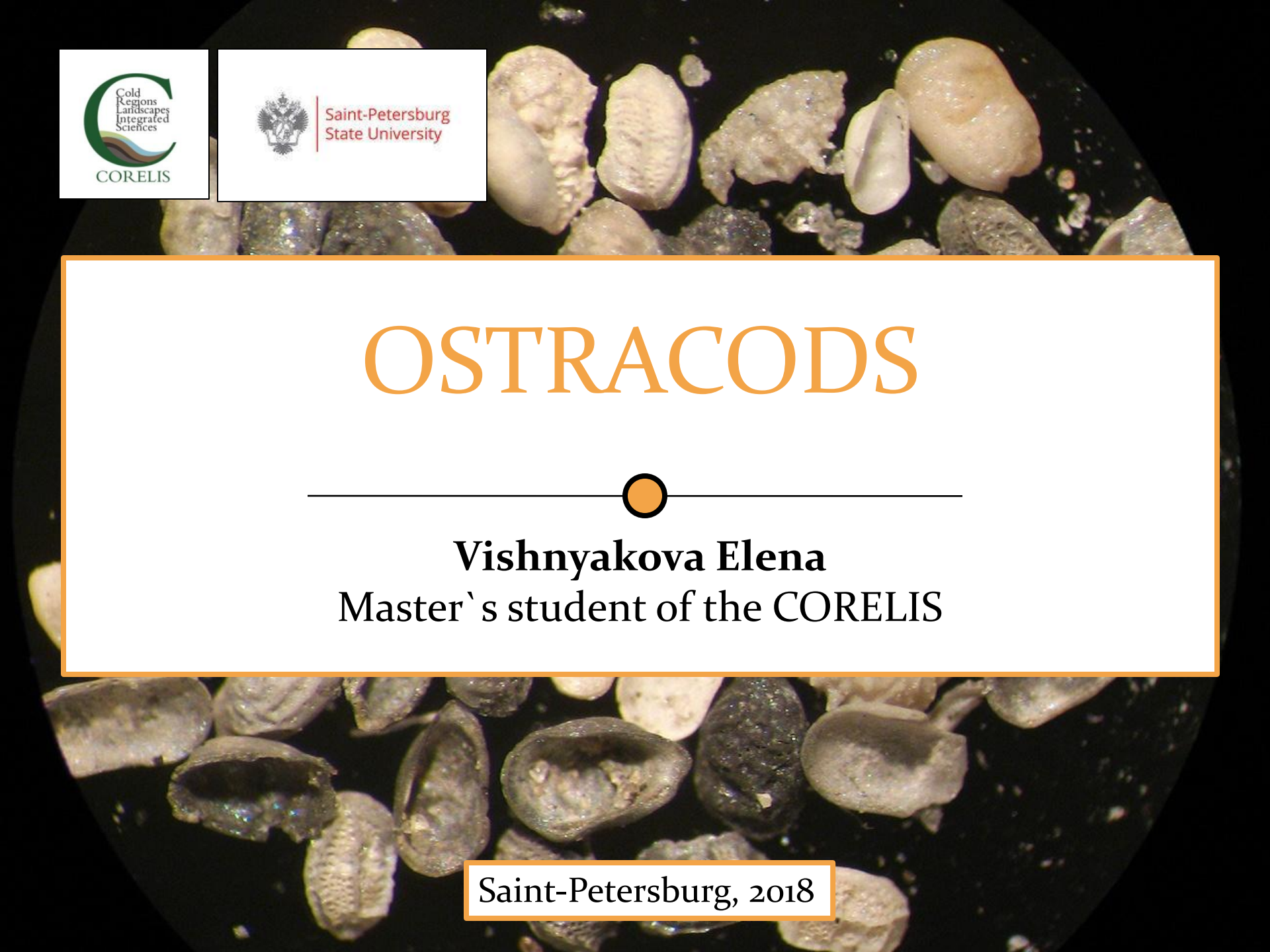

OSTRACODS

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What is an ostracod?

