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*Artostrobiidae* -

*crassum* - *Tripodiscinus* sp.

;

*Prunobrachium*

*Lophophaena mugaica*.

[1964]

### THE NEW DATA ON THE UPPER CRETACEOUS (CAMPAN-DANIAN) RADIOLARIA FROM THE EAST SLOPE OF NORTHERN URAL

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All-Russia Research Institute of Petroleum Prospecting (VNIGRI)

The radiolarian association, consisted from 81 species of radiolarian (53 genera and 24 families), is discovered in lepninskaya formation diatomites, uncovered by well (the upper reaches of Ust-Manja). There are distinguished 3 biostratigraphic subdivisions as layers which fauna, which immediately be changed in the cut of investigated interval (up to): layers with *Artostrobiidae* - lower layers of upper part lepninskaya formation; layers with *Prunobrachium crassum* - *Tripodiscinus* sp; layers with *Lophophaena mugaica*. The supposed age of lepninskaya formation is determined as Campanian-Danian stages. V.A. Lider [1964] ascribed lepninskaya formation to the Campan on the basis of general geological considerations, but flinty microorganism's data suppose more young age of the formation up to the Danian.

Key words: *Nord Ural, Campanian-Danian stages, Lepninskaya svite, Radiolaria, stratum with fauna.*

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[ - , 1955; , *Dictyomitra striata* ( . 1). , 1955].

[1966].

[1960].

Система	Отдел	Ярус		Р.Х. Липман [1960]	Г.Э. Козлова, А.Н. Горбовец [1966]	А.И. Григорьева [1975]	Э.О. Амон [2000]		В данной статье	
		летский	дан				Зауралье	Север Тургайского прогиба		
Меловая	нижний	маастрихт	dan				Diacanthocapsa foveata-D.ancus		L.m.	
			m <sub>2</sub>				Sethocyrtis tintinabulum	Orbiculiforma renillaeformis		
		кампан	m <sub>1</sub>						Orbiculiforma citra	Amphipyndax stocki
			сп <sub>2</sub>				Prunobrachium articulatum		Prunobrachium articulatum	Prunobrachium articulatum
		сантон	сп <sub>1</sub>				Prunobrachium crassum	Lithostrobis rostovzevi	Prunobrachium crassum *	Prunobrachium crassum *
			st <sub>2</sub>				Единичные виды		Theocampe animula *	Theocampe animula *
		коньяк	сп				Ommatodiscus mobilis Spongodiscus multus		Ommatodiscus mobilis	Ommatodiscus mobilis *
		турон	t <sub>2</sub>	t <sub>1</sub>			Dictyomitra pyramidalis	Dictyomitra pyramidalis	Stichocapsa pyramidata	Stichocapsa pyramidata *
		сеноман	см <sub>3</sub>	см <sub>1,2</sub>			-----	Stichocapsa uvatica	Stichocapsa uvatica*	

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« [2000] ( . 1).  
 4 :  
*Dictyomitrapyramidalis* ( );  
*Ommatodiscus mobilis* *Spongodiscus multus* ( - ); *Prunobrachium crassum* ( ) *Prunobrachium articulatum* ( ). *Spumellaria*.  
 . [ , , 1966].  
*Prunobrachium crassum* *P. articulatum*  
*Dictyomitra striata* [ , , 1966].  
 « ».  
 1975 . : 19, 22, 82. . 1.  
 60-  
*Sethocyrtis* ) ( 100  
*tintinabulum*. 22.  
 [ , , 1985; , 1987 , 1989, 1990, 1994], :  
*Nassellaria*,  
 ;  
 ( ,  
 ). 1989 . . . [1964].  
*Orbiculiforma*  
*citra*,  
 1987 .  
*Prunobrachium crassum* *P. articulatum*,

