

## NEW SUBFAMILY, GENUS AND SPECIES OF LOWER CARBONIFEROUS RUGOSE CORALS FROM CENTRAL ALBORZ (N. IRAN)

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### Abstract

Carboniferous strata in the Alborz mountains consist of calcareous rich fossils the main part of which is composed of rugose corals. There have been few studies carried out on corals so far. In this paper, a new subfamily, genus and eight new species of rugose corals from Mobarak limestones in the central Alborz mountains are introduced.

### Introduction

The Mobarak Formation [2] of central Alborz (N. Iran) contains a distinctive and diverse coral fauna. The corals of this formation were not known of until 1963 and no monographic study had been carried out on them until that date. Some investigators have reported the presence of some genera. Flügel [7] has carried out monographic studies on corals in the north of Semnan, and introduced ten species which belong to six genera. Then Khaksar [13] studied corals in the Lower Carboniferous of central Alborz and overall recognized eighty-eight species belonging to thirty-eight genera and introduced them; among them were sixteen new species [13].

There are numerous varieties in the Lower Carboniferous corals of Iran, but most of the species belong to *Amplexizaphrentis*, *Siphonophyllia*, *Kueichouphyllum* and *Zaphriphyllum*. They can be useful in determining the different horizons of the Lower Carboniferous in Iran. Although the Lower Carboniferous rugose corals of central Alborz haven't been issued yet, the results which have been obtained up till now, are very promising.

The aim of this study is to describe eight new species from rugosa which have been taken from sections of central Alborz in the north of Iran (Fig. 1). The classification which has been used for systematic description is

**Keywords:** Central Alborz; Corals; Lower Carboniferous; Mobarak-Formation

taken from Hill [11].

### Systematic Description

Phylum Coelentrata Frey & Leuckart, 1847  
Subphylum Cnidaria Hatschek, 1888  
Class Anthozoa Ehrenberg, 1834  
Subclass Rugosa Milne-Edwards & Haime, 1850  
Order Stauriida Verrill, 1865  
Suborder Stereolasmatina Hill, 1981  
Family Hapsiphyllidae Grabau, 1928  
Subfamily Hapsiphyllinae Grabau, 1928  
Genus *Amplexizaphrentis* Vaughan, 1906

*Amplexizaphrentis iraniense* sp. nov.  
(Pl. 1, Figs. 1-6)

**Holotype:** Specimen number MO-A-9 (Pl. 1, Fig. 2), from Mobarak Type section.

**Material:** Eighty-three specimens in total. One hundred five transverse thin sections and ten longitudinal thin sections.

**Derivation of Specific Name:** The name of the species is dedicated to Iran.

**Type Locality:** 50 km east of Tehran, north of Mobarak-

Abad village, Central Alborz, N. Iran.

Age: Tournaisian.

**Diagnosis:** *Amplexizaphrentis* with a diameter ranging from 8 to 14 mm and with 24 to 38 major septa. Minor septa are short and a cardinal fossula is well defined. The major septa are somewhat rotated around the axis of the corallite, specially in the counter quadrants.

### Description

**External Characters:** Solitary, small, ceratoid to trochoid, with a maximum diameter of between 6 and 16 mm and their length until 34 mm (MO-AA-29). The external surface shows longitudinal grooves.

### Internal Characters:

**Transverse Sections:** The diameter varies from between 8 to 14 mm in the adult stage and the number of septa for this diameter ranges from 24 to 38. The epitheca is moderately thick and undulated in the external surface. The major septa are long and reach the center. They are thick on the periphery, expand a third of the way down and thin out toward the center. They are arranged in the pinnad form, and can form fascicles of septa distributes in quadrants in some cases. The cardinal septum is short and is

situated in the marked fossula, with parallel borders or with a small median construction. Minor septa are short (from one third to a fifth the size of the major).

Some specimens have marked counter pseudofossula in the mature stage. Marks outlines of numerous concentric tabulae.

**Longitudinal Sections:** The epitheca is medially thick. The tabulae are thin, generally complete and present a dome arched in the center and strongly inclined toward the borders, with 12 tabulae in each cm.

### Discussion

This group represents a new species, because of its size and the frequent recurrence of counter pseudofossula.

*A. iraniense* differs from *A. enniskilleni* cf. *enniskilleni* [14], in its fossula which is not expanded, its different counter and its cardinal fossula which is larger. *A. iraniense* differs from *A. patula* Easton, in that the cardinal septum is reduced late and the septa of the counter quadrants withdraw from the axis before the septa of cardinal quadrants do. Finally, it is different from *A. ningxiangensis* Wu, because it has fewer radial disposition of sept and the cardinal septum become shorter more tardly.

Suborder Caniniina Wang, 1950

Family Cyathopsidae Dybowski, 1873

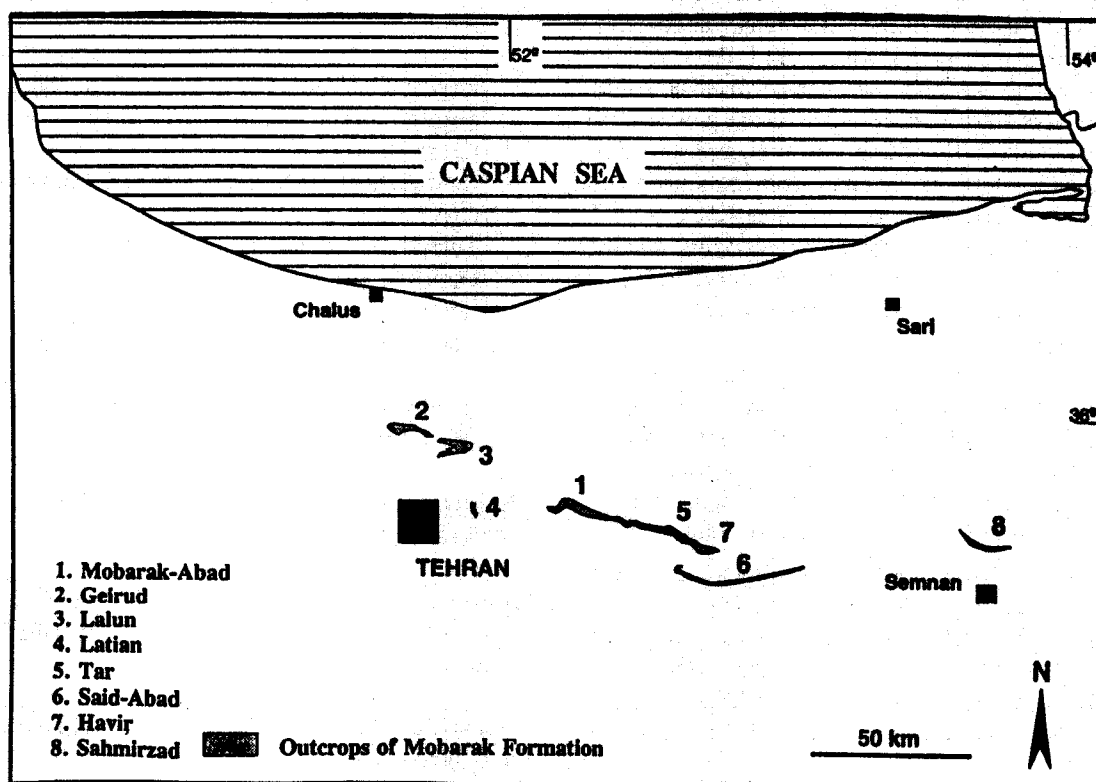


Figure 1. The geographical location of sections which have been studied in this paper.

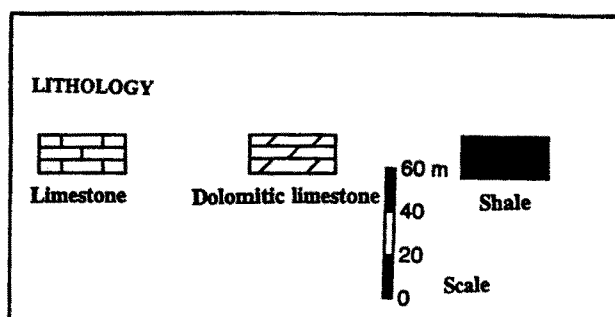


Figure 2. General legend of sections.

