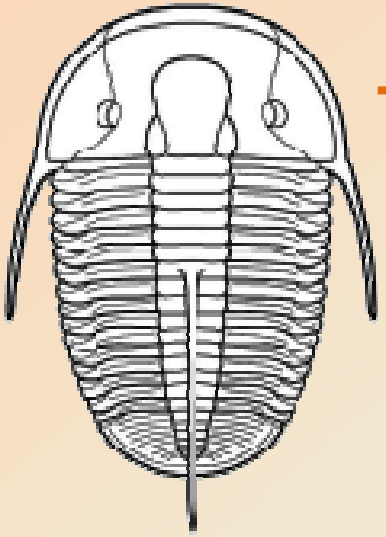
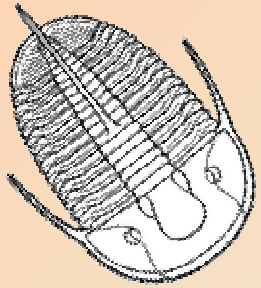


Mgr. Matúš Hyžný, PhD.

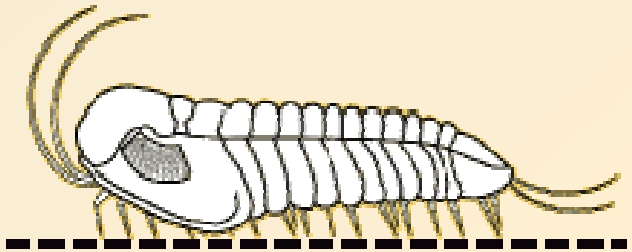
O MALEJ VÄČŠINE: ČLÁNKONOŽCE Z POHĽADU PALEONTOLÓGA

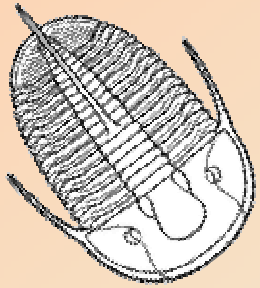


O ČOM TO CELÉ BUDE?

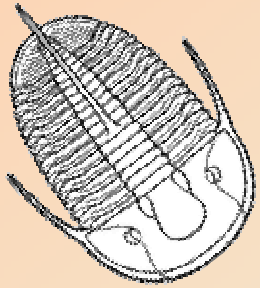
Samozrejme, že o ČLÁNKONOŽCOCH!

Článkonožce: čo sú zač?
Článkonožce: kde sa tu vzali?
Článkonožce: prečo sú také úspešné a prečo je ich tak veľa?



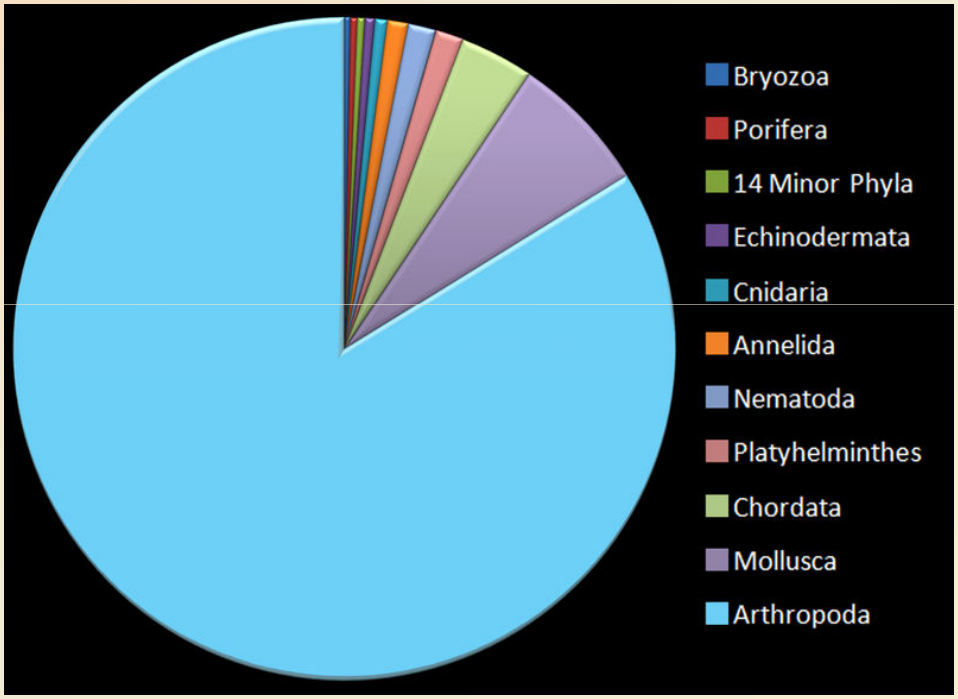


ČLÁNKONOŽCE: ČO SÚ ZAČ?

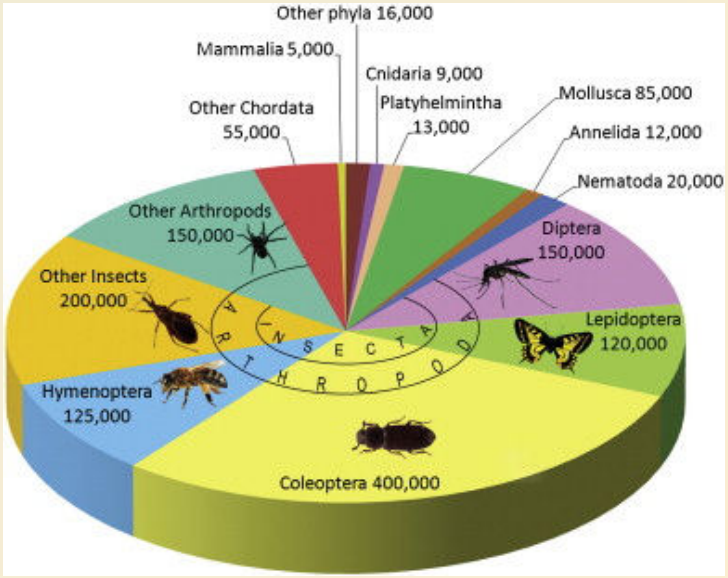


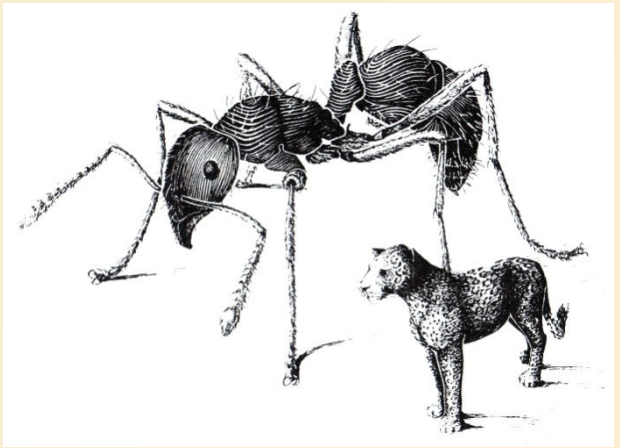
ČLÁNKONOŽCE: ČO STE MOŽNO NEVEDELI

„MALÁ VÄČŠINA“

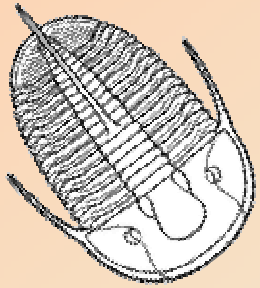


Článkonožce: viac ako 1 milión opísaných dnes žijúcich druhov

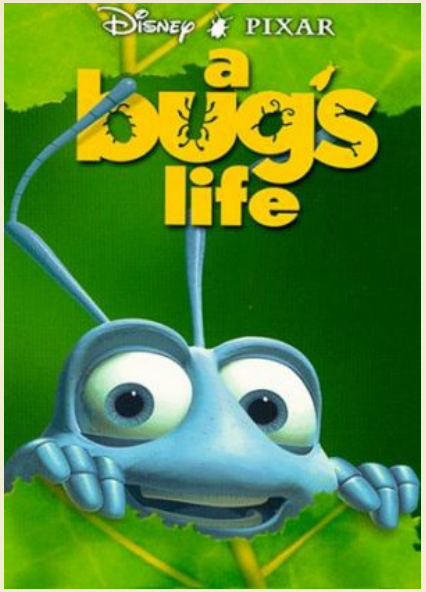


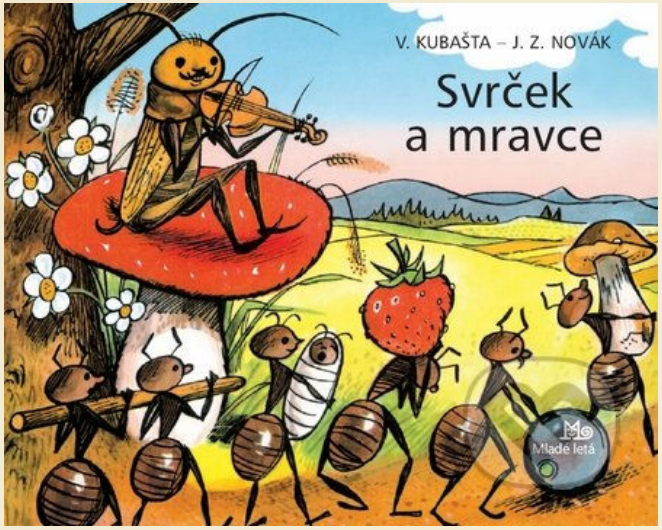


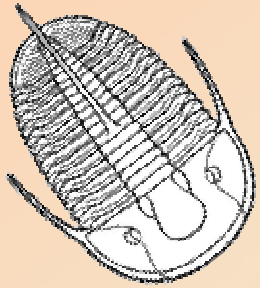
Hölldobler & Wilson (1995)



