

RECENT FORAMINIFERIDA FROM THE SEA SHORES OF YEMEN ARAB REPUBLIC, PART 1 : THE GENUS *QUINQUELOCULINA*

RECENTNE FORAMINIFERE OBALNOG PODRUČJA JEMENSKE
ARAPSKE REPUBLIKE

DIO I. Rod *QUINQUELOCULINA*

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More than 100 foraminiferid species have been recorded from four sandy samples collected from different localities along the nearshore zone of the Red Sea, Yemen Arab Republic. Twenty-six species of these belong to the genus *Quinqueloculina* d'Orbigny, which are discussed here and illustrated. The recorded assemblage is typical of tropical waters.

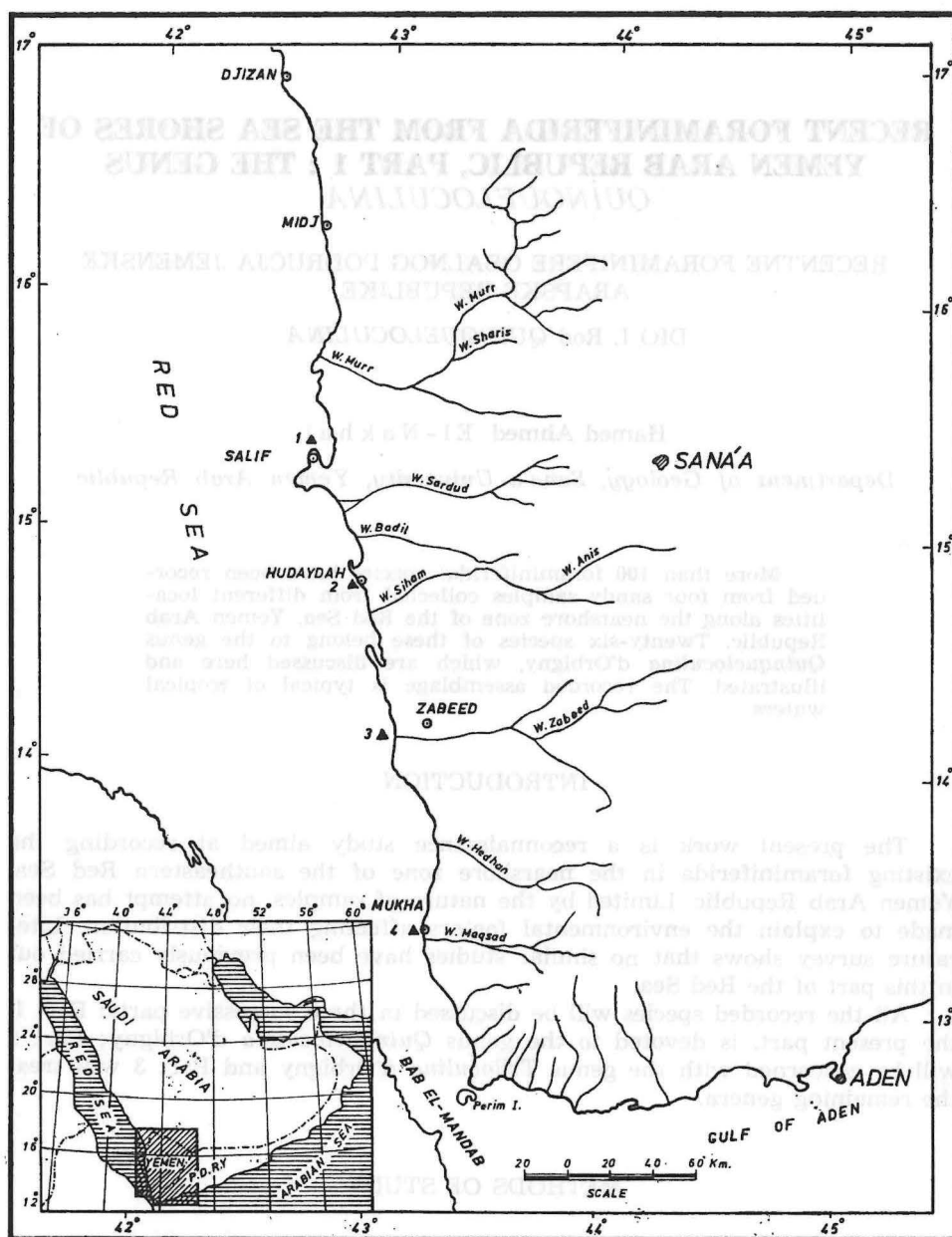
INTRODUCTION

The present work is a reconnaissance study aimed at recording the existing foraminiferida in the nearshore zone of the southeastern Red Sea, Yemen Arab Republic. Limited by the nature of samples, no attempt has been made to explain the environmental factors affecting their distribution. Literature survey shows that no similar studies have been previously carried out in this part of the Red Sea.