Genus *Siphonophyllia* Scouler in McCoy, 1844

*Siphonophyllia iranica* sp. nov.  
(Pl. 2, Figs. 1-3)

**Holotype:** SA-AA-29 (Pl. 2, Fig. 1), from Said-Abad section.

**Material:** Eleven specimens in total. Altogether there are twelve transverse thin sections and five longitudinal sections.

**Derivation of Specific Name:** Denomination refers to the country where the studied samples were found.

**Type Locality:** 100 km east of Tehran, north of Said-Abad village, central Alborz, north Iran.

**Age:** Tournaisian.

**Diagnosis:** Large *Siphonophyllia*, which can reach a diameter of 86 mm and 63 major septa.

Dissepimentarium is wide and forms up to 12 rows of transeptal and interseptal dissepiments.

The thickness of septa in the cardinal quadrants is very marked.

### Description

**External Characters:** Solitary corals, large cylindric to trochoid. The maximum diameter is from 49 to 84 mm and the length varies from between 78 to 80 mm.

External surface presents longitudinal grooves and transverse furrows. Calice is deep.

### Internal Characters:

**Transverse Sections:** Diameters in realized section in the adult stage or immediately below the calice, vary from between 45 to 84 mm. The number of major septa for mentioned diameter is from 52 to 63. The septa of the cardinal quadrants are thick and the counter septa are thin.

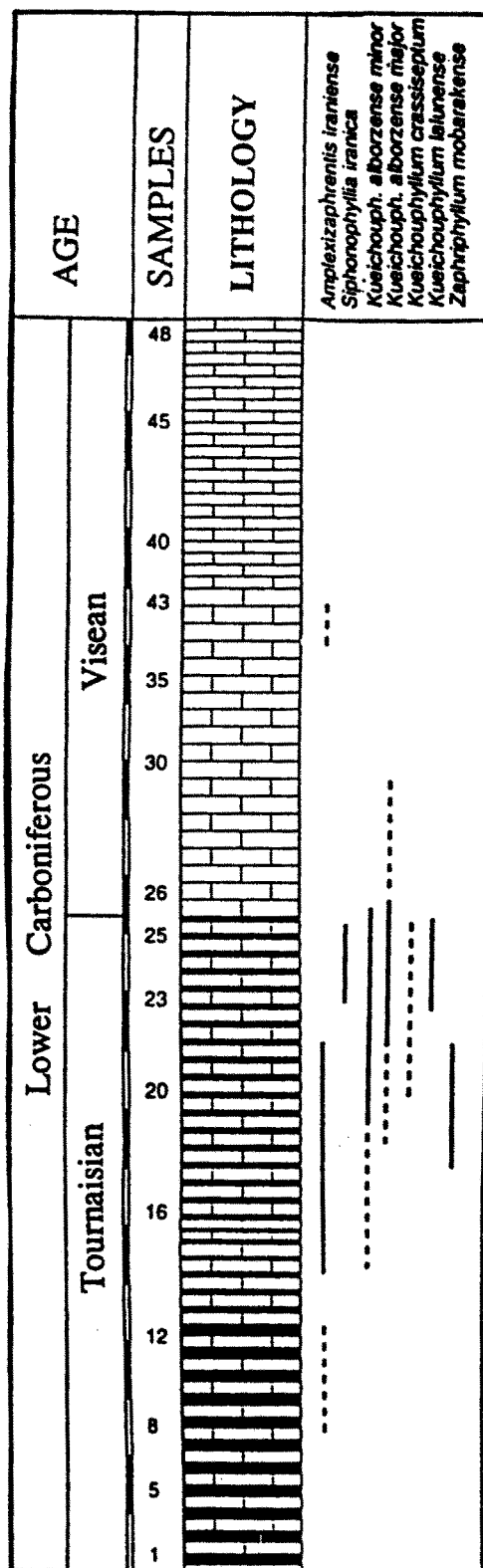


Figure 3. Vertical distribution of species of coral from Mobarak-Abad section.

The septa are thin in the dissepimentarium and thick in the tabularium. They are medially long and reach two-thirds to three quarters of the radius. The length of minor septa is from a half to a quarter of the major. The septa have a fibrous microstructure, are thin and ondulada. Dissepimentarium is wide and composed of 4 to 12 rows of transeptal dissepiments of 1<sup>st</sup> and 2<sup>nd</sup> order and regulars. Fossula is marked and cardinal septum is short.

**Longitudinal Sections:** The epitheca is thin with wrinkles. Dissepimentarium is composed of 4 to 12 rows of dissepiments, large, long, a few globose, which are strongly inclined toward the axis.

The tabularium presents between 30 and 45 mm diameters. Tabulae, with granular microstructure, are flat and arched in the center, smoothly inclined toward the border, with seven tabulae in each cm.

#### Discussion

The species which is described here differs from *S. cylindrica* Scouler, 1844, because of its major diameter, the smaller number of septa and because its minor septa are slightly longer. It also differs from *S. hasteriensis*, Salée, 1913 because it has longer minor septa and more tabulae in each cm.

It differs from *S. garwoodi* Ramsbottom & Mitchell, 1980; *S. latitabulata* Onoprienko, 1979; *S. doriadoti* Salée, 1913; and *S. buxtonensis* Lewis, 1924, in the greater relationship between the diameter and the number of septa and the smaller number of tabulae. It is distinguished from *S. samsonesis*, Salée, 1913 because of the smaller number of septa.

Suborder Aulophyllina Dybowski, 1873  
Family Aulophyllidae Dybowski, 1873  
Subfamily Heterocaniniinae Hill, 1981  
Genus *Kueichouphyllum* Yü, 1931

*Kueichouphyllum alborsense minor* sp. et subsp. nov.  
(Pl. 2, Figs. 4-6, Pl. 3, Fig. 1)

**Holotype:** TA-B-1 (Pl. 3, Fig. 1), from Tar section, Mobarak Formation.

**Material:** Twelve specimens in total. Sixteen transverse thin sections and nine longitudinal thin sections.

**Derivation of Specific Name:** Refers to Alborz mountain.

**Type Locality:** 60 km east of Tehran, north-east of Lake Tar, central Alborz, north Iran.

**Age:** Tournaisian.

**Diagnosis:** *Kueichouphyllum* with diameters ranging from 21 to 26 mm and 44 to 63 major septa in the mature stage. The cardinal fossula is well defined and cardinal septum is less shortened.

Dissepimentarium is narrow. The septa are very thick in the tabularium in the cardinal quadrants.

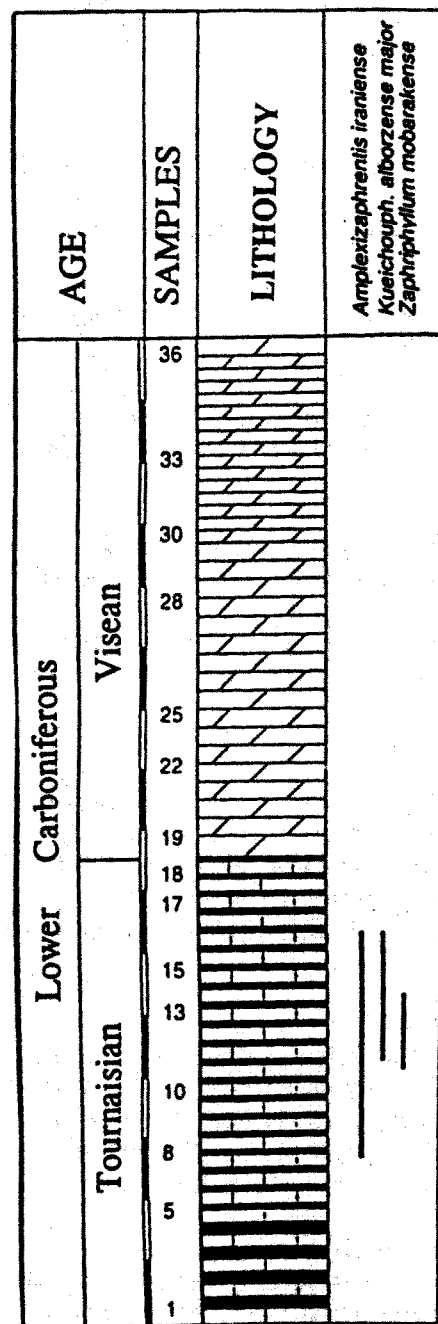


Figure 4. Vertical distribution of species of coral from Geirud section.