ČLÁNKONOŽCE A KULTÚRA

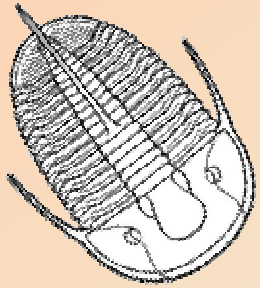






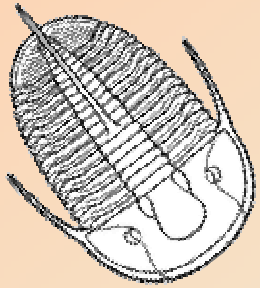
ČLÁNKONOŽCE: POHĽAD DIEŤAŤA

listovka zelená

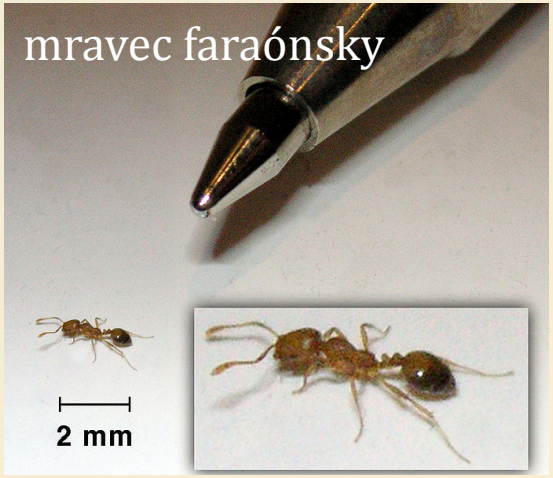


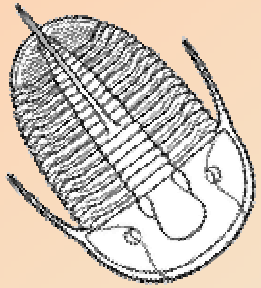
ČLÁNKONOŽCE: POHĽAD DIEŤAŤA

cifruša bezkrídla

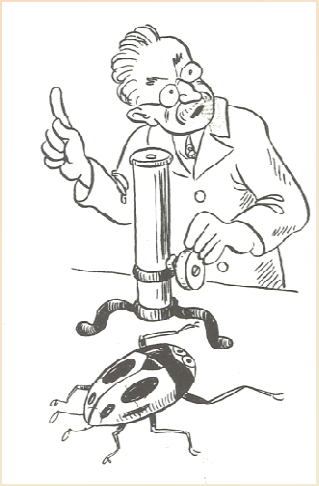


ČLÁNKONOŽCE V DOMÁCNOSTI

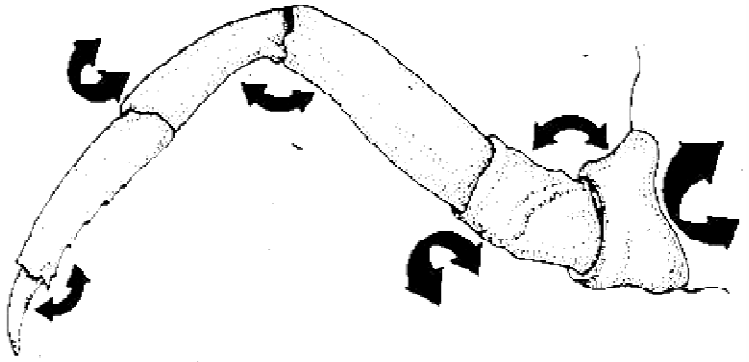


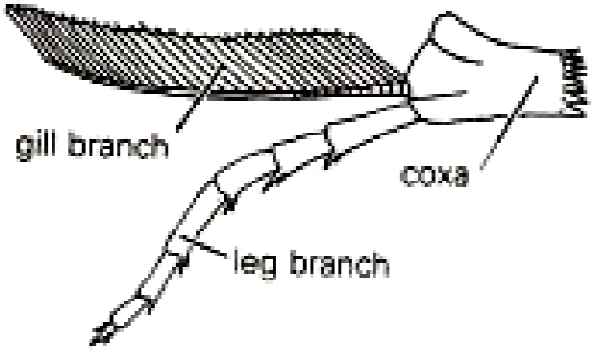


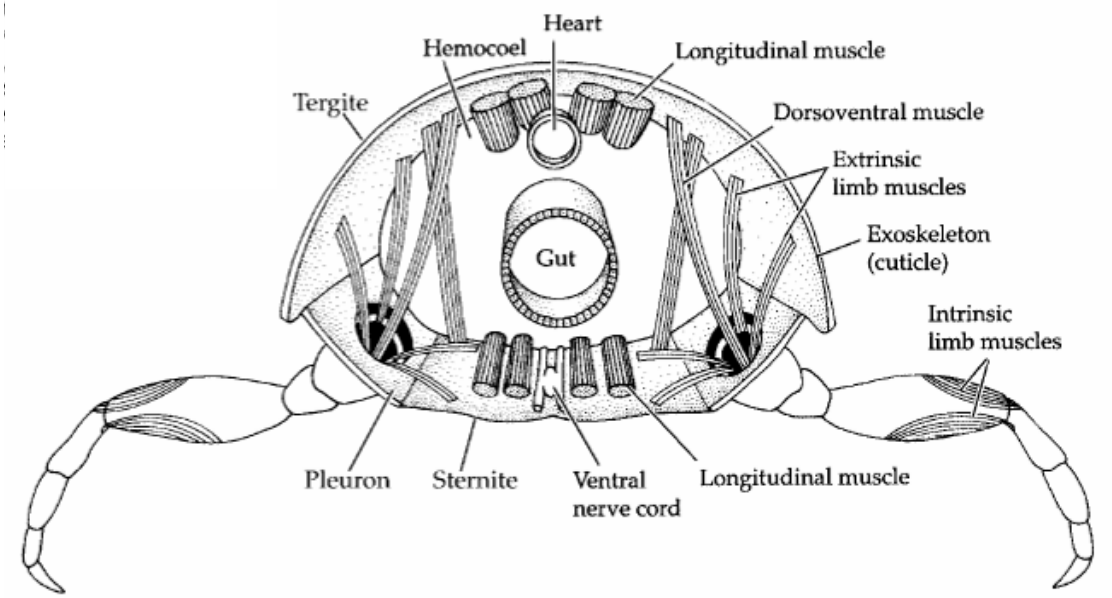
ČLÁNKONOŽCE: POHĽAD ZOOLÓGA

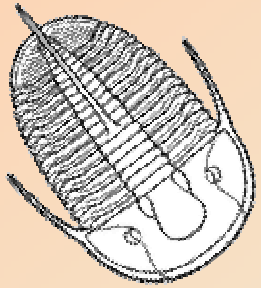


© Ondřej Sekora





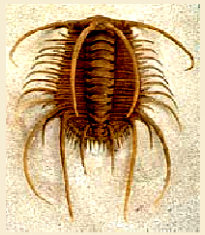


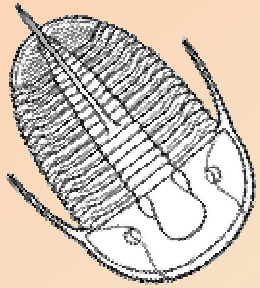


ČLÁNKONOŽCE: KLASIFIKÁCIA A SYSTÉM

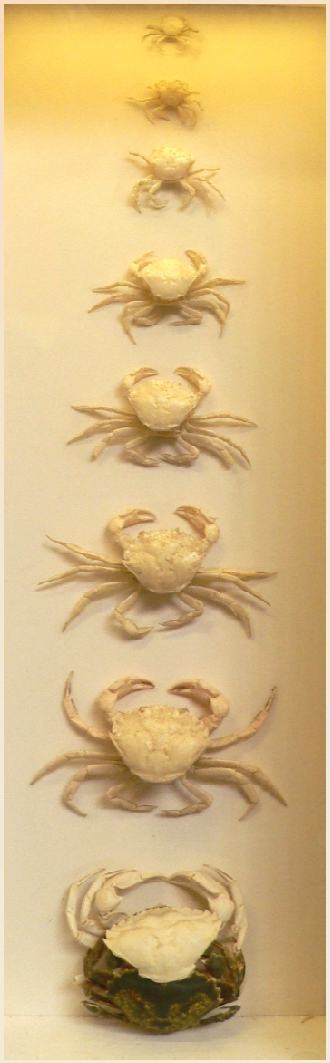
kmeň ARTHROPODA (článkonožce)

- **podkmeň CHELICERATA (klepietkavce)**
- **podkmeň † MARELLOMORPHA**
- **podkmeň † TRILOBITOMORPHA**
- **podkmeň MYRIAPODA (viacnôžky)**
- **podkmeň PANCRUSTACEA (kôrovce + šesťnôžky)**