All the recorded species will be discussed in three successive parts: Part 1, the present part, is devoted to the genus *Quinqueloculina* d'Orbigny; Part 2 will be concerned with the genus *Triloculina* d'Orbigny and Part 3 will treat the remaining genera.

METHODS OF STUDY

Four sandy samples were collected during the period September—October 1979, from the sea shore at Salif, Hudaydah, Zabeed and Mukha (Text-Fig. 1). These samples were taken from nearshore areas at about 1.5 m water depth. One hundred grams of each of the original sandy samples were treated for studying their foraminiferal content. Several species were identified by using the catalogue of foraminifera (Ellis and Messina, 1940). Twentyone



Text Figure 1: Sample collecting localities, Yemen Arab Republic.

of the recorded species were drawn by the author from camera lucida, whereas the remaining forms were photographed by the scanning electron microscope available at Kuwait University. The frequency of these forms in the studied localities is shown in Table 1. The illustrated specimens are deposited in the Department of Geology, University of Sana'a, Sana'a, Yemen Arab Republic.

Table 1. The frequency of the recorded species in the studied localities.

R = Rare: 1—4 specimens.

F = Frequent: 5—15 specimens.

A = Abundant: over 15 specimens.

Species \ Sample no.	Locality			
	1 Salif	2 Hudaydah	3 Zabed	4 Mukha
<i>Q. agglutinata</i>	F	F	A	A
<i>bellatula</i>	F	F	F	A
<i>disparilis</i>	—	F	R	F
<i>distorqueata</i>	A	A	A	A
<i>flavescens</i>	F	F	F	A
<i>granuloscostata</i>	F	F	A	F
<i>jugosa</i>	—	R	—	R
<i>laevigata</i>	F	F	R	A
<i>lamarckiana</i>	A	A	A	A
<i>lata</i>	—	R	R	R
<i>mosharrafai</i>	A	R	F	F
<i>multimarginata</i>	—	R	R	—
<i>neostraitula</i>	R	R	R	—
<i>parkeri</i>	F	F	F	F
<i>plicosa</i>	R	R	F	—
<i>poeyana</i>	R	R	—	R
<i>polygona</i>	F	F	A	F
<i>sabulosa</i>	—	R	—	—
<i>seminulum</i>	F	F	A	A
<i>subcuneata</i>	—	R	—	F
<i>subdecorata</i>	—	R	—	—
<i>triangularis</i>	F	F	F	A
<i>trigonula</i>	A	A	A	A
<i>tropicalis</i>	R	R	R	—
<i>undulosecostata</i>	—	R	R	A
<i>venusta</i>	R	—	R	R

SYSTEMATIC DESCRIPTIONS

The systematic position of the genus *Quinqueloculina* d'Orbigny, is according to the classification of Loeblich and Tappan (1964).

Order Foraminiferida Eichwald
Suborder Miliolina Delage and Herouard
Superfamily Miliolacea Ehrenberg
Family Miliolidae Ehrenberg
Subfamily Quinqueloculininae Cushman
Genus *Quinqueloculina* d'Orbigny, 1826

Quinqueloculina agglutinata Cushman

(Pl. 1, Fig. 12)

Quinqueloculina agglutinata CUSHMAN, 1917, p. 43, pl. 9, fig. 2

Quinqueloculina agglutinata Cushman, HAMAN, 1966, p. 68, pl. 7, figs. 2—4.

Quinqueloculina agglutinata Cushman, MURRAY, 1969, p. 416 (no figs).

Quinqueloculina agglutinata Cushman, SEN GUPTA, 1971, p. 85 (no figs).

Remarks:

Q. agglutinata is characterized by the presence of a large amount of the agglutinated material in the wall of the test. So, this species, as well as the similar forms such as *Q. sabulosa* Cushman, which is recorded in the present study, represents a transitional stage between the genus *Quinqueloculina* d'Orbigny and the genus *Dentostomina* Carman.

