Aptychae In general very rare in Renggeri marl, a bit more frequent in Lamberti subchron (plate 33.2).

Bryozoes Rare, possibly just not seen because of the very small size. Mostly grown on brachiopods or mussel shells (plate 39.1).

Fruits/Seeds ? Extremely rare (plate 39.2/3+6).

Reptiles Vertebrae or teeth are extremely rare (plate 35.2/3 bez. 31.2/7+8 ?).

Comparing with beaches of today

Living SNAILS – Size and no. of whorls

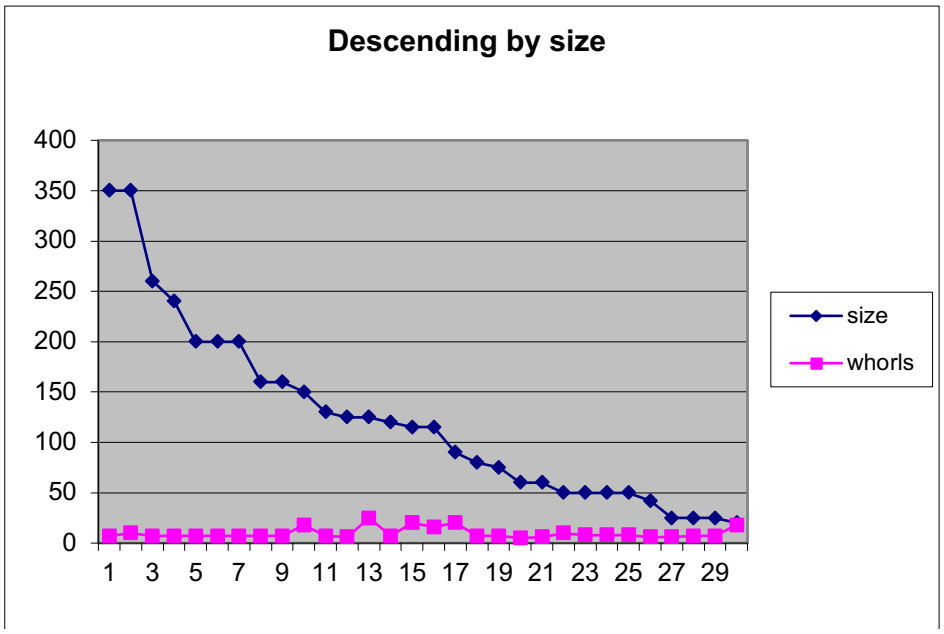
p.	S.family	Genus	Species	Size mm	Whorls No.	Protoc. whorls
46	Cerithiacea	Turritella	crocea	90	>20	
47			duplicata	150	18	
			terebra	125	25	
			leucostoma	115	20	
			gonostoma	115	16	
62	Strombacea	Tibia	fiscus	20	18	
63		Tibia	powisi	50	10	
126	Tonnacea	Cassis	cornuta	350	7	
128		Cassis	tessellata	260	7	
129		Cassis	nana	60	5	
		Cassis	madagascar.	350	10	
138		Tonna	variegata	160	7	
		Tonna	tesselata	80	7	
		Tonna	cepa	130	7	
139		Tonna	luteostoma	200	7	
140		Tonna	sulcosa	120	7	
141		Tonna	galea	200	7	
142		Malea	ringens	100-240	7	
143		Malea	pomum	75	7	
194	Buccinacea	Buccinum	undatum	160	7	
		Siphonalis	signum	60	6	
		Peniom	adustus	125	6	
		Hemifusus	ternatana	200	7	
234	Volutacea	Vexillium	sanguisugum	42	6	
		Vexillium	melangea	50	8	
		Vexillium	stainforthi	50	8	
235		Vexillium	exaspreatum	25	7	
		Vexillium	plicarium	50	8	
		Vexillium	vulpecula	25	7	
		Pusia	microzonias	25	6	
246		Cymbiolena	magnifica	300		3.5
		Aulicina	deshayesi	100		3.5
		Aulicina	sophiae	75		2.5