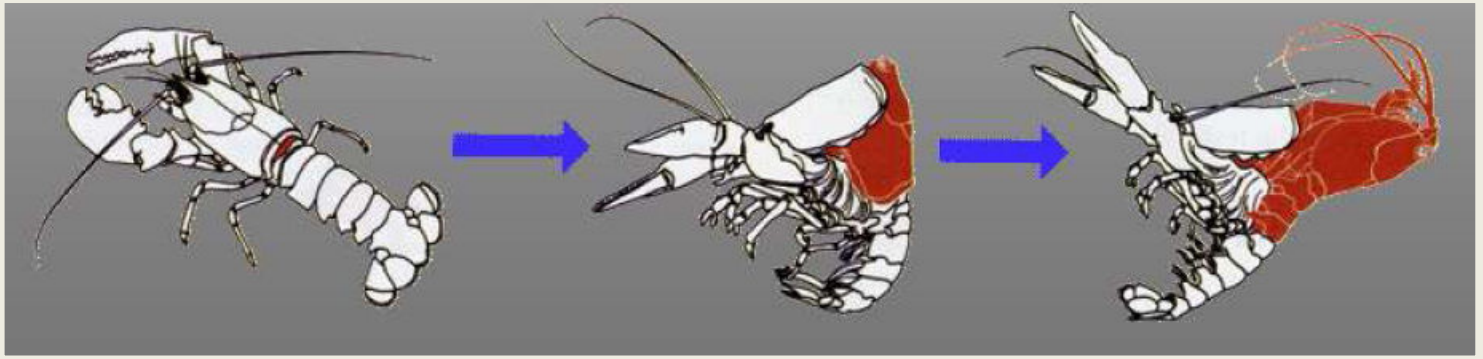


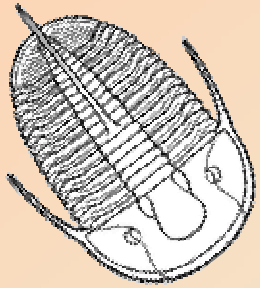


ČLÁNKONOŽCE: ZVLIEKANIE

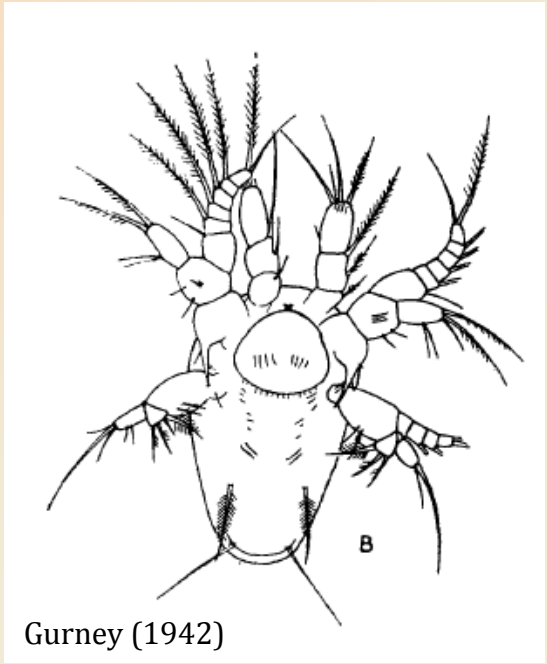


© Sam Gon III

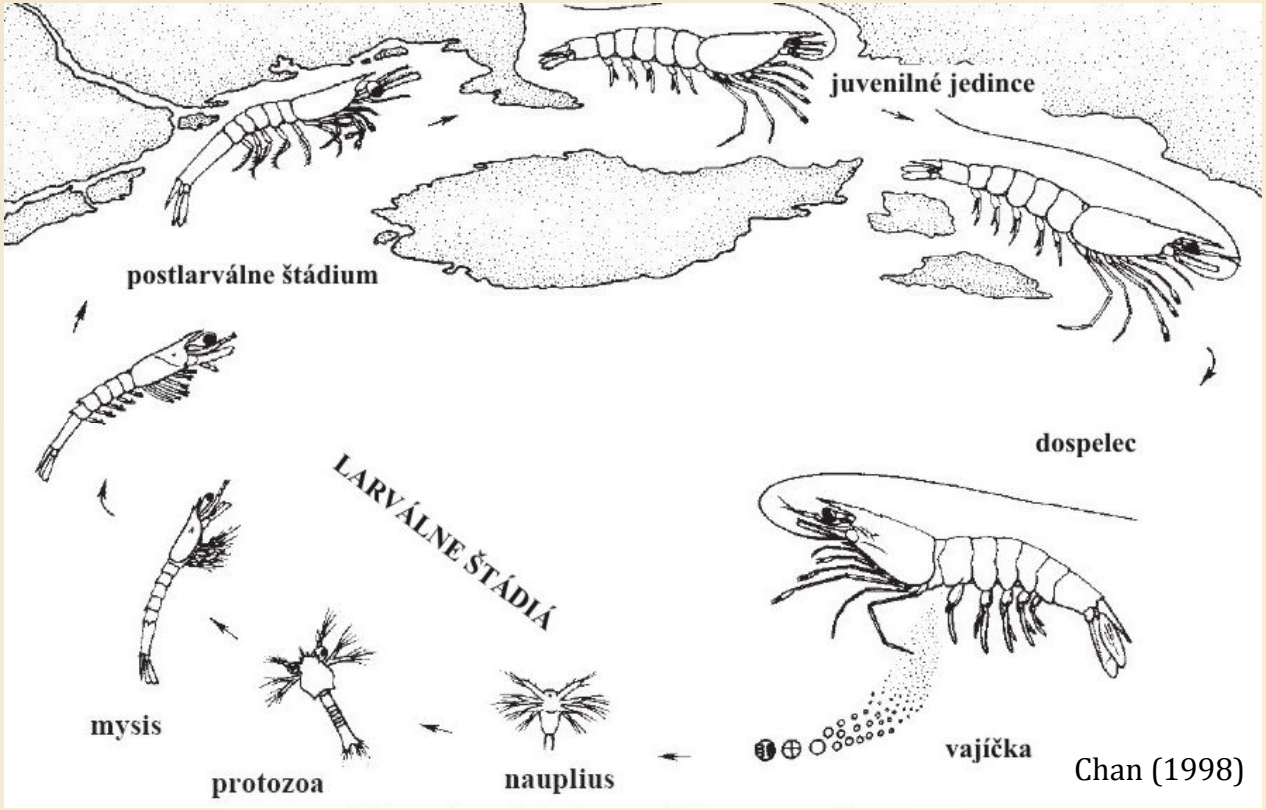




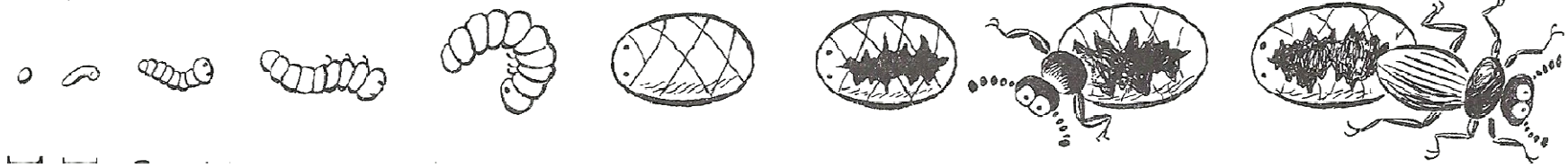
ČLÁNKONOŽCE: ŽIVOTNÝ CYKLUS

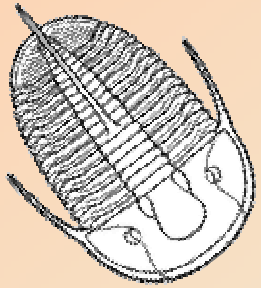


Gurney (1942)



Chan (1998)





ČLÁNKONOŽCE A ICH ŽIVOTNÉ PROSTREDIE

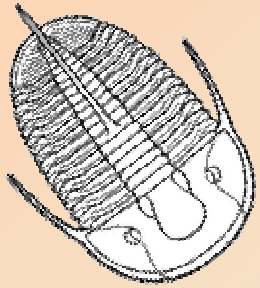
...článkonožce sú „ v š a d e “ !

VODA – morské, brakické aj sladkovodné prostredie, podzemná voda, voda v intersticiálnych priestoroch

ZEM – všetky suchozemské biotopy vo všetkých nadmorských výškach, pôda, intersticiálne priestory

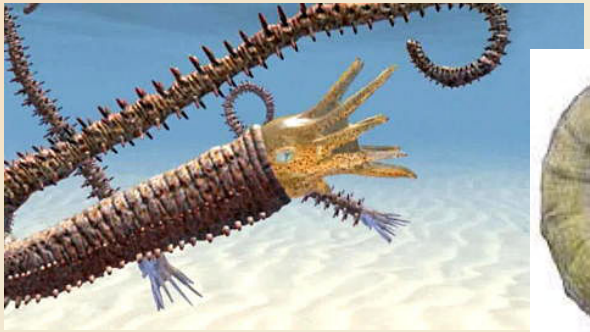
VZDUCH – lietajúci hmyz

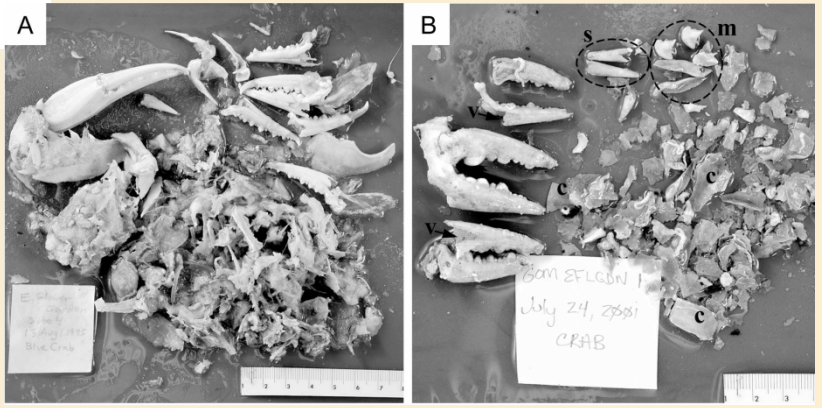
VNÚTRI INÝCH ORGANIZMOV – parazity a parazitoidy



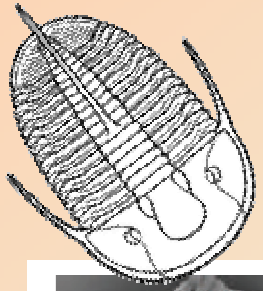
ČLÁNKONOŽCE: POHĽAD PALEONTOLÓGA

Na rozdiel od organizmov s prevažne tvrdou vápnitou schránkou (mäkkýše, ramenonožce...) sú článkonožce vo fosílnom stave pomerne zriedkavé.

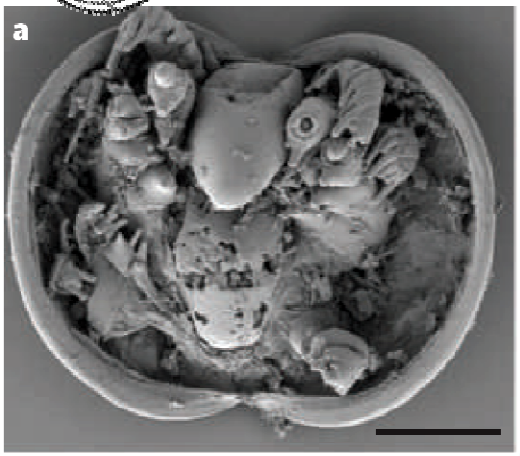


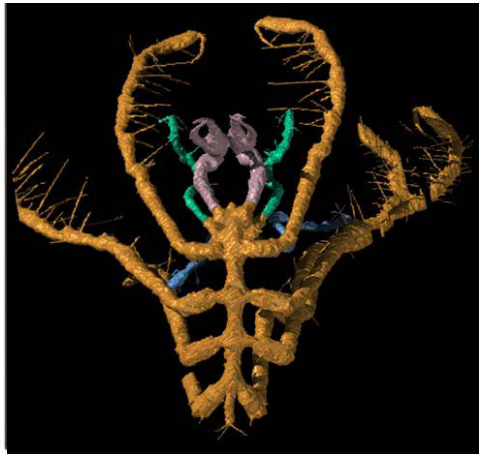


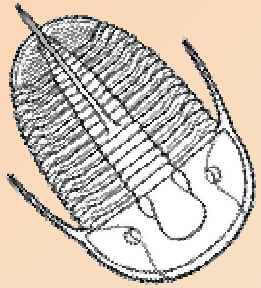
Mutel et al. (2008)