The present species was originally described from off Alaska (Cushman, 1917). It was later recorded from Denmark (Haman, 1966), the Atlantic continental shelf of the U. S. A. (Murray, 1969) and Newfoundland (Sen Gupta, 1971). In Yemen, *Q. agglutinata* occurs in all of the studied samples.

Quinqueloculina bellatula Bandy

(Pl. 1, Fig. 1)

Quinqueloculina akneriana d'Orbigny var. *bellatula* BANDY, 1950, p. 273, pl. 41, fig. 1.

Quinqueloculina bellatula Bandy, ARNAL, 1958, p. 39, pl. 10, figs. 13—15.

Quinqueloculina akneriana d'Orbigny var. *bellatula* Bandy, BANDY, 1961, p. 16, pl. 1, fig. 1.

Quinqueloculina akneriana d'Orbigny var. *bellatula* Bandy, LANKFORD and PHLEGER, 1973, p. 125, pl. 2, fig. 7.

Remarks:

Bandy (1950) described this form from the Pleistocene of Oregon. It was later recorded from the Recent deposits of California (Arnal, 1958; Bandy, 1961) and western North America (Lankford and Phleger, 1973). In Yemen, it occurs in the four studied localities.

Quinqueloculina disparilis d'Orbigny

(Pl. 1, Fig. 18)

Quinqueloculina disparilis D'ORBIGNY, 1893, p. 70.

Remarks:

Q. disparilis was recorded from the Gulf of Marseilles, France (d'Orbigny, 1893). In the present study, it is recorded in samples no. 2, 3 and 4.

Quinqueloculina distorta Cushman

(Pl. 1, Fig. 10)

Quinqueloculina distorta CUSHMAN, 1954 (in Cushman, Todd and Post), p. 333, pl. 83, fig. 27.

Remarks:

The present species was described from Marshall Islands (Cushman, 1954). In the studied samples, *Q. distorta* occurs as an abundant form.

Quinqueloculina flavescens d'Orbigny

(Pl. 1, Fig. 4)

Quinqueloculina flavescens D'ORBIGNY, 1905, p. 68, pl. 4, fig. 4.

Remarks:

Q. flavescens was described from Madagascar (d'Orbigny, 1905). In Yemen, it is recorded in all of the studied localities.

Quinqueloculina granulocostata Germeraad

(Pl. 1, Fig. 21)

Quinqueloculina granulocostata GERMERAAD, 1946, p. 63, pl. 6, figs. 15—20.

Remarks:

The present species was described from Indonesia (Germeraad, 1946). In the studied area, *Q. granulocostata* is recorded in the four localities.

Quinqueloculina jugosa Cushman

(Pl. 1, Fig. 17)

Quinqueloculina seminulum (Linné) var. *jugosa* CUSHMAN, 1944, p. 13, pl. 2, fig. 15.*Quinqueloculina seminulum* (Linné) var. *jugosa* Cushman, MILLER, 1953, p. 52, pl. 8, fig. 5.

Remarks:

Cushman (1944) described the present species from the Recent deposits of the New England Coast. It was later recorded from northern Carolina, U. S. A. (Miller, 1953). In the present study *Q. jugosa* occurs as a rare form in samples no. 2 and 4.

Quinqueloculina laevigata d'Orbigny

(Pl. 1, Fig. 2)

Quinqueloculina laevigata D'ORBIGNY, 1839, p. 143, pl. 3, figs. 31—33.*Quinqueloculina laevigata* d'Orbigny, BOLTOVSKOY and LENA, 1970, p. 153, pl. 19, figs. 19—21.*Quinqueloculina laevigata* d'Orbigny, LANKFORD and PHLEGER, 1973, p. 126, pl. 2, figs. 5, 6.*Quinqueloculina laevigata* d'Orbigny, CHERIF and FLICH, 1974, p. 240, pl. 2, figs. 1—5.*Quinqueloculina laevigata* d'Orbigny, SCOTT and others, 1976, p. 79 (no figs.).

Remarks:

Q. laevigata was described from the Holocene of Canary Islands and from the Tertiary of Paris (d'Orbigny, 1839). It was later recorded from the Recent deposits of: Argentina (Boltovskoy and Lena, 1970), western North America (Lankford and Phleger, 1973), Greece (Cherif and

Flich, 1974) and southern California (Scott and others, 1976). In Yemen, *Q. laevigata* occurs in the four studied localities.