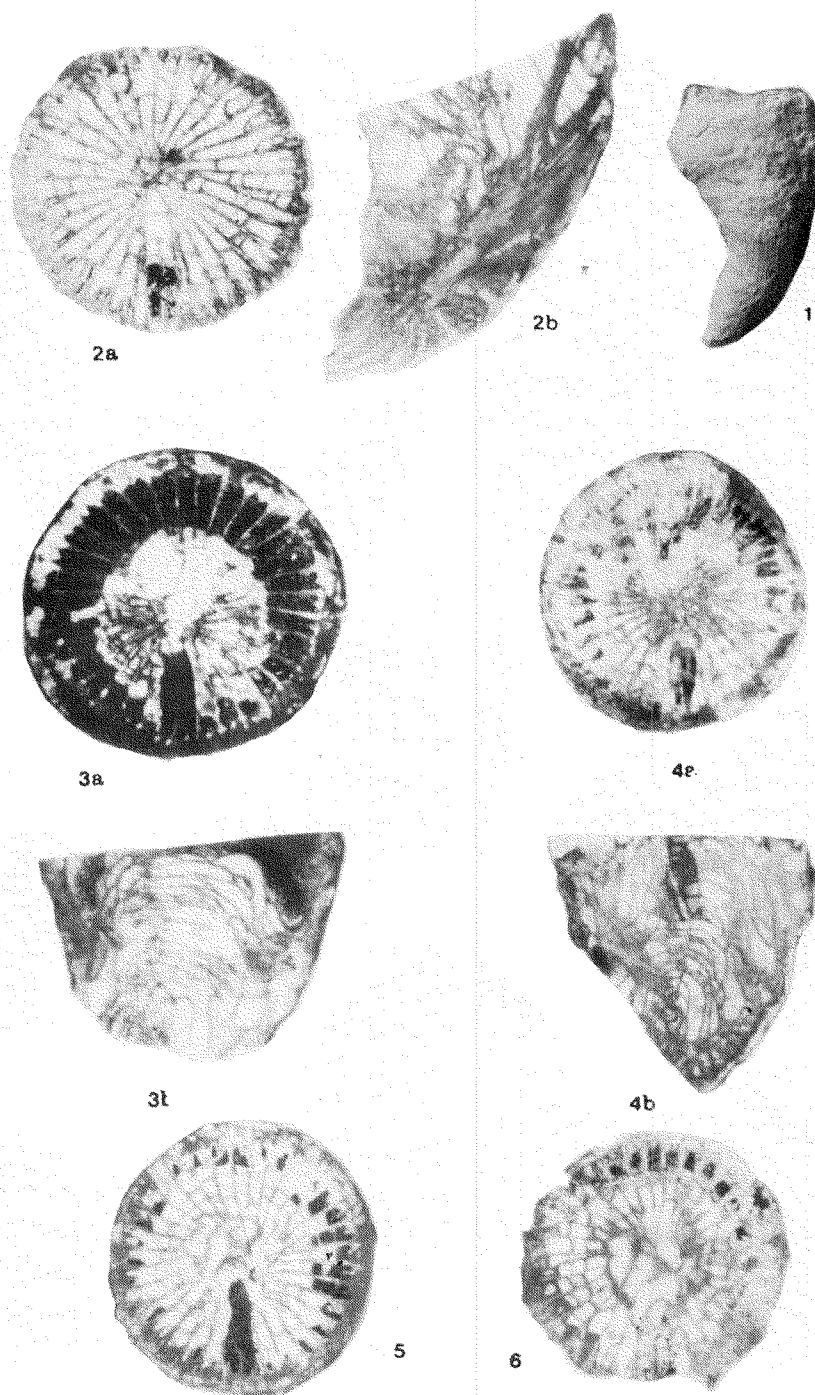


Plate 1

Figures 1-6. *Amplexizaphrentis iraniense* sp. nov. (*Amplexizaphrentis*), (x4.5), Lower Carboniferous

1- Side view of specimen, showing the external form (x1)

2a- Transverse section of the holotype

2b- Longitudinal section of the same

3a- Transverse section of a fragment

3b- Longitudinal section of the same

4a- Transverse section of the specimen

4b- Longitudinal section of the same

5- Transverse section of the specimen

6- Transverse section of the specimen

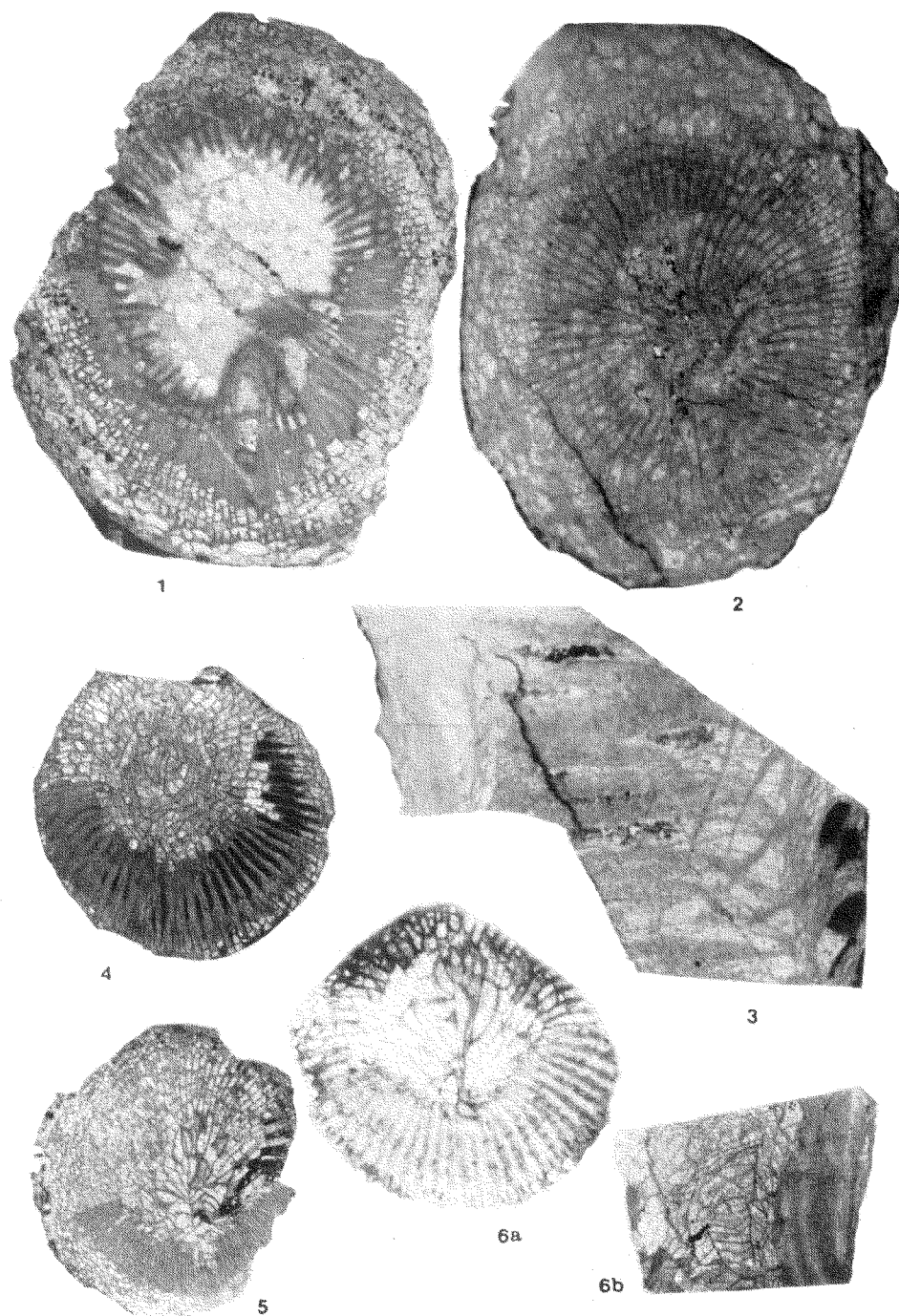


Plate 2

Figures 1-3. *Siphonophyllia iranica* sp. nov. (*Siphonophyllia*), (x2), L. Carboniferous

- 1- Transverse section of the holotype
- 2- Transverse section
- 3- Longitudinal section

Figures 4-6. *Kueichouphyllum alborsense* minor sp. et subsp. nov. (*Kueichouphyllum*), (x2), Tournaisian

- 4 - Transverse section of the specimen
- 5 - Transverse section of the specimen
- 6a - Transverse section of the mature stage of the specimen
- 6b - Longitudinal section of the same

**Description**

**External Characters:** Solitary corals, ceratoid, with a maximum diameter of between 25 and 38 mm and a length which varies from between 50 and 70 mm.