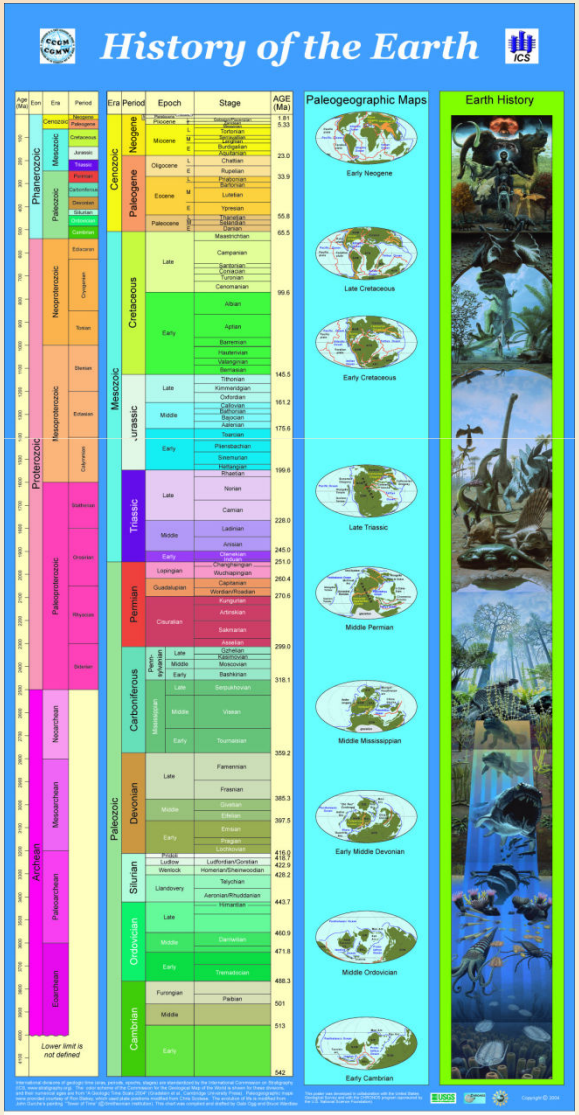
ČLÁNKONOŽCE AKO FOSÍLIE

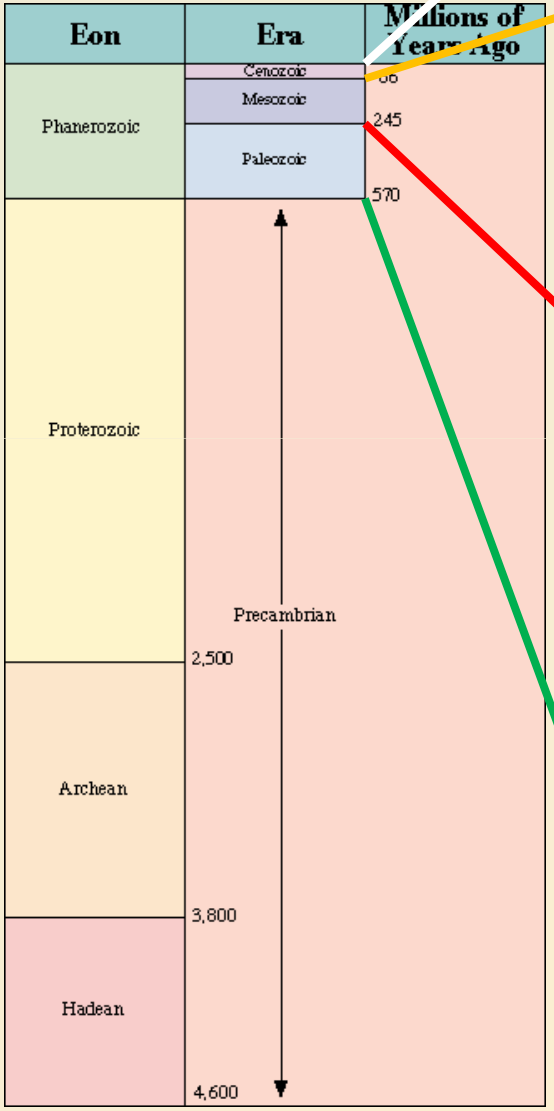


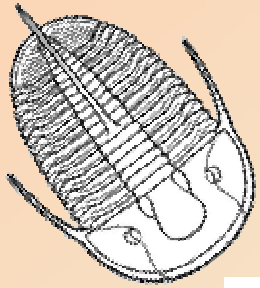




GEOLOGICKÝ ČAS

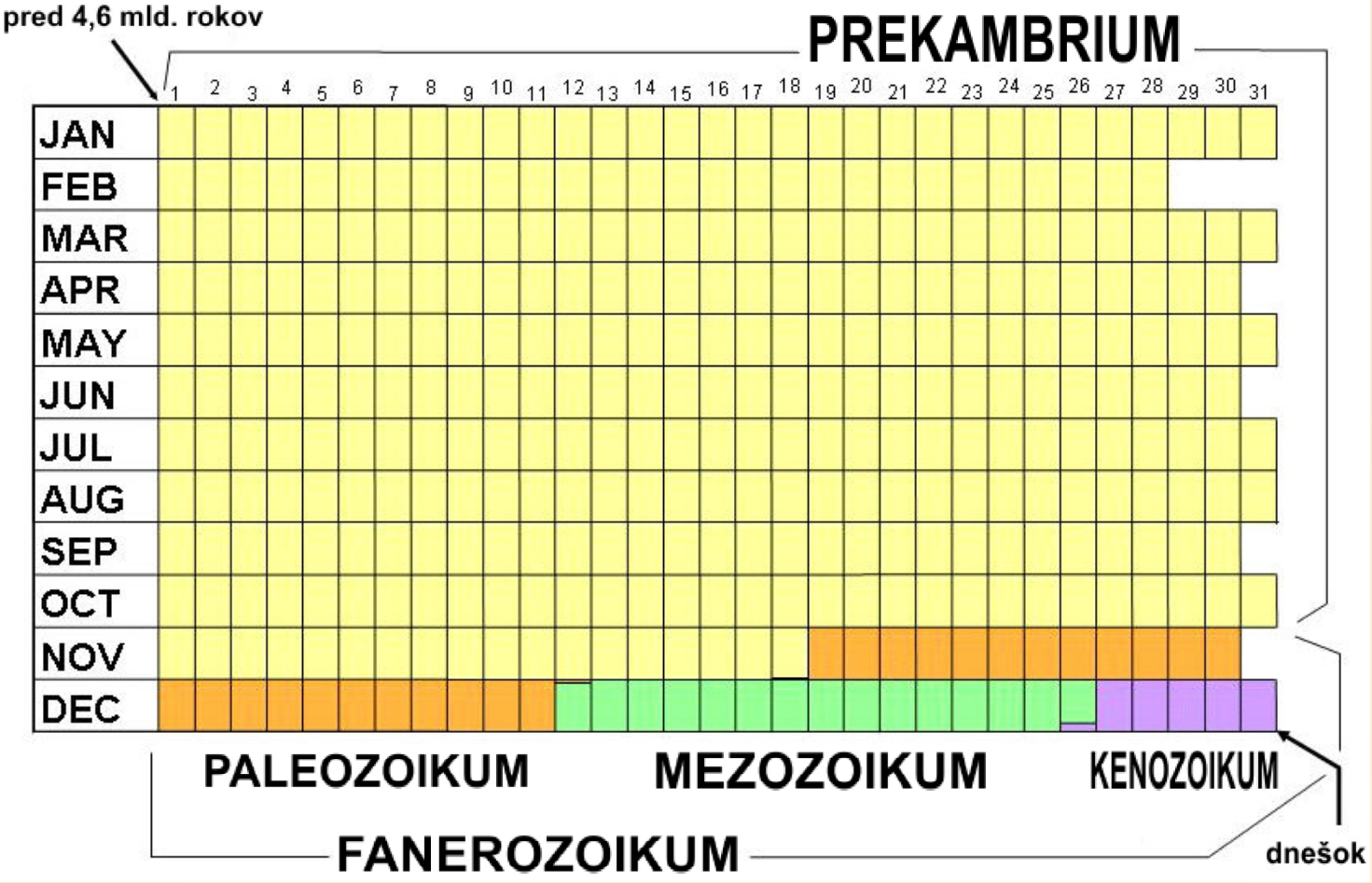


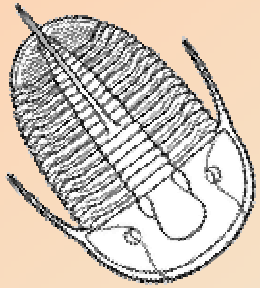




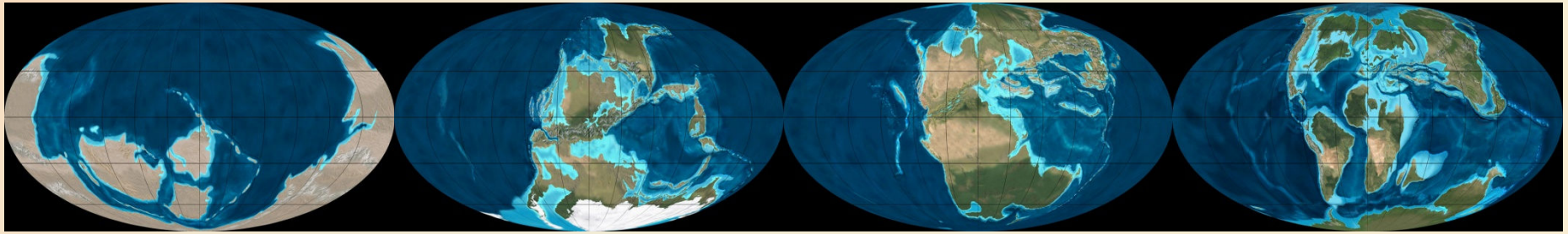
GEOLOGICKÝ ČAS

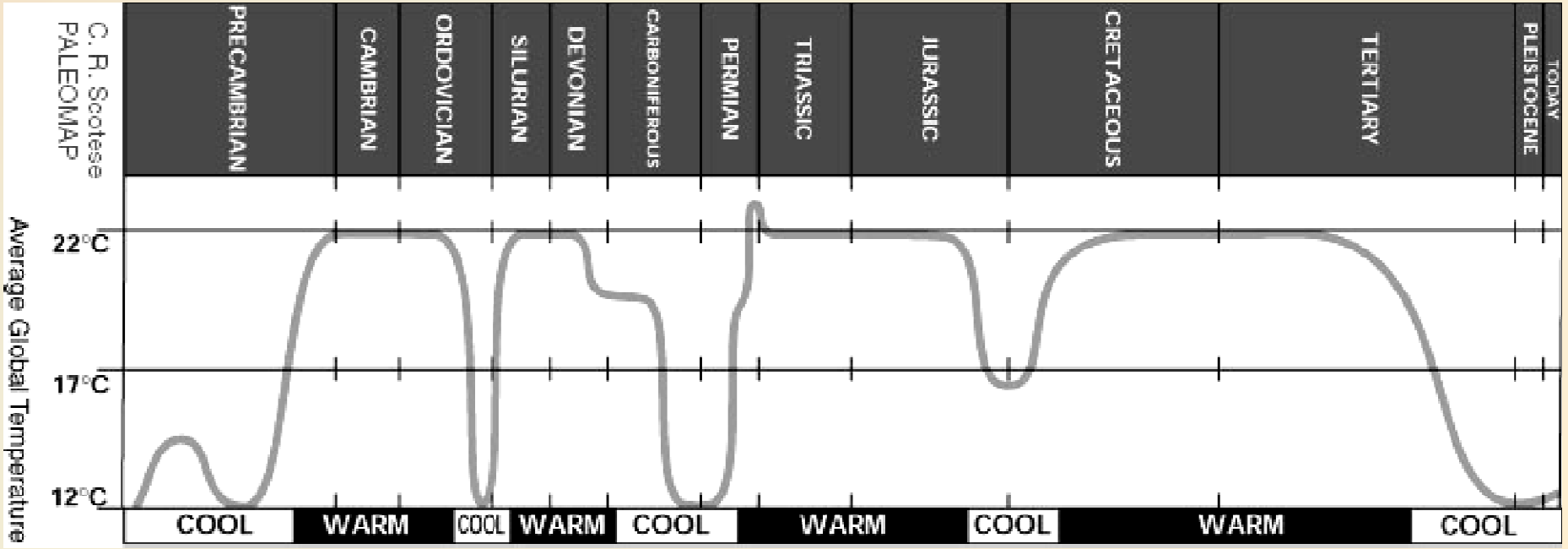
1 sekunda = 146 rokov; 1 minúta = 8 752 rokov; 1 hodina = 525 114 rokov; 1 deň = 12 602 740 rokov

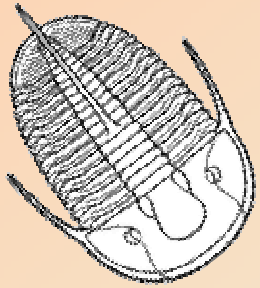




MENIACA SA PLANÉTA

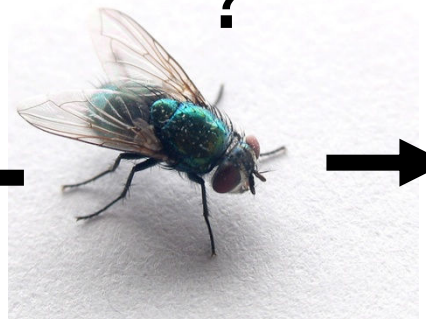




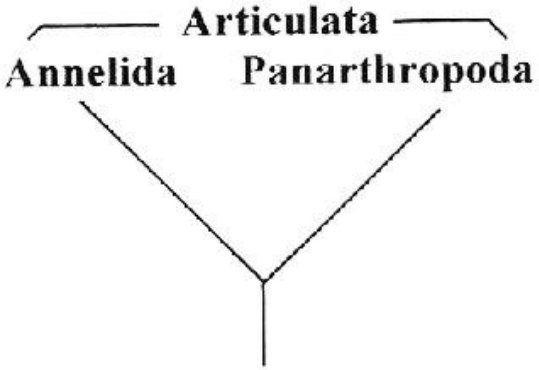


ČLÁNKONOŽCE: KDE SA TU VZALI?

?