Quinqueloculina lamarckiana d'Orbigny

(Pl. 1, Fig. 23)

- Quinqueloculina lamarckiana* D'ORBIGNY, 1839, p. 189, pl. 11, figs. 14, 15.
Quinqueloculina lamarckiana d'Orbigny, BANDY, 1953, p. 177, pl. 21, fig. 3.
Quinqueloculina lamarckiana d'Orbigny, MILLER, 1953, p. 51, pl. 7, fig. 8.
Quinqueloculina lamarckiana d'Orbigny, BHATIA, 1956, p. 17, pl. 2, fig. 10.
Quinqueloculina lamarckiana d'Orbigny, BANDY, 1961, p. 16, pl. 1, fig. 10.
Quinqueloculina lamarckiana d'Orbigny, MURRAY, 1969, p. 401 (no figs.).
Quinqueloculina lamarckiana d'Orbigny, LANKFORD and PHLEGER, 1973, p. 126, p. 1, fig. 23.
Quinqueloculina lamarckiana d'Orbigny, BROOKS, 1973, p. 391, (no figs.).
Quinqueloculina lamarckiana d'Orbigny, SCOTT and others, 1976, p. 63, (no figs.).

Quinqueloculina lamarckiana d'Orbigny, LOHMANN, 1978, p. 25, (no figs.).

Remarks:

This cosmopolitan species was described from the Recent deposits of Cuba and Jamaica (d'Orbigny, 1839). It was later recorded from the Holocene of several parts of the world such as: California (Bandy, 1953, 1961; Scott and others, 1976), Carolina (Miller, 1953), west India (Bhatia, 1956), the Atlantic Continental Shelf of U.S.A. (Murray, 1969), western North America (Lankford and Phleger, 1973) and Puerto Rico (Brooks, 1973). In the present study, *Q. lamarckiana* occurs as an abundant form.

Quinqueloculina lata Terquem

(Pl. 1, Fig. 11)

- Quinqueloculina lata* Terquem 1876, p. 82, pl. 11, fig. 8.
Quinqueloculina lata Terquem, MURRAY, 1969, p. 416 (no figs.).
Quinqueloculina lata Terquem, MURRAY, 1970, p. 485 (no figs.).
Quinqueloculina lata Terquem, ROUVILLOIS, 1970, p. 196 (no figs.).
Quinqueloculina lata Terquem, RAO and RAO, 1974, p. 407 (no figs.).
Quinqueloculina lata Terquem, LEVY and others, 1975, p. 172, pl. 1, figs. 3—5, 8, 9.
Quinqueloculina lata Terquem, HAWARD and HAYNES, 1976, p. 34 (no figs.).

Remarks:

Q. lata occurs as a rare form in the studied localities no. 2, 3 and 4. The present species was previously recorded from the Holocene of France (Terquem, 1876; Rouvillois, 1970; Levy and others, 1975) the Atlantic Continental Shelf of U.S.A. (Murray, 1969), the English Channel (Murray, 1970), east India (Rao and Rao, 1974) and Plymouth and Cardigan Bay, U.K. (Haward and Haynes, 1976).

Quinqueloculina mosharrafai Said

(Pl. 1, Fig. 14)

- Quinqueloculina mosharrafai* SAID, 1949, p. 10, pl. 1, fig. 23.
Quinqueloculina cf. *mosharrafai* Said, BHATIA, 1956, p. 17, pl. 2, fig. 11.

Remarks:

This form was described from northern Red Sea (Said, 1949). It was later recorded from western India (Bhatia, 1956). In the present study, it is recorded in the four localities.

Quinqueloculina multimarginata Said
(Pl. 1, Fig. 13)

Quinqueloculina multimarginata SAID, 1949, p. 10, pl. 1, fig. 34.

Remarks:

Rare specimens of this form have been recorded in samples no. 2 and 3. It was originally described from the Recent deposits of northern Red Sea.

Quinqueloculina neostraitula Thalmann
(Pl. 1, Fig. 25)

Quinqueloculina straitula CUSHMAN, 1932 (non Deshayes, 1831), p. 27, pl. 7, figs. 3, 4.

Quinqueloculina straitula Cushman, SAID, 1950, p. 5, pl. 1, fig. 9.

