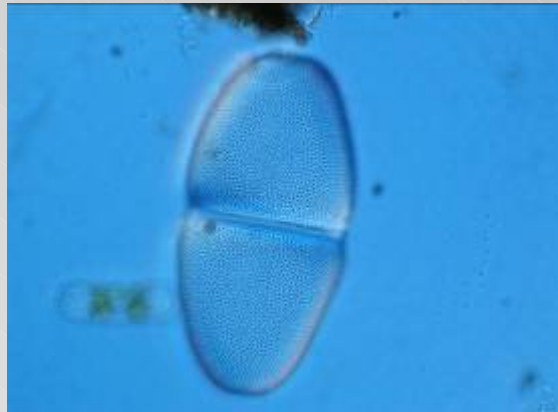


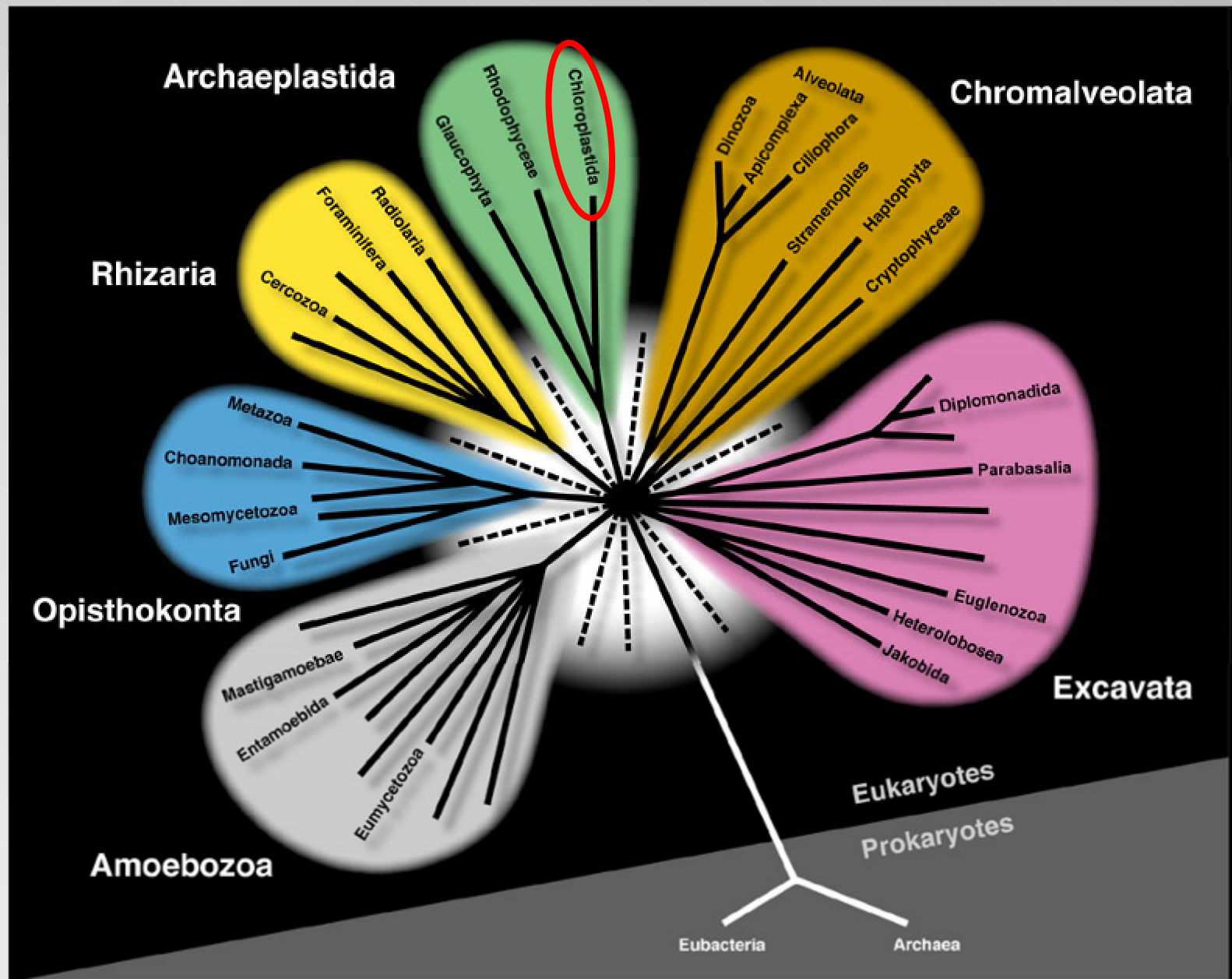
Co nám říká morfologická plasticita o ekologii zelených řas v rašeliništích...

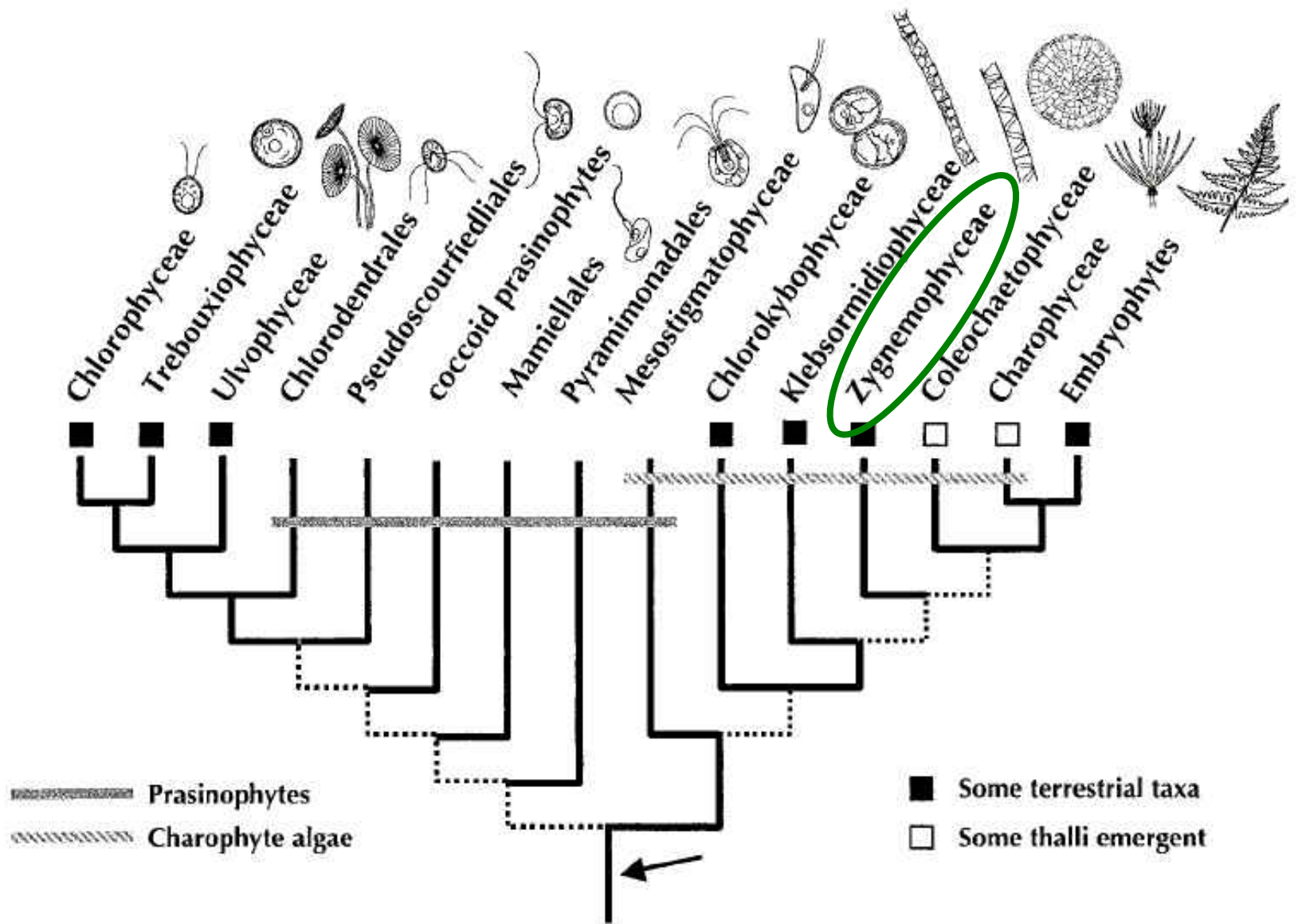
Jiří Neustupa, Kateřina Machová-Černá, Pavel Škaloud, Jan Šťastný, Ladislav Hodač, Yvonne Němcová

