MURICIDAE
FROM TDSB CAMPAIGNS

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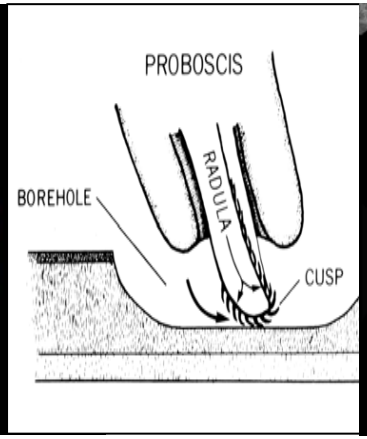
MUREX SHELLS

rock shells, oyster drills, mussel drills, drupes

MURICIDAE Rafinesque, 1815

1600+ extant species
11 recognised subfamilies
All oceans
(including remarkable radiations in cold-temperate areas)
0-3000+ m depth range

Carnivores (mostly predators)



Muricidae from TDSB

497 species (31% of global diversity)

44 papers (14 international journals; 15 authors)

168 new species (34%)

- RAPANINAE: 2
- ERGALATAXINAE: 9
- CORALLIOPHILINAE: 22
- MURICINAE: 45
- MURICOPSINAE: 21
- TROPHONINAE: 46
- **PAGODULINAE**(*): 3
- TYPHINAE: 17
- TRIPTEROTYPHINAE: 3

>100 m deep: 133 n. spp. (79%)
<100 m deep: 35 n. spp. (21%)

1 new subfamily (*)

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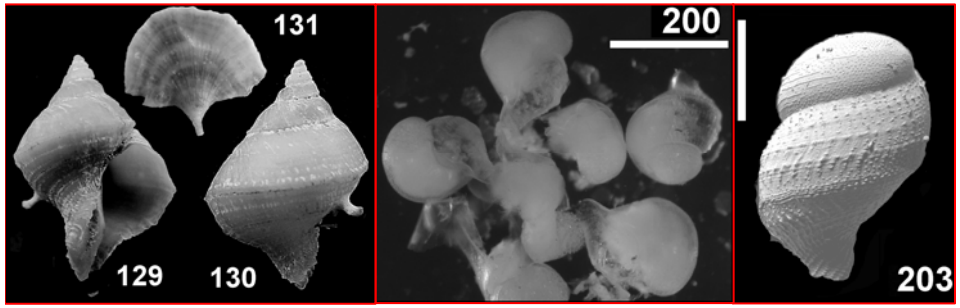
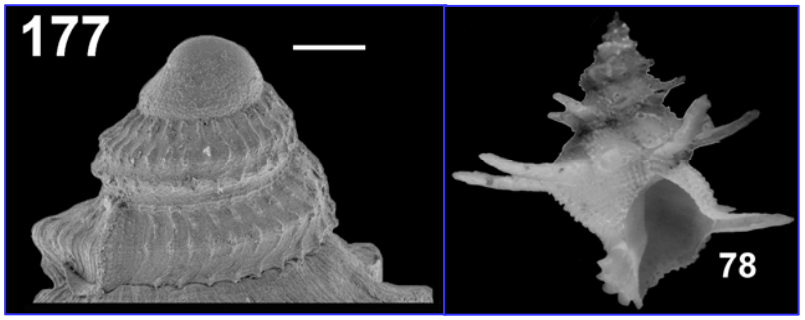
MURICIDAE



	non-planktotrophic larval development		planktotrophic larval development	
497 species (31% of global diversity)	30%	(150)	63%	(313)
168 new species (34%)	82%	(137)	18%	(31)
RAPANINAE: 2	0%	(0)	100%	(0)
ERGALATAXINAE: 9	33%	(3)	66%	(6)
CORALLIOPHILINAE: 22	19%	(4)	81%	(18)
MURICINAE: 45	90%	(40)	10%	(5)
MURICOPSINAE: 21	100%	(21)	0%	(0)
TROPHONINAE: 46	100%	(46)	0%	(0)
PAGODULINAE(*): 3	100%	(3)	0%	(0)
TYPHINAE: 17	100%	(17)	0%	(0)
TRIPTEROTYPHINAE: 3	100%	(3)	0%	(0)