- Ostracods are small crustaceans, which inhabit virtually all aquatic environments on Earth. An important distinguishing feature Ostracods share with other arthropods is the bilateral symmetry of their body form.
- Ostracods range from warm waters of the tropics to very cold environments such polar seas and are found from intertidal zones to many thousands of metres depth in the deep sea. They are also adapted to freshwater niches such as rivers, lakes and temporary ponds.
- Most species reproduce sexually, but some of them reproduce asexually by parthenogenesis.

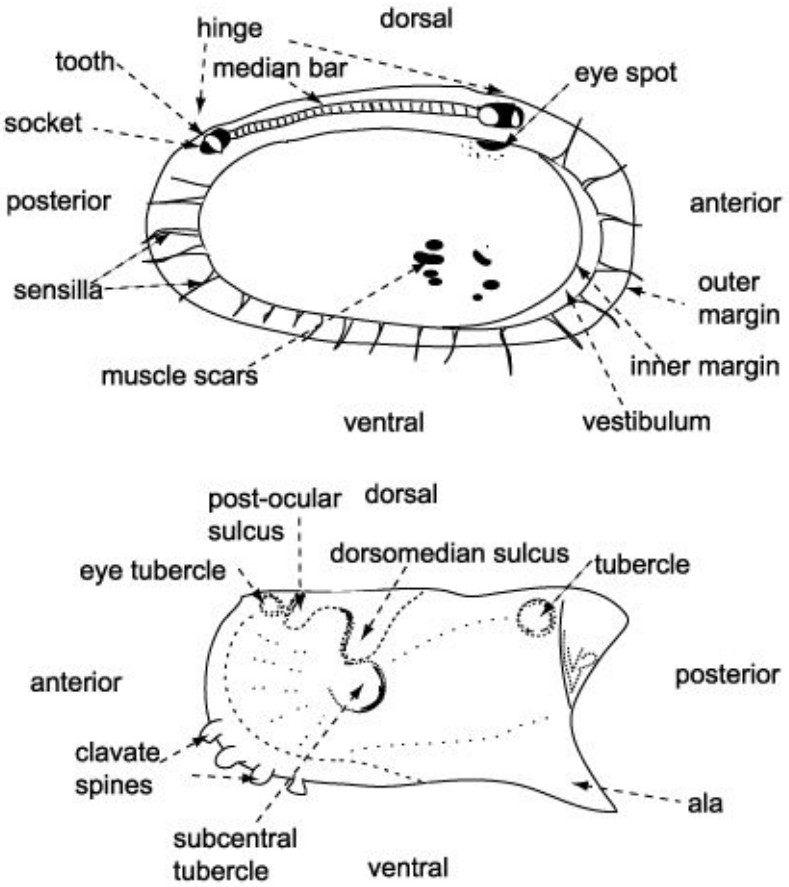


Diagram of two different idealised ostracods to show common ostracod valve features. Top internal view of a left valve, bottom external view of left valve.

After Horne et al. 1989.

- Ecologically, marine ostracods can be part of the zooplankton or (most commonly) are part of the benthos, living on or inside the upper layer of the sea floor.