There are longitudinal grooves and transverse furrows on the external surface. Calice is deep.

**Internal Characters:**

**Transverse Sections:** Diameters vary from between 21 to 26 mm and the number of major septa range from 44 to 63. The external wall is of medium thickness. Dissepimentarium is wide (2 to 5 mm), formed by 6 to 12 rows of interseptal regular dissepiments. The septa are thin in the dissepimentarium and become thick when entering into the tabularium.

**Longitudinal Sections:** Dissepimentarium with 5 to 12 rows of dissepiments which are small, globose and incline toward the wall, which is simple and of medium thickness. Diameters of the tabularium are from 13 to 16 mm and the distance between tabulae ranges, on average, from 0.8 to 1.4 mm.

Tabulae are in two forms: the more external are formed from incomplete tabulae, are globose and incline toward the periphery; are the more internal, in direct relation to the axial structure, are convex and thin.

**Discussion**

The corals described here are similar to *Kueichouphyllum chenxianense* Jiang (1982) but have fossula with minor openings and more marked axial plates. Dissepimentarium is variable, but in general better developed. It presents minor diameter for equal numbers of septa.

*Kueichouphyllum alborzense* major sp. et subsp. nov.  
(Pl. 3, Figs. 2-4)

**Holotype:** GI-AA-83 (Pl. 3, Fig. 2), from Geirud section, Alborz.

**Material:** Eight specimens in total. Eight transverse thin sections and four longitudinal thin sections.

**Derivation of Specific Name:** Denomination refers to the mountain where the studied specimens were found.

**Type Locality:** 100 m north of Geirud village, north of Tehran, central Alborz, north Iran.

**Age:** Tournaisian.

**Diagnosis:** Like minor form, but with major diameter, which reaches 50 mm, and 104 major septa.

**Description**

**External Characters:** Corals great in size, ceratoids to trochoids which reach a diameter of 52 mm near to calice, and 110 mm in length.

External surface presents longitudinal groove.

**Internal characters:**

**Transverse Sections:** The wall is undulated. Alar diameter varies in the mature stage from between 24 to 45 mm and the septa are 70 to 104 in number.

The septa are thin within dissepimentarium. The septa in the cardinal quadrants become thick in the tabularium while the rest are uniform. They are long and reach the axial structure. The minor septa are one-third to one-fourth the size of the major septa, contratingent.

Dissepimentarium is composed of 7 to 14 rows of normal dissepiments. The cardinal fossula is very marked, narrow and expanded in the tabularium, with one shortened cardinal septum. The axial structure is composed of median plate and radial lamellae and is well defined.

**Longitudinal Sections:** The wall is thin and of a wrinkled appearance. Dissepimentarium is composed of 5 to 14 rows of globose and small dissepiments, in a very inclined position, with a tendency to be vertical.

Tabularium have 7 to 10 tabulae in each cm. Tabulae are convex to horizontal in the center part and inclined in the borders toward the wall.

**Discussion**

Corals of this specie *Kueichouphyllum alborzense* sp. nov. major form, differ from *Kueichouphyllum planotabulatum* Wu, (1964), in its thicker cardinals and the dissepimentarium which is more ample.

*Kueichouphyllum lalunense* sp. nov.  
(Pl. 4, Figs. 1-2)

**Holotype:** LA-AA-47 (Pl. 4, Fig. 1), from Lalun section.

**Material:** Twelve specimens. Ten transverse thin sections and three longitudinal thin sections.

**Derivation of Specific Name:** Dedicated to the Lalun region, where the holotype is found.

**Type Locality:** The east of Lalun village, 23 km north of Tehran, central Alborz, north Iran.

**Age:** Tournaisian.

**Diagnosis:** *Kueichouphyllum* large in size (maximum diameter 55 mm and 78 septa), thick in the tabularium septa in the cardinal quadrants. The fossula is very marked

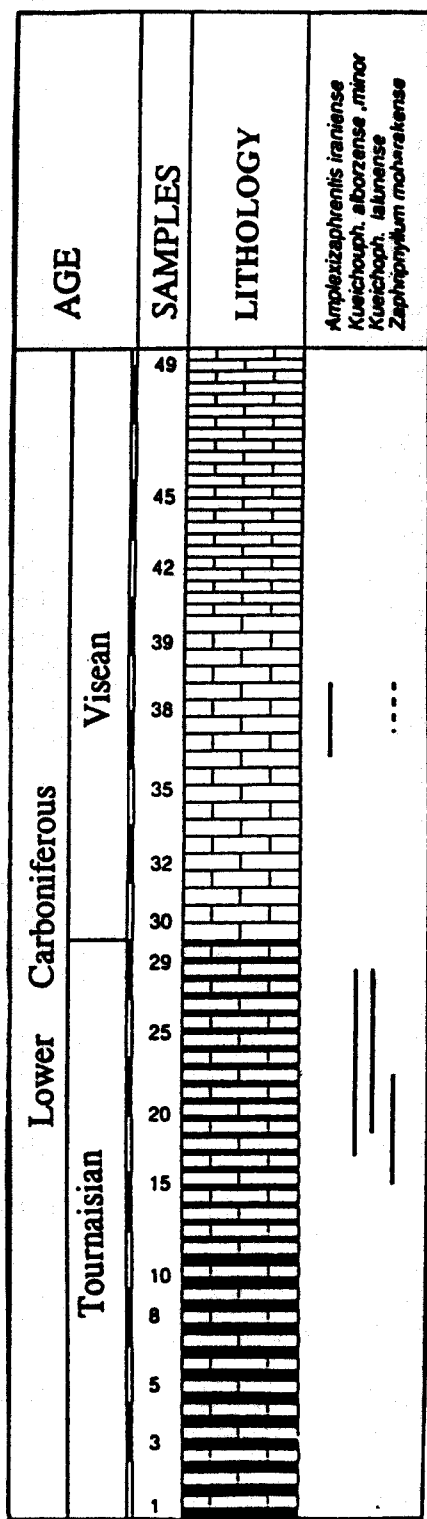


Figure 5. Vertical distribution of species of coral from Lalum section.

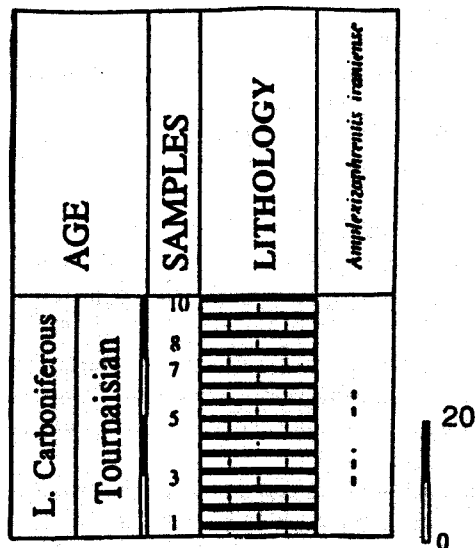


Figure 6. Vertical distribution of species of coral from Latian section.

