

Cephalopods

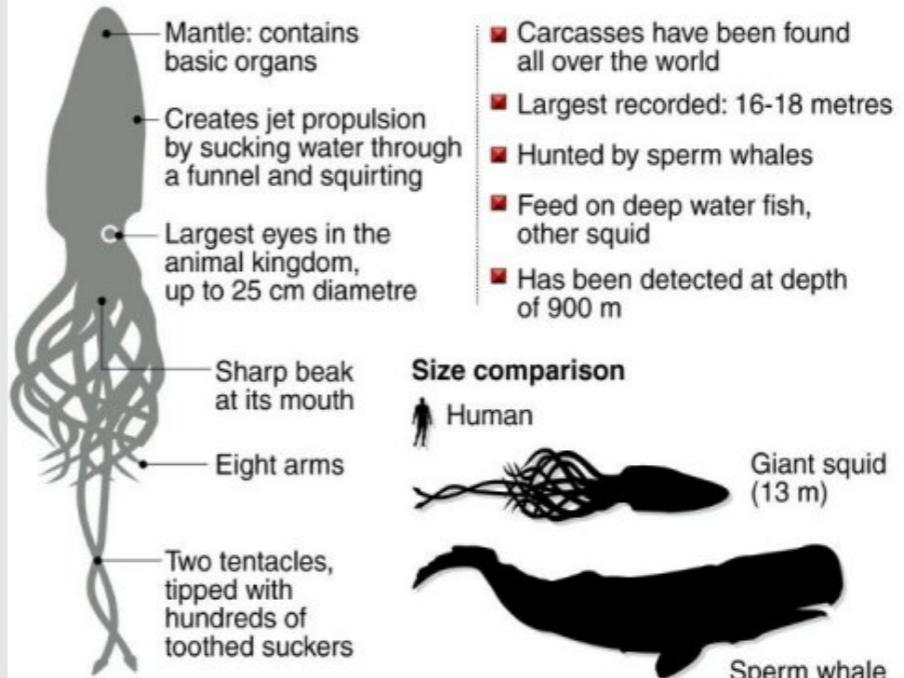


Glenn Loates

Giant squid

Architeuthis, one of the mysteries of the ocean

Despite its huge size, most of what we know about the deep sea dweller comes from carcasses and remains found in sperm whale stomachs

