

TABLES

	<i>craccoi</i>	<i>degrangei</i>	<i>epigloafuniculata</i>	<i>epiglopardalis</i>	<i>epiglottina epiglottina</i>	<i>mortoni</i>	<i>neglecta</i>	<i>pseudovittata</i>	<i>rarpunctata raropunctata</i>	<i>sallomacensis</i>	<i>separata</i>	<i>tigrina</i>
Cochlis												
<i>craccoi</i>		-0.9	0.4	0.0	0.6	-0.4	-0.4	-0.4	1.0	-0.1	-0.5	0.3
<i>degrangei</i>			1.4	0.9	1.5	0.5	0.5	0.5	1.9	0.9	0.4	1.2
<i>epigloafuniculata</i>				-0.4	0.1	-0.9	-0.9	-0.8	0.5	-0.5	-1.0	-0.2
<i>epiglopardalis</i>					0.6	-0.4	-0.4	-0.4	1.0	-0.1	-0.5	0.3
<i>epiglottina epiglottina</i>						-1.0	-1.0	-1.0	0.4	-0.6	-1.1	-0.3
<i>mortoni</i>							0.0	0.0	1.4	0.3	-0.1	0.7
<i>neglecta</i>								0.0	1.4	0.3	-0.1	0.7
<i>pseudovittata</i>									1.4	0.3	-0.1	0.7
<i>rarpunctata raropunctata</i>									-1.0	-1.5	-0.7	
<i>sallomacensis</i>											-0.4	0.3
<i>separata</i>												0.8
<i>tigrina</i>												

Tab. 1 - Matrix showing difference in number of protoconch whorls within pairs of naticine taxa; significant values are boldfaced.

	<i>craccoi</i>	<i>degrangei</i>	<i>epigloafuniculata</i>	<i>epiglopardalis</i>	<i>epiglottina epiglottina</i>	<i>mortoni</i>	<i>neglecta</i>	<i>pseudovittata</i>	<i>rarpunctata raropunctata</i>	<i>sallomacensis</i>	<i>separata</i>	<i>tigrina</i>
Cochlis												
<i>craccoi</i>		-5	14	0	-1	32	0	1	32	8	15	29
<i>degrangei</i>			18	5	4	36	5	6	36	13	19	33
<i>epigloafuniculata</i>				-13	-15	22	-14	-13	21	-6	1	18
<i>epiglopardalis</i>					-1	32	0	0	32	8	14	29
<i>epiglottina epiglottina</i>						33	1	2	33	9	16	30
<i>mortoni</i>							-33	-32	0	-26	-21	-4
<i>neglecta</i>								5	32	-22	15	29
<i>pseudovittata</i>									31	7	14	29
<i>rarpunctata raropunctata</i>									-26	-20	-4	
<i>sallomacensis</i>											7	23
<i>separata</i>												17
<i>tigrina</i>												

Tab. 2 - Matrix showing percent difference in diameter of the larval shell within pairs of naticine taxa; significant values are boldfaced. Taxa are those considered in Tab. 1.

	<i>craccoi</i>	<i>degrangei</i>	<i>epigloafuniculata</i>	<i>epiglopardalis</i>	<i>epiglottina epiglottina</i>	<i>mortoni</i>	<i>neglecta</i>	<i>pseudovittata</i>	<i>rarpunctata raropunctata</i>	<i>sallomacensis</i>	<i>separata</i>	<i>tigrina</i>
Cochlis												
<i>craccoi</i>		53	-28	30	-43	45	38	41	-57	21	58	-6
<i>degrangei</i>			-66	-33	-73	-15	-24	-20	-80	-41	9	-56
<i>epigloafuniculata</i>				50	-22	60	56	58	-40	43	70	23
<i>epiglopardalis</i>					-61	21	11	16	-70	-12	39	-35
<i>epiglottina epiglottina</i>						69	65	67	-23	55	76	40
<i>mortoni</i>							-10	-5	-76	-30	23	-48
<i>neglecta</i>								5	-73	-22	32	-40
<i>pseudovittata</i>									-75	-26	28	-45
<i>rarpunctata raropunctata</i>										66	82	54
<i>sallomacensis</i>											47	-26
<i>separata</i>												-61
<i>tigrina</i>												

Tab. 3 - Matrix showing percent difference in diameter of the first half-whorl of the protoconch within pairs of naticine taxa; significant values are boldfaced. Taxa are those considered in Tab. 1.

	<i>noe</i>	<i>dillwyni koeneni</i>	<i>albertii</i>	<i>astensis</i>	<i>burtoni altavillensis</i>	<i>consimilis</i>	<i>deromamilla</i>	<i>miocolligens</i>	<i>pasinii</i>	<i>rupeliana</i>	<i>tectula</i>	<i>Tectonica sp. 1</i>	<i>Tectonica sp. 2</i>
Cryptonica													
<i>noe</i>		-1.5	-0.1	-1.0	-0.9	0.1	-0.2	-0.8	-0.4	-1.3	-1.0	-0.2	-0.9
Tanea													
<i>dillwyni koeneni</i>			1.4	0.5	0.6	1.6	1.3	0.7	1.1	0.2	0.5	1.3	0.5
Tectonica													
<i>albertii</i>				-0.9	-0.8	0.2	-0.1	-0.7	-0.3	-1.2	-0.9	-0.1	-0.8
<i>astensis</i>					0.1	1.1	0.8	0.2	0.6	-0.3	0.0	0.8	0.1
<i>burtoni altavillensis</i>						1.0	0.7	0.1	0.5	-0.3	-0.1	0.7	0.0
<i>consimilis</i>							-0.2	-0.9	-0.5	-1.4	-1.1	-0.2	-1.0
<i>deromamilla</i>								-0.6	-0.2	-1.1	-0.8	0.0	-0.8
<i>miocolligens</i>									0.4	-0.4	-0.2	0.6	-0.1
<i>pasinii</i>										-0.9	-0.6	0.2	-0.5
<i>rupeliana</i>											0.3	1.1	0.3
<i>tectula</i>												0.8	0.1
<i>Tectonica sp. 1</i>													-0.8
<i>Tectonica sp. 2</i>													

Tab. 4 - Matrix showing difference in number of protoconch whorls within pairs of naticine taxa; significant values are boldfaced.

	<i>noe</i>	<i>dillwyni koeneni</i>	<i>albertii</i>	<i>astensis</i>	<i>burtoni altavillensis</i>	<i>consimilis</i>	<i>deromamilla</i>	<i>miocolligens</i>	<i>pasinii</i>	<i>rupeliana</i>	<i>tectula</i>	<i>Tectonica sp. 1</i>	<i>Tectonica sp. 2</i>
Cryptonica													
<i>noe</i>		-42	-41	-39	-25	3	-17	-18	13	-18	-30	-32	-15
Tanea													
<i>dillwyni koeneni</i>			2	5	23	44	30	28	49	29	17	14	32
Tectonica													
<i>albertii</i>				2	21	42	28	27	48	28	15	12	30
<i>astensis</i>					19	41	26	25	47	26	13	10	28
<i>burtoni altavillensis</i>						27	8	7	34	8	-7	-10	11
<i>consimilis</i>							-20	-21	10	-20	-32	-34	-17
<i>deromamilla</i>								-1	28	0	-15	-17	3
<i>miocolligens</i>									29	1	-14	-16	4
<i>pasinii</i>										-28	-39	-41	-26
<i>rupeliana</i>											-14	-17	3
<i>tectula</i>												-3	17
<i>Tectonica sp. 1</i>													20
<i>Tectonica sp. 2</i>													

Tab. 5 - Matrix showing percent difference in diameter of the larval shell within pairs of naticine taxa; significant values are boldfaced. Taxa are those considered in Tab. 4.

	<i>noe</i>	<i>dillwyni koeneni</i>	<i>albertii</i>	<i>astensis</i>	<i>burtoni altavillensis</i>	<i>consimilis</i>	<i>deromamilla</i>	<i>miocolligens</i>	<i>pasinii</i>	<i>rupeliana</i>	<i>tectula</i>	<i>Tectonica sp. 1</i>	<i>Tectonica sp. 2</i>
Cryptonica													
<i>noe</i>		63	-46	44	46	1	11	44	29	60	54	-13	44
Tanea													
<i>dillwyni koeneni</i>			-80	-35	-32	-63	-59	-35	-48	-8	-20	-68	-34
Tectonica													
<i>albertii</i>				70	71	46	52	70	62	78	75	38	70
<i>astensis</i>					4	-43	-37	0	-21	28	18	-54	0
<i>burtoni altavillensis</i>						-46	-40	-4	-25	25	15	-53	-3
<i>consimilis</i>							10	44	28	60	54	-14	44
<i>deromamilla</i>								37	20	55	49	-23	37
<i>miocolligens</i>									-21	28	19	-51	0
<i>pasinii</i>										44	36	-38	22
<i>rupeliana</i>											-12	-65	-18
<i>tectula</i>												-60	-28
<i>Tectonica sp. 1</i>													52
<i>Tectonica sp. 2</i>													

Tab. 6 - Matrix showing percent difference in diameter of the first half-whorl of the protoconch within pairs of naticine taxa; significant values are boldfaced. Taxa are those considered in Tab. 4.