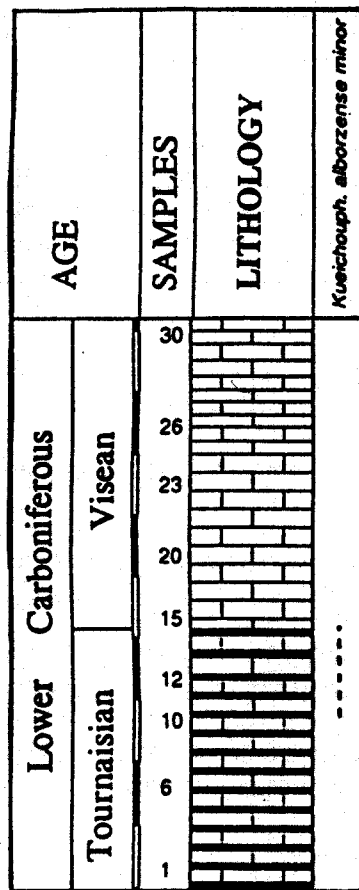


Figure 7. Vertical distribution of species of coral from Tar section.



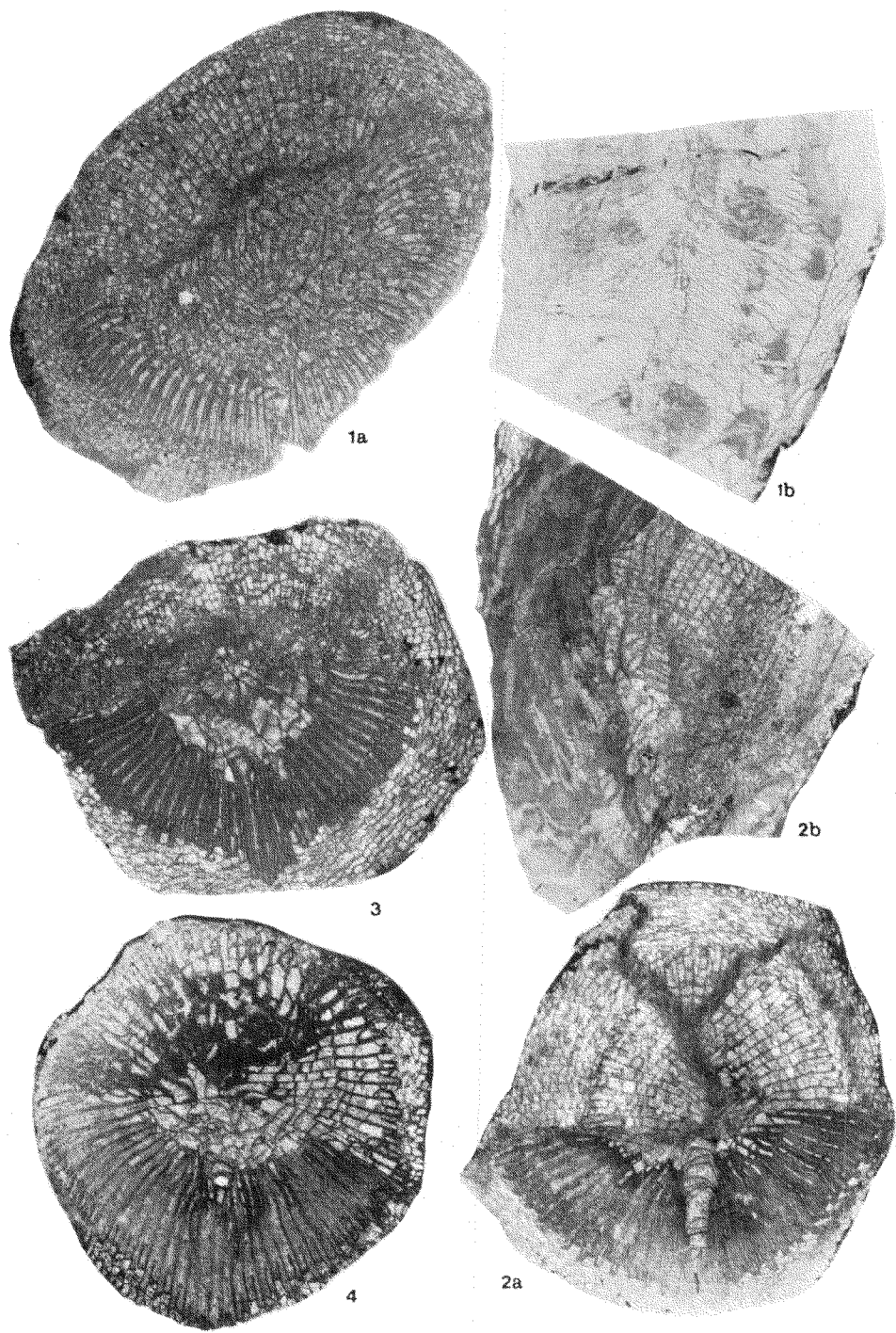


Plate 3

**Figure 1.** *Kueichouphyllum albosense* minor sp. et subsp. nov. (*Kueichouphyllum*), (x2)

**1a** - Transverse section of the holotype

**1b** - Longitudinal section of the same

**Figures 2-4.** *Kueichouphyllum albosense* major sp. et subsp. nov. (x2), Lower Carboniferous

**2a** - Transverse section of the holotype

**2b** - Longitudinal section of the same

**3** - Transverse section

**4** - Transverse section of the specimen

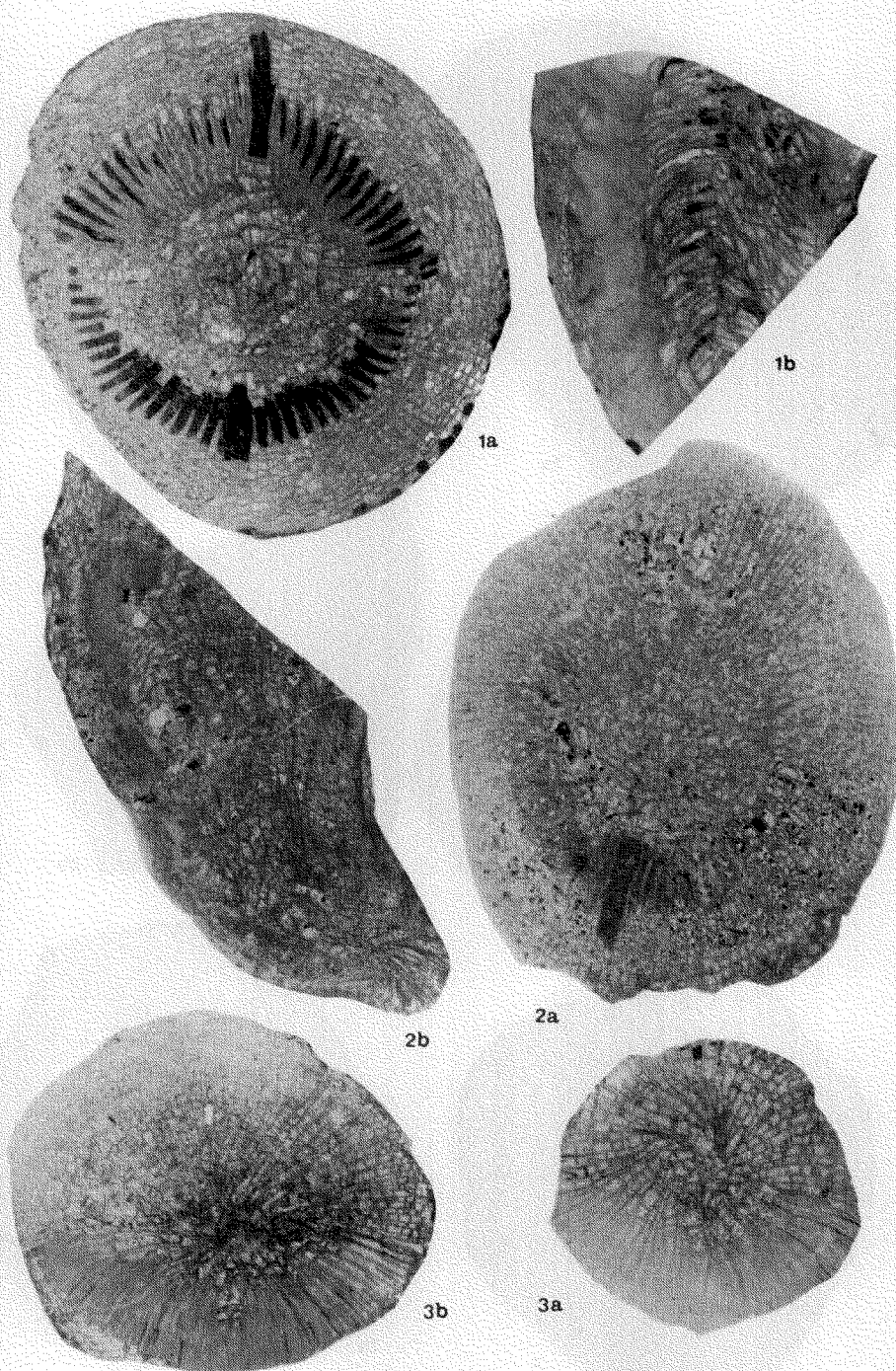


Plate 4

**Figures 1-2.** *Kueichouphyllum lalunense* sp. nov. (x2), Tournaisian

1a - Transverse section of the holotype

1b - Longitudinal section of the same

2a - Transverse section of the specimen

2b - Longitudinal section of the same

**Figure 3.** *Kueichouphyllum crassiseptum* sp. nov. (x2), Tournaisian

3a - Transverse sections of a holotype

3b - Longitudinal section of the same

and deep. Median plate is less marked.

