

Description: The test if free and discoidal. In spite of its inner dissymmetry, it is coiled planispirally. The coiling is completely involute. In some superficial sections it is observed that the surface is covered by a perforate, irregular and reticulate pattern. The equatorial periphery is arcuate. The test structure is hyaline calcareous and radially perforate as in Rotaliidae. Thickness of the test varies from one edge to the other. Proloculum is very small, subspherical and its diameter is about 65y. The proloculum is followed by 2-3 whorls. The spire thickness begins to increase from the first whorl and reaches its maxiumum at the last whorl. There are some big alveoles within this rather large thickening. Presence of these alveoles is a very important character for this species. In the first whorl, the spire interval stays almost constant; but, at the last whorl is sudenly becomes wider as operculinoid pattern. The septa have double layers and are arched backward. Intraseptal channels are present. The chamber communications are made by a slit form intercameral foramen, at the base of the septum. In the first whorl, chambers are very small and their height is slightlly bigger than their breadth. The chambers of the last whorl are very different in size and in shape. The last four chambers, being very characteristic, become greater and reach 2-4 times of the size of the first whorl's chambers. There are 11-12 chambers in the last whorl.

Measurements: (in 20 samples)

	Maximum	**Minimum**	**Average**
Diameter	3,33 mm	1,89 mm	2,75 mm
Central thickness	0,65 mm	0,55 mm	0,60 mm

Comparisons and Remarks. — Because of the similarities of external ornamentation and of coiling plane this new species is placed in genus Cuvillierina, although its external ornamentation is similar to that of *Latffitteina Marie. Cuvillierina sözeri n.sp. differs definitely from Laffitteina Marie* by a different coiling plane.

Cuvillierina sozerii n.sp. is distinguished from Cuvillierina eocenica Debourlle by unlike shape of the last whorls and by presence of alveols within the spire in the last whorl. Another difference be-

tween these two species is the lack of alveoles in basal part of the chambers of the last whorl of Cuvillierina sozerii n.sp.

It is distinguished from Cuvillierina vallensis (Ruiz De Gaona) by unlike chambers of the last whorl and the lack of alveoles within the spire in the last whorl. *Cuvillierina sözerii* n.sp. occurs in a lower stratigraphical (level.

Distribution. — The species has been found in hard, buff-colored Limestone with a rich fauna composed of Lepidorbitoides socialis (Leym.), Lepidorbitoides sp., Orbitoides media (D'Arch.) Orbitoides sp., Globotruncana stuarti (De Lapp.), Globotruncana contusa (Cush.), Siderolites calcitrapoides Lam., Siderolites sp., Omphalocyclus sp-, Sulcoperculina sp., Acervulina sp., Navarella sp., Kathina

Stratigraphical level: Maestrichtian.

Locality: Cide Town, North-West of Kastamonu.

Yayına verildigi tarih: 2.1.1973

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PLATE I

Cuvillierina sözerii n.sp.

Fig. 1 — Axial section, paratype (Es. C. 2) X 30

Fig. 2 — Equatorial section, holotype (Es. C. 1) X 34

Fig. 3 — Equatorial section, paratype (Es. C. 3) X
32 Si- Siderolites sp.

Fig. 4 — Section parallel to surface of test, paratype (Es. C. 4)

Fig. 5 — Tangential section, paratype (Es. C. 5) X 30

Fig. 6 — Axial section, paratype (Es. C. 6) X 30

PLATE II

Cuvillierina sözerii n.sp.

Fig. 1 — Equatorial section, paratype (Es. C. 7) X 31
Si- Siderolites calcitrapoides Lamarck,

Fig. 2 — Axial section, paratype (Es. C. 8) X 30

Fig. 3 — Subaxial section, paratype (Es,. C. 9) X 30
Lpo- Lepidorbitoides sp., Git- Globotruncana contusa (Cush.)

Fig. 4 — Subaxial section, paratype (Es. C. 10) X 31

PLATE I

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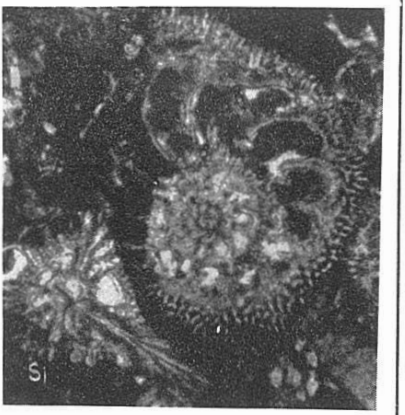

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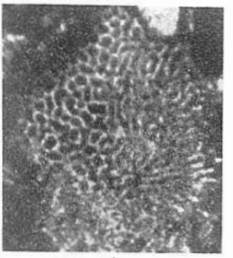

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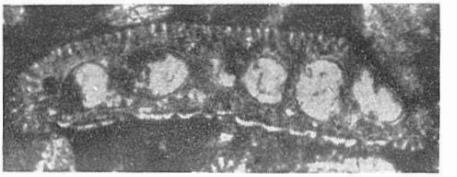

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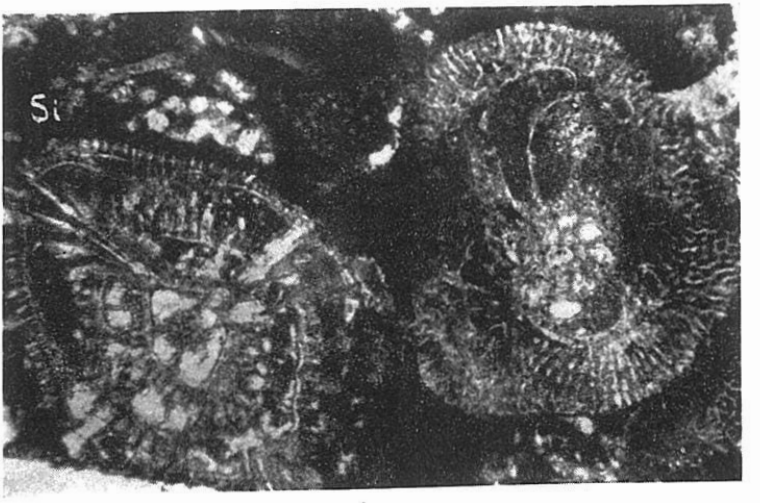

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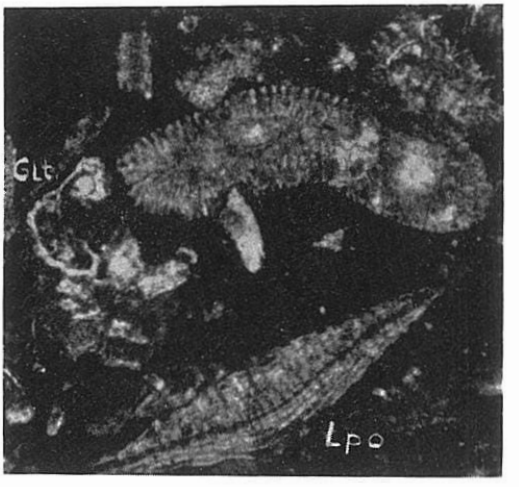

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