	<i>pseudorepressa</i>	<i>Ampullonatica</i> sp.	<i>Eunaticina</i> sp.	<i>gianoii</i>	<i>giuntellii</i>	<i>grossularia</i>	<i>helicina helicina</i>	<i>latecallosa</i>	<i>molarensis</i>	<i>notabilis</i>	<i>perforata</i>	<i>piccolii</i>	<i>submamillaris</i>	<i>pulchella</i>	<i>subobturata</i>	<i>umbilicocarinata</i>	<i>umbilicolunata</i>	<i>Euspira</i> sp. 2	<i>Euspira</i> sp. 4	<i>Euspira</i> sp. 5	<i>Euspira</i> sp. 6	<i>maga</i>	<i>olla</i>
<i>Ampullonatica</i>																							
<i>pseudorepressa</i>		0.2	0.5	-0.2	1.0	-0.1	0.2	-0.2	0.3	0.6	0.6	-0.2	-0.3	0.3	0.6	-0.1	-0.1	0.6	0.5	0.2	0.6	0.9	0.2
<i>Ampullonatica</i> sp.			0.3	-0.4	0.7	-0.4	0.0	-0.4	0.1	0.4	0.3	-0.4	-0.5	0.1	0.4	-0.3	-0.3	0.3	0.3	0.0	0.3	0.7	-0.1
<i>Eunaticina</i>																							
<i>Eunaticina</i> sp.				-0.7	0.4	-0.7	-0.3	-0.7	-0.2	0.1	0.0	-0.7	-0.8	-0.2	0.1	-0.6	-0.6	0.0	0.0	-0.3	0.1	0.3	-0.3
<i>Euspira</i>																							
<i>gianoii</i>					1.2	0.1	0.4	0.0	0.5	0.8	0.8	0.0	-0.1	0.5	0.8	0.1	0.1	0.8	0.7	0.4	0.8	1.1	0.4
<i>giuntellii</i>						-1.1	-0.8	-1.2	-0.7	-0.4	-0.4	-1.2	-1.3	-0.7	-0.3	-1.1	-1.1	-0.4	-0.4	-0.7	-0.4	-0.1	-0.8
<i>grossularia</i>							0.3	0.0	0.4	0.7	0.7	0.0	-0.1	0.4	0.8	0.1	0.0	0.7	0.7	0.4	0.7	1.1	0.3
<i>helicina helicina</i>								-0.4	0.1	0.4	0.4	-0.4	-0.5	0.1	0.4	-0.3	-0.3	0.4	0.3	0.0	0.4	0.7	0.0
<i>latecallosa</i>									0.4	0.8	0.7	0.0	-0.1	0.4	0.8	0.1	0.1	0.7	0.7	0.4	0.7	1.1	0.4
<i>molarensis</i>										0.3	0.3	-0.5	-0.6	0.0	0.3	-0.3	-0.4	0.3	0.2	-0.1	0.3	0.6	-0.1
<i>notabilis</i>											0.0	-0.8	-0.9	-0.3	0.0	-0.7	-0.7	0.0	-0.1	-0.3	0.0	0.3	-0.4
<i>perforata</i>																-0.7	-0.9	-0.3	0.1	-0.6	-0.7	0.0	-0.3
<i>piccolii</i>																	-0.1	0.5	0.8	0.1	0.1	0.8	0.7
<i>submamillaris</i>																		0.6	1.0	0.2	0.2	0.9	0.8
<i>pulchella</i>																			0.3	-0.3	-0.4	0.3	0.2
<i>subobturata</i>																				-0.7	-0.7	-0.1	-0.1
<i>umbilicocarinata</i>																							
<i>umbilicolunata</i>																							
<i>Euspira</i> sp. 2																							
<i>Euspira</i> sp. 4																							
<i>Euspira</i> sp. 5																							
<i>Euspira</i> sp. 6																							
<i>Neverita</i>																							
<i>maga</i>																							
<i>olla</i>																							

Tab. 7 - Matrix showing difference in number of protoconch whorls within pairs of poliniceine taxa; significant values are boldfaced.

	<i>pseudorepressa</i>	<i>Ampullonatica</i> sp.	<i>Eunaticina</i> sp.	<i>gianoi</i>	<i>giuntellii</i>	<i>grossularia</i>	<i>helicina helicina</i>	<i>latecallosa</i>	<i>molarensis</i>	<i>notabilis</i>	<i>perforata</i>	<i>piccolii</i>	<i>submamillaris</i>	<i>pulchella</i>	<i>subobturata</i>	<i>umbilicocarinata</i>	<i>umbilicolunata</i>	<i>Euspira</i> sp. 2	<i>Euspira</i> sp. 4	<i>Euspira</i> sp. 5	<i>Euspira</i> sp. 6	<i>maga</i>	<i>olla</i>	
<i>Ampullonatica</i>																								
<i>pseudorepressa</i>		5	-47	-17	33	-23	16	-3	39	31	14	-38	11	33	-3	-4	-10	0	28	32	28	12	24	
<i>Ampullonatica</i> sp.			-50	-21	29	-27	11	-9	36	26	9	-41	5	30	-8	-9	-15	-5	24	28	24	7	20	
<i>Eunaticina</i>																								
<i>Eunaticina</i> sp.				36	65	31	55	45	68	63	55	15	53	65	45	45	41	47	62	64	62	53	60	
<i>Euspira</i>																								
<i>gianoi</i>				45	-7	30	13	50	42	29	-25	26	45	14	13	7	17	40	44	40	27	37		
<i>giuntellii</i>					-48	-21	-36	9	-3	-22	-58	-25	0	-35	-36	-40	-33	-7	-2	-7	-24	-11		
<i>grossularia</i>						35	20	53	46	34	-19	31	49	20	19	13	23	44	47	45	32	42		
<i>helicina helicina</i>							-19	28	17	-1	-48	-5	21	-18	-19	-25	-16	14	-19	14	-4	10		
<i>latecallosa</i>								42	33	18	-35	14	36	0	0	-7	4	30	35	31	16	27		
<i>molarensis</i>									-12	-29	-62	-32	-8	-41	-42	-46	-39	-16	-10	-15	-30	-19		
<i>notabilis</i>										-19	-57	-22	4	-33	-33	-38	-31	-4	2	-3	-21	-8		
<i>perforata</i>											-47	-4	22	-17	-18	-23	-15	15	20	16	-2	11		
<i>piccolii</i>												44	59	35	35	30	38	55	58	55	45	53		
<i>submamillaris</i>													25	-14	-14	-20	-11	19	24	19	2	15		
<i>pulchella</i>														-36	-36	-41	-34	-8	-2	-7	-24	-12		
<i>subobturata</i>															-1	-7	3	30	34	31	15	27		
<i>umbilicocarinata</i>																-7	4	31	35	31	16	27		
<i>umbilicolunata</i>																	10	35	39	36	22	32		
<i>Euspira</i> sp. 2																			28	32	28	12	24	
<i>Euspira</i> sp. 4																				6	0	-17	-4	
<i>Euspira</i> sp. 5																					-5	-22	-10	
<i>Euspira</i> sp. 6																						-18	-5	
<i>Neverita</i>																								
<i>maga</i>																								13
<i>olla</i>																								

Tab. 8 - Matrix showing percent difference in diameter of the larval shell within pairs of poliniceine taxa; significant values are boldfaced. Taxa are those considered in Tab. 7.

	<i>pseudorepressa</i>	<i>Ampullonatica</i> sp.	<i>Eunaticina</i> sp.	<i>giano</i>	<i>giuntellii</i>	<i>grossularia</i>	<i>helicina helicina</i>	<i>latecallosa</i>	<i>molarensis</i>	<i>notabilis</i>	<i>perforata</i>	<i>piccolii</i>	<i>submamillaris</i>	<i>pulchella</i>	<i>subobturata</i>	<i>umbilicocarinata</i>	<i>umbilicolunata</i>	<i>Euspira</i> sp. 2	<i>Euspira</i> sp. 4	<i>Euspira</i> sp. 5	<i>Euspira</i> sp. 6	<i>maga</i>	<i>olla</i>	
<i>Ampullonatica</i>																								
<i>pseudorepressa</i>		-31	-54	32	-39	31	-3	11	33	33	0	-7	39	30	-39	3	31	-36	-31	42	5	-37	13	
<i>Ampullonatica</i> sp.			-33	53	-11	53	29	39	54	54	31	26	58	52	-11	33	52	-7	0	60	34	-9	40	
<i>Eunaticina</i>																								
<i>Eunaticina</i> sp.				69	24	68	52	59	69	69	54	50	72	68	24	55	68	28	33	73	56	26	60	
<i>Euspira</i>																								
<i>giano</i>					-58	-1	-34	-23	2	2	-32	-37	10	-2	-58	-29	-1	-57	-53	15	-28	-57	-21	
<i>giuntellii</i>						58	37	46	59	59	39	34	62	57	0	41	58	4	10	65	42	2	47	
<i>grossularia</i>							-33	-22	-3	3	-31	-36	11	0	-58	-29	0	-56	-53	16	-27	-57	-21	
<i>helicina helicina</i>								14	36	36	3	-4	41	32	-37	6	33	-34	-29	44	8	-35	16	
<i>latecallosa</i>									25	25	-12	-18	30	21	-46	-9	22	-44	-40	34	-7	-45	2	
<i>molarensis</i>										0	-34	-38	7	-5	-59	-31	-4	-58	-55	13	-30	-58	-23	
<i>notabilis</i>											-34	-38	7	-5	-59	-31	-4	-58	-55	13	-30	-58	-23	
<i>perforata</i>												-7	39	30	-39	3	31	-36	-31	42	5	-37	13	
<i>piccolii</i>													43	35	-34	10	36	-31	-26	46	11	-32	19	
<i>submamillaris</i>														-12	63	-37	-11	-61	-58	5	-35	-62	-29	
<i>pulchella</i>															-57	-28	0	-56	-52	17	-26	-56	-19	
<i>subobturata</i>																41	58	4	11	65	42	2	47	
<i>umbilicocarinata</i>																	29	-38	-34	40	2	-39	10	
<i>umbilicolunata</i>																		-56	-53	-16	-27	-57	-21	
<i>Euspira</i> sp. 2																			7	63	39	-1	45	
<i>Euspira</i> sp. 4																				60	35	-8	41	
<i>Euspira</i> sp. 5																					-39	-64	-33	
<i>Euspira</i> sp. 6																						-40	9	
<i>Neverita</i>																								
<i>maga</i>																							46	
<i>olla</i>																								