#### Description

**External Characters:** Solitary corals, large, with a maximum diameter of between 25 and 55 mm and a length which varies from between 66 to 93 mm. Ceratoids to trochoids. Transverse furrows and longitudinal grooves appear over the external surface. Calice is deep.

#### Internal Characters:

**Transverse Sections:** The coral's diameter varies from between 22 to 47 mm in the mature stage and the number of major septa for the above diameter is from 51 to 78. The epitheca is thin.

The septa are long and reach the central structure. They are thin in the dissepimentarium and thick in the tabularium. In addition, they are lightly undulated. The minor septa are

long and reach to a half or a third the length of the major septa.

The cardinal fossula is well marked, deep and is penetrated in the tabularium by short cardinal septa. The axial structure is complex and presents numerous radial lamellae. The median plate is less detached.

**Longitudinal Sections:** The wall is thin. The tabulae are complete. The tabularium is composed of 10 to 13 tabulae in each cm. The tabulae are convex in the center and incline toward the border in the dissepimentarium. This is wide, with many rows of the dissepiments varying between 10 and 15. Dissepiments are small, globose and large, very inclined, with a strong tendency to be vertical near the axial margin of the dissepimentarium. The dissepiments near the tabularium are larger than those near the wall.

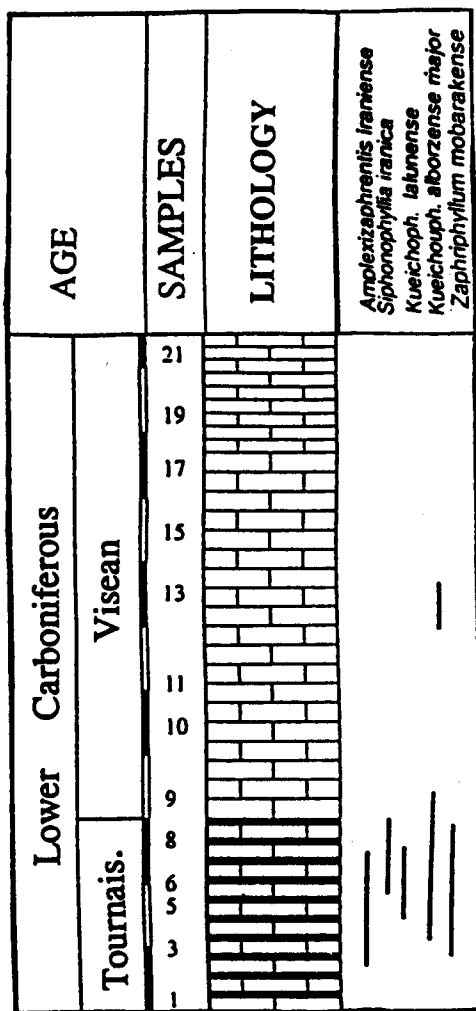


Figure 8. Vertical distribution of species of coral from Said-Abad section.

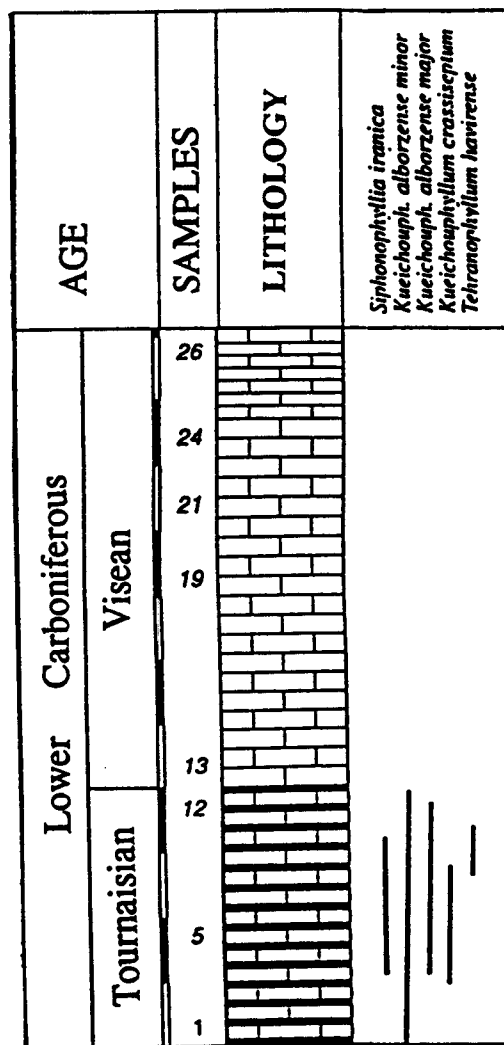


Figure 9. Vertical distribution of species of coral from Havar section.

### Discussion

The corals which are described here are similar to *Kueichouphyllum splendens* Volkova (1938), but differ from it in that their minor septa are somewhat larger and the thickness of the septa is more regular.

*Kueichouphyllum crassiseptum* sp. nov.  
(Pl. 4, Fig. 3, Pl. 5, Figs. 1-2)

**Holotype:** HA-2 (Pl. 4, Fig. 3), from Havir section.

**Material:** Six specimens in total.

**Derivation of Specific Name:** It refers to their thick septa.

**Type Locality:** 70 km east of Tehran, 3 km east of Lake Tar, central Alborz, north Iran.

**Age:** Tournaisian.

**Diagnosis:** *Kueichouphyllum* with very thick septa in the cardinal quadrants, scarce differentiation from axial structure and few development from dissepiments. The maximum diameter is from 25 to 55 mm and the number of septa ranges from 61 to 78.

### Description

**External Characters:** Solitary corals, large, trochoids to ceratoids. The maximum diameter varies from between 35 to 57 mm and their length is above 60 mm. There are longitudinal grooves and transverse furrows on the external grooves surface. Calice is deep.

### Internal Characters:

**Transverse Sections:** The epitheca is thin and generally not conserved. Alar diameter varies from between 22 to 55 mm and tabular diameter from 20 to 45 mm. The number of septa for this diameter range from 61 to 78.

The septa are generally thin in the dissepimentarium and thick in the tabularium. The cardinal quadrants of septa are very thick. The septa are generally large and reach the center. The minor septa are a half or a quarter the length of the major septa.

The dissepimentarium is composed of regular dissepiments in 6 to 9 rows. It is somewhat wider in the counter quadrants.

The fossula is marked. The cardinal septum is reduced and is situated in the very marked fossula. The axial structure is irregular and is defined.

**Longitudinal Sections:** The epitheca is simple, with wrinkles. Dissepiments are globose and small, with a strong inclination toward the axis.

The tabularium presents 7 to 8 tabulae in each cm,

which are incomplete, globose and convex and have borders which incline toward the wall.

### Discussion

*Kueichouphyllum crassiseptum* sp. nov. is similar to *K. lalunense* sp. but with a smaller number of septa and very thicker structures in the cardinal quadrants. In addition, the dissepimentarium is wider in the counter quadrants than in the cardinals. Its dimensions are similar to those of *K. planotubulaum* Wu, 1964, *K. kuangturgensis* Yü, 1933 and *K. magricystose* Yü, 1933, but it differs from all of them in thickness of septum in the cardinal quadrants, and because it has less pronounced development of dissepiments and scarce differentiation from axial structure. It is similar to the immature forms of the other *Kueichouphyllum*.