Pic 109 Living Snails – Size / no. of whorls

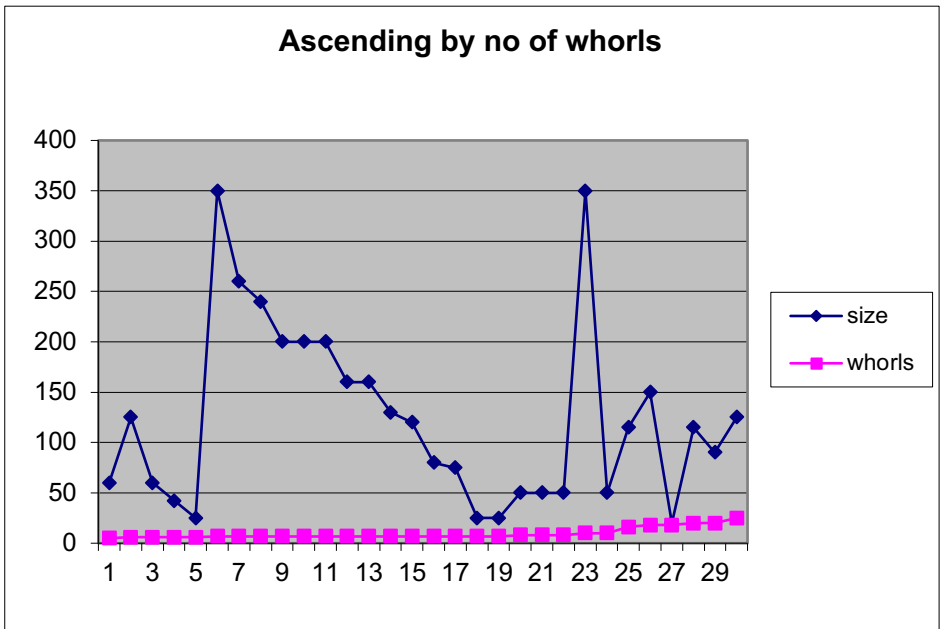
Source: Guide to Seashells of the World – A.P.H. Oliver (Philip's)

Remarks:

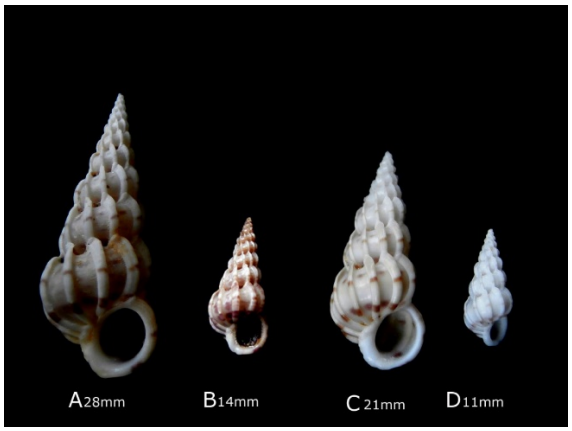
- Notice that out of more than 1000 species , whorls are mentioned only exceptional wise and then specially for some genus only like Turritella, Cassis, Tonna, or Vexilium. On most of the genus nothing is said about the number of whorls.
- A protoconch with more than one whorl I can't interpret.
- Compared with the size of the shell the number of whorls show similar behavior like ammonites, 5-7 whorls, but larger difference in size. So if the spiral of snails is a logarithmical one as well, then the size of the protoconch in combination with the number of whorls would define the size of the shell.
- Clathrus clathrus: looks like that ……?
  With the following picture of Clathrus clathrus from the Mediterranean it is difficult to say whether the two shown shells are Macro- and micro-Conch or two very similar looking species



Snails: Descenting by size



Snails: ascending by no of whorls



Clathrus clathrus L.1758 from Sanaray / France (close to Toulon).

Shells taken on the same picture are directly comparable.