Tab. 9 - Matrix showing percent difference in diameter of the first half-whorl of the protoconch within pairs of poliniceine taxa; significant values are boldfaced. Taxa are those considered in Tab. 7.

	<i>bituberculata</i>	<i>crassicorda</i>	<i>fasciolata</i>	<i>zarantonelloi</i>	<i>plicatulaeformis</i>	<i>tortonensis</i>	<i>proredemptus</i>	<i>redemptus</i>	<i>submamilla</i>	<i>claudiae</i>	<i>eleonorae</i>	<i>hecchii</i>	<i>clathratum deshayesi</i>	<i>michaudi</i>	<i>Sigaretotrema</i> sp.	<i>borellense</i>	<i>cryptostomoides</i>	<i>patulum</i>	<i>paviai</i>	<i>Sinum</i> sp. 1	<i>Sinum</i> sp. 2	<i>Sinum</i> sp. 3
Payraudeautia																						
<i>bituberculata</i>		0.9	0.3	1.2	0.2	0.2	0.5	1.1	0.2	0.9	0.9	0.9	0.2	0.4	0.4	0.2	0.0	0.4	0.2	0.4	0.4	-0.1
<i>crassicorda</i>			-0.6	0.2	-0.7	-0.7	-0.4	0.2	-0.7	0.0	0.0	0.0	-0.7	-0.5	-0.5	-0.7	-1.0	-0.5	-0.7	-0.5	-0.5	-1.0
<i>fasciolata</i>				0.8	-0.1	-0.1	0.2	0.8	-0.1	0.6	0.5	0.6	-0.1	0.1	0.1	-0.1	-0.4	0.1	-0.1	0.1	0.1	-0.4
<i>zarantonelloi</i>					-0.9	-0.9	-0.6	0.0	-0.9	-0.2	-0.2	-0.2	-0.9	-0.7	-0.7	-0.9	-1.2	-0.7	-0.9	-0.7	-0.7	-1.3
Pliconacca																						
<i>plicatulaeformis</i>						0.0	0.3	0.9	0.0	0.7	0.7	0.7	0.0	0.2	0.2	0.0	-0.2	0.2	0.0	0.2	0.2	-0.3
<i>tortonensis</i>							0.3	0.9	0.0	0.7	0.7	0.7	0.0	0.2	0.2	0.0	-0.2	0.2	0.0	0.2	0.2	-0.3
Polinices																						
<i>proredemptus</i>								0.6	-0.3	0.4	0.4	0.4	-0.3	-0.1	-0.1	-0.3	-0.5	-0.1	-0.3	-0.1	-0.1	-0.6
<i>redemptus</i>									-0.9	-0.1	-0.2	-0.1	-0.9	-0.7	-0.6	-0.9	-1.1	-0.7	-0.9	-0.6	-0.6	-1.2
<i>submamilla</i>										0.7	0.7	0.7	0.0	0.2	0.2	0.0	-0.2	0.2	0.0	0.2	0.2	-0.3
Sigatica																						
<i>claudiae</i>											-0.1	0.0	-0.7	-0.5	-0.5	-0.8	-1.0	-0.5	-0.7	-0.5	-0.5	-1.0
<i>eleonorae</i>												0.1	-0.7	-0.5	-0.4	-0.7	-0.9	-0.4	-0.7	-0.4	-0.4	-1.0
Sigaretotrema																						
<i>hecchii</i>													-0.7	-0.5	-0.5	-0.8	-1.0	-0.5	-0.7	-0.5	-0.5	-1.0
<i>clathratum deshayesi</i>														0.2	0.2	0.0	-0.2	0.2	0.0	0.2	0.2	-0.3
<i>michaudi</i>															0.0	-0.2	-0.4	0.0	-0.2	0.0	0.0	-0.5
<i>Sigaretotrema</i> sp.																-0.3	-0.5	0.0	-0.2	0.0	0.0	-0.5
Sinum																						
<i>borellense</i>																	-0.2	0.2	0.0	0.3	0.3	-0.3
<i>cryptostomoides</i>																		0.4	0.2	0.5	0.5	-0.1
<i>patulum</i>																			-0.2	0.0	0.0	-0.5
<i>paviai</i>																				0.2	0.2	-0.3
<i>Sinum</i> sp. 1																					0.0	-0.5
<i>Sinum</i> sp. 2																						-0.5
<i>Sinum</i> sp. 3																						

Tab. 10 - Matrix showing difference in number of protoconch whorls within pairs of polinicine and sinine taxa; significant values are boldfaced.

	<i>bituberculata</i>	<i>crassicorda</i>	<i>fasciolata</i>	<i>zarantonelloi</i>	<i>plicatulaeformis</i>	<i>tortonensis</i>	<i>proredemptus</i>	<i>redemptus</i>	<i>submamilla</i>	<i>claudiae</i>	<i>eleonorae</i>	<i>hecchii</i>	<i>clathratum deshayesi</i>	<i>michaudi</i>	<i>Sigaretotrema</i> sp.	<i>borellense</i>	<i>cryptostomoides</i>	<i>patulum</i>	<i>paviai</i>	<i>Sinum</i> sp. 1	<i>Sinum</i> sp. 2	<i>Sinum</i> sp. 3
<i>Payraudeautia</i>																						
<i>bituberculata</i>		-7	4	-4	10	2	5	5	33	28	-34	34	-24	44	34	-1	-30	12	-24	13	3	-5
<i>crassicorda</i>			11	3	16	10	12	12	38	34	-28	39	-18	49	39	6	-24	18	-18	20	10	2
<i>fasciolata</i>				-8	6	-1	1	1	30	25	-36	31	-27	42	32	-5	-33	8	-27	9	-1	-9
<i>zarantonelloi</i>					13	6	8	9	36	31	-31	37	-21	47	37	3	-27	15	-21	17	7	-1
<i>Pliconacca</i>																						
<i>plicatulaeformis</i>						-7	-5	-5	26	21	-40	27	-32	38	27	-10	-37	2	-31	4	-7	-14
<i>tortonensis</i>							2	3	31	26	-35	33	-26	43	33	-3	-31	9	-26	11	1	-7
<i>Polinices</i>																						
<i>proredemptus</i>								0	29	24	-37	31	-28	42	31	-5	-33	7	-28	9	-2	-10
<i>redemptus</i>									29	24	-37	31	-28	42	31	-5	-33	7	-28	9	-2	-10
<i>submamilla</i>										-6	-56	2	-49	17	2	-33	-53	-24	-49	-23	-31	-37
<i>Sigatica</i>																						
<i>claudiae</i>											-52	8	-46	22	8	-29	-50	-19	-46	-17	-26	-32
<i>eleonorae</i>												56	12	63	56	33	5	42	12	43	36	30
<i>Sigaretotrema</i>																						
<i>hecchii</i>																						
<i>clathratum deshayesi</i>																						
<i>michaudi</i>																						
<i>Sigaretotrema</i> sp.																						
<i>Sinum</i>																						
<i>borellense</i>																						
<i>cryptostomoides</i>																						
<i>patulum</i>																						
<i>paviai</i>																						
<i>Sinum</i> sp. 1																						
<i>Sinum</i> sp. 2																						
<i>Sinum</i> sp. 3																						

Tab. 11 - Matrix showing percent difference in diameter of the larval shell within pairs of poliniceine and sinine taxa; significant values are boldfaced. Taxa are those considered in Tab. 10.