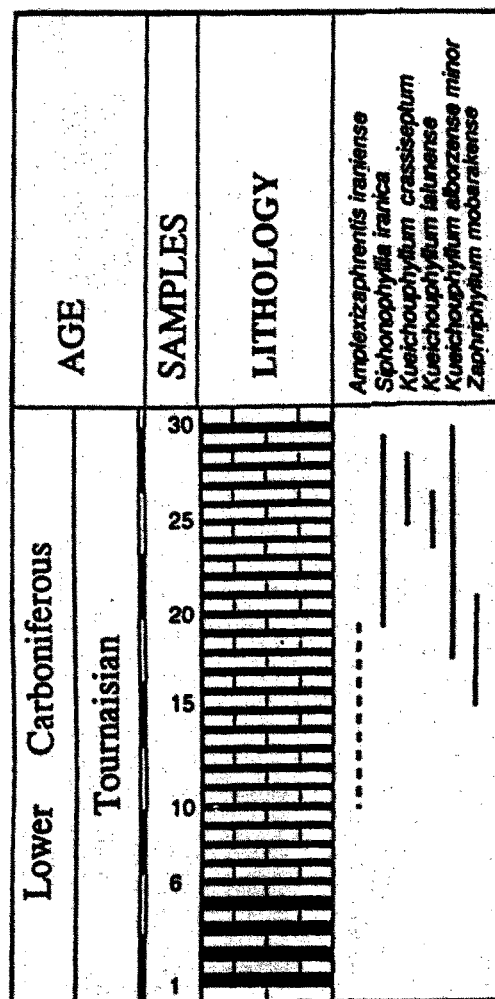


Figure 10. Vertical distribution of species of coral from Sahmirzad section.



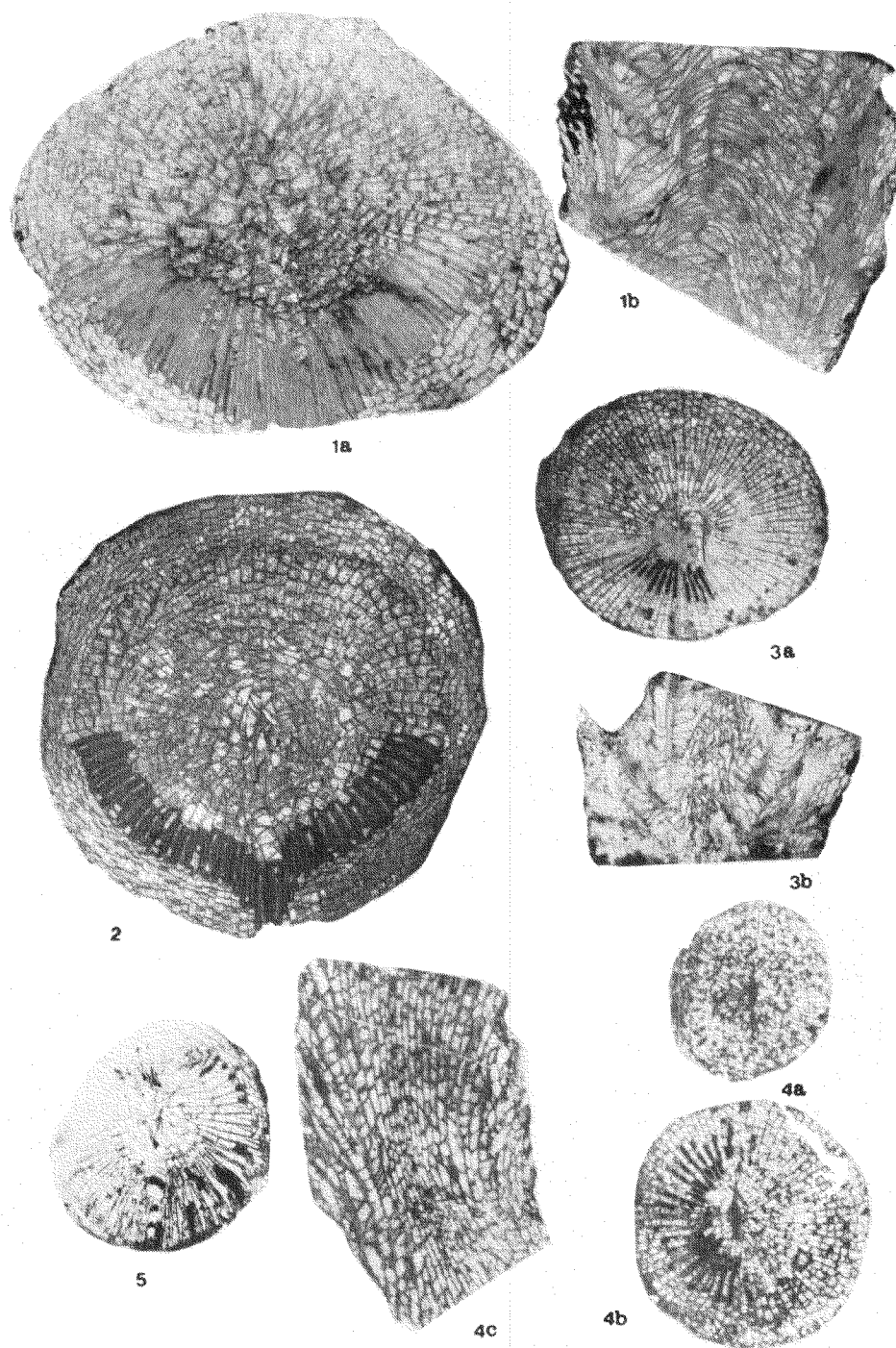


Plate 5

Figures 1-3. *Kueichouphyllum crassiseptum* sp. nov. (x2).

1a- Transverse sections of a holotype

1b - Longitudinal section of the same

2- Transverse section of a specimen

Figures 3-5. *Tehranophyllum* gen. nov. Tournaisian

3a- Transverse section of specimen (x1.5)

3b - Longitudinal section of the same (x1.5)

4a, b- A serie successive thin trasverse section of the holotype (x2.5)

4c - Longitudinal section of the same (2.5)

5- Transverse section (x2.5)