Quinqueloculina neostraitula THALMANN, 1950, p. 45 (new name).

Remarks:

The present species was described from the Recent deposits of Fiji Islands, Pacific Ocean (Cushman, 1932) as *Q. straitula*. Thalmann (1950) discovered that this name had been preoccupied by *Q. straitula* Deshayes, 1831. So, Thalmann (*op. cit.*) introduced *Q. neostraitula* as a new name. This form was also recorded from northern Red Sea (Said, 1950). In Yemen, *Q. neostraitula* occurs as a rare form in localities no. 1, 2 and 3.

Quinqueloculina parkeri (Brady)
(Pl. 1, Fig. 24)

Miliolina parkeri BRADY, 1881, p. 46.

Quinqueloculina parkeri (Brady), SAID, 1950, p. 5, pl. 1, fig. 8.

Quinqueloculina parkeri (Brady), HUGHES, 1977, p. 53, pl. 2, figs. 44, 45.

Remarks:

Q. parkeri has been recorded as a frequent form in all of the studied samples. It was previously described from Hawaii Islands (Brady, 1881), northern Red Sea (Said, 1950) and Solomon Islands (Hughes, 1977).

Quinqueloculina plicosa Costa
(Pl. 1, Fig. 16)

Quinqueloculina plicosa COSTA, 1856, p. 322, pl. 25, figs. 2, 5, 7.

Remarks:

This form was described from Italy (Costa, 1856). In the present study, *Q. plicosa* occurs in samples no. 1, 2 and 3.

Quinqueloculina poeyana d'Orbigny
(Pl. 1, Fig. 20)

Quinqueloculina poeyana D'ORBIGNY, 1839, p. 191, pl. 11, figs. 25—27.

Quinqueloculina poeyana d'Orbigny, MILLER, 1953, p. 52, pl. 8, fig. 2.

Quinqueloculina poeyana d'Orbigny, BANDY, 1961, p. 16, pl. 2, fig. 4.

Quinqueloculina poeyana d'Orbigny, MURRAY, 1969, p. 416 (no figs.).

Remarks:

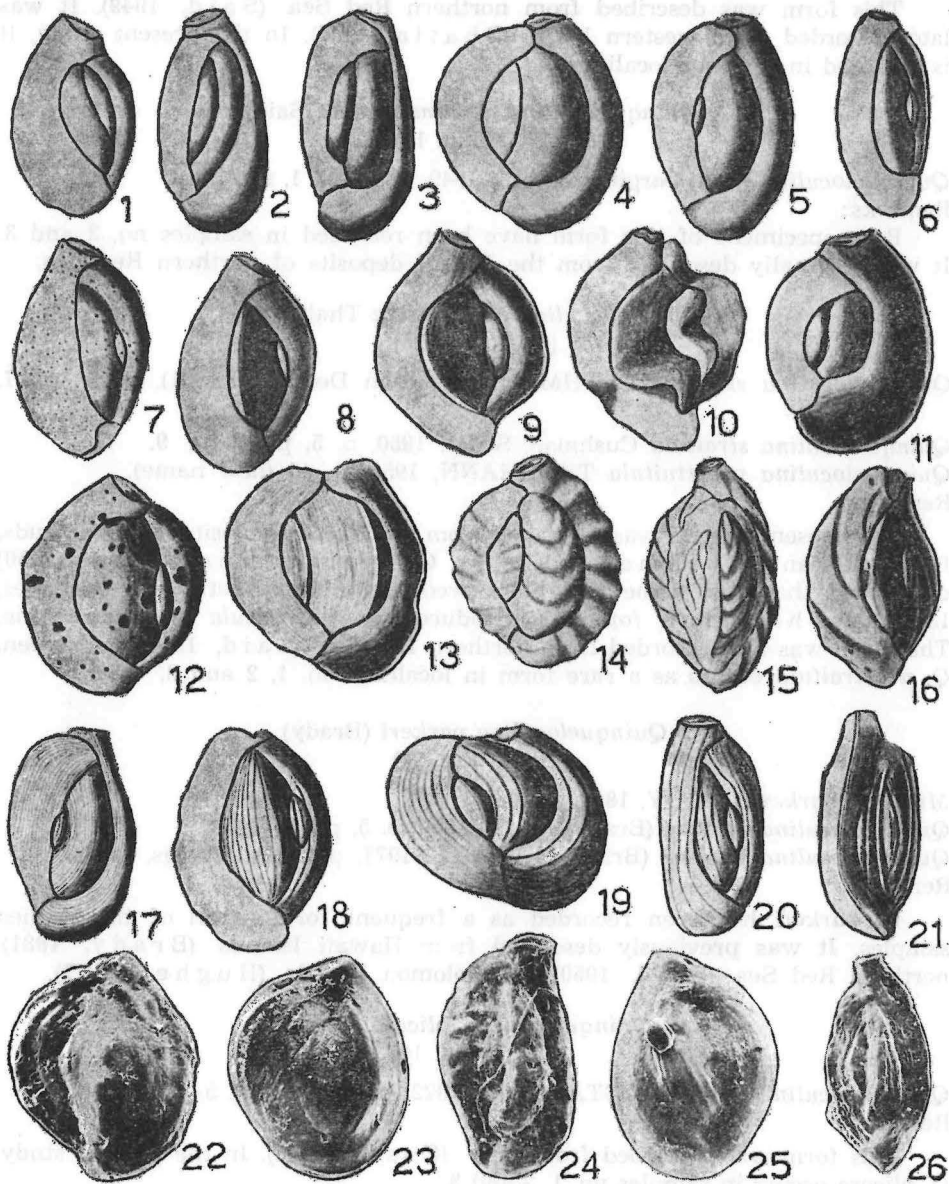


Plate 1:

- Fig. 1. *G. bellatula* Bandy, from sample no. 2, $\times 125$.
 Fig. 2. *Q. laevigata* d'Orbigny, from sample no. 2, $\times 100$.
 Fig. 3. *Q. tropicalis* Cushman, from sample no. 2, $\times 115$.
 Fig. 4. *Q. flavescens* d'Orbigny, from sample no. 3, $\times 90$.
 Fig. 5. *Q. seminulum* (Linné), from sample no. 2, $\times 80$.
 Fig. 6. *Q. venusta* Karrer, from sample no. 3, $\times 90$.

In Yemen, *Q. poeyana* occurs as a rare form in samples no. 1, 2 and 4. It was previously recorded from the Recent deposits of Cuba (d'Orbigny, 1839), north Carolina (Miller, 1953), California (Bandy, 1961) and the Atlantic Continental Shelf of U.S.A. (Murray, 1969).

Quinqueloculina polygona d'Orbigny
(Pl. 1, Fig. 26)

Quinqueloculina polygona D'ORBIGNY, 1839, p. 198, pl. 8, figs. 21—23.

Quinqueloculina polygona d'Orbigny, BROOKS, 1973, p. 406, pl. 6, figs. 19, 20.
Remarks:

The present species was described from the Recent deposits of Cuba and Jamaica (d'Orbigny, 1939). It was later recorded from the Holocene of Puerto Rico (Brooks, 1973). In the present study, *Q. polygona* occurs in the four localities.

Quinqueloculina sabulosa Cushman
(Pl. 1, Fig. 7)

Quinqueloculina sabulosa CUSHMAN, 1947, p. 87, pl. 18, fig. 22.

Quinqueloculina sabulosa Cushman, LANKFORD and PHLEGER, 1973, p. 126, pl. 2, fig. 4.

Remarks:

Q. sabulosa was described from the Recent deposits of the coast of Carolina (Cushman, 1947). It was later recorded from western North America (Lankford and Phleger, 1973). In Yemen, this species occurs as a rare form in the locality no. 2.

As it has been mentioned in the remarks of *Q. agglutinata*, the test of *Q. sabulosa* contains a noticeable amount of the agglutinated grains. So, it can be considered as a transitional stage between the two genera *Quinqueloculina* d'Orbigny and *Dentostomina* Carman.