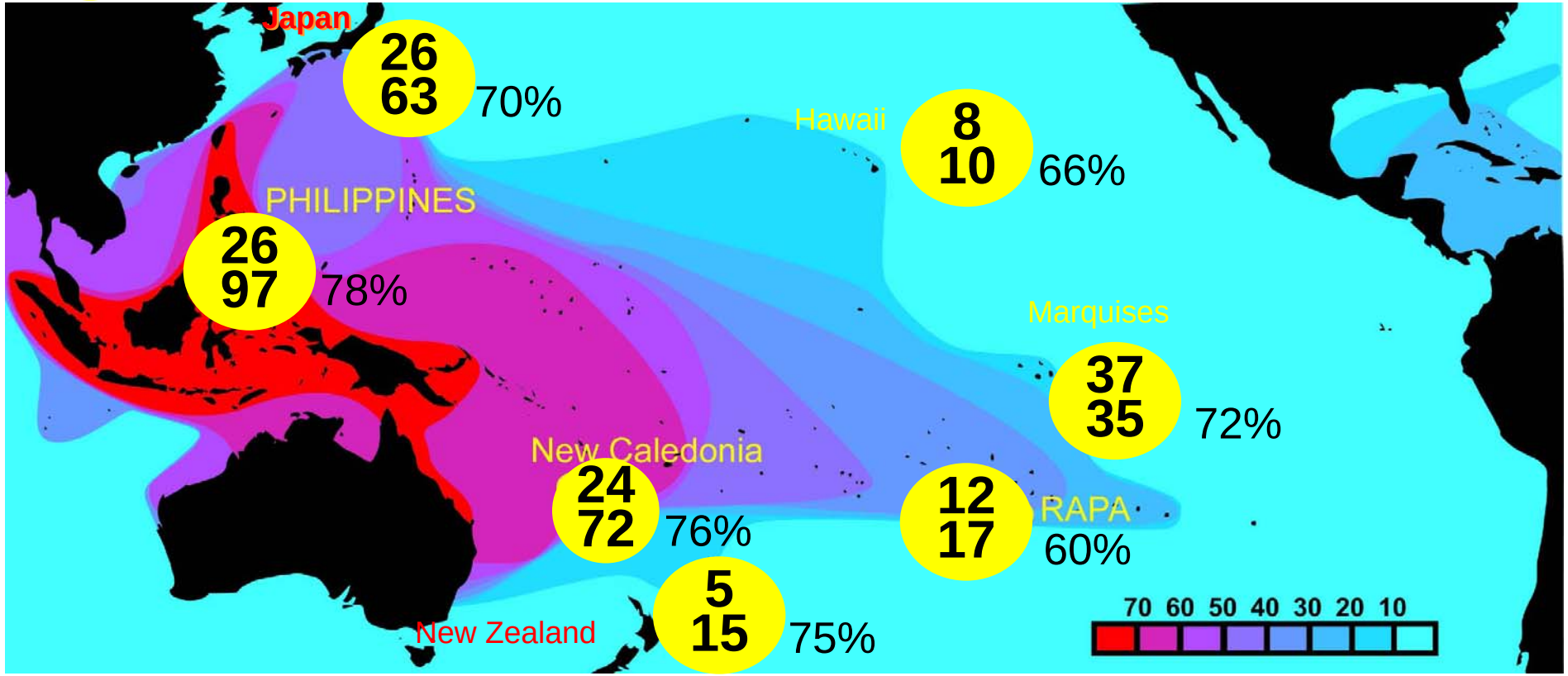
MURICIDAE

Bathymetric distribution of coralliophiline diversity in the South West Pacific

xx
yy

Shallow: <50-100 m depth
Deep: >50-100 m depth

% of deep water species



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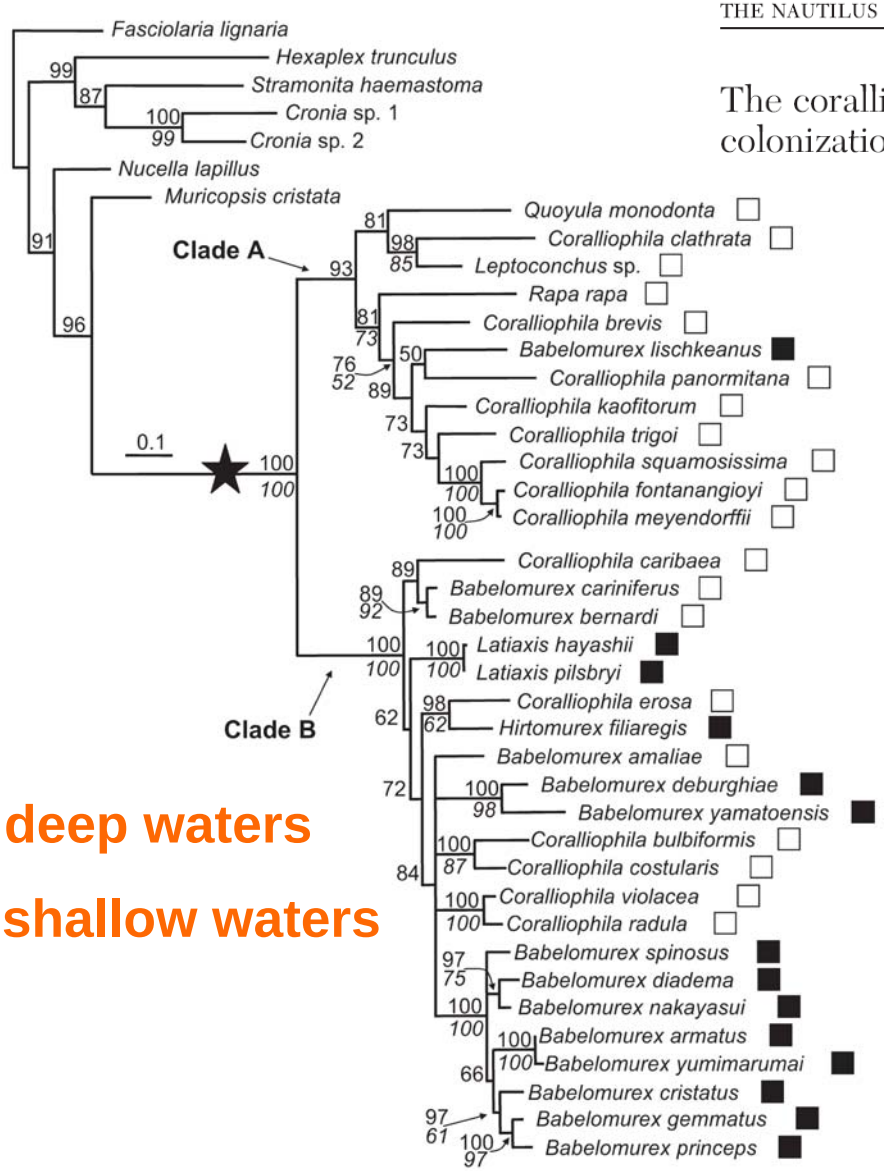
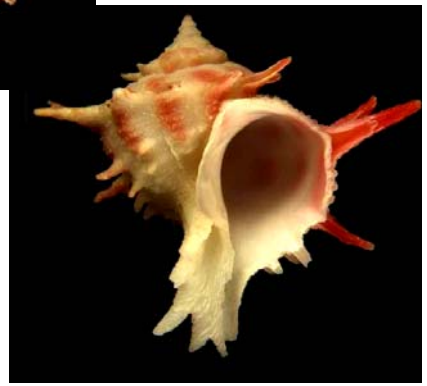
The coralliophiline (Gastropoda: Muricidae) radiation: repeated colonizations of the deep sea?



deep waters

shallow waters



MURICIDAE