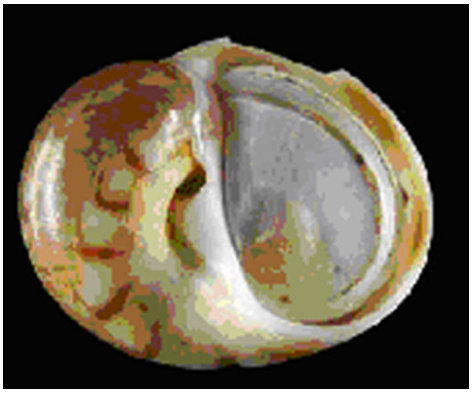
1) Left picture: left species oiginal size - 27mm, 10 whorls, right shell 9 whorls
2) B and D approx. have the same number of whorls like A and C

Conclusion:

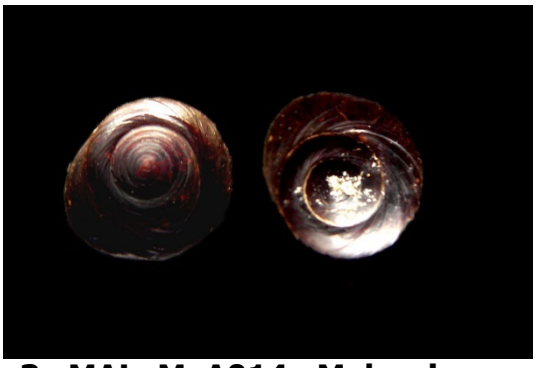
As it looks like the same species of living sera snails have two different sizes. Does'nt this Looks like micro- and Macro-shells or male and female respectiuvely ?

Some closures from snails of to day.

x3 MAL_Pp118 Malaysia



Notocochlis dylwinii (Pavraudeau, 1826)



x3 MAL_MeA014x Malaysia

MAL_MeA 014 Turritella terebra Malaysia

x3 SINLa 007.02 Singapore

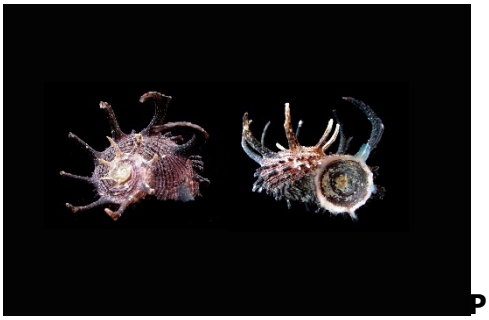
SIN_La 125c2 Turbo bruneus Singapore

If aptychi of ammonites are found in the body chamber then their diameter often corresponds with the diameter of the body chamber. (see operculum / snails).
If the shell of a snail is closed by an operculum it usually is a bit inside till approx. 1/5 of a turn of the shell.
As the examples show, the operculi are more different in shape than the aptychy of ammonites (see also shape differencies within ammonites).

Singapore

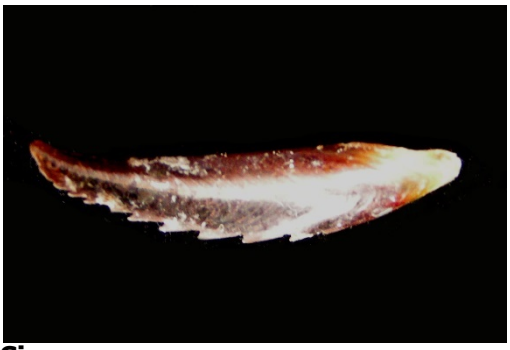
SIN_La 035c2 Singapoe,Labrador
Nerita chamaeleon Linnaeus 1758

0Snail-Newx1 003x

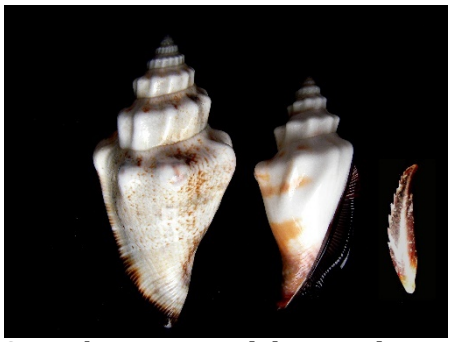


P

0Coll_Oth92 924x



Singapore



Strombus urceus (Linnaeus)
Singapore

Abb. 170. Anaptychen des Lias in Verschlußstellung. a) *Lytoceras*; b) *Alsatites*; c) *Euasteroceras*; d) *Arietites*; e) *Pleuroceras*; f) *Amaltheus*. Ohne Maßstab. — Nach M. Schmidt 1925; umgez.