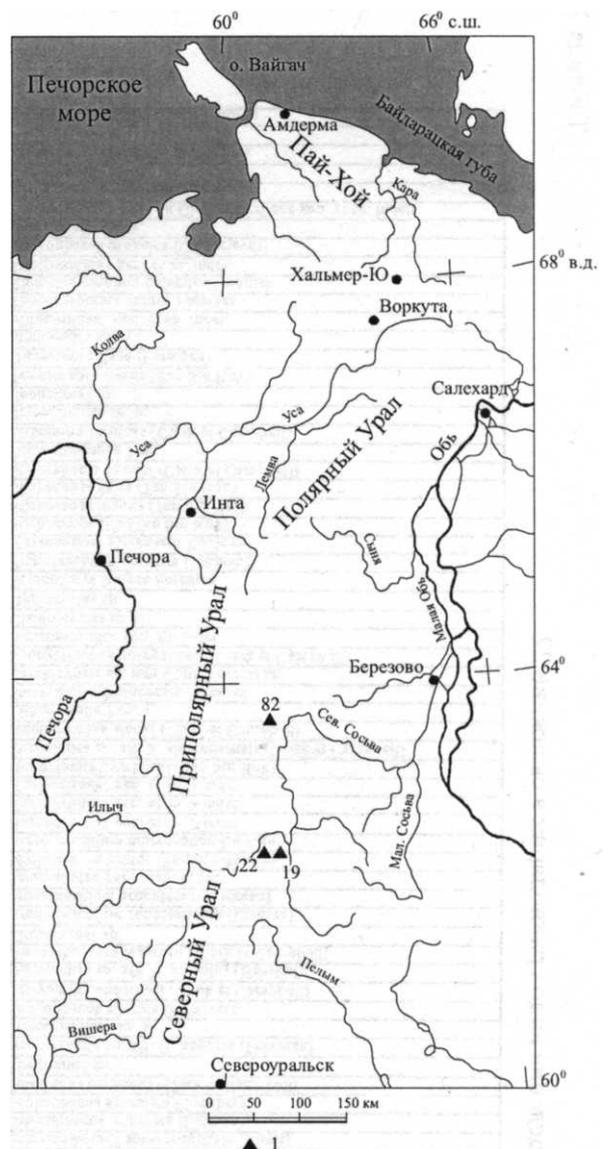
850-1300

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60-80

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[1977]



1. [ ... 1982; ... 1986] ?

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( - ) [ ..., 1980].

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. 2, . 2.

«Amplewal», 120

400



*Spumellaria*  
*Porodiscidae* ( *Spongodiscus*  
*Spongotrochus*), *Miropylidae*, *Hagiastriidae*,

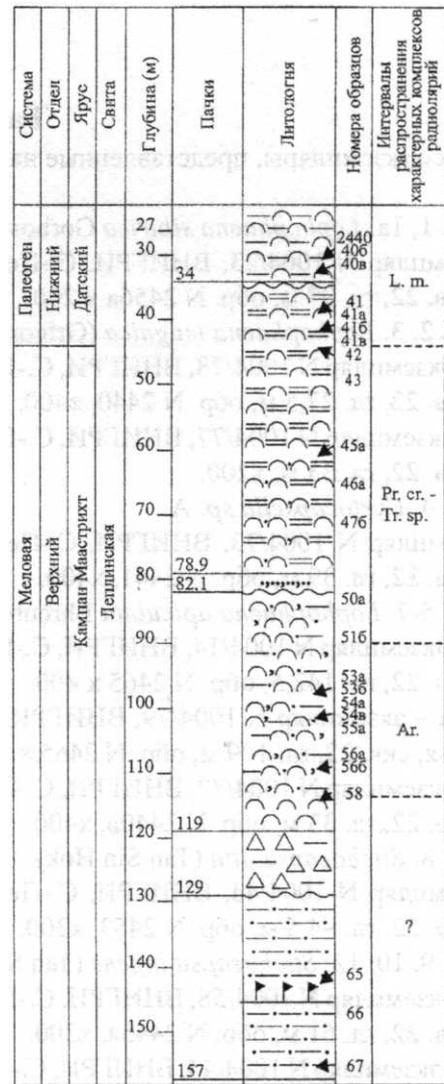
*Coccodiscidae* ( *Heterosestrum*) *Actinommidae* (*pon&Hexacantium Stylosphaera*).