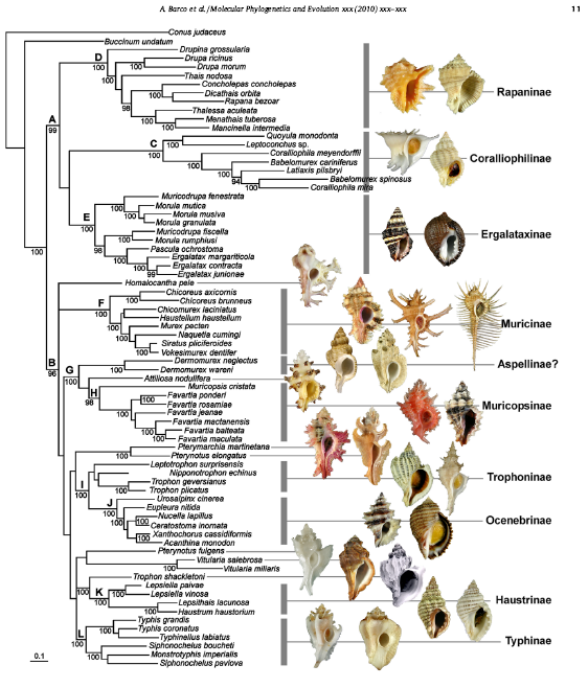


Fig. 4. Bayesian analysis (10^7 generations, trees sampled every 1000 generations) of the combined dataset (12S, 16S, COI, 28S). Stationarity was reached after 1.6×10^7 generations, and a conservative burn-in at 2.5×10^7 generations was selected. Bayesian posterior probability values from 7500 trees are reported only for moderate to high support (>90%). Representative shells of each subfamily are illustrated (photo courtesy of Guido & Philippe Poppe).