A



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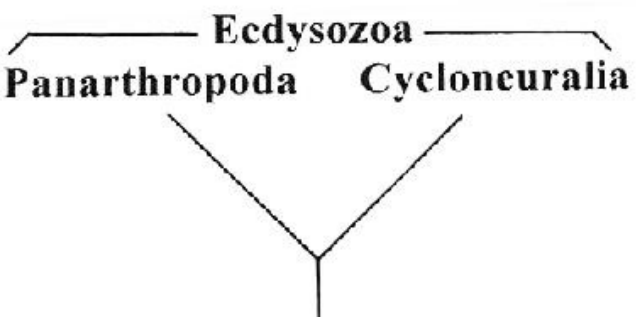
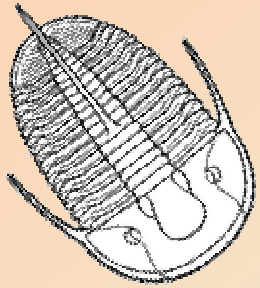
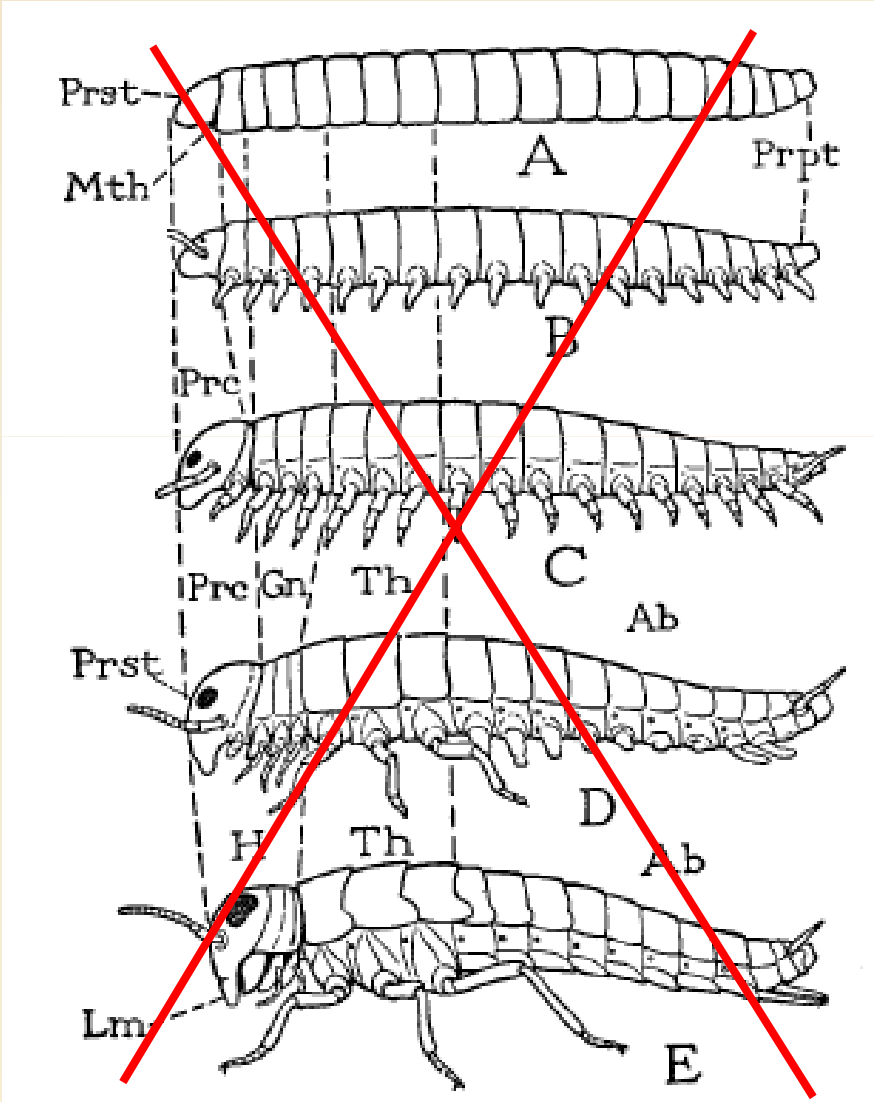
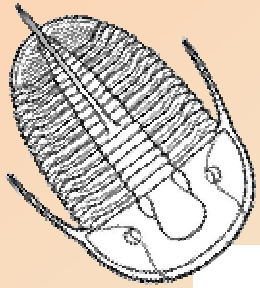




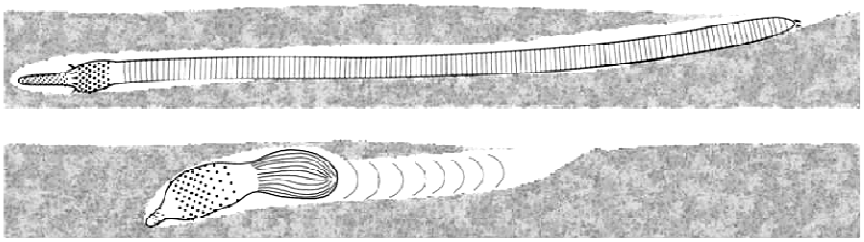
ČLÁNKONOŽCE: KDE SA TU VZALI?



Snodgrass (1938)



ČLÁNKONOŽCE: KDE SA TU VZALI?

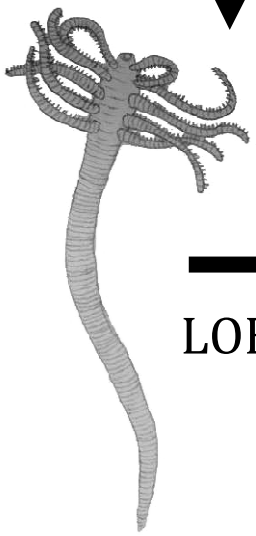


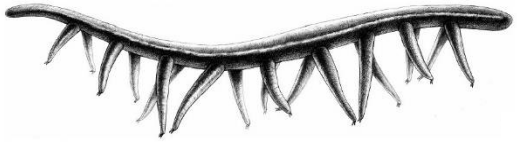
CYCLONEURALIA

?

ONYCHOPHORA

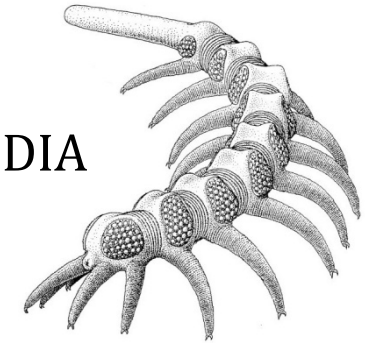
ARTHROPODA





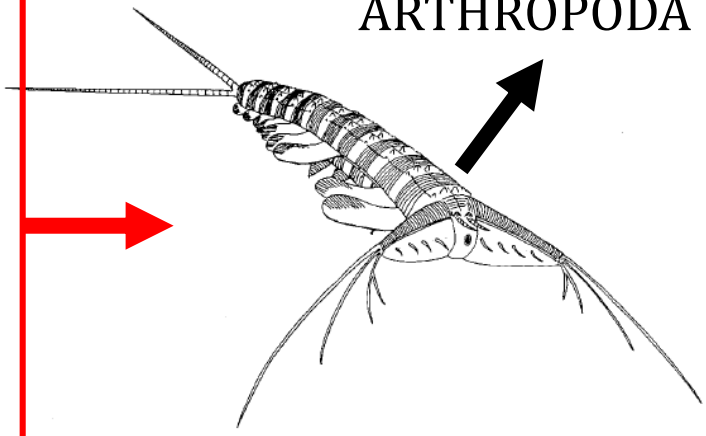
Paucipodia

LOBOPODIA

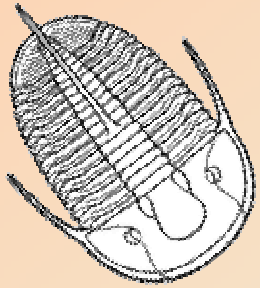


Facivermis

Microdictyon



Kerygmachela

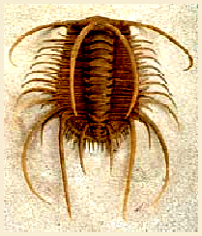


ČLÁNKONOŽCE: FYLOGENÉZA

kmeň ARTHROPODA (článkonožce)

podkmeň CHELICERATA (klepietkavce)

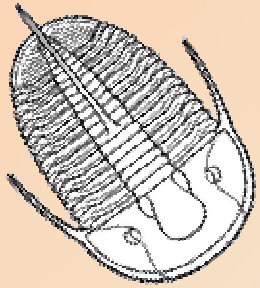
podkmeň † MARELLOMORPHA



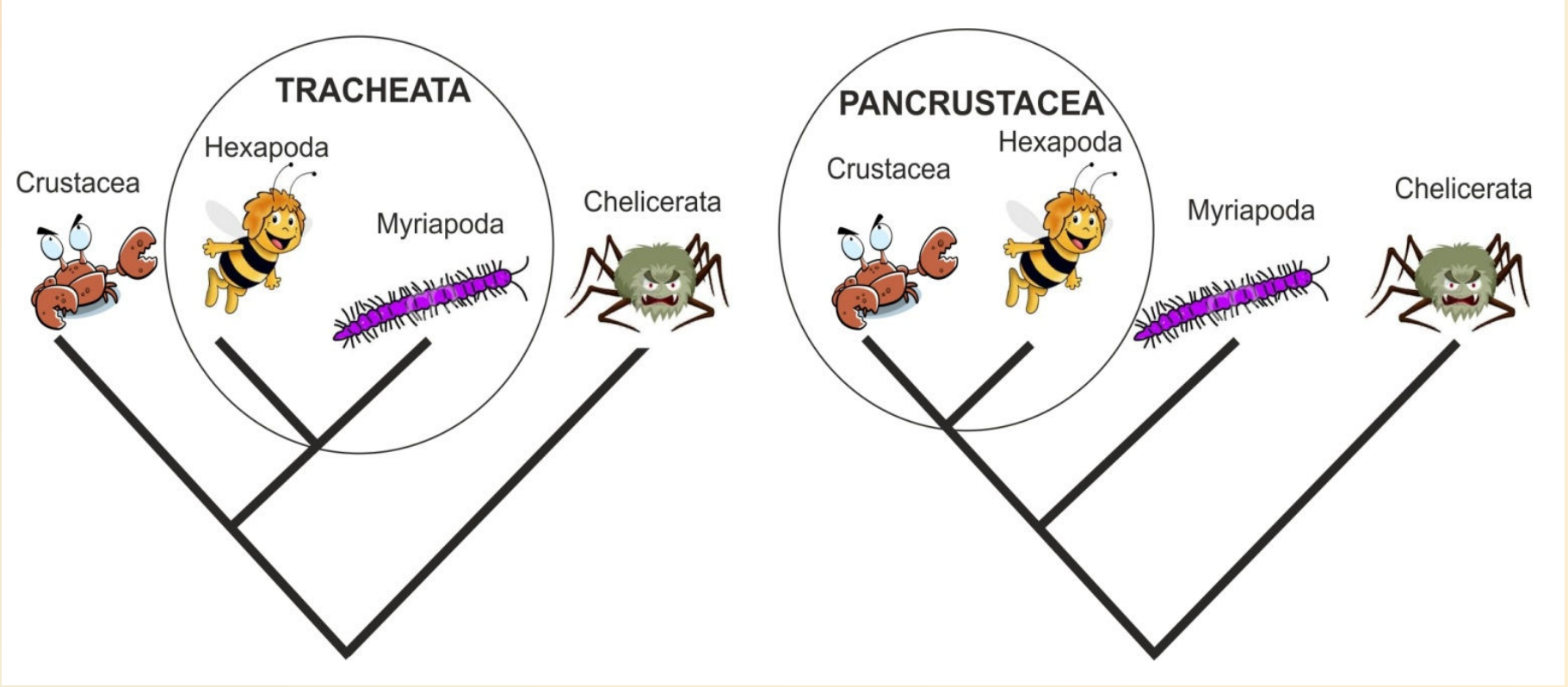
podkmeň † TRILOBITOMORPHA

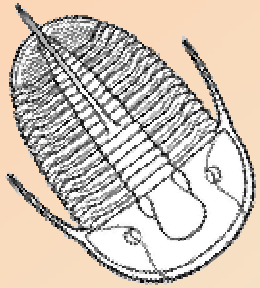
podkmeň MYRIAPODA (viacnôžky)

podkmeň PANCRUSTACEA (kôrovce + šesťnôžky)