	<i>bituberculata</i>	<i>crassicorda</i>	<i>fasciolata</i>	<i>zarantonelloi</i>	<i>plicatulaeformis</i>	<i>tortonensis</i>	<i>proredemptus</i>	<i>redemptus</i>	<i>submamilla</i>	<i>claudiae</i>	<i>eleonorae</i>	<i>hecchii</i>	<i>clathratum deshayesi</i>	<i>michaudi</i>	<i>Sigaretotrema</i> sp.	<i>borellense</i>	<i>cryptostomoides</i>	<i>patulum</i>	<i>paviai</i>	<i>Sinum</i> sp. 1	<i>Sinum</i> sp. 2	<i>Sinum</i> sp. 3
<i>Payraudeautia</i>																						
<i>bituberculata</i>		-79	-40	-76	-45	-53	-57	-79	-13	-74	-88	-64	-46	-8	-53	-31	-28	-46	-39	-55	-58	-14
<i>crassicorda</i>			66	14	62	56	51	0	76	20	-42	43	61	77	56	70	71	62	66	54	51	76
<i>fasciolata</i>				-60	-9	-21	-29	-65	31	-57	-80	-39	-11	35	-22	13	16	-10	2	-25	-30	29
<i>zarantonelloi</i>					55	49	43	-14	71	6	-51	33	55	74	48	65	66	55	60	46	42	72
<i>Pliconacca</i>																						
<i>plicatulaeformis</i>						-13	-22	-62	35	-52	-78	-33	-2	41	-14	21	24	-1	11	-17	-23	36
<i>tortonensis</i>							-10	-56	44	-46	-75	-23	11	48	-1	31	34	12	22	-4	-11	44
<i>Polinices</i>																						
<i>proredemptus</i>								-51	49	-39	-72	-15	20	54	8	31	40	21	30	6	-1	50
<i>redemptus</i>									75	19	-43	43	61	77	55	70	71	61	66	54	50	76
<i>submamilla</i>										-69	-86	-58	-38	6	-46	-20	-17	-38	-29	-48	-51	-1
<i>Sigatica</i>																						
<i>claudiae</i>											-54	29	52	72	45	63	64	52	58	43	38	70
<i>eleonorae</i>												67	78	87	74	83	83	78	80	74	72	86
<i>Sigaretotrema</i>																						
<i>hecchii</i>													32	60	22	48	49	33	41	19	13	57
<i>clathratum deshayesi</i>														42	-12	23	25	0	13	-15	-21	37
<i>michaudi</i>															-49	-25	-22	-41	-33	-51	-54	0
<i>Sigaretotrema</i> sp.																33	35	13	24	-3	-10	45
<i>Sinum</i>																						
<i>borellense</i>																	3	-22	-11	-35	-39	19
<i>cryptostomoides</i>																		-25	-14	-37	-41	16
<i>patulum</i>																			12	-16	-22	37
<i>paviai</i>																				-26	-31	28
<i>Sinum</i> sp. 1																					-7	47
<i>Sinum</i> sp. 2																						51
<i>Sinum</i> sp. 3																						

Tab. 12 - Matrix showing percent difference in diameter of the first half-whorl of the protoconch within pairs of poliniceine and sinine taxa; significant values are boldfaced. Taxa are those considered in Tab. 10.

	number of whorls	protoconch diameter	diameter of the first half-whorl
Cochlis			
1. <i>craccoi</i>	2, 5, 9, 11	6, 9, 12	2, 3, 4, 5, 6, 7, 8, 9, 10, 11
2. <i>degrangei</i>	1, 3, 4, 5, 6, 7, 8, 9, 10, 12	6, 9, 12	1, 3, 4, 5, 7, 8, 9, 10, 12
3. <i>epiglofuniculata</i>	2, 6, 7, 8, 9, 10, 11	6, 9	1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12
4. <i>epiglopardalis</i>	2, 5, 9, 11	6, 9, 12	1, 2, 3, 5, 6, 9, 11, 12
5. <i>epiglottina epiglottina</i>	1, 2, 4, 6, 7, 8, 10, 11	6, 9, 12	1, 2, 3, 4, 6, 7, 8, 9, 10, 11, 12
6. <i>mortoni</i>	2, 3, 5, 9, 12	1, 2, 3, 4, 5, 7, 8, 10, 11	1, 3, 4, 5, 9, 10, 11, 12
7. <i>neglecta</i>	2, 3, 5, 9, 12	6, 9, 10, 12	1, 2, 3, 5, 9, 10, 11, 12
8. <i>pseudovittata</i>	2, 3, 5, 9, 12	6, 9, 12	1, 2, 3, 5, 9, 10, 11, 12
9. <i>raropunctata raropunctata</i>	1, 2, 3, 4, 6, 7, 8, 12	1, 2, 3, 4, 5, 7, 8, 10, 11	1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 12
10. <i>sallomacensis</i>	2, 3, 5, 9	6, 7, 9, 12	1, 2, 3, 5, 6, 7, 8, 9, 11, 12
11. <i>separata</i>	1, 3, 4, 5, 9	6, 7, 9, 12	1, 3, 4, 5, 6, 7, 8, 9, 10, 12
12. <i>tigrina</i>	2, 6, 7, 8, 9, 11	1, 2, 4, 5, 7, 8, 10	2, 3, 4, 5, 6, 7, 8, 9, 10, 11
Tectonatica			
1. <i>albertii</i>	2, 3, 6, 8, 9, 11	3, 4, 5, 6, 7, 8, 11	2, 3, 4, 5, 6, 7, 8, 9, 10, 11
2. <i>astensis</i>	1, 4, 5, 7, 10	4, 5, 6, 7, 8, 11	1, 4, 5, 7, 8, 10
3. <i>burtoni altavillensis</i>	1, 4, 5, 7, 10	1, 4, 7	1, 4, 5, 7, 8, 10
4. <i>consimilis</i>	2, 3, 6, 7, 8, 9, 11	1, 2, 3, 5, 8, 9, 10	1, 2, 3, 6, 7, 8, 9, 11
5. <i>dertomamilla</i>	2, 3, 6, 8, 9, 11	1, 2, 4, 7	1, 2, 3, 6, 7, 8, 9, 10, 11
6. <i>miocolligens</i>	1, 4, 5, 10	1, 2, 4, 7	1, 4, 5, 7, 8, 10
7. <i>pasinii</i>	2, 3, 4, 8, 9, 11	1, 2, 3, 5, 6, 8, 9, 10, 11	1, 2, 3, 4, 5, 6, 8, 9, 10, 11
8. <i>rupeliana</i>	1, 4, 5, 7, 10	1, 2, 4, 7, 9, 10, 11	1, 2, 3, 4, 5, 6, 7, 10, 11
9. <i>tectula</i>	1, 4, 5, 7, 10	4, 7	1, 4, 5, 7, 10
10. <i>Tectonatica</i> sp.1	2, 3, 6, 8, 9, 11	4, 7, 11	1, 2, 3, 5, 6, 7, 8, 9, 11
11. <i>Tectonatica</i> sp.2	1, 4, 5, 7, 10	1, 2, 7, 10	1, 4, 5, 7, 8, 10
Ampullonatica			
1. <i>pseudorepressa</i>	-	-	2
2. <i>Ampullonatica</i> sp.	-	-	1
Euspira			
1. <i>gianoi</i>	2, 6, 7, 8, 10, 12, 15, 16, 18	2, 4, 6, 7, 8, 9, 10, 11, 16, 17, 18	2, 4, 5, 8, 9, 12, 13, 15, 16, 18
2. <i>giuntellii</i>	1, 3, 4, 5, 6, 9, 10, 11, 13, 14, 17	1, 3, 4, 5, 8, 9, 11, 12, 13, 14, 15	1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 17, 18
3. <i>grossularia</i>	2, 7, 8, 12, 15, 16, 18	2, 4, 5, 6, 7, 8, 10, 11, 12, 15, 16, 17, 18	2, 4, 5, 8, 9, 12, 13, 15, 16, 18
4. <i>helicina helicina</i>	2, 11	1, 2, 3, 6, 9, 10, 14	1, 2, 3, 6, 7, 10, 11, 12, 14, 15, 16, 17
5. <i>latecallosa</i>	2, 7, 8, 12, 15, 16, 18	2, 3, 6, 7, 9, 10, 16, 17, 18	1, 2, 3, 6, 7, 10, 11, 12, 14, 15, 16, 17
6. <i>molarensis</i>	1, 2, 9, 11, 12, 16	1, 3, 4, 5, 8, 9, 11, 12, 13, 14, 15	2, 4, 5, 8, 9, 12, 13, 15, 16, 18
7. <i>notabilis</i>	1, 3, 5, 9, 11, 12, 13, 14, 16	1, 3, 5, 9, 11, 12, 13, 14, 15	2, 4, 5, 8, 9, 12, 13, 15, 16, 18
8. <i>perforata</i>	1, 3, 5, 9, 11, 12, 13, 14, 16	1, 2, 3, 6, 9, 10, 14, 17	1, 2, 3, 6, 7, 10, 11, 12, 14, 15, 16, 17
9. <i>piccolii</i>	2, 6, 7, 8, 10, 15, 18	1, 2, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 17, 18	1, 2, 3, 6, 7, 10, 11, 12, 14, 15, 16, 17
10. <i>pulchella</i>	1, 2, 9, 11, 12, 16	1, 3, 4, 5, 8, 9, 11, 12, 13, 14, 15	2, 4, 5, 8, 9, 12, 13, 15, 16, 18
11. <i>submamillaris</i>	2, 4, 6, 7, 8, 10, 15, 17, 18	1, 2, 3, 6, 7, 9, 10, 14, 17	2, 4, 5, 8, 9, 12, 13, 15, 16, 18
12. <i>subobturata</i>	1, 3, 5, 6, 7, 8, 10, 16	2, 3, 6, 7, 9, 10, 16, 17, 18	1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 17, 18
13. <i>umbilicocarinata</i>	2, 7, 8, 15, 18	2, 6, 7, 9, 10, 16, 17, 18	1, 2, 3, 6, 7, 10, 11, 12, 14, 15, 16, 17
14. <i>umbilicolunata</i>	2, 7, 8, 15, 18	2, 4, 6, 7, 8, 9, 10, 11, 16, 17, 18	2, 4, 5, 8, 9, 12, 13, 15, 16, 18
15. <i>Euspira</i> sp.2	1, 3, 5, 9, 11, 12, 13, 14	2, 3, 6, 7, 9, 10, 16, 17, 18	1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 17, 18
16. <i>Euspira</i> sp.4	1, 3, 5, 6, 7, 8, 10	1, 3, 5, 9, 12, 13, 14, 15	1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14, 17, 18
17. <i>Euspira</i> sp.5	2, 11	1, 3, 5, 8, 9, 11, 12, 13, 14, 15	2, 4, 5, 8, 9, 12, 13, 15, 16, 18
18. <i>Euspira</i> sp.6	1, 3, 5, 9, 11, 13, 14	1, 3, 5, 9, 12, 13, 14, 15	1, 2, 3, 6, 7, 10, 11, 12, 14, 15, 16, 17
Neverita			
1. <i>maga</i>	2	-	2
2. <i>olla</i>	1	-	1
Payraudeautia			
1. <i>bituberculata</i>	2, 4	-	2, 3, 4
2. <i>crassicorda</i>	1, 3	-	1, 3
3. <i>fasciolata</i>	2, 4	-	1, 2, 4
4. <i>zarantonelloi</i>	1, 3	-	1, 3
Pliconacca			
1. <i>plicatulaeformis</i>	-	-	-
2. <i>tortonensis</i>	-	-	-
Polinices			
1. <i>proredemptus</i>	2	3	2, 3
2. <i>redemptus</i>	1, 3	3	1, 3
3. <i>submamilla</i>	2	1, 2	1, 2
Sigatica			
1. <i>claudiae</i>	-	2	2
2. <i>eleonorae</i>	-	1	1
Sigaretotrema			
1. <i>hecchii</i>	2, 3, 4	2	2, 3, 4
2. <i>clathratum deshayesi</i>	1	1, 3, 4	1, 3
3. <i>michaudi</i>	1	2	1, 2, 4
4. <i>Sigaretotrema</i> sp.	1	2	1, 3
Sinum			
1. <i>borellense</i>	-	2, 4	3, 5, 6
2. <i>cryptostomoides</i>	5, 6	1, 3, 5, 6, 7	3, 5, 6
3. <i>patulum</i>	7	2, 4	1, 2, 6, 7
4. <i>paviai</i>	-	1, 3, 5, 6	5, 6, 7
5. <i>Sinum</i> sp.1	2, 7	2, 4	1, 2, 4, 7
6. <i>Sinum</i> sp.2	2, 7	2, 4	1, 2, 3, 4, 7
7. <i>Sinum</i> sp.3	3, 5, 6	2	4, 5, 6