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A molecular phylogenetic framework for the Muricidae, a diverse family of carnivorous gastropods

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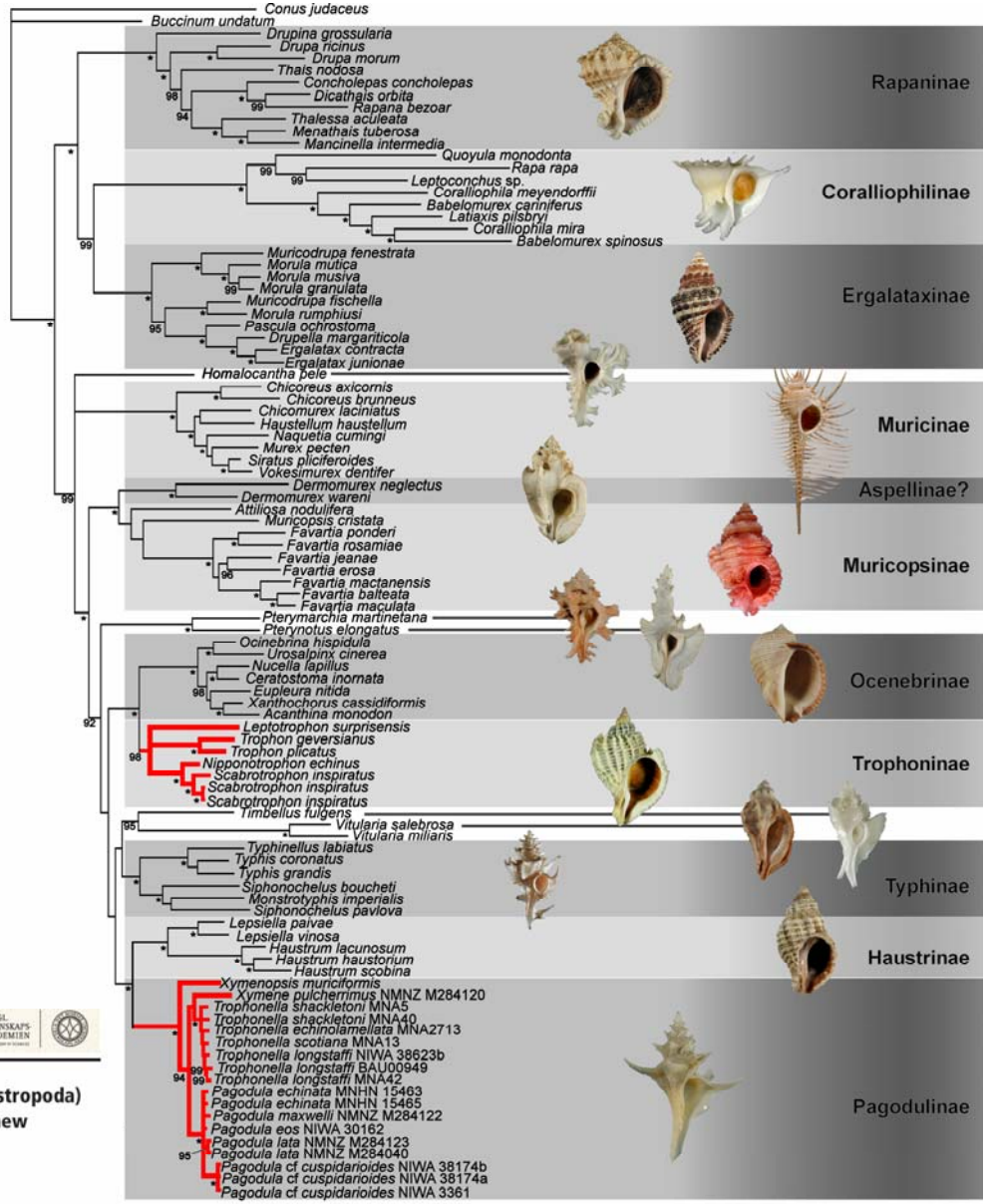

Zoologica Scripta

KUNGL. VETENSKAPS-AKADEMIEN

Cenozoic evolution of Muricidae (Mollusca, Neogastropoda) in the Southern Ocean, with the description of a new subfamily

Andrea Barco, Stefano Schiaparelli, Roland Houart & Marco Oliverio

TROPICAL DEEP SEA BENTHOS

Thank You !