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- Fig. 7. *Q. sabulosa* Cushman, from sample no. 2, $\times 80$.
Fig. 8. *Q. triangularis* d'Orbigny, from sample no. 2, $\times 80$.
Fig. 9. *Q. trigonula* Terquem, from sample n. 2, $\times 80$.
Fig. 10. *Q. distorta* Cushman, from sample no. 4, $\times 110$.
Fig. 11. *Q. lata* Terquem, from sample no. 2, $\times 80$.
Fig. 12. *Q. agglutinata* Cushman, from sample no. 2, $\times 85$.
Fig. 13. *Q. multimarginata* Said, from sample no. 2, $\times 80$.
Fig. 14. *Q. mosharrafai* Said, from sample no. 3, $\times 80$.
Fig. 15. *Q. undulosecostata* Terquem, from sample no. 4, $\times 95$.
Fig. 16. *Q. plicosa* Costa, from sample no. 2, $\times 80$.
Fig. 17. *Q. jugosa* Cushman, from sample no. 2, $\times 75$.
Fig. 18. *Q. disparilis* d'Orbigny, from sample no. 2, $\times 75$.
Fig. 19. *Q. subdecorata* Cushman, from sample no. 2, $\times 90$.
Fig. 20. *Q. poeyana* d'Orbigny, from sample no. 1, $\times 120$.
Fig. 21. *Q. granulocostata* Germeraad, from sample no. 3, $\times 100$.
Fig. 22. *Q. subcuneata* Cushman, from sample no. 2, $\times 55$.
Fig. 23. *Q. lamarckiana* d'Orbigny, from sample no. 3, $\times 115$.
Fig. 24. *Q. parkeri* (Brady), from sample no. 2, $\times 60$.
Fig. 25. *Q. neostraitula* Thalmann, from sample no. 2, $\times 125$.
Fig. 26. *Q. polygona* d'Orbigny, from sample no. 2, $\times 110$.

Quinqueloculina seminulum (Linné)

(Pl. 1, Fig. 5)

Serpula seminulum LINNÉ, 1758, p. 786.*Quinqueloculina* sp. cf. *Q. seminulum* (Linné), MILLER, 1953, p. 52, pl. 8, fig. 1.*Quinqueloculina seminulum* (Linnaeus), BHATIA, 1956, p. 17, pl. 2, fig. 9.*Quinqueloculina seminulum* (Linné), HAMAN, 1966, p. 68, pl. 7, figs. 5—7.*Quinqueloculina seminulum* (Linné), MURRAY, 1969, p. 416 (no figs.).*Quinqueloculina seminulum* (Linné), ROUVILLOIS, 1970, p. 196 (no figs.).*Quinqueloculina seminulum* (Linné), MURRAY, 1970, p. 485, pl. 1, figs. 9, 10.*Quinqueloculina* cf. *Q. seminulum* (Linné), BHALLA, 1970, p. 156, pl. 20, fig. 1.*Quinqueloculina seminulum* (Linné), SEN GUPTA, 1971, p. 85, pl. 1, figs. 25—27.*Quinqueloculina seminulum* (Linné), BROOKS, 1973, p. 391 (no figs.).*Quinqueloculina seminulum* (Linné), RAO and RAO, 1974, p. 414, pl. 1, fig. 11.*Quinqueloculina seminulum* (Linné), HAWARD and HAYNES, 1976, p. 34, pl. 1, fig. 6.*Quinqueloculina seminulum* (Linné), SCOTT and others, 1976, p. 89, (no figs.).*Quinqueloculina seminulum* (Linné), HUGHES, 1977, p. 48 (no figs.).*Quinqueloculina seminula* (Linné), HAAKE, 1977, p. 64 (no figs.).

Remarks:

This cosmopolitan species was originally described from the Recent deposits of the Adriatic Sea (Linné, 1758). It was later recorded from the Holocene of numerous localities in the world such as: Carolina (Miller, 1953), India (Bhatia, 1956; Bhalla, 1970; Rao and Rao, 1974), Denmark (Haman, 1966), the Atlantic Continental Shelf of U.S.A. (Murray, 1969), the Atlantic Continental Shelf of France (Rouvillois, 1970), the English Channel (Murray, 1970), Newfoundland (Sen Gupta, 1971), Puerto Rico (Brooks, 1973), Plymouth and Cardigan Bay, U.K. (Howard and Haynes, 1976), California (Scott and others, 1976), Solomon Islands, Pacific Ocean (Hughes, 1977) and from the Adriatic Sea (Haake, 1977). In Yemen, *Q. seminulum* has been recorded in all of the studied samples.

Quinqueloculina subcuneata Cushman

(Pl. 1, Fig. 22)

Quinqueloculina crassa d'Orbigny var. *subcuneata* CUSHMAN, 1921, p. 423, pl. 89, fig. 4.*Quinqueloculina crassa* d'Orbigny var. *subcuneata* Cushman, BHATIA, 1956, pl. 2, fig. 2.*Quinqueloculina subcuneata* Cushman, RAO and RAO, 1974, p. 414, pl. 1, fig. 12.*Quinqueloculina crassa* var. *subcuneata* Cushman, HUGHES, 1977, p. 53, pl. 2, figs. 33—35.