Tab. 13 - Summarized differences in protoconch measurements. Figures refer to species (left of first column) and denote those species which are distinguished from that on the left of each row, on the basis of the examined protoconch characters (columns 2 through 4). Genera are those considered in Tabs. 1, 4, 7, 10 except for *Cryptonatica*, *Eunaticina* and *Tanea*, which are represented by a single taxon.

Tab. 14 - Microsculptural characters of the protoconch and their use as additional differentiating element. Four Pliocene or Pliocene to Recent species morphologically similar to taxa considered herein are included (right column).

	microsculptural characters	differentiated taxa
<i>Cochlis</i>		
<i>degrangei</i>	spiral cordlets on last whorl	<i>pseudovittata</i>
<i>pseudovittata</i>	protoconch I with microgranules roughly arranged into spiral rows	<i>degrangei</i> <i>Cochlis vittata</i> (Gmelin, 1791)
<i>Euspira</i>		
<i>gianoi</i>	protoconch I with spiral rows of interconnected, axially elongated and variously shaped microprotuberances forming a markedly irregular, somewhat reticulated pattern	<i>helicina helicina notabilis</i>
<i>giuntellii</i>	last half-whorl with even spiral cordlets	<i>Euspira magenesi</i> Pedriali & Robba, 2001
<i>grossularia</i>	protoconch I with unevenly noded spiral threads occasionally connected by thin, irregular axials	<i>latecallosa notabilis</i>
<i>helicina helicina</i>	protoconch I with abapical spiral threads	<i>gianoi</i> <i>latecallosa</i>
<i>latecallosa</i>	absent	<i>grossularia</i> <i>helicina helicina notabilis</i> <i>pulchella</i>
<i>notabilis</i>	protoconch I with unevenly noded, thin and well spaced spiral threads	<i>gianoi</i> <i>grossularia</i>
<i>pulchella</i>	protoconch I with distant, coarsely and irregularly granulated spiral threads over abapical two-thirds	<i>latecallosa</i>
<i>submamillaris</i>	remnants of straight collabral riblets	
<i>umbilicocarinata</i>	protoconch I with irregularly nodulose spiral cordlets	
<i>Neverita</i>		
<i>olla</i>	spiral rows of microgranules on first half-whorl	
<i>Payraudeautia</i>		
<i>fasciolata</i>	absent	<i>intricata</i>
<i>intricata</i>	protoconch I with closely set spiral threads	<i>fasciolata</i>
<i>Sigaretotrema</i>		
<i>clathratum deshayesi</i>	last 1.3 whorls with even, flatly rounded spiral cordlets	
<i>Sinum</i>		
<i>borellense</i>	protoconch II with spiral cordlets	<i>paviai</i> <i>Sinum perregulare</i> (Sacco, 1891) <i>Sinum subhaliotideum</i> (d'Orbigny, 1852) <i>Sinum</i> sp. 2
<i>patulum</i>	remnants of spiral cordlets	<i>Sinum</i> sp. 2
<i>paviai</i>	protoconch I with minute granular microprotuberances, protoconch II with spiral cordlets	<i>borellense</i>
<i>Sinum</i> sp. 1	remnants of spiral cordlets	<i>Sinum</i> sp. 2
<i>Sinum</i> sp. 2	increasingly robust peripheral cord overridden by short, irregular axial riblets	<i>borellense</i> <i>paviai</i> <i>Sinum</i> sp. 1

	mean	95% confidence interval
Cochlis		
<i>craccoi</i>	120°	108°-132°
<i>degrangei</i>	105°	87°-123°
<i>epigloafuniculata</i>	123°	115°-131°
<i>epiglopardalis</i>	122°	104°-140°
<i>epiglottina epiglottina</i>	114°	100°-128°
<i>infelix</i>	114°	96°-132°
<i>mortoni</i>	121°	113°-129°
<i>neglecta</i>	107°	91°-123°
<i>pseudovittata</i>	116°	100°-132°
<i>raropunctata raropunctata</i>	125°	107°-146°
<i>sallomacensis</i>	125°	113°-137°
<i>separata</i>	116°	102°-130°
<i>tigrina</i>	118°	102°-134°
Tectonatica		
<i>albertii</i>	126°	114°-138°
<i>astensis</i>	115°	99°-131°
<i>burtoni altavillensis</i>	124°	112°-136°
<i>consimilis</i>	128°	116°-140°
<i>dertomamilla</i>	111°	103°-119°
<i>miocolligens</i>	99°	85°-113°
<i>pasinii</i>	102°	88°-116°
<i>rupeliana</i>	99°	87°-111°
<i>tectula</i>	116°	106°-126°
Euspira		
<i>gianoii</i>	95°	81°-109°
<i>giuntellii</i>	134°	124°-144°
<i>grossularia</i>	121°	109°-133°
<i>helicina helicina</i>	108°	94°-122°
<i>latecallosa</i>	120°	104°-136°
<i>molarenensis</i>	105°	81°-129°
<i>notabilis</i>	107°	95°-119°
<i>perforata</i>	120°	110°-130°
<i>piccolii</i>	117°	99°-135°
<i>pulchella</i>	99°	77°-121°
<i>submamillaris</i>	109°	97°-121°
<i>subobturata</i>	116°	98°-134°
<i>umbilicocarinata</i>	114°	98°-130°
<i>umbilicolunata</i>	100°	88°-112°
<i>Euspira</i> sp. 1	130°	122°-138°
<i>Euspira</i> sp. 2	120°	112°-128°
<i>Eupira</i> sp. 6	117°	97°-137°
Neverita		
<i>antiqua</i>	127°	115°-139°
<i>maga</i>	127°	107°-147°
<i>olla</i>	130°	118°-142°
Payraudeautia		
<i>bituberculata</i>	121°	115°-127°
<i>crassicorda</i>	116°	106°-126°
<i>fasciolata</i>	123°	111°-135°
<i>zarantonelloi</i>	115°	97°-133°
Pliconacca		
<i>plicatulaeformis</i>	94°	70°-118°
<i>tortonensis</i>	115°	105°-125°
Polinices		
<i>proredemptus</i>	115°	99°-131°
<i>redemptus</i>	105°	95°-115°
Sigatica		
<i>claudiae</i>	111°	103°-119°
<i>eleonorae</i>	126°	112°-140°
Sigaretotrema		
<i>checchii</i>	118°	108°-128°
<i>clathratum deshayesi</i>	118°	108°-128°
<i>michaudi</i>	120°	112°-128°
Sinum		
<i>borellense</i>	136°	130°-142°
<i>oligopolitum</i>	112°	106°-118°
<i>patulum</i>	128°	116°-140°
<i>paviai</i>	121°	99°-143°
<i>Sinum</i> sp. 3	128°	110°-146°