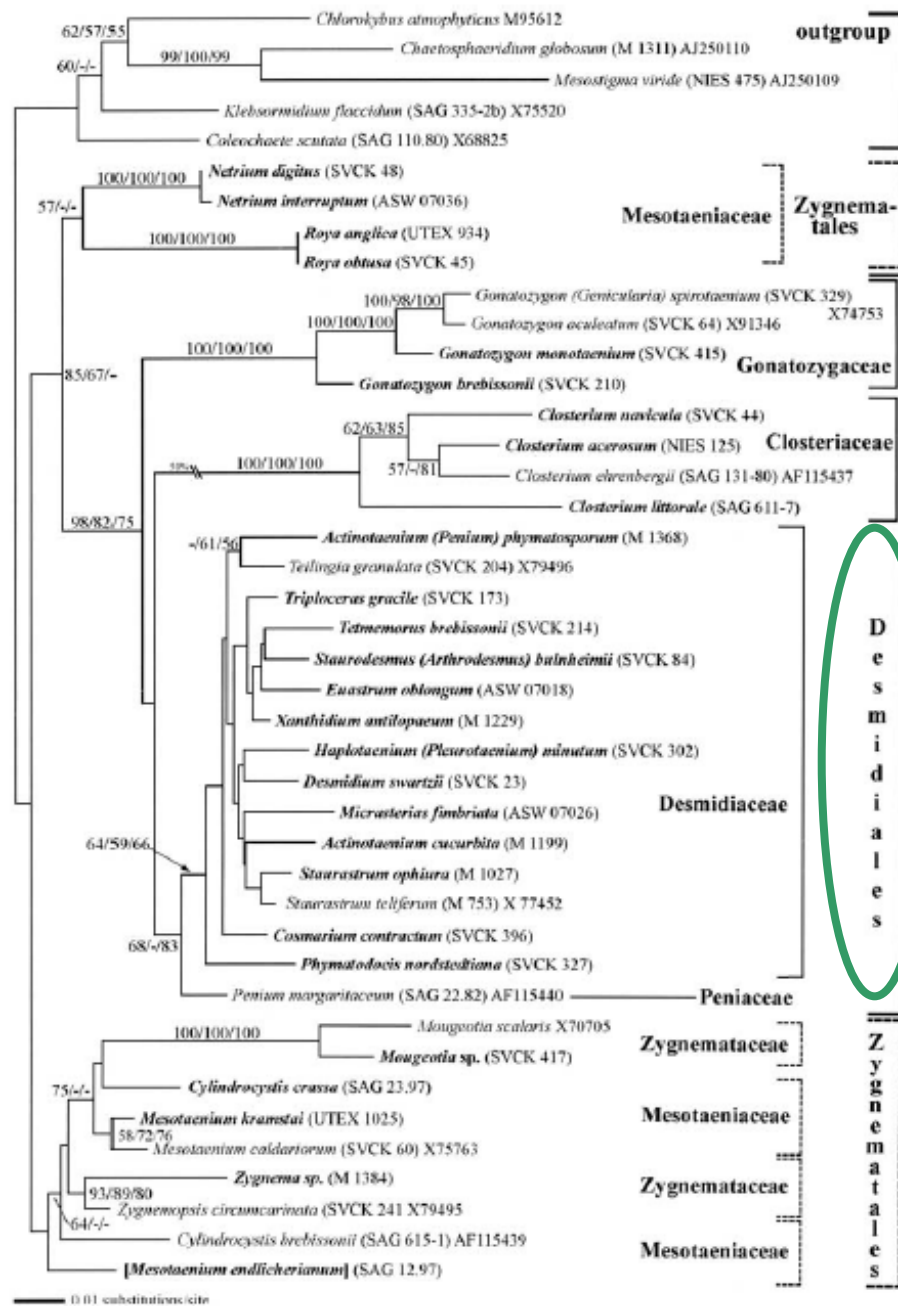
algologická výzkumná skupina, katedra botaniky PřF UK, Benátská 2, Praha 2, 128 01



co je to vlastně za organismy...





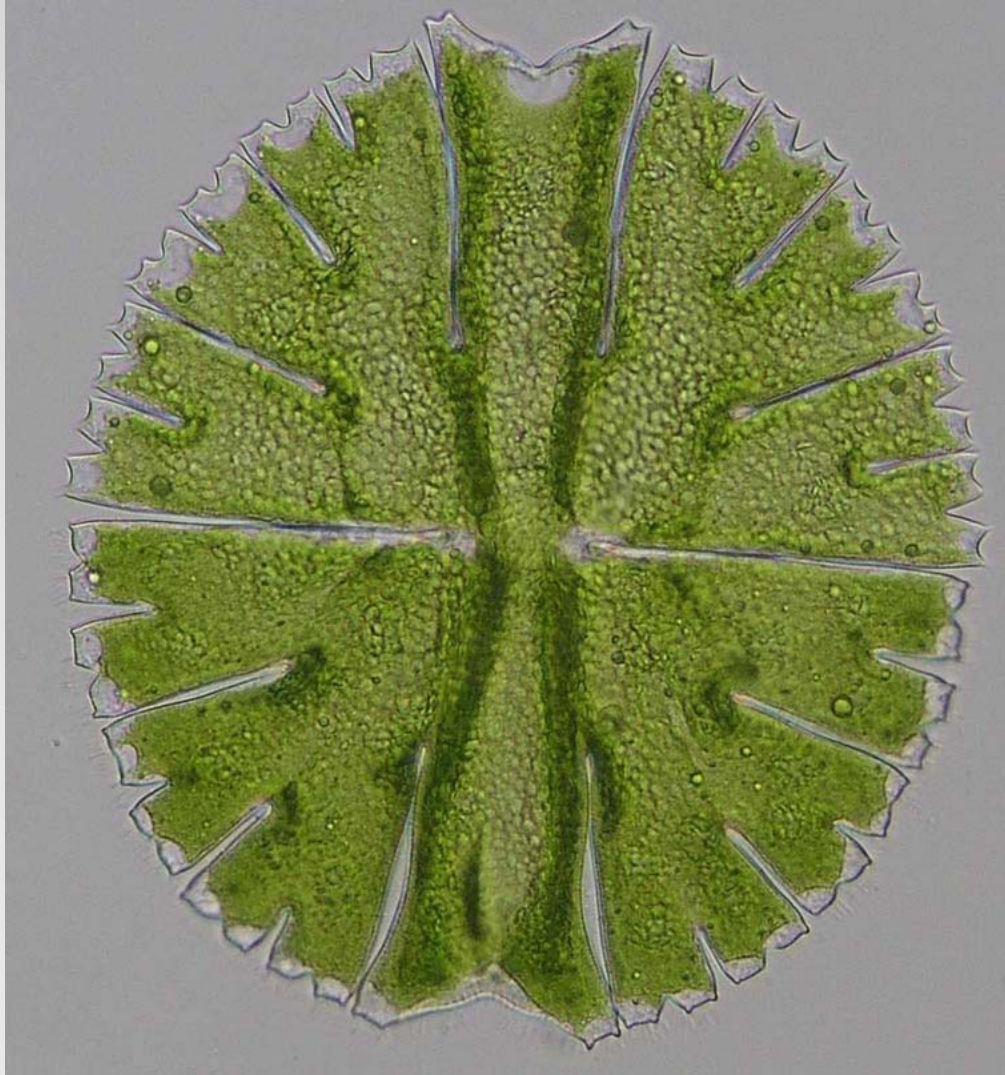


a kde žijí...



... převážně v bentosu kyselých sladkovodních mokřadů

Proč jsou krásivky krásné?



Atkinsonovo teplovní pravidlo u protist:

„protists decrease in size linearly with temperature: ca. 2.5% / 1C (= their S:V ratio increases)

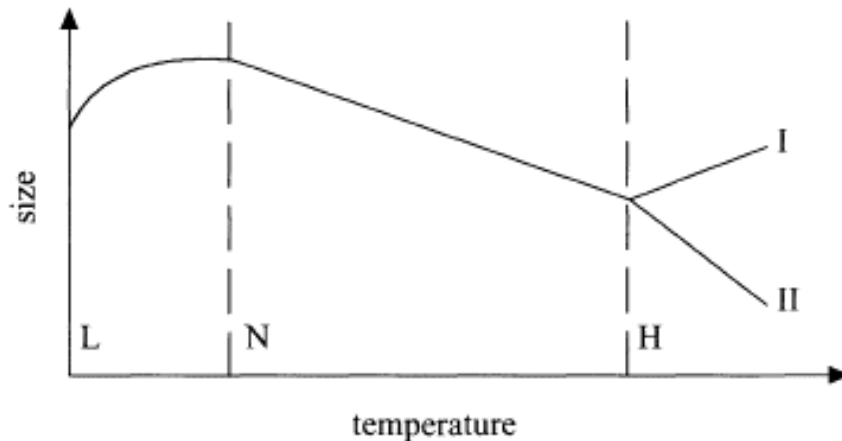


Figure 1. Plasticity of maximum size in response to rearing temperature in ectotherms: a proposed general relationship. At extremely low temperatures (zone L), size increases with increasing temperature. In the thermal range normally encountered by a population or genotype (zone N), an inverse relationship between size and temperature is expected. At extremely high temperatures (zone H) the response is more variable, and size may increase (line I) or decrease (line II) with increasing temperature. See § 1 for further discussion.

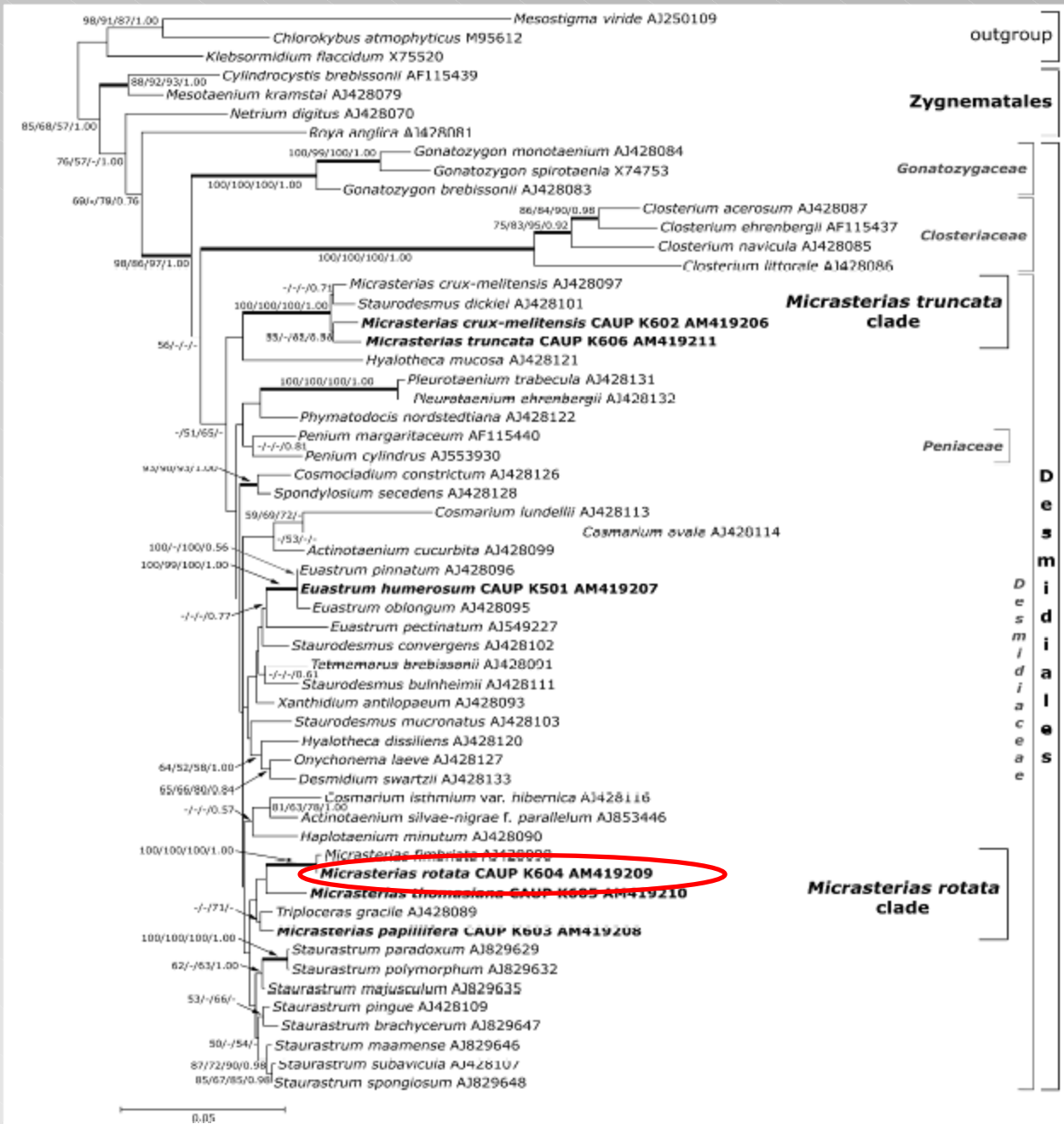
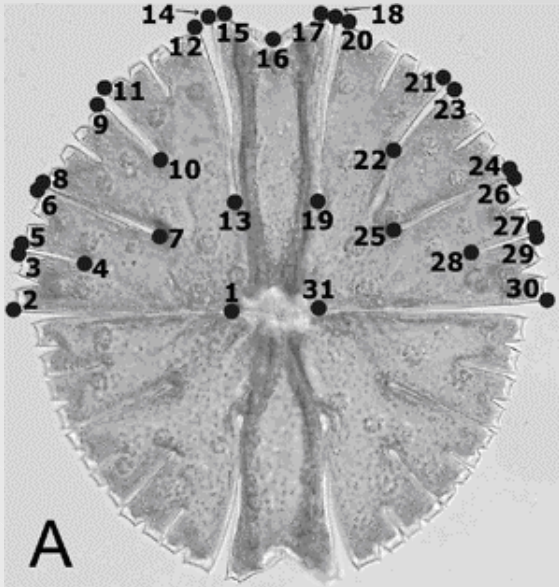
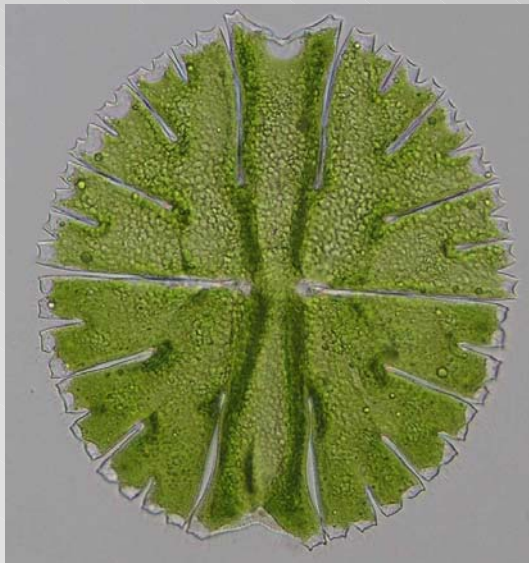
„fyziologické vysvětlení“:

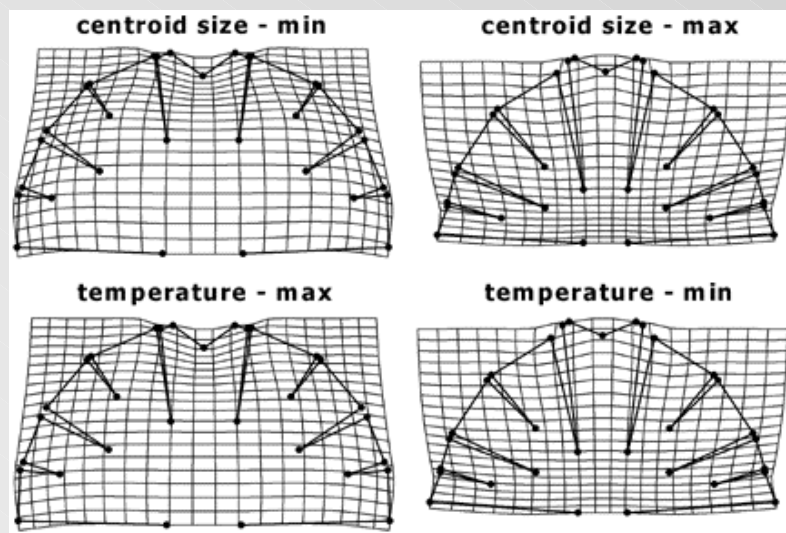
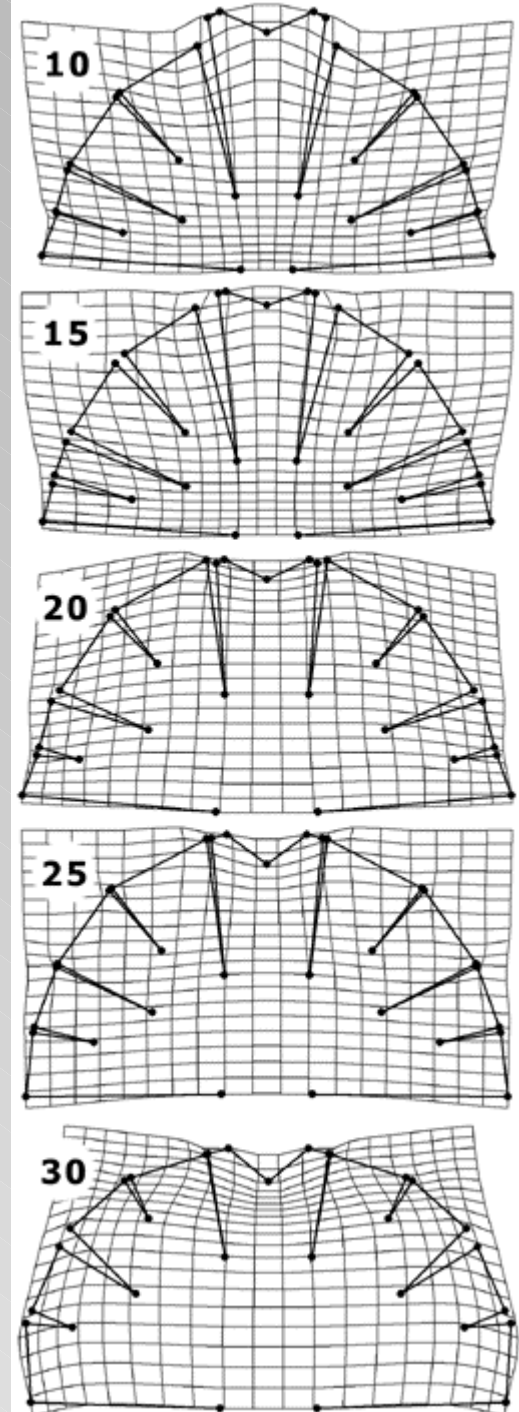
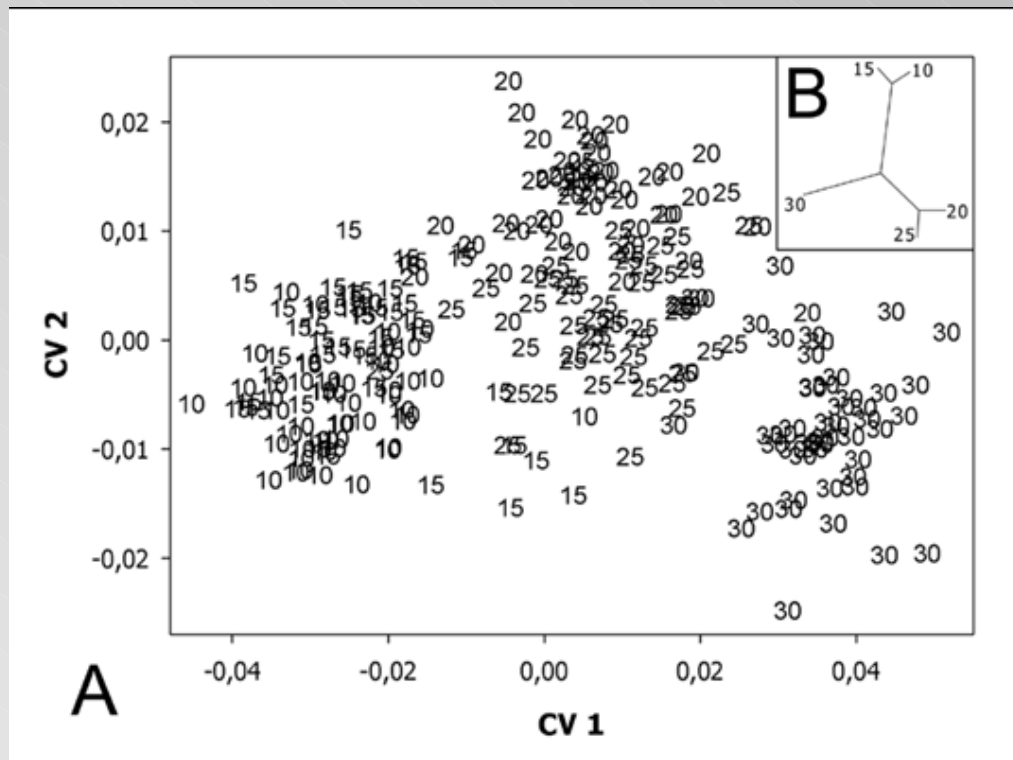
The consumption of resources (carbon dioxide, nutrients) is known to be reduced in higher temperatures and an **increase in the S/V ratio** by decreasing the cell size can then be considered an adaptive response.

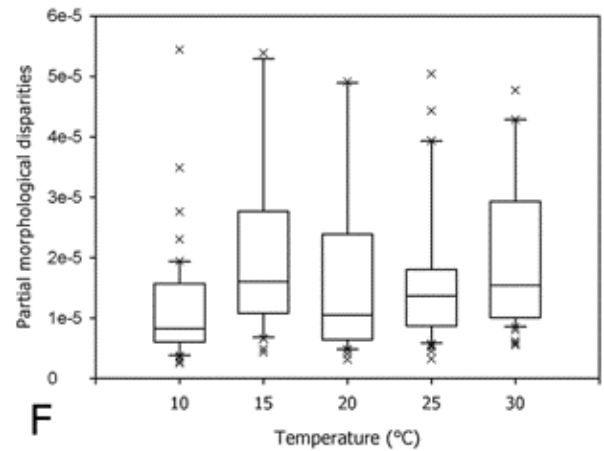
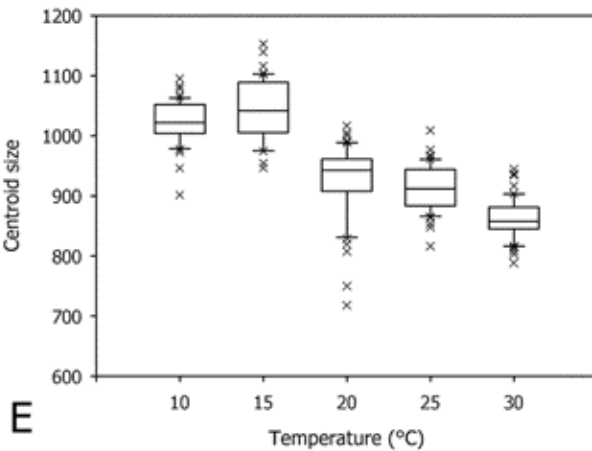
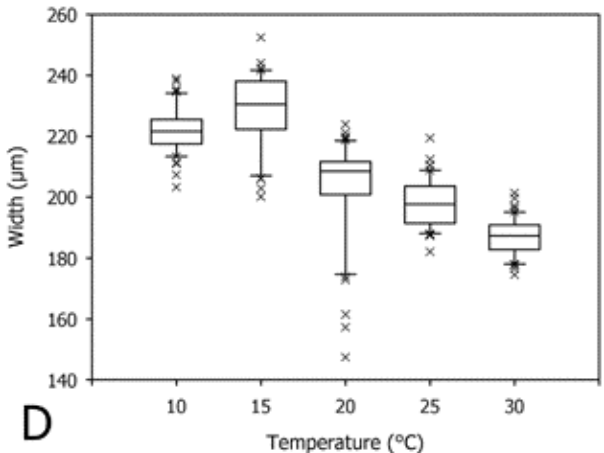
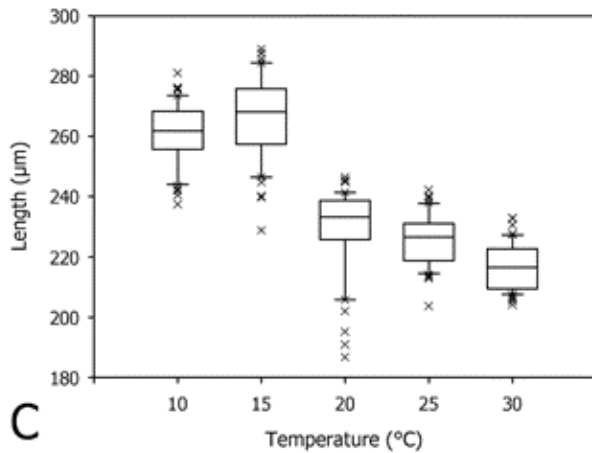
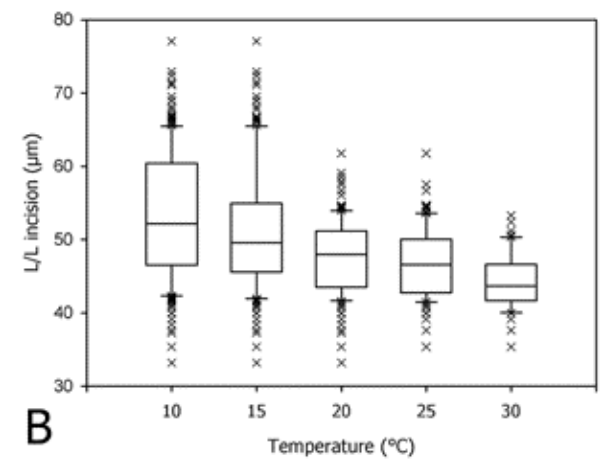
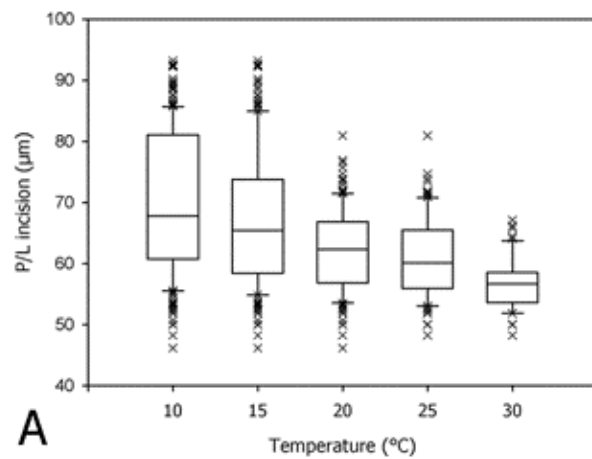
„evoluční vysvětlení“:

Population growth usually increases in protist populations as consequence of higher temperature that lies within the range of normally encountered values (Atkinson 1994, Atkinson et al. 2003). **Selection pressure for earlier reproduction** – that is facilitated by earlier completion of the cell cycle and results in the smaller size of adult cells – is higher in rapidly growing populations because the offspring of smaller maternal cells then would constitute a larger fraction of the total population.

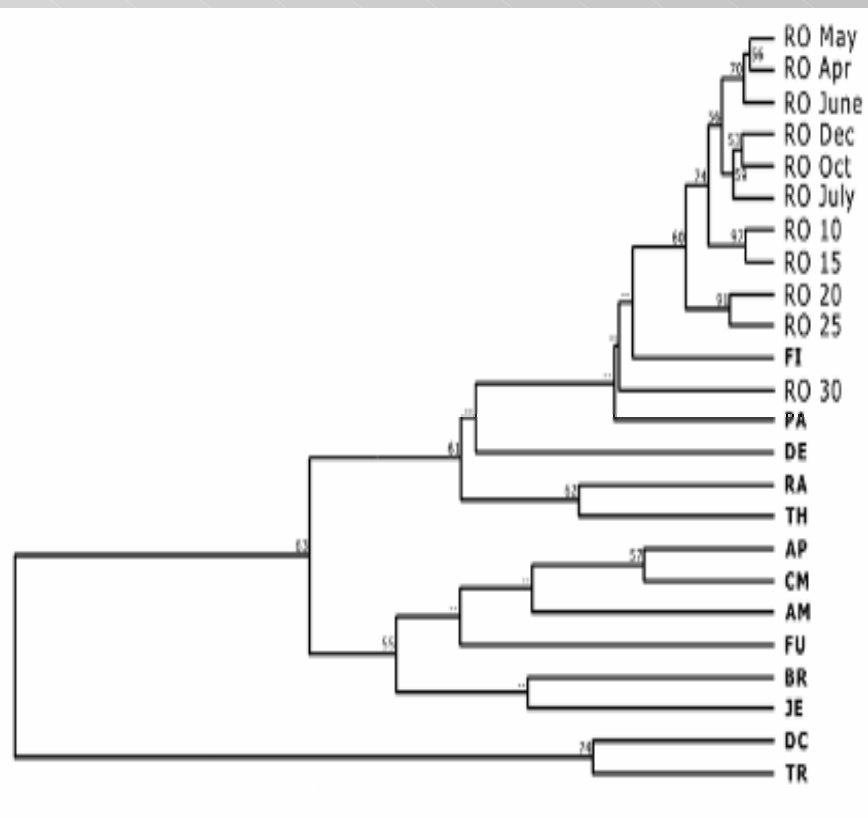
Micrasterias rotata



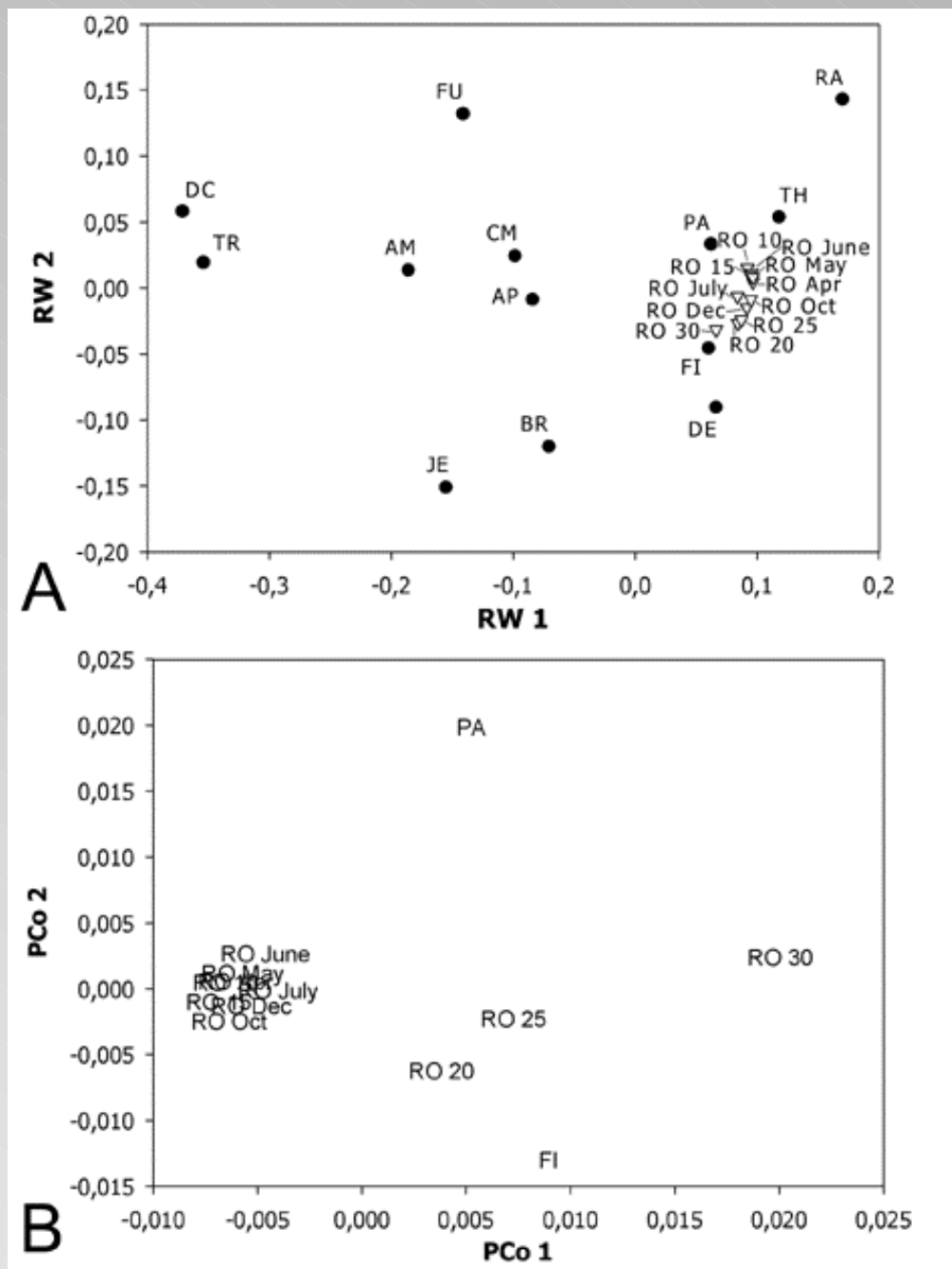




ale jak je to v přírodě?



**ve stredoevropské přírodě jsou
zřejmě jen „low temperature
morphotypes“**



pracují krásivky se svým tvarem také ve vztahu k pH prostředí?



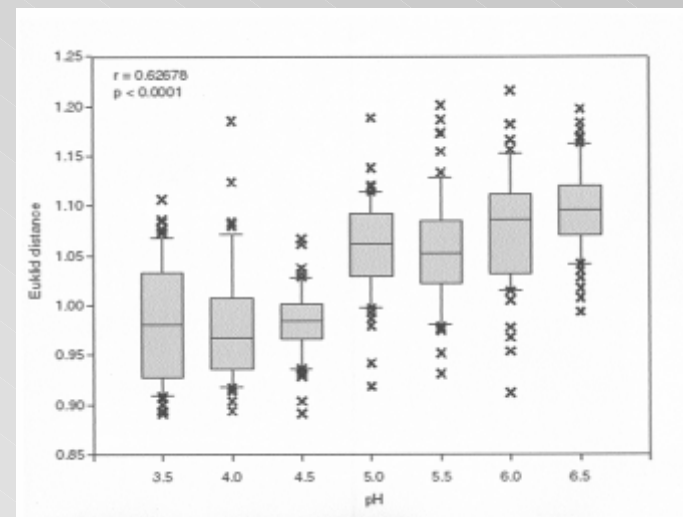
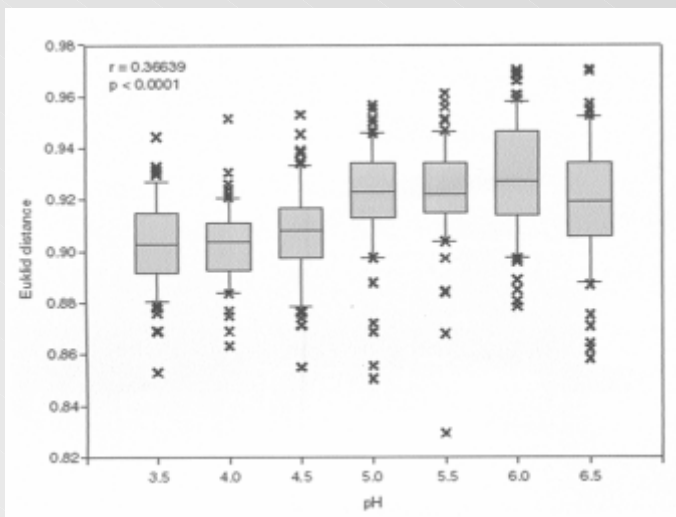
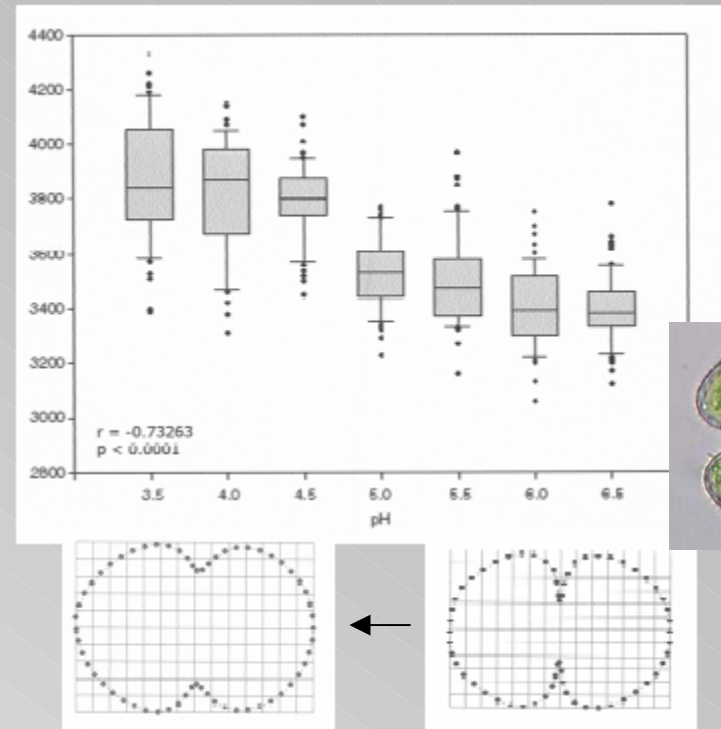
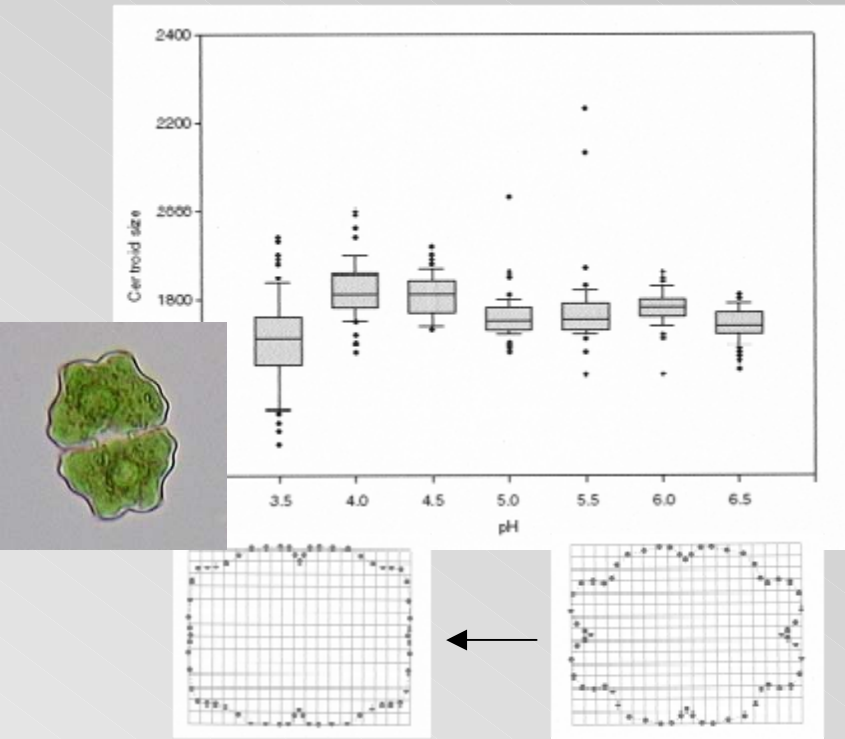
Euastrum binale



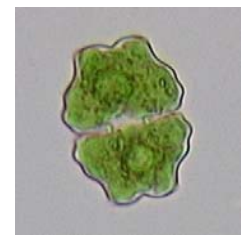
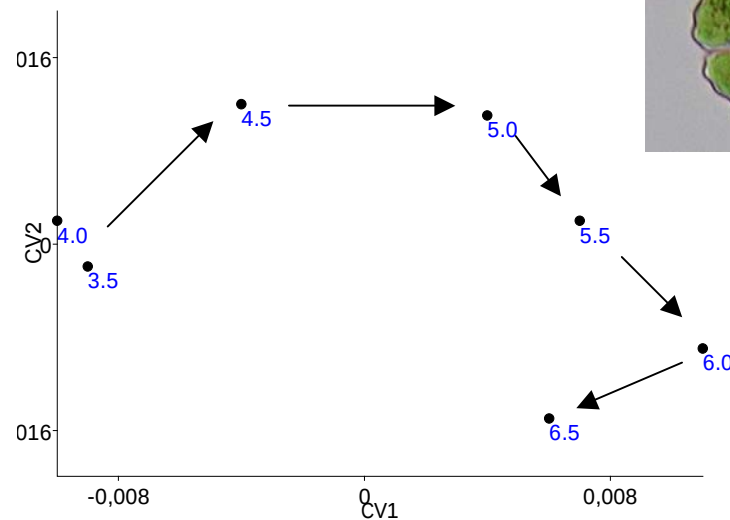
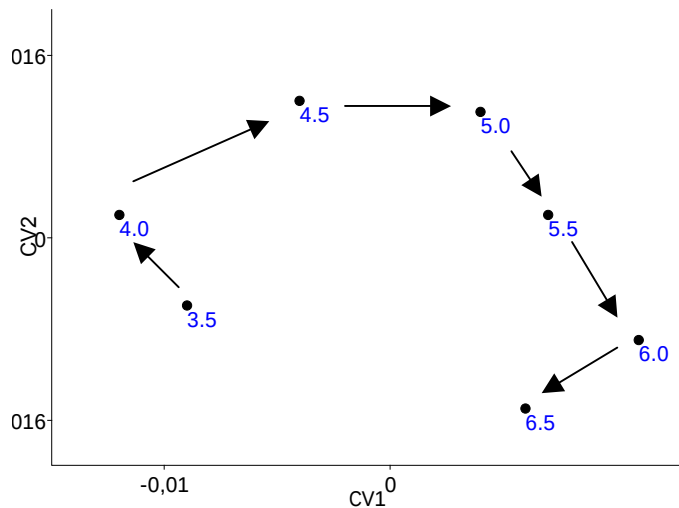
Staurastrum hirsutum



nízké pH působí jako stresový faktor...

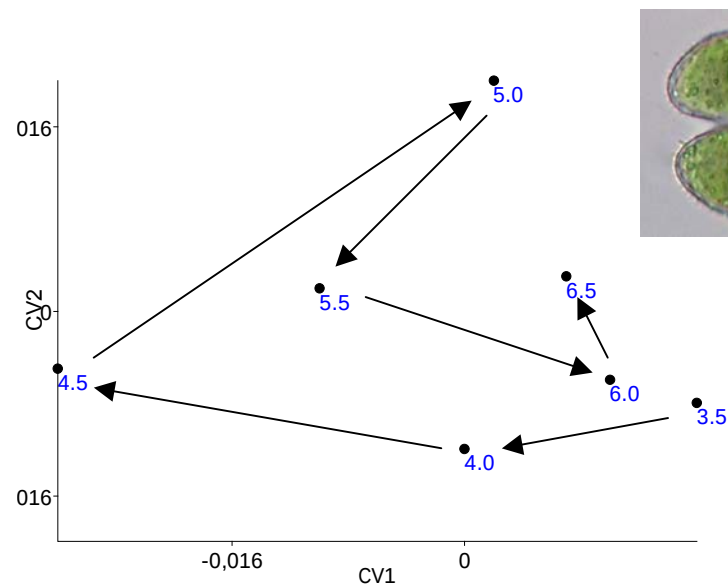
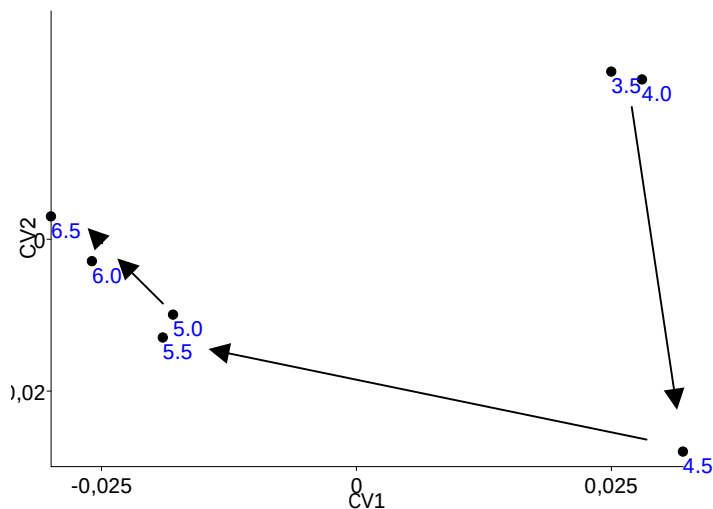


Tvarové vztahy populací podle úrovně pH...



... s vlivem allometrie

...po odečtení allometrické tvarové variability



... s vlivem allometrie

...po odečtení allometrické tvarové variability



Děkuji vám za pozornost