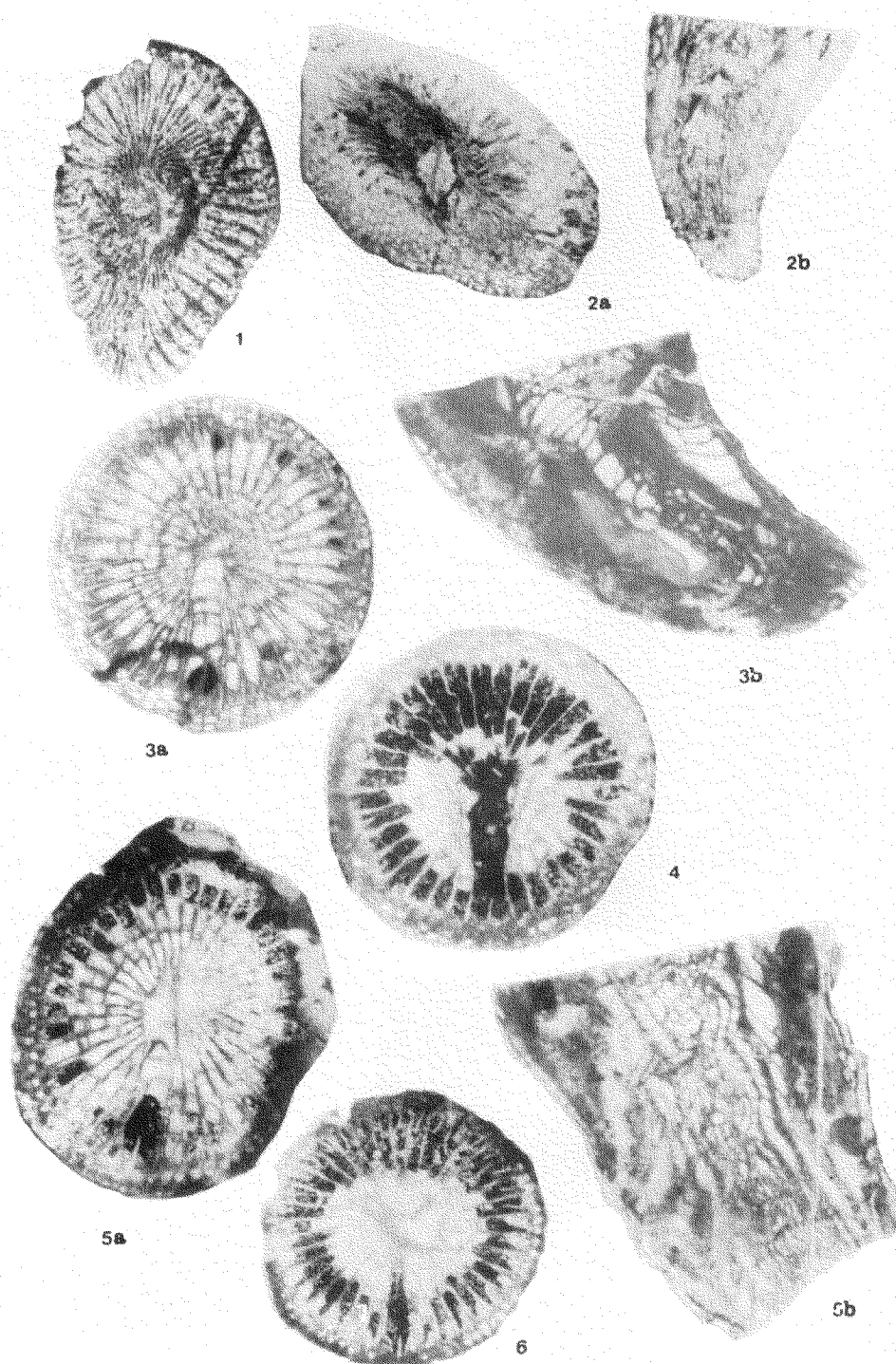


Plate 6

Figures 1-2. *Tehranophyllum* gen. nov. (x2.5)

1 - Transverse section

2a - Transversal section of type specimen

2b - Longitudinal section of the same

Figures 3-6. *Zaphriphyllum mobarakense* sp. nov.  
(*Zaphriphyllum*), (x4), Lower Carboniferous

3a - Transverse section of the holotype

3b - Longitudinal section of the same

4 - Transverse section of a fragment

5a - Transverse section of a specimen

5b - Longitudinal section of the same

6 - Transverse section of a fragment

## Subfamily Tehranophyllinae, new subfamily

**Diagnosis:** Aulophyllid with long minor septa and biform tabularium.

**Genotype:** *Tehranophyllum* gen. nov. from Havir profile.

*Tehranophyllum* gen. nov.  
(Pl. 5, Figs. 3-5; Pl. 6, Figs. 1-2)

**Type Species:** *Tehranophyllum havirense* gen. et sp. nov., from Havir section.

**Derivation of Specific Name:** Dedicated to Tehran.

**Type Locality:** 70 km east of Tehran, 3 km east of Lake Tar, north Iran.

**Age:** Tournaisian.

**Diagnosis:** Aulophyllids with regular dissepimentarium. The axial structure is formed from a thick central plate and the end part of the major septa. Tabularium is biform.

#### Discussion

Under new denomination of *Tehranophyllum* which includes various species of Aulophyllid with a range of characteristics, but with the common characteristic of having long minor septa and biform tabularium. The biform tabularium in the numerous solitary corals without dissepiments has already been described [20]. It has not been expressly described in corals with dissepiments where this phenomenon is not very common. The reason is evident: the corals with dissepiments rarely have minor septa long enough to penetrate the long stretch in the tabularium, where this character is produced. Nevertheless, there are various species of Aulophyllids with biform tabularium, which have been included in other genera. Poty [17] described an exemplar which was included in the *Carruthersella* genus and the same author described another exemplar assigned to a *Cyathoclisia* genus, both of them are similar to some corals of Iran which have biform tabularium.

Otherwise, the species are included here in *Tehranophyllum* and have important affinity with other genera of Aulophyllids. Therefore, it's possible that this character has been obtained independently in the evolution of the various lines and which it treats to a morphologic-poliphiletic genus.

*Tehranophyllum havirense* sp. nov.  
(Pl. 5, Fig. 4)

**Holotype:** K-HA-21 (Pl. 5, Fig. 4), from Havir region, specimen illustrated in Plate 5, Figure 4.

**Derivation of Specific Name:** The name of the specimen is dedicated to the village of Havir.

**Material:** One specimen from Havir beds.

**Type Locality:** 70 km east of Tehran, 3 km east of Lake Tar, central Alborz, north Iran.

**Age:** Tournaisian.

**Diagnosis:** *Tehranophyllum* with one axial structure composed of a thick central plate and some radial septa lamellae. Minor septa are long.

#### Description

**External Characters:** Solitary corals, ceratoids to trochoids, curve, with a maximum diameter of more than 25 mm. The external surface has longitudinal grooves.

#### Internal Characters:

**Transverse Sections:** The wall is thin, generally not conserved. Alar diameter in the adult stage is 15 mm and the number of major septa is 42.

The major septa are long and reach to the axial structure. The minor septa are long, and their length is half to two-thirds that of the major septa.

Dissepimentarium is composed of 4 to 6 rows of regular dissepiments. The axial structure is simple and is formed of a thick median plate and some radial lamellae.

**Longitudinal Sections:** The wall is thin and somewhat preserved. Dissepimentarium is narrow, with 4 to 6 rows of irregular globose dissepiments of various sizes. Dissepiments are large and steeply inclined on the periphery and small and vertical near the tabularium.

The tabularium is occupied by incomplete, conic tabulae in the central part and ascends toward the peripheral part with three tabulae in each cm. It is biform.

Family Ekvaphyllidae Hill, 1981  
Genus *Zaphriphyllum* Sutherland, 1954

*Zaphriphyllum mobarakense* sp. nov.  
(Pl. 6, Figs. 3-6)

**Holotype:** GI-AA-91 (Pl. 6, Fig. 3), from Geirud profile.

**Material:** Twenty-six specimens in total. Twenty-six transverse thin sections and nine longitudinal thin sections.

**Derivation of Specific Name:** Dedicated to the place where the major exemplars are found.

**Type Locality:** The north of Geirud village, north of Tehran, central Alborz.

**Age:** Tournaisian.

**Diagnosis:** Corals ceratoid to trochoid from small to medium size, with 30 to 40 septa of diameters ranging from between 11 to 17 mm. The septa are undulated. The fossula is marked.

### Description

**External Characters:** Solitary corals, ceratoid to trochoid, are small to medium in size. Maximum diameter varies between 13 and 20 mm. They are curved. The external surface is marked with longitudinal grooves and transverse furrows. Calice is fairly deep.

### Internal Characters:

**Transverse Sections:** Are festoon, alar diameter varies from between 11 to 17 mm. The number of major septa for the mentioned diameters is from 30 to 40. The diameter of tabularium varies from between 7 to 14 mm.

The major septa are long, with medium thickness and are placed in a radial position. The minor septa are a third to a quarter the length of the major septa.

The wall is thick with stereozone. Dissepimentarium is composed of 2 to 3 rows of interseptal regular dissepiments which occupy a space of 1 and 3 mm.

The fossula is marked; near to the wall it is very ample and is closed toward the end of the septa, nevertheless it can be expanded in the center.

The cardinal septum remained small from the immature stage.

**Longitudinal Sections:** The wall is simple with septal stereozone from medium thickness to thick. Dissepimentarium has a width of 0.5 to 1.5 mm and is composed of long dissepiments, strongly inclined toward the axis of coral. The tabularium has 12 to 20 tabulae in each cm. Tabulae are incomplete, globose and convex to flat in the center, with borders which incline toward the periphery.

### Discussion

The specimen described here is similar to *Zaphriphyllum crassiauxum* Semenoff-Tian-Chansky, 1974, in dimensions and thickness of axis, but differs from it in the abundant presence of the tabulae and the lower rate of development for the dissepiment for the same size.

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