Tab. 15 - Spire angle of species and subspecies. Only those taxa for which the 95% confidence interval could be calculated are included.

Tab. 16 - Slope of inner lip of species and subspecies. Taxa are those considered in Tab. 15.

	mean	95% confidence interval
<i>Cochlis</i>		
<i>craccoi</i>	25°	21°- 29°
<i>degrangei</i>	20°	14°- 26°
<i>epigloafuniculata</i>	25°	15°- 35°
<i>epiglopardalis</i>	20°	16°- 24°
<i>epiglottina epiglottina</i>	17°	7°- 27°
<i>infelix</i>	20°	10°- 30°
<i>mortoni</i>	19°	9°- 29°
<i>neglecta</i>	24°	14°- 34°
<i>pseudovittata</i>	25°	19°- 31°
<i>raropunctata raropunctata</i>	27°	13°- 41°
<i>sallomacensis</i>	21°	11°- 31°
<i>separata</i>	17°	7°- 27°
<i>tigrina</i>	21°	11°- 31°
<i>Tectonatica</i>		
<i>albertii</i>	16°	8°- 24°
<i>astensis</i>	18°	14°- 22°
<i>burtoni altavillensis</i>	20°	14°- 26°
<i>consimilis</i>	25°	17°- 33°
<i>dertomamilla</i>	13°	7°- 19°
<i>miocolligens</i>	21°	9°- 33°
<i>pasinii</i>	24°	18°- 30°
<i>rupeliana</i>	20°	14°- 26°
<i>tectula</i>	16°	10°- 22°
<i>Euspira</i>		
<i>gianoii</i>	23°	17°- 29°
<i>giuntellii</i>	22°	14°- 30°
<i>grossularia</i>	26°	18°- 34°
<i>helicina helicina</i>	25°	15°- 35°
<i>latecallosa</i>	21°	15°- 27°
<i>molarensis</i>	19°	11°- 27°
<i>notabilis</i>	19°	11°- 27°
<i>perforata</i>	24°	16°- 32°
<i>piccolii</i>	18°	8°- 28°
<i>pulchella</i>	18°	12°- 24°
<i>submamillaris</i>	19°	9°- 29°
<i>subobturata</i>	23°	15°- 31°
<i>umbilicocarinata</i>	22°	12°- 32°
<i>umbilicolunata</i>	21°	13°- 29°
<i>Euspira</i> sp. 1	16°	10°- 22°
<i>Euspira</i> sp. 2	16°	12°- 20°
<i>Euspira</i> sp. 6	15°	9°- 21°
<i>Neverita</i>		
<i>antiqua</i>	22°	12°- 32°
<i>maga</i>	15°	9°- 21°
<i>olla</i>	18°	10°- 26°
<i>Payraudeautia</i>		
<i>bituberculata</i>	18°	12°- 24°
<i>crassicorda</i>	20°	14°- 26°
<i>fasciolata</i>	17°	11°- 23°
<i>zarantonelloi</i>	24°	14°- 34°
<i>Pliconacca</i>		
<i>plicatulaeformis</i>	30°	20°- 40°
<i>tortonensis</i>	20°	12°- 28°
<i>Polinices</i>		
<i>proredemptus</i>	26°	18°- 34°
<i>redemptus</i>	23°	13°- 33°
<i>Sigatica</i>		
<i>claudiae</i>	21°	17°- 25°
<i>eleonorae</i>	20°	16°- 24°
<i>Sigaretotrema</i>		
<i>hecchii</i>	39°	25°- 53°
<i>clathratum deshayesi</i>	53°	45°- 61°
<i>michaudi</i>	48°	38°- 58°
<i>Sinum</i>		
<i>borellense</i>	27°	13°- 41°
<i>oligopolitum</i>	36°	30°- 42°
<i>patulum</i>	52°	44°- 60°
<i>paviai</i>	43°	33°- 53°
<i>Sinum</i> sp. 3	56°	44°- 68°

	funicle	inner ridge	inner spiral furrow	inner spiral sculpture
Cochlis				
<i>craccoi</i>	moderately thick to thick	—	narrow	absent
<i>degrangei</i>	broad, depressed, largely filling umbilicus	—	narrow	absent
<i>epigloafuniculata</i>	broad, very low	—	wide, shallow	absent
<i>epiglopardalis</i>	cord-like, prominent to broad, depressed	—	narrow, shallow	absent
<i>epiglottina epiglottina</i>	cord-like, thick, prominent	—	shallow, of variable breadth	absent
<i>infelix</i>	broad, depressed	—	shallow, rather narrow	absent
<i>mortoni</i>	cord-like, thick, prominent, largely filling umbilicus in young specimens	—	shallow, wide to very narrow, bounded abaxially by obscure step	spiral furrow with 1-2 rough, longitudinal cordlets in larger specimens
<i>neglecta</i>	cord-like, thin to moderately thick	—	shallow, of variable breadth	absent
<i>pseudovittata</i>	thin to rather thick	—	shallow, of variable breadth	absent
<i>raropunctata raropunctata</i>	thread-like to thick	—	of variable breadth	absent
<i>rossii</i>	moderately wide, depressed	—	shallow, nearly flat-bottomed	absent
<i>sallomacensis</i>	cord-like, prominent	—	narrow to very narrow	absent
<i>separata</i>	broad, depressed toward interior of umbilicus	—	shallow, flat-bottomed, bounded abaxially by distinct step	absent
<i>tigrina</i>	cord-like, prominent to broad, markedly depressed, largely filling umbilicus in many specimens	—	shallow, of variable breadth	absent
<i>Cochlis</i> sp. 1	cord-like, thick and prominent	—	shallow, very narrow to moderately wide	absent
<i>Cochlis</i> sp. 2	broad, increasingly depressed toward interior of umbilicus	—	shallow, rather narrow	absent
Tectonatica				
<i>albertii</i>	broad, low	—	narrow, shallow	absent
<i>astensis</i>	broad, low	—	very narrow	absent
<i>burtoni altavillensis</i>	broad, low to markedly depressed	—	narrow, shallow	absent
<i>consimilis</i>	not visible	—	—	absent
<i>dertomamilla</i>	thick, broad	—	—	absent
<i>miocolligens</i>	thick	—	narrow	absent
<i>pasinii</i>	broad, thick	—	narrow	absent
<i>rupeliana</i>	thick, largely filling umbilicus	—	narrow	absent
<i>tectula</i>	not visible	—	—	absent
<i>Tectonatica</i> sp. 1	broad, markedly depressed, obsolescent toward interior of umbilicus	—	—	absent
<i>Tectonatica</i> sp. 2	broad, rather thick to thick	—	rather narrow, shallow	absent
Ampullonatica				
<i>pseudorepressa</i>	a short, depressed adaxial thickening of inner lip vanishing toward interior of umbilicus	—	—	absent
<i>repressa</i>	vestigial to indistinct	—	—	absent
<i>Ampullonatica</i> sp.	a short, depressed adaxial thickening of inner lip vanishing toward interior of umbilicus	—	—	rather even cordlets
Euspira				
<i>gianoii</i>	markedly depressed	—	separated from umbilical wall by very slight groove	absent
<i>giuntellii</i>	markedly depressed to indistinct	—	—	absent
<i>grossularia</i>	broad, very slightly prominent, absent in larger shells	—	absent	absent
<i>helicina helicina</i>	obsolescent	—	moderately deep to deep, of variable breadth	absent
<i>latecallosa</i>	a broad, depressed adaxial thickening of inner lip, soon obsolete toward interior of umbilicus	—	—	absent
<i>molarensis</i>	absent	—	—	absent
<i>notabilis</i>	broad, depressed	—	moderately deep, narrow	absent
<i>perforata</i>	absent	—	—	4-9 uneven, coarse cordlets, abapical one markedly broader
<i>piccolii</i>	absent	—	—	more than 20, rather even cordlets
<i>pulchella</i>	obsolete	—	shallow, rather wide	absent
<i>submamillaris</i>	a broad, depressed adaxial thickening of inner lip, soon obsolete toward interior of umbilicus	—	—	absent
<i>subobturata</i>	only partially exposed, broad, depressed, obsolescent toward interior of umbilicus	—	separated from umbilical wall by shallow groove	absent
<i>umbilicocarinata</i>	markedly depressed, obsolescent toward interior of umbilicus	—	broad, shallow, separated from umbilical wall by keel-like angulation	absent
<i>umbilicolunata</i>	broad, markedly depressed	—	—	absent

Tab. 17 - Inner umbilical characters. Genera represented by a single taxon are not included.