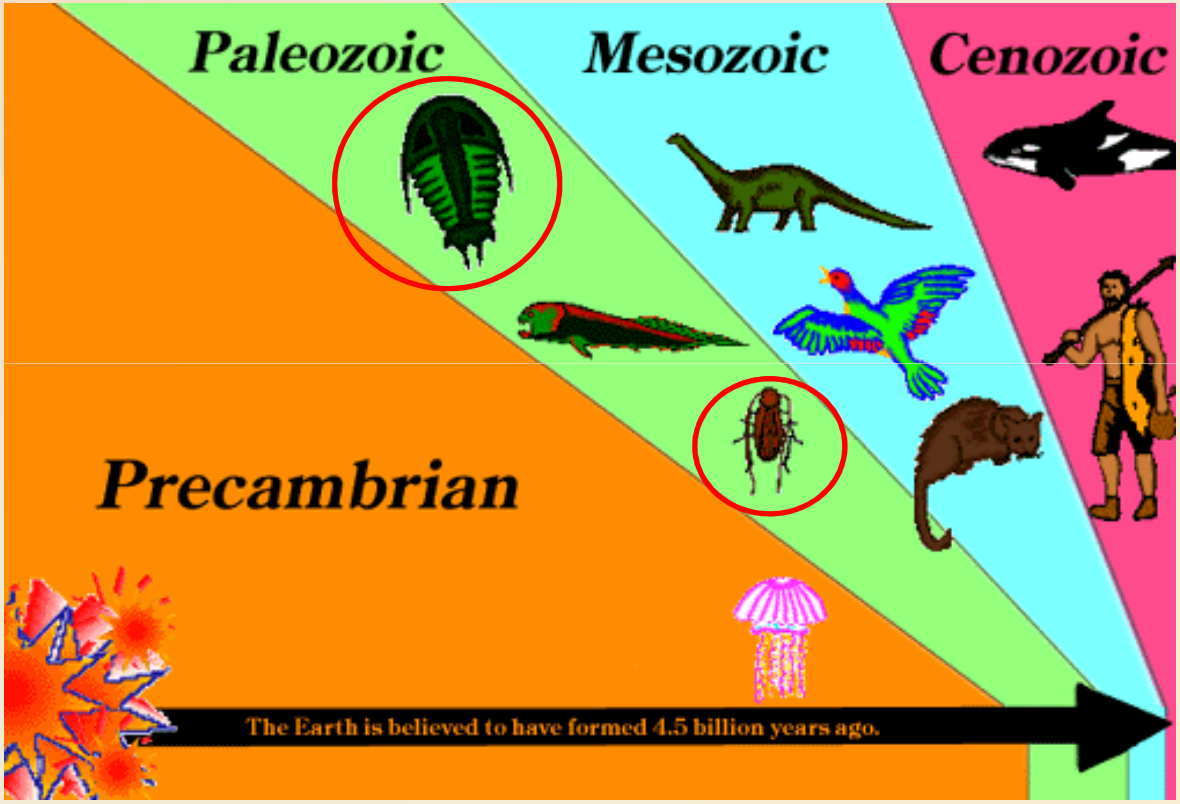


ČLÁNKONOŽCE: A ČO HMYZ?





ČLÁNKONOŽCE: TO NAJ... Z HISTÓRIE ŽIVOTA



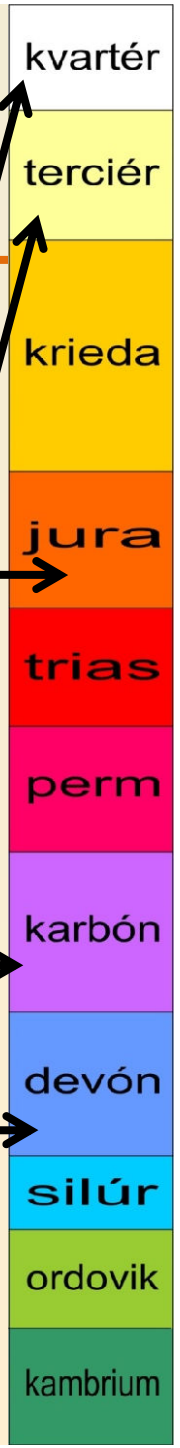
vek človeka?

vek cicavcov?

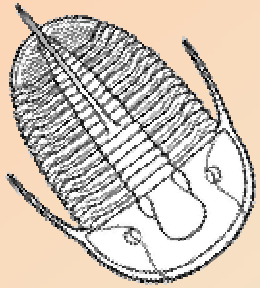
vek plazov?

vek obojživelníkov?

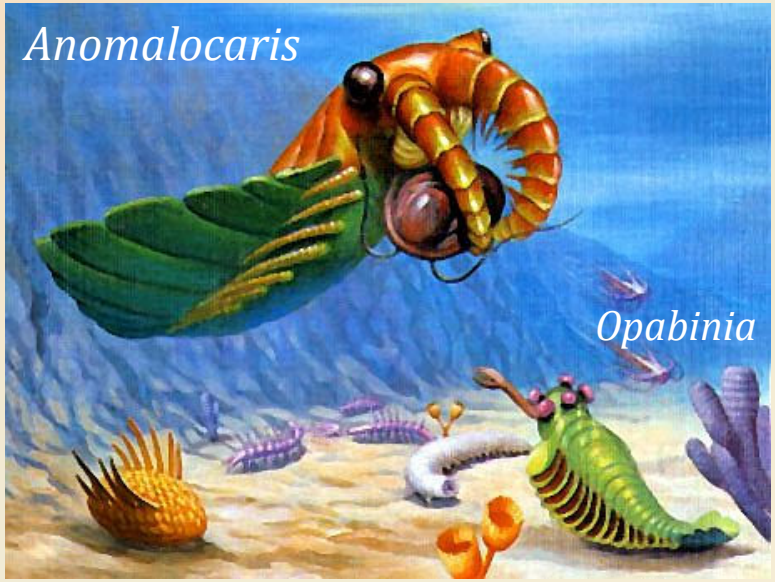
vek rýb?

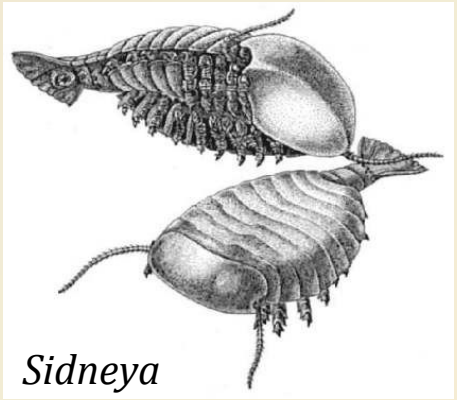


K dnešnému dňu majú článkonožce za sebou viac ako 500 miliónov rokov evolúcie. A môžeme si byť istí, že tu budú aj dlho po nás...



ČLÁNKONOŽCE: KAMBRIUM (542-488)





Sidneya

Marella

Paradoxides

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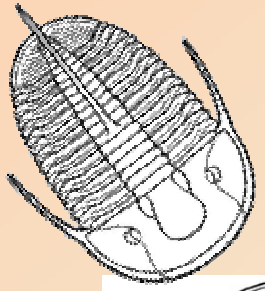
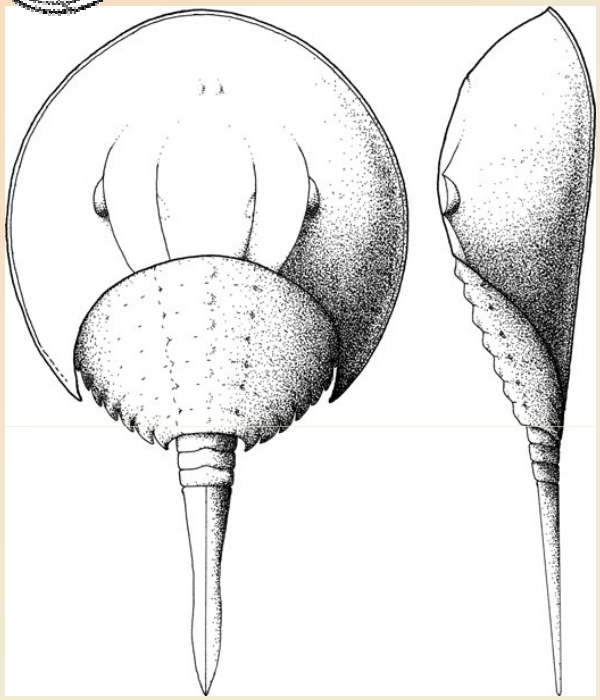
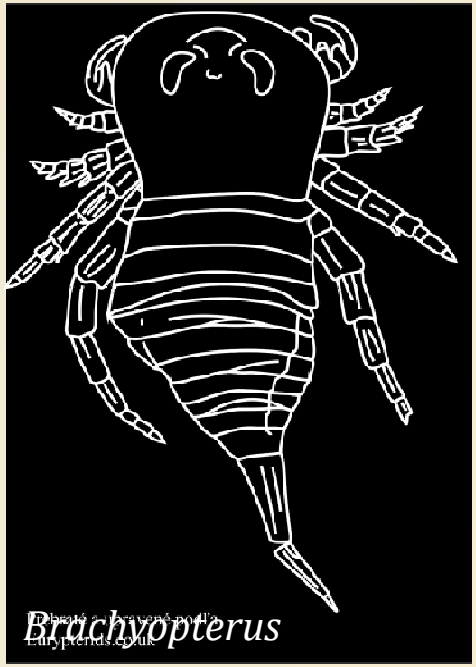
ordovik
kambrium



ČLÁNKONOŽCE: ORDOVIK (488-444)



Lunataspis



Brachyopterus

Soomaspis

Boedaspis

Selenopeltis

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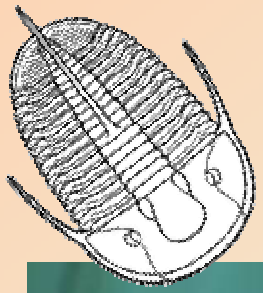
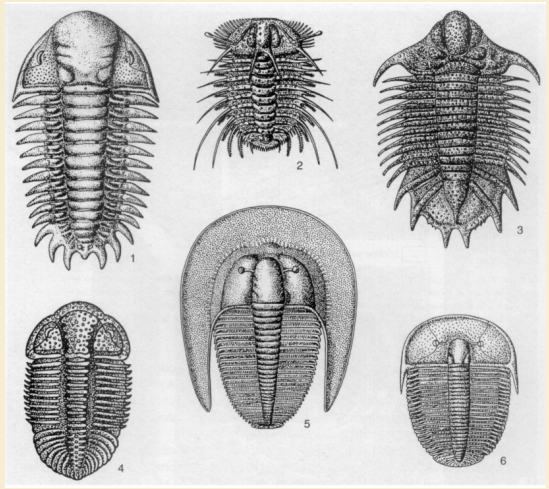


ČLÁNKONOŽCE: SILÚR (444-416)