Range

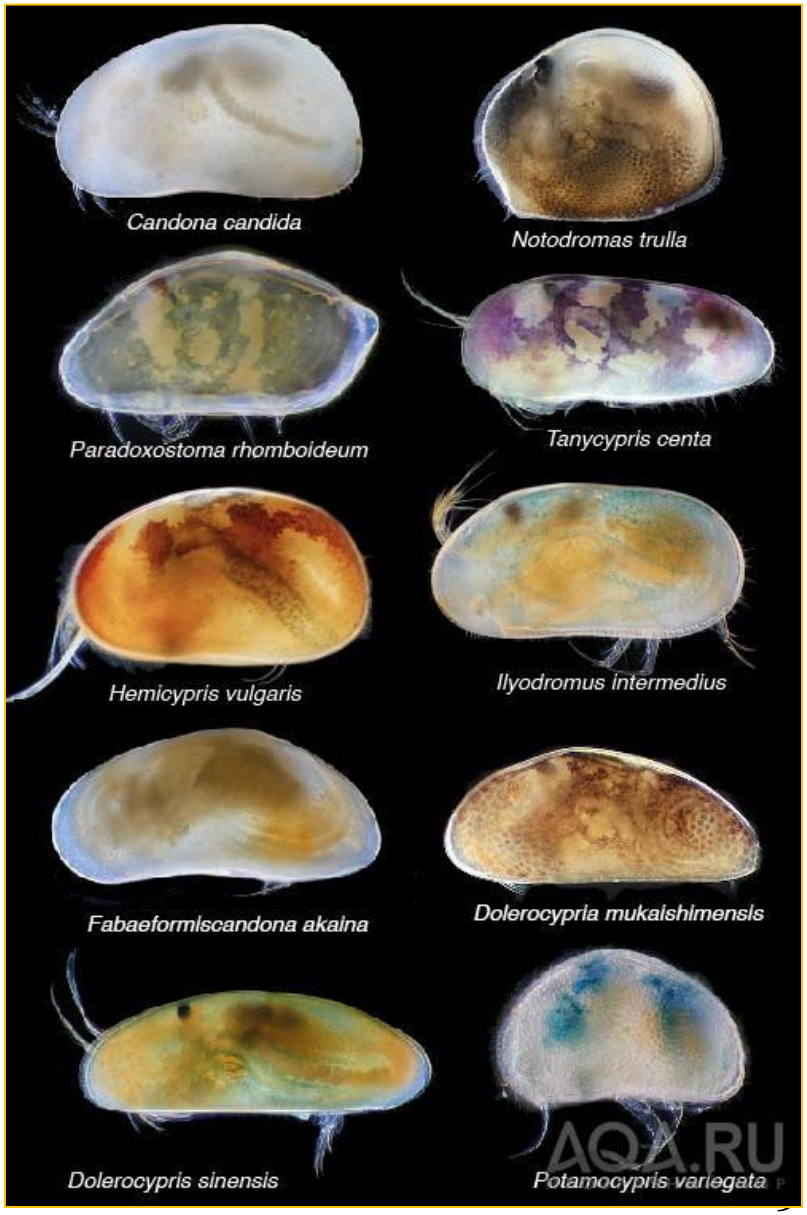
- Ostracod-like organisms (bivalved arthropods) are recorded from the Cambrian, but it is uncertain whether these can be classified as true ostracods.
- Myodocopid and podocopid forms are recorded from the **Ordovician**. All these early forms are marine, the first freshwater forms occur in the Carboniferous and by the Jurassic ostracods are common in freshwater environments.

Eon	Era	Period	Epoch	Age Ma
Phanerozoic	Cenozoic	Quaternary	Holocene	0.01
			Pleistocene	1.64
		Neogene	Pliocene	5.2
			Miocene	23.3
		Palaeogene	Oligocene	35.4
			Eocene	56.5
			Palaeocene	65.0
	Mesozoic	Cretaceous		145.6
		Jurassic		208.0
		Triassic		245.0
	Palaeozoic	Permian		290.0
		Carboniferous		362.5
		Devonian		408.5
		Silurian		439.0
		Ordovician		510.0
		Cambrian		570.0
Proterozoic				2500
Archean				4000

Geologic Time Scale based on Harland et al 1989

History of Study

1. The oldest generic names given to ostracods are Cypris and Cythere by Muller in the 1770's
2. In the 1860's Sars classified ostracods as an order divided into four suborders: Podocopa, Myodocopa, Cladocopa and Platycopa
3. In 1958 Pokorny combined these two classifications and in 1961 an Anglo American treatise modified Pokorny's work to give the foundation of today's classification system. It



Utility of ostracods

In the marine environment benthic ostracods are **utilised for palaeoenvironmental reconstructions**. Freshwater and brackish facies commonly contain abundant ostracods which are **used for environmental studies and for biostratigraphic zonations**, for instance in non-marine sediments from Mongolia and China.
Ostracods have utility: they are used to date and correlate rock sequences world-wide, and **are good palaeoenvironmental indicators**, revealing information on, for example, palaeobathymetry, palaeosalinity and palaeoclimatic changes of our planet through time.

THANK YOU
FOR YOUR ATTENTION

Interestingly, ostracods have survived the 5 'big extinctions' of life that have occurred over the last 540 million years, and have also survived in zero gravity for 4 months in the Russian Mir space station!

References

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