Tab. 17 - (continued).

	funicle	inner ridge	inner spiral furrow	inner spiral sculpture
<i>Euspira</i> sp. 1	obsolete	—	separated from umbilical wall by slight groove	present
<i>Euspira</i> sp. 2	broad, depressed, obsolescent toward interior of umbilicus	—	shallow, rather narrow	absent
<i>Euspira</i> sp. 3	absent	—	—	umbilical wall and interior of umbilicus with uneven cordlets
<i>Euspira</i> sp. 4	broad, markedly depressed	—	shallow, bounded abaxially by distinct step	absent
<i>Euspira</i> sp. 5	a broad, depressed adaxial thickening of inner lip, soon obsolete toward interior of umbilicus	—	—	absent
<i>Euspira</i> sp. 6	a broad, depressed adaxial thickening of inner lip, obsolescent toward interior of umbilicus	—	narrow, shallow, bounded abaxially by slight step	absent
<i>Neverita</i>				
<i>antiqua</i>	thick, prominent, largely filling umbilicus	—	—	absent
<i>maga</i>	not visible	—	—	absent
<i>olla</i>	a thick, prominent cord	—	—	absent
<i>Payraudeautia</i>				
<i>bituberculata</i>	broad, rather depressed, separated from inner spiral ridge by wide groove	prominent, overhanging interior of umbilicus	wide, with abaxial side ascending to form sharp angle with top of ridge	absent
<i>crassicorda</i>	broad, markedly depressed	thick, cord-like	narrow, deeply incised	absent
<i>fasciolata</i>	broad, rather depressed	nearly flat-topped, overhanging interior of umbilicus	abaxial side ascending to form sharp angle with top of ridge	absent
<i>intricata</i>	moderately narrow, rather depressed	narrowly round-topped, prostrate over interior of umbilicus	abaxial side strongly overhanging	absent
<i>zarantonelloi</i>	moderately prominent	low, subangular	a rather narrow groove	absent
<i>Pliconacca</i>				
<i>plicatulaeformis</i>	obsolete	—	—	absent
<i>tortonensis</i>	obsolete	—	bounded abaxially by slight groove	absent
<i>Polinices</i>				
<i>proredemptus</i>	not visible	—	—	—
<i>redemptus</i>	not visible	—	—	—
<i>submamilla</i>	not visible	—	—	—
<i>Polinices</i> sp.	not visible	—	—	—
<i>Sigatica</i>				
<i>claudiae</i>	robust, moderately prominent	—	—	2- 4 cords
<i>eleonorae</i>	robust, moderately depressed	—	—	several coarse, rough cords
	funicle	inner ridge	inner spiral furrow	inner spiral sculpture
<i>Sigaretotrema</i>				
<i>chechchi</i>	absent	—	—	absent
<i>clathratum deshayesi</i>	absent	—	—	very fine threads
<i>michaudi</i>	absent	—	—	fine threads
<i>Sigaretotrema</i> sp.	absent	—	—	absent
<i>Sinum</i>				
<i>borellense</i>	absent	—	—	—
<i>cryptostomoides</i>	absent	—	—	—
<i>oligopolitum</i>	absent	—	—	—
<i>patulum</i>	absent	—	—	—
<i>paviai</i>	absent	—	—	—
<i>perinflatum</i>	absent	—	—	—
<i>Sinum</i> sp. 1	absent	—	—	—
<i>Sinum</i> sp. 2	absent	—	—	—
<i>Sinum</i> sp. 3	absent	—	—	—

Cochlis	
<i>craccoi</i>	semicircular, separated from parietal callus by broad, shallow notch
<i>degrangei</i>	narrow, elongate, with gently arched adaxial outline, separated from parietal callus by narrow, shallow notch
<i>epigloafricanulata</i>	with slightly sinuous outline obliquely extended adapically to merge into parietal callus
<i>epiglopardalis</i>	semicircular, separated from anterior corner of parietal callus by shallow, reverse J-shaped notch
<i>epiglottina epiglottina</i>	semicircular, separated from parietal callus by moderately deep, mostly narrow notch
<i>infelix</i>	with arched abapertural outline, separated from parietal callus by shallow, reverse J-shaped notch
<i>mortoni</i>	semicircular, separated from parietal callus by rather narrow, moderately deep notch
<i>neglecta</i>	semicircular, separated from parietal callus by moderately deep notch
<i>pseudovittata</i>	semicircular to triangular, separated from parietal callus by narrow, moderately deep notch
<i>raropunctata raropunctata</i>	with arched outline, separated from parietal callus by shallow, reverse J-shaped notch
<i>rossii</i>	slightly arched in outline, separated from parietal callus by wide, very shallow reverse J-shaped notch
<i>sallomacensis</i>	roundly triangular, separated from anterior corner of parietal callus by reverse J-shaped, shallow sinuation
<i>separata</i>	roundly triangular, separated from anterior lobe of parietal callus by moderately deep, narrow notch
<i>tigrina</i>	roundly triangular and merging into anterior corner of parietal callus with reverse J-shaped outline, or semicircular, separated from parietal callus by narrow, shallow notch
<i>Cochlis</i> sp. 1	semicircular, separated from anterior lobe of parietal callus by moderately deep, narrow notch
<i>Cochlis</i> sp. 2	with arched abapertural outline, separated from anterior end of parietal callus by very slight notch
Tectonatica	
<i>albertii</i>	long, with reverse S-shaped adaxial outline
<i>astensis</i>	large, with reverse S-shaped adaxial outline
<i>burtoni altavillensis</i>	long, with attenuated reverse S-shaped adaxial outline
<i>consimilis</i>	large, semicircular
<i>dertomamilla</i>	rather short, triangular, with reverse J-shaped adaxial outline
<i>miocolligens</i>	subtriangular, with arched adaxial outline, demarcated from anterior lobe of parietal callus by very slight sinus
<i>pasinii</i>	subtriangular, short to very short, with straight or attenuated reverse S-shaped adaxial outline
<i>rupeliana</i>	large, with convex adaxial outline
<i>tectula</i>	large, semicircular
<i>Tectonatica</i> sp. 1	narrowly elongate, with gently convex adaxial outline
<i>Tectonatica</i> sp. 2	large, with convex adaxial outline, separated from anterior lobe of parietal callus by shallow notch
Ampullonatica	
<i>pseudorepressa</i>	slender to very slender, triangular
<i>repressa</i>	slenderly triangular
<i>Ampullonatica</i> sp.	triangular
Euspira	
<i>gianoii</i>	subtriangular, with straight or attenuated reverse S-shaped abapertural outline
<i>giuntellii</i>	slender, with straight or attenuated reverse S-shaped outline
<i>grossularia</i>	subtriangular
<i>helicina helicina</i>	narrowly subtriangular, with oblique reverse J-shaped outline
<i>latecallosa</i>	wide, with convex abapertural outline
<i>molarensis</i>	obsolete, short, very narrowly triangular in a few specimens
<i>notabilis</i>	with reverse S-shaped outline
<i>perforata</i>	triangular
<i>piccolii</i>	triangular, slender in most specimens
<i>pulchella</i>	narrowly subtriangular, with reverse J-shaped outline
<i>submamillaris</i>	subtriangular, with straight or reverse S-shaped adaxial outline

Tab. 18 - Characters of the umbilical callus. Taxa are those considered in Tab. 17.

Tab. 18 - (continued).