Pterygotus

Eurypterus



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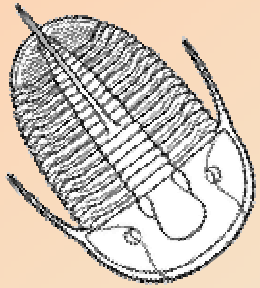
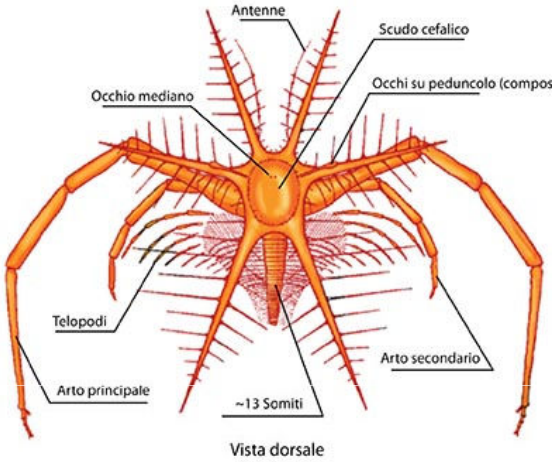
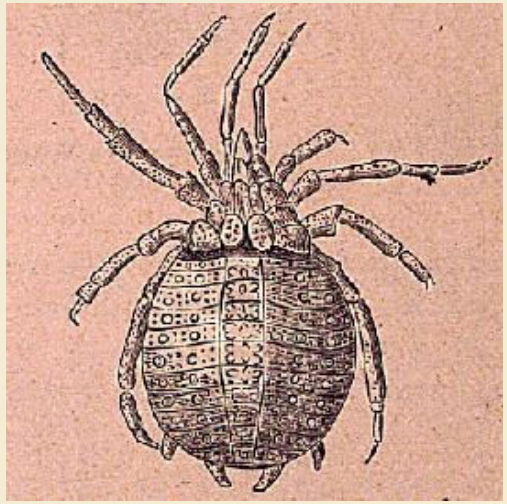


ČLÁNKONOŽCE: DEVÓN (416-359)

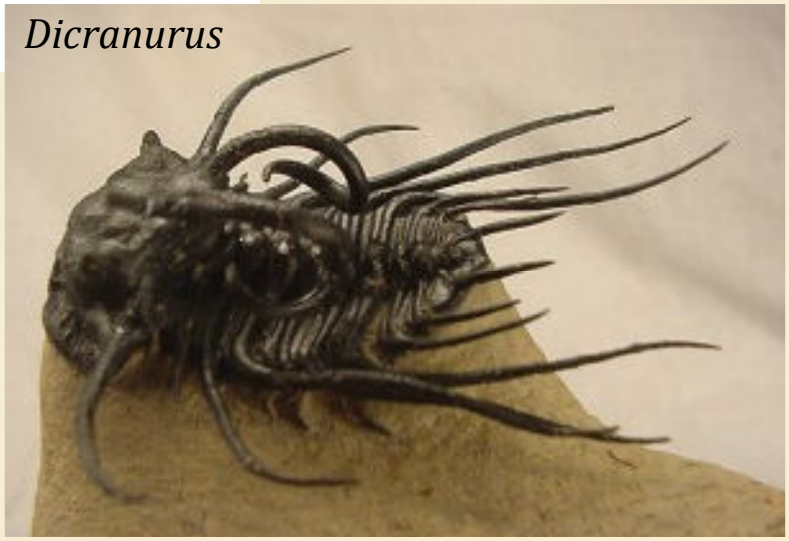


Mimetaster



Palaeocharinus

Dicranurus



Walliserops

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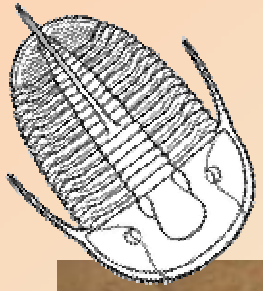
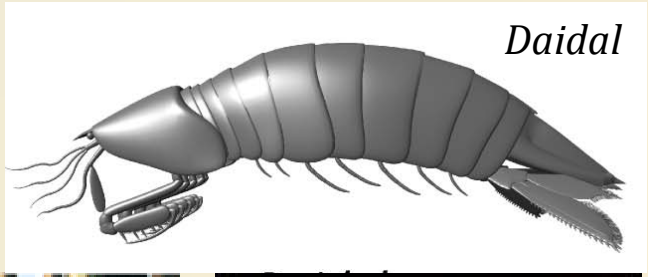
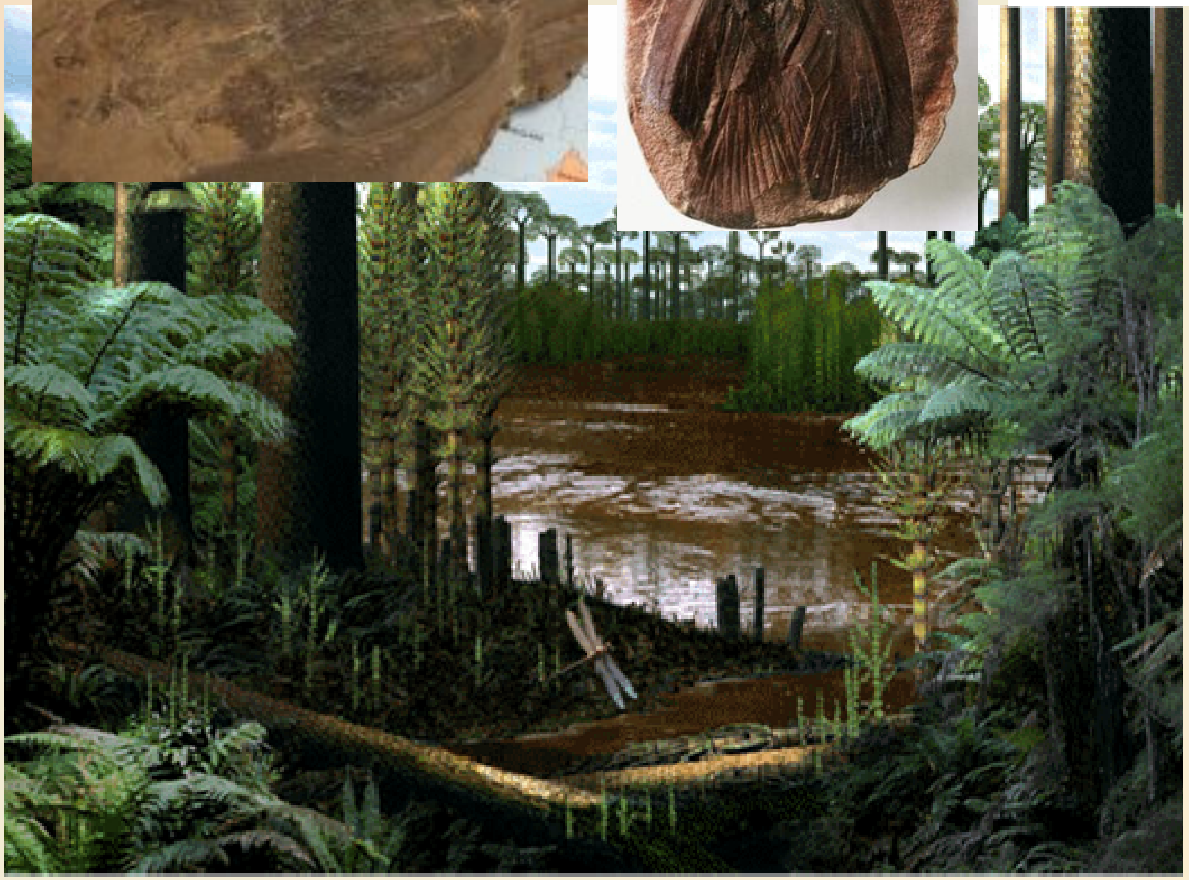


ČLÁNKONOŽCE: KARBÓN (359-299)



Daidal



Arthropleura

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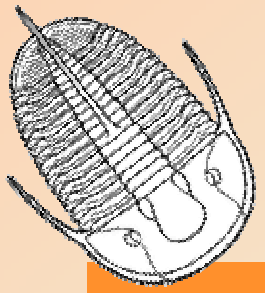
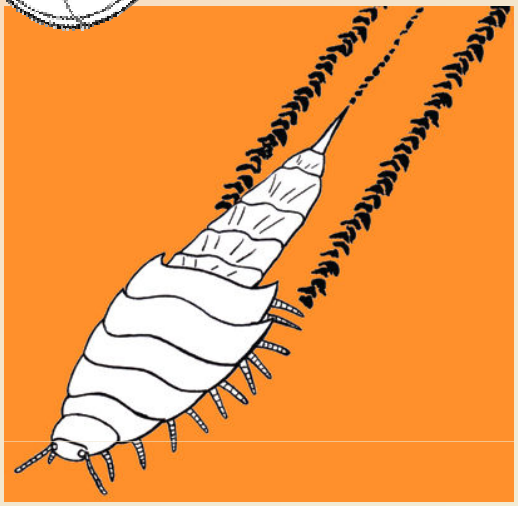
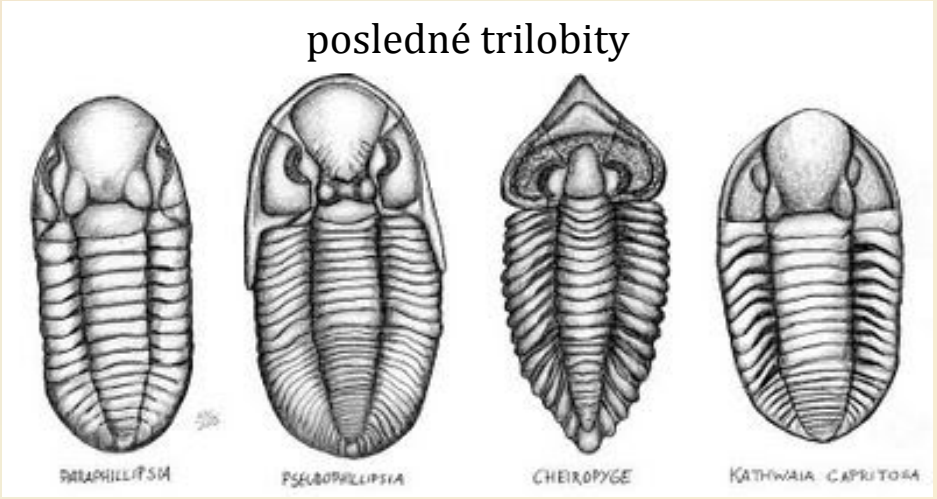


ČLÁNKONOŽCE: PERM (299-251)



posledné trilobity



Meganeuropsis

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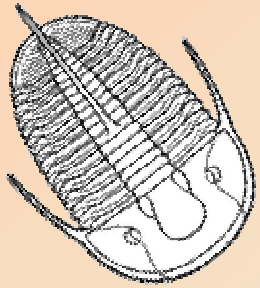
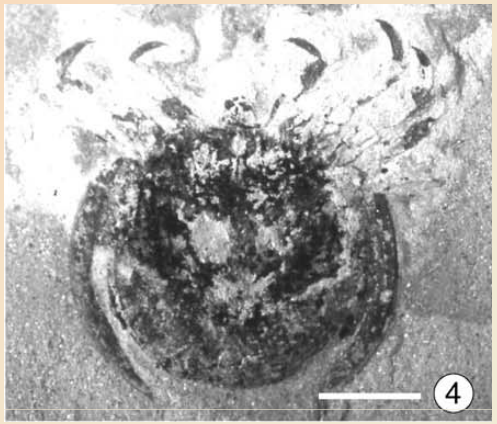
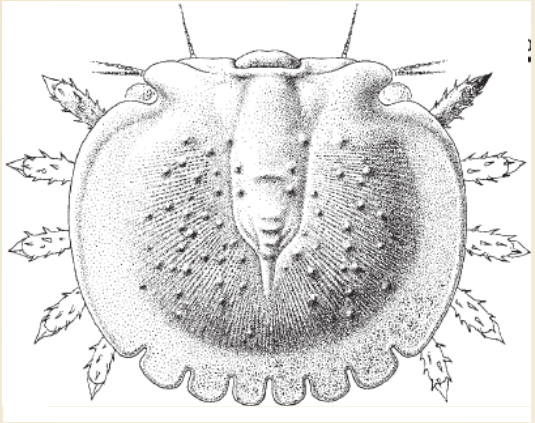