Remarks:

Cushman (1921) described this species from the Philippine Islands. It was later recorded from India (Bhatia, 1956; Rao and Rao, 1977) and Solomon Islands (Hughes, 1977). In the studied area, *Q. subcuneata* occurs in the samples no. 2, and 4.

Quinqueloculina subdecorata

(Pl. 1, Fig. 19)

Quinqueloculina subdecorata CUSHMAN, 1918, p. 71, pl. 29, fig. 3.*Quinqueloculina subdecorata* Cushman, ARNAL, 1958, p. 40, pl. 11, figs. 3—5.

Remarks:

Originally this species was described from the Miocene of Virginia (Cushman, 1918). It was later recorded from the Recent deposits of California (Arnal, 1958). In Yemen, rare specimens of *Q. subdecorata* have been recorded in sample no. 2.

Quinqueloculina triangularis d'Orbigny

(Pl. 1, Fig. 8)

Quinqueloculina triangularis D'ORBIGNY, 1846, 288, pl. 18, figs. 7—9.*Quinqueloculina triangularis* d'Orbigny, CHERIF and FLICK, 1974, p. 238, pl. 1, figs. 1—3.

Remarks:

Q. triangularis was described from the Tertiary and the Recent of Austria and Germany (d'Orbigny, 1846). It was later recorded from the Recent deposits of Greece (Cherif and Flick, 1974). In Yemen, the present species has been recorded in all of the studied samples.

Quinqueloculina trigonula Terquem

(Pl. 1, fig. 9)

Quinqueloculina trigonula TERQUEM, 1876, p. 84, pl. 12, fig. 4.*Quinqueloculina trigonula* Terquem, LEVY and others, 1975, p. 172, pl. 1, figs. 10—15.

Remarks:

This species was described from the northern shores of France (Terquem, 1876; Levy and others, 1975). In the studied area, *Q. trigonula* occurs as an abundant form in the four localities.

Quinqueloculina tropicalis Cushman

(Pl. 1, Fig. 3)

Quinqueloculina tropicalis CUSHMAN, 1924, p. 63, pl. 23, figs. 9, 10.

Remarks:

Cushman (1924) described *Q. tropicalis* from the Recent deposits of Pago Pago Harbor. In Yemen, this species occurs as a rare form in localities 1, 2 and 3.

Quinqueloculina undulosecostata Terquem

(Pl. 1, Fig. 15)

Quinqueloculina undulose-costata TERQUEM, 1882, p. 185, pl. 20, figs. 18, 19.*Quinqueloculina undulose-costata* Terquem, BHATIA, 1956, p. 17, pl. 2, fig. 8.

Remarks:

Q. undulosecostata was described from the Eocene of Paris (Terquem, 1882). It was later recorded from the Recent deposits of the western shores of India (Bhatia, 1956). In the studied area, the present species occurs in samples no. 2, 3 and 4.

Quinqueloculina venusta Karrer

(Pl. 1, Fig. 6)

Quinqueloculina venusta KARRER, 1968, p. 147, pl. 2, fig. 6.*Quinqueloculina venusta* Karrer, BHATIA, 1956, p. 17, pl. 2, fig. 6.

Remarks:

The present species was described from the Miocene of Romania (Karrer, 1968). It was later described from the Recent deposits of the western shores of India (Bhatia, 1956) and from western south Atlantic Ocean (Lohmann, 1978). In Yemen, *Q. venusta* occurs as a rare form in samples no. 1, 3 and 4.

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RECENTNE FORAMINIFERE OBALNOG PODRUČJA JEMENSKE ARAPSKJE REPUBLIKE

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KRATKI SADRŽAJ

Autor iznosi rezultate istraživanja foraminifera na 4 postaje različitih lokaliteta uzduž obalne zone jugoistočnog dijela Crvenog mora Jemenske Arapske Republike. Istražio je više od 100 vrsta Foraminifera, od kojih 26 vrsta pripadaju rodu *Quinqueloculina* d'Orbigny o kojima se donosi dijagnoza i koje su ilustrirane. Autor tvrdi da je istraženo naselje tipično za tropske vode.