<i>Euspira</i>	
<i>subobturata</i>	very short, subtriangular, with straight or reverse J-shaped adaxial outline
<i>umbilicocarinata</i>	short, subtriangular, with straight or reverse S-shaped adaxial outline
<i>umbilicolunata</i>	rather slender, with gently convex to convex adaxial outline
<i>Euspira</i> sp. 1	very slender, with reverse J-shaped outline, ending in middle of abapical margin of parietal callus
<i>Euspira</i> sp. 2	with well curved, reverse S-shaped adaxial outline
<i>Euspira</i> sp. 3	obsolete
<i>Euspira</i> sp. 4	slenderly subtriangular
<i>Euspira</i> sp. 5	rather wide, with convex abapertural outline
<i>Euspira</i> sp. 6	triangular
<i>Neverita</i>	
<i>antiqua</i>	massive, roundly triangular, adapically overlapped by and fused to parietal callus
<i>maga</i>	large, semicircular, thick and prominent medially, somewhat excavated abapically, adapically overlapped by and fused to parietal callus
<i>olla</i>	massive, semicircular, divided from parietal callus by slight notch
<i>Payraudeautia</i>	
<i>bituberculata</i>	subtriangular, demarcated from anterior knob of parietal callus by slight transverse groove
<i>crassicorda</i>	narrowly subtriangular, with oblique, straight or reverse S-shaped outline, merging into anterior angle of parietal callus
<i>fasciolata</i>	subtriangular, demarcated from parietal callus by distinct transverse groove
<i>intricata</i>	subtriangular to semicircular, with reverse S-shaped outline, merging into anterior lobe of parietal callus
<i>zarantonelloi</i>	triangular, demarcated from anterior angle of parietal callus by sinuation of various breadth
<i>Pliconacca</i>	
<i>plicatulaeformis</i>	narrowly subtriangular, with oblique reverse J-shaped outline, merging into anterior lobe of parietal callus
<i>tortonensis</i>	narrowly subtriangular, with oblique reverse J-shaped outline and with 1 transverse fold where it merges into anterior lobe of parietal callus
<i>Polinices</i>	
<i>proredemptus</i>	subcircular, expanded to overlap basal fasciole, slightly excavated in most specimens, fused with parietal callus
<i>redemptus</i>	subrectangular, with arched abapical outline, fused with parietal callus
<i>submamilla</i>	subrectangular, with arched abapical outline, overlapping basal fasciole, fused with parietal callus
<i>Polinices</i> sp.	subcircular, expanded against umbilical border, fused with parietal callus
<i>Sigatica</i>	
<i>claudiae</i>	semicircular, separated from parietal callus by slight sinus
<i>eleonorae</i>	semicircular, separated from parietal callus by deep sinus, shallower to obsolescent in larger specimens
<i>Sigaretotrema</i>	
<i>hecchii</i>	absent
<i>clathratum deshayesi</i>	absent
<i>michaudi</i>	absent
<i>Sigaretotrema</i> sp.	absent
<i>Sinum</i>	
<i>borellense</i>	absent
<i>cryptostomoides</i>	absent
<i>oligopolitum</i>	absent
<i>patulum</i>	absent
<i>paviai</i>	absent
<i>perinflatum</i>	absent
<i>Sinum</i> sp. 1	absent
<i>Sinum</i> sp. 2	absent
<i>Sinum</i> sp. 3	absent

	background	color pattern
Cochlis		
<i>craccoi</i>	uniform, pale reddish-brown	apparently unpatterned
<i>degrangei</i>		not preserved
<i>epigloafuliculata</i>	light brown	reddish, uneven, subquadrangular spots irregularly arranged into spiral rows
<i>epiglopardalis</i>	uniform pale brown	reddish-brown, large, oval to elongately teardrop-shaped spots irregularly arranged into collabral rows; a few specimens (var. <i>zonata</i> Sacco) bear three brownish spiral bands
<i>epiglottina epiglottina</i>		one specimen from Cava Grola with well spaced, brown, undulating axial lines
<i>infelix</i>		not preserved
<i>mortoni</i>		not preserved
<i>neglecta</i>	uniform pale brown	apparently unpatterned
<i>pseudovittata</i>	pale brown	darker subsutural band and lower base; vestige of median, reddish spiral line occurring on last whorl of a few specimens
<i>raropunctata raropunctata</i>	brown to light-brown	reddish-brown pattern, which may consist of: 1. usually crowded, small, even dots often arranged into collabral rows 2. large, even spots irregularly arranged into collabral rows 3. uneven, irregularly arranged, large spots 4. spirally elongated spots 5. spots and chevron marks fused to form collabral stripes in a few specimens 6. irregular spiral broken lines
<i>rossii</i>		not preserved
<i>sallomacensis</i>	pale brown	darker band encircling umbilicus
<i>separata</i>		not preserved
<i>tigrina</i>	pale brown in holotype of <i>Natica (Natica) millepunctata</i> var. <i>tauropicta</i> Sacco, 1890	lighter, undulating collabral stripes changing into collabral rows of oval spots on final half-whorl
<i>Cochlis</i> sp. 1		not preserved
<i>Cochlis</i> sp. 2		one specimen retains vestige of dark brown subsutural band and lowermost base
Tectonatica		
<i>albertii</i>	brown	blackish-brown subsutural band, lower base and collabral stripes
<i>astensis</i>	uniform pale brown	darker subsutural band
<i>burtoni altavillensis</i>	brown	blackish-brown subsutural band, lower base and undulating collabral stripes
<i>consimilis</i>		pale brown quadrangular spots arranged into spiral rows
<i>dertomamilla</i>	uniform pale brown	dark brown subsutural band
<i>miocolligens</i>		not preserved
<i>pasinii</i>	uniform brown	apparently unpatterned
<i>rupeliana</i>		not preserved
<i>tectula</i>	uniform pale brown	darker subsutural band and reddish-brown, undulating collabral lines
<i>Tectonatica</i> sp. 1		not preserved
<i>Tectonatica</i> sp. 2		not preserved
Ampullonatica		
<i>pseudorepressa</i>		not preserved
<i>repressa</i>	pale brown	apparently unpatterned
<i>Ampullonatica</i> sp.		one specimen with dark brown, well spaced axial lines

Tab. 19 - Background color and color patterns. Taxa are those considered in Tab. 17.

Tab. 19 - (continued).

	background	color pattern
<i>Euspira</i>		
<i>gianoii</i>	pale brown	darker subsutural band and lower base
<i>giuntellii</i>	yellowish-brown color present in a few specimens	apparently unpatterned
<i>grossularia</i>	pale yellowish-brown shaded light violet-gray on spire whorls	reddish-brown, sparse, uneven spots arranged into five spiral rows
<i>helicina helicina</i>	pale brown, darker on lowermost base	reddish-brown subsutural band
<i>latecallosa</i>		not preserved
<i>molarensis</i>		not preserved
<i>notabilis</i>	uniform pale brown	two brown bands, respectively on subsutural shelf and on lowermost base
<i>perforata</i>		not preserved
<i>piccolii</i>		not preserved
<i>pulchella</i>	more or less pale buff, yellowish-gray or orange; umbilical wall and inner lip calluses chestnut-brown in some shells	1. chestnut-brown chevron markings arranged into spiral rows, one on spire whorls, five over the last whorl 2. fossil specimens exhibit remnants of two brown bands, respectively subsutural and on lowermost base
<i>submamillaris</i>		brown subsutural band
<i>subobturata</i>		brown subsutural band
<i>umbilicocarinata</i>	pale brown	apparently unpatterned
<i>umbilicolumata</i>	uniform pale brown throughout	apparently unpatterned
<i>Euspira</i> sp. 1		not preserved
<i>Euspira</i> sp. 2	pale brown	darker subsutural band and lowermost base
<i>Euspira</i> sp. 3		not preserved
<i>Euspira</i> sp. 4		not preserved
<i>Euspira</i> sp. 5		not preserved
<i>Euspira</i> sp. 6	uniform light brown	apparently unpatterned
<i>Neverita</i>		
<i>antiqua</i>	vestige of brown color over umbilical wall	reddish-brown collabral lines throughout last whorl
<i>maga</i>		not preserved
<i>olla</i>	uniform pale brown	brown suprasutural stripe
<i>Payraudeautia</i>		
<i>bituberculata</i>		not preserved
<i>crassicorda</i>		not preserved
<i>fasciolata</i>		not preserved
<i>intricata</i>	pale gray or buff with whitish mottles; parietal callus, basal fasciole and inner umbilical ridge uniform reddish-brown in most specimens	reddish-brown pattern of chevron or flammulate markings arranged into four or five spiral rows, subsutural one wider
<i>zarantonelloi</i>		not preserved
<i>Pliconacca</i>		
<i>plicatulaeformis</i>		not preserved
<i>tortonensis</i>	some specimens retain traces of pale reddish-brown colour	apparently unpatterned
<i>Polinices</i>		
<i>proredemptus</i>	uniform pale brown	darker subsutural and lowermost basal bands
<i>redemptus</i>	uniform pale brown	darker crescent-shaped marks roughly arranged into collabral alignments, observable on the last 1.5 whorls
<i>submamilla</i>	a few better preserved specimens have yellowish-white, shining surface	
<i>Polinices</i> sp.		not preserved
<i>Sigatica</i>		
<i>claudiae</i>		not preserved
<i>eleonorae</i>		not preserved
<i>Sigaretotrema</i>		
<i>checcchii</i>		last whorl of one specimen retains traces of rectangular spots arranged into two spiral rows, respectively halfway between suture and periphery, and peripheral
<i>clathratum deshayesi</i>		not preserved
<i>michaudi</i>		not preserved
<i>Sigaretotrema</i> sp.		not preserved
<i>Sinum</i>		
<i>borellense</i>		not preserved
<i>cryptostomoides</i>		not preserved
<i>oligopolitum</i>		not preserved
<i>patulum</i>		not preserved
<i>paviai</i>		not preserved
<i>perinflatum</i>		not preserved
<i>Sinum</i> sp. 1		not preserved
<i>Sinum</i> sp. 2		not preserved
<i>Sinum</i> sp. 3		not preserved