*Nassellaria*.  
*Artostrobiidae* ( *Lithomitrella Dictyoprora*), *Eucyrtidae* ( *Lithocampe, Theocampe, Theocoronium, Dictyophimus, Cyrtocapsella*), *Stichocapsidae* ( *Lithostrobos, Dictyomitra, Stichomitra, Amphipyndax, Stichocapsa*), *Plagiocanthidae* ( *Lophophaena Lithomelissa*), *Sethophormididae* ( *Stichopilium, Dyplocyclos, Theocalyptra, Ehneaphormis, Clathrocyclos*),  
 ( *Diacanthocapsa Myllocercion*), *Clathromitriidae* ( *Tripodiscinus*), *Lampromitridae* ( *Ceratocyrtis, Lithocampiana, Gongylothorax*), *Botryocyrtidae* ( *Botryometra*).

*Lithostrobos rostovzevi* Lipmm, *Lophophaena mugaica* (Grigorjeva), *Amphibrachium ornatum* Lipman

[Foreman, 1968; Tan Sin Hok 1927]. *Botryometra hews* (Campbell et Clark), *Rhopalosyringium colpodes* Foreman, *Staurodictya fresnoensis* Foreman, *Dictyomitra andersoni hews* (Campbell et Clark), *Stichomitra alamedaensis hews* (Campbell et Clark), *Gongylothorax verbeeki* (Tan Sin Hok)

[ , 1979], : *Arthobotrys auriculaleporis* (Campbell et Clark), *Lophophaena sibirica* (Gorbovetz), *Lophophaena mugaica* (Grigorjeva), *Tripodiscinus sengilensis* (Kozlova)



2.  
 22.  
 1 - , 2 -  
 , 3 - , 4 - , 5 -  
 . L.  
 . - *Lophophaena mugaica*; Pr. cr. - Tr. sp. -  
*Prunobrachium crassum* - *Tripodiscinus sp.*;  
 Ar. - *Artostrobiidae*.

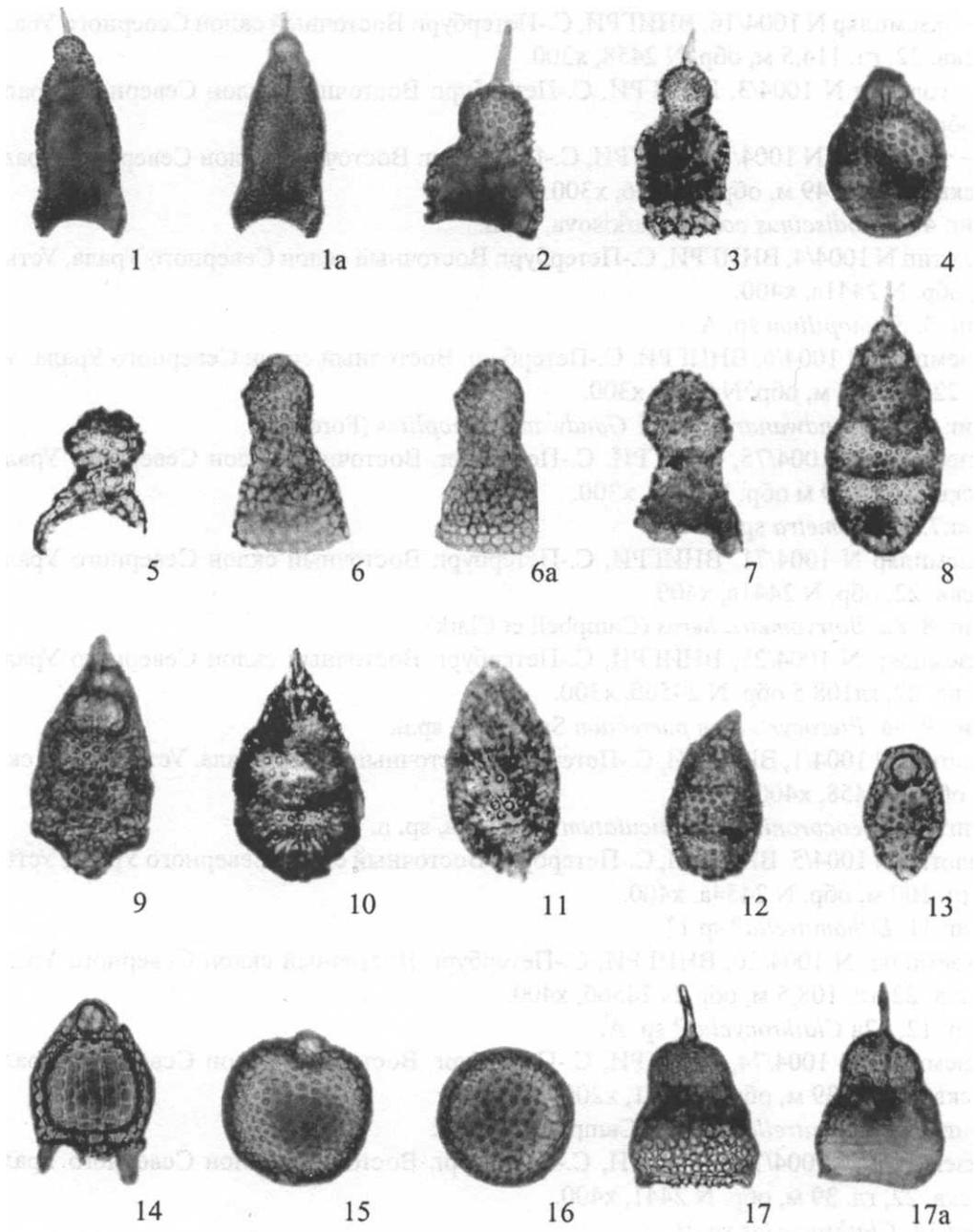
*Lithocampe?* *granulata* Petrushevskaya,  
*Dictyomitra?* *nodosa* (Kozlova), *Theocalyptra limbata* (Kozlova), *Stichopilium sp.* ,  
*Lithomitrella* Haeckel.

1. *Artostrobiidae*

*Dictyoprora sp. aff. D. urceolus* (Haeckel).

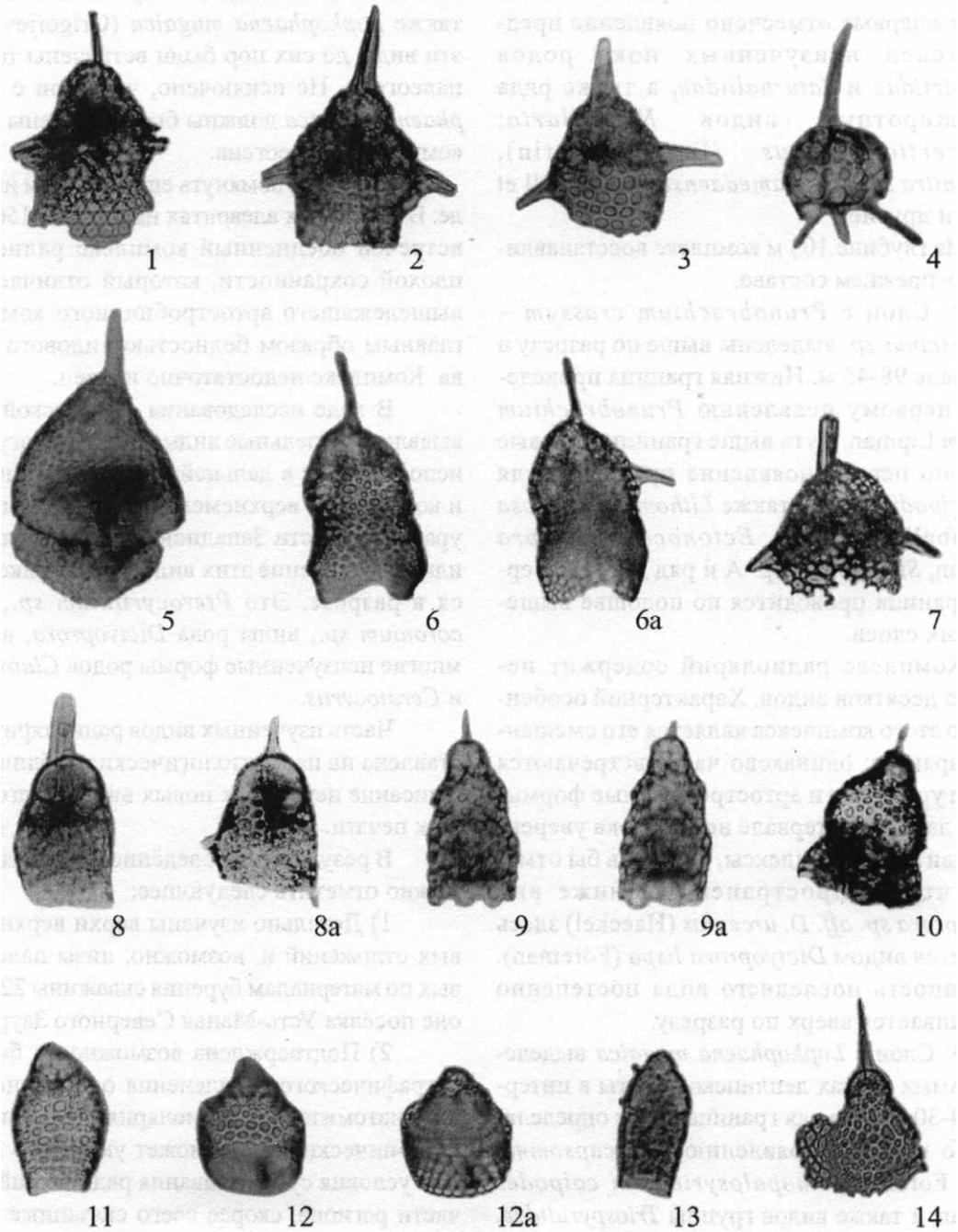
# I

- . 1, 1 . *Lophophaena sibirica* Gorbovetz  
 N 1004/23, , .-
- , . 22, . 97 , . N 2456 200.
- . 2, 3. *Lophopkaena mugaica* (Grigorjeva)
- 2- N 1004/78, , .-
- , . 22, . 27,5 , . N 2440, 400.
- 3- N 1004/77, , .-
- , . 22, . 33 , 200.
4. *Cyrtocapsella* sp. .  
 N 1004/73, , .-
- , . 22, . 39 , . N 2441, 400.
- . 5-7. *Lophophaena apiculata* Ehrenberg
- 5 - N 1004/14, , .-
- , . 22, . 142,5; . N 2465 400.
- 6, 6 - N 1004/79, , .-
- , . 22, . 109 , . N 2465 400.
- 7 - N 1004/79, , .-
- , . 22, . 33 , . N 2440 , 400.
- . 8. *Stichocapsa alfa* (Tan Sin Hok)  
 N 1004/43, , .-
- , . 22, . 94,5 , . N 2453, .
- . 9, 10, 12. *Stichocapsa ingens* (Tan Sin Hok)
- 9- N 1004/58, , .-
- , . 22, . 61 , . N 2445 , .
- 10- N 1004/44, , .-
- , . 22, . 96 , . N 2453 , .
- 12 - N 1004/68, , .-
- , . 22, . 43 , . N 2441 , . . 11. *Stichocapsa delta* (Tan Sin Hok)
- N 1004/45, , .-
- , . 22, . 97 , . N 24536, .
- . 13. *Tricolocapsa ovalis* (Tan Sin Hok)  
 N 1004/63, , .-
- , . 22, . 84,5 , . N 2450 , 400.
- . 14. *Myllocercion echtus* (Empson-Morin)  
 N 1004/56, , .-
- , . 22, . 66 , . N 2446 , .
- . 15, 16. *Gongyiohorax verbeeki* (Tan Sin Hok)
- 15- N 1004/64, , .-
- , . 22, . 84,5 , . N 2450 , .
- 16- N 1004/41, , .-
- , . 22, . 99 , . N 2450 , .
- . 17, 17 . *Spongomelissa imperceptusa* Sarkisova, sp. .  
 N 1004/2, , .-
- , . 22, . 33 , . N 2440 , .