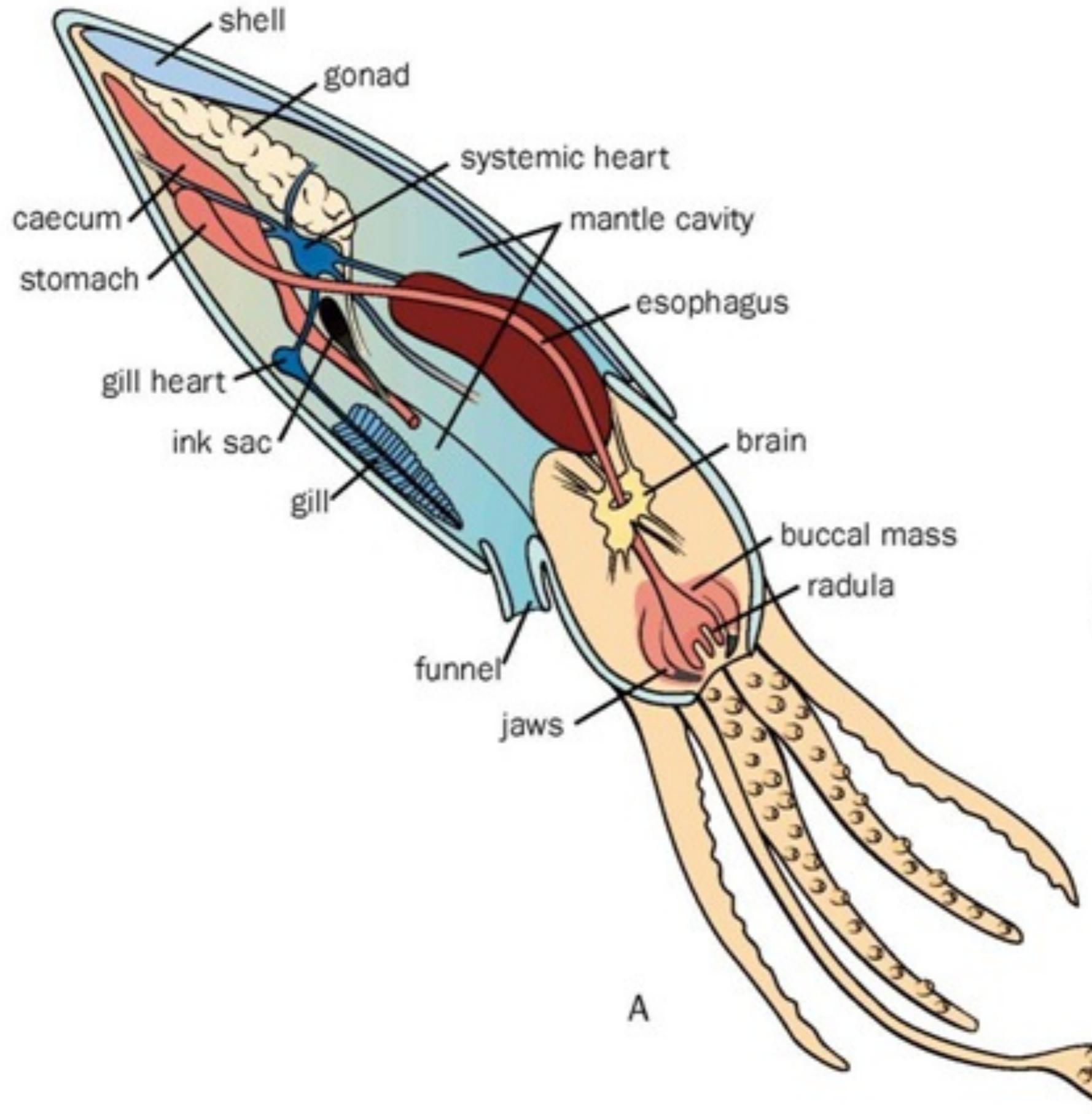


AFP Source: National Geographic/Smithsonian Institute

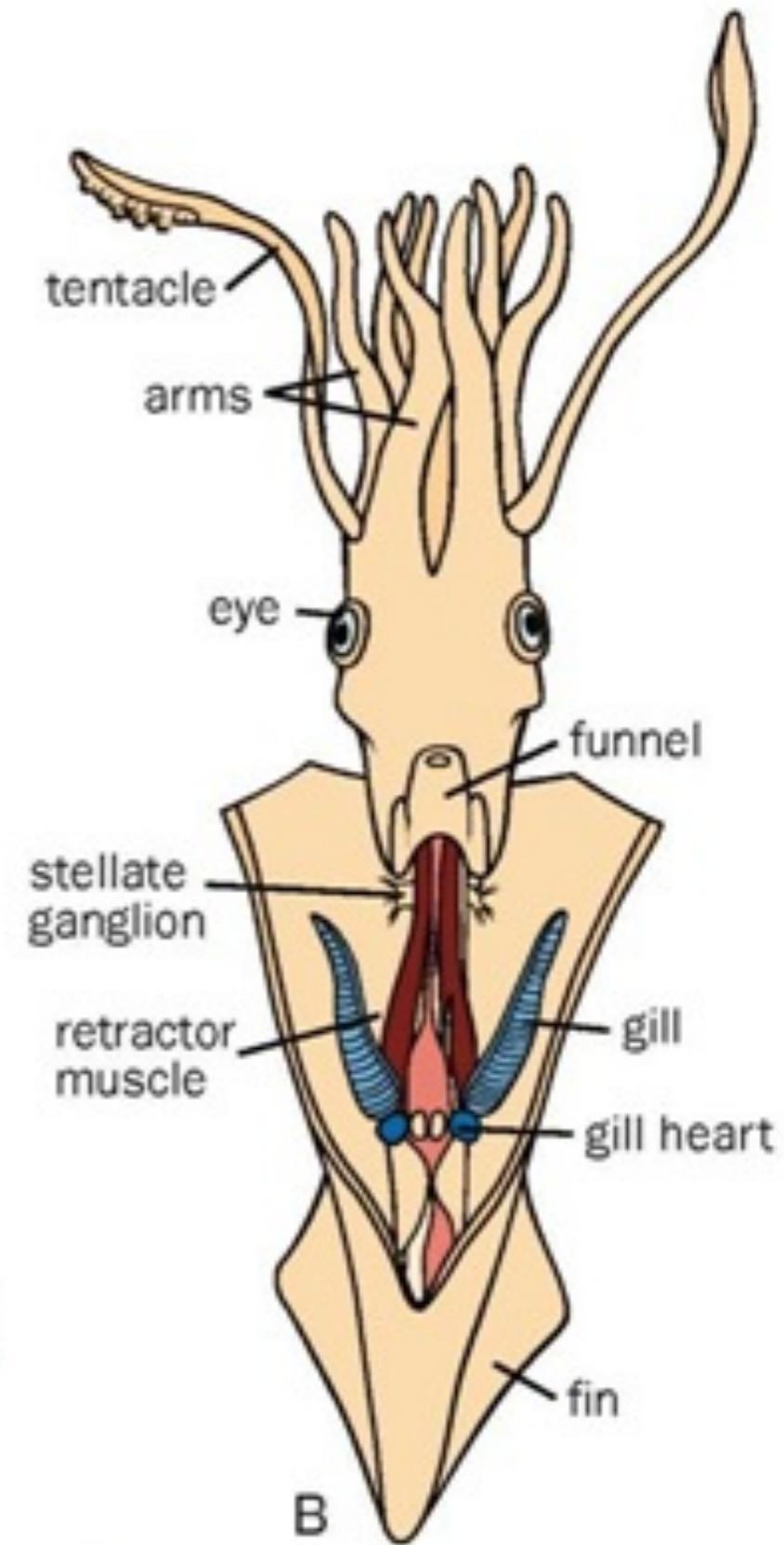
Brian O'Meara
EEB464 Fall 2019

Learning objectives

- Understand cephalopod anatomy
- Understand cephalopod evolution
- How can mimicry evolve?
- Life cycle evolution



A



B