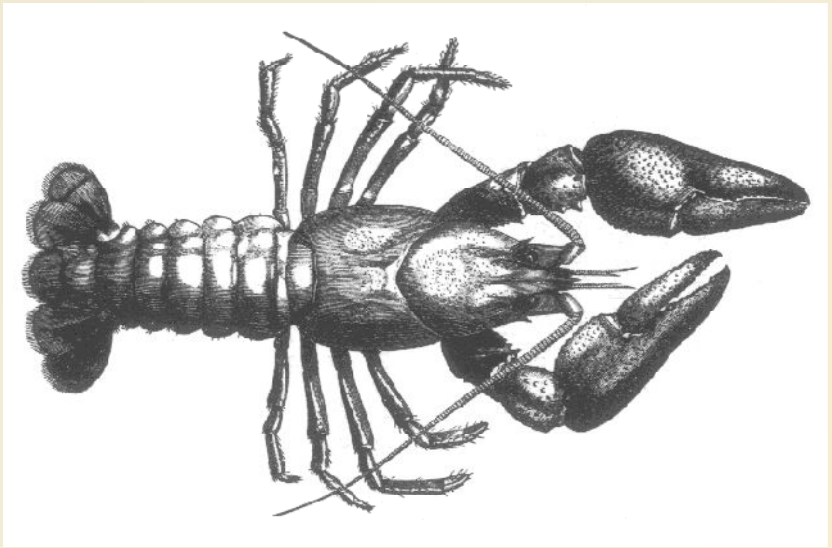
ČLÁNKONOŽCE: TRIAS (251-200)



Halicyne



Opolanka



Cyclosphaeroma

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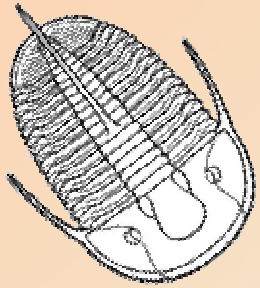
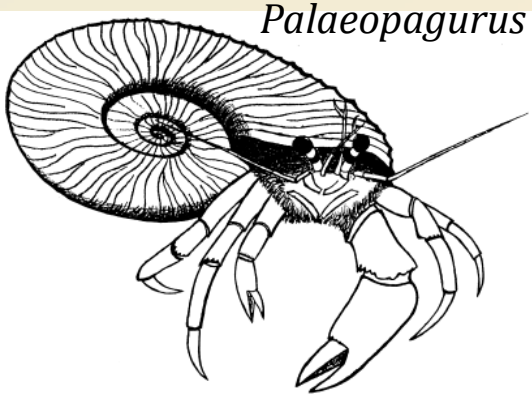


ČLÁNKONOŽCE: JURA (200-146)

Homolodromia



Palaeopagurus

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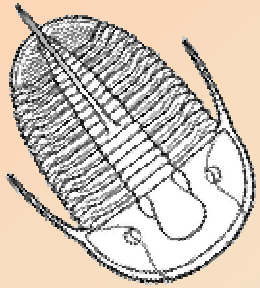
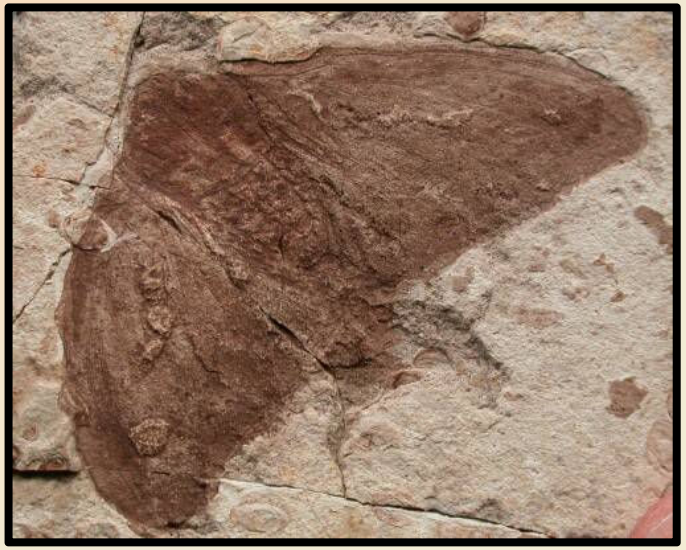
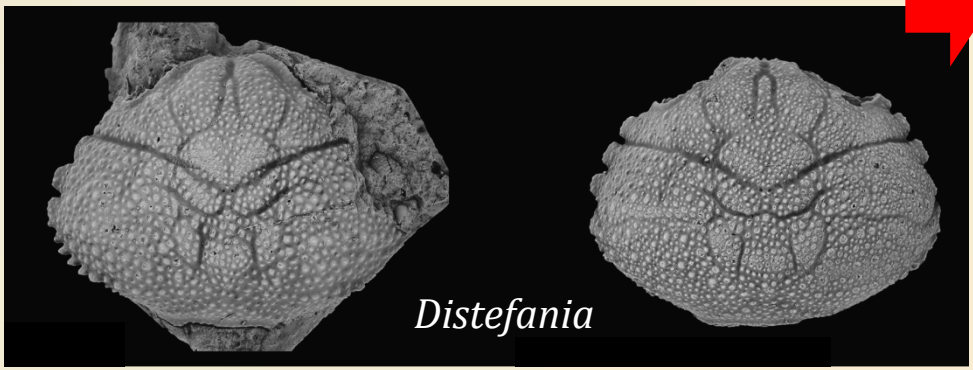


ČLÁNKONOŽCE: KRIEDA (146-65)

Klompmaker et al. (2012)





Selden (1989)

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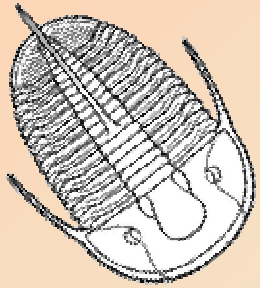

ČLÁNKONOŽCE: PALEOGÉN (65-23)

© Alexander Wild

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ordovik
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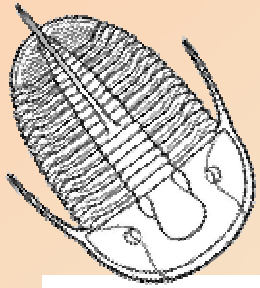
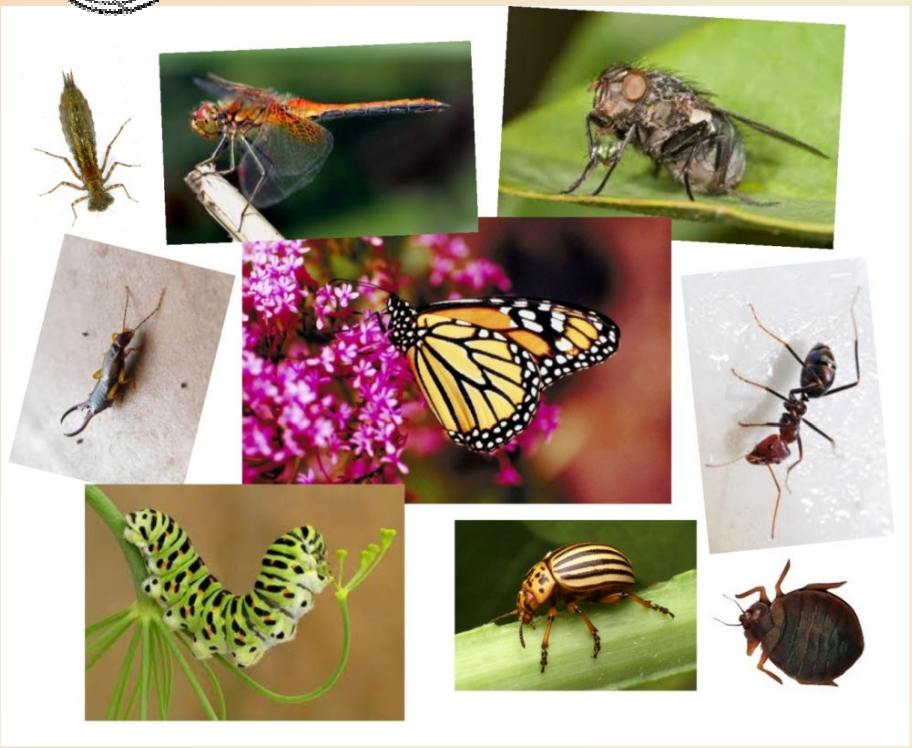


ČLÁNKONOŽCE: NEOGÉN (23-2,5/0)



Pheidole

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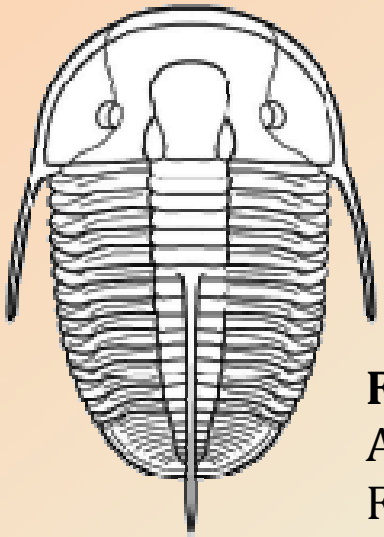

ĎAKUJEM ZA POZORNOSŤ!

Financovanie výskumu fosílnych článkonožcov:
APVV-0644-10, APVV0436-12
FWF LISE MEITNER PROGRAM M 1544-B25

naturhistorisches museum wien

Der Wissenschaftsfonds.

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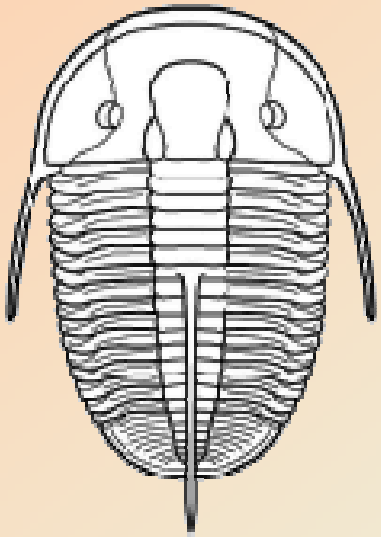


http://viventibusesse.blogspot.sk

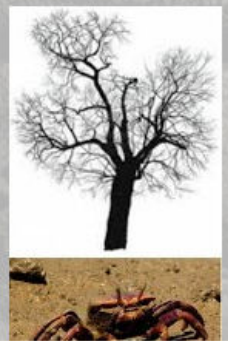
viventibus esse

Vážne i menej vážne o živom okolo nás...

blog o blogu o mne

MATÚŠ HYŽNÝ

VIVERE EST VIVENTIBUS ESSE...



PIATOK, 8. JANUÁRA 2016

Megarachne – najväčší pavúk, ktorý nikdy nebol

V roku 1980 bola z permo-karbónu Argentíny opísaná fosília interpretovaná ako obrovský mygalomorfný pavúk. S dĺžkou tela 34 cm a odhadovaným rozpätím končatín 50 cm tak malo ísť o najväčšieho pavúka všetkých čias. Tvor dostal príznačné meno *Megarachne*. Svetové múzeá si rýchlo zadovážili odliatky slávnej fosílie a zakomponovali ich do svojich expozícií. Dnes už ale vieme, že *Megarachne* nebol pavúk, ale neobvyklý eurypterid („vodný škorpión“)...