## II

- . 1-3. *Dictyophimus? orbiculiporosus* Sarkisova, sp. .  
 1- N 1004/16, , .- ,  
 . 22, . 114,5 , . N 2458, .  
 2- N 1004/3, , .- , -  
 ,  
 3- N 1004/8, , .- ,  
 . 22, . 149 , . N 2466, .  
 . 4. *Tripodiscinus corona* Sarkisova, sp. .  
 N 1004/4, , .- , -  
 , . 40 , . N 2441 , 400.  
 . 5. *Stichopilium* sp. .  
 N 1004/6, , .- , -  
 , . 22, . 155 , . N 2467, .  
 . 6, 6 . *Gondwanaria sp.aff. Gondwanaria hoplites* (Foreman)  
 N 1004/75, , .- , - ,  
 . 22, . 39 . N 2441, . . 7. *Botryometra* sp. .  
 N 1004/71, , .- , -  
 , . 22, . N 2441 , 400.  
 . 8, 8 . *Botryometra hews* (Campbell et Clark)  
 N 1004/25, , .- , -  
 , . 22, . 108,5 . N 24566, .  
 . 9, 9 . *Pterocyrtidium porrectum* Sarkisova, sp.n.  
 N 1004/1, , .- , - , . 22,  
 . 114,5 , . N 2458, 400.  
 . 10. *Theocoronium puncticulatwn* Sarkisova, sp. .  
 N 1004/5, , .- , - ,  
 . 22, . 100 , . N 2454 , 400. . 11. *Lithomitrella?* sp.1  
 N 1004/26, , .- , -  
 , . 22, . 108,5 , . N 24566, 400. . 12, 12 *Clathrocyclas?* sp. .  
 N 1004/74, , .- , -  
 , . 22, . 39 , . N 2441, 200.  
 . 13. *Lithomitrella formosa* Campbell et Clark  
 N 1004/76, , .- , - ,  
 . 22, . 39 , . N 2441, 400. . 14. *Clathrocyclas* sp.  
 N 1004/64, , .- , -  
 , . 22, . 84,5 , . N 2450 , 200.



109-103	Artostrobiidae,	- <i>Spongomelissa</i> sp.n., <i>Gondwanaria</i> sp. aff. <i>G. hoplites</i> (Foreman), <i>Diacanthocapsa legumen</i> (Campbell et Clark), <i>Dyplocyclas</i> sp.,
		Hagiastriidae, Saturnaliidae Micropiliidae.
	<i>Artostrobiidae</i>	
	<i>Prunobrachium articulatum</i> (Lipman), <i>Amphibrachium ornatum</i> (Lipman), <i>Amphibrachium mucronatum</i> Lipman.	<i>Tripodiscinus tumulosus</i> (Kozlova), <i>sengilensis</i> Kozlova, a <i>Lophophaena mugaica</i> (Grigorjeva). Bee
	<i>Hagiastriidae</i> <i>Saturnaliidae</i> ,	
	<i>Nassellaria: Myllocertion ectus</i> (Empson-Morin), <i>Stichomitra</i> sp. aff. <i>alamedaensis</i> (Campbell et Clark)	<i>Lophophaena mugaica</i>
103		
2.	<i>Prunobrachium crassum</i> -	156-143
	<i>Tripodiscinus</i> sp.	
98-45		
	<i>Prunobrachium crassum</i> Lipman.	
	<i>Tripodiscinus</i> ,	
	<i>Lithomitra formosa</i> (Campbell et Clark), <i>Ectonocorys lampra</i> Foreman, <i>Stichomitra</i> sp.	
		<i>Pterocyrtidium</i> sp., <i>Theo-coronium</i> sp.,
		<i>Dictyoprora</i> ,
		<i>Clatrocyclas</i>
		<i>Ceratocyrtis</i> .
		I-II.
	<i>Dictyoprora</i> sp. aff. <i>D. urceolus</i> (Haeckel)	
	<i>Dictyoprora lispa</i> (Foreman).	
		1)
3.	<i>Lophophaena mugaica</i>	
		22,
44-30		
	<i>Theocapsomma comys</i> Foreman, <i>Rhopalosyringium colpodes</i> Foreman,	2)
	<i>Triospyrididae</i> .	
	<i>Clathromitriidae</i> .	3)

*Theocalyptra* Haeckel, *Theocoronium* Haeckel,  
*Stichopilium* Haeckel, *Enneaphormis* Haeckel,  
*Ceratocyrtis* Butschli, *Clathrocyclas* Haeckel

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6)

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*mugaica*,

*Lophophaena*

. 9. 1955.

77-95.

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7)

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, 1966. 158 .

. VIII , 1977. .84-85.

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: , 1987 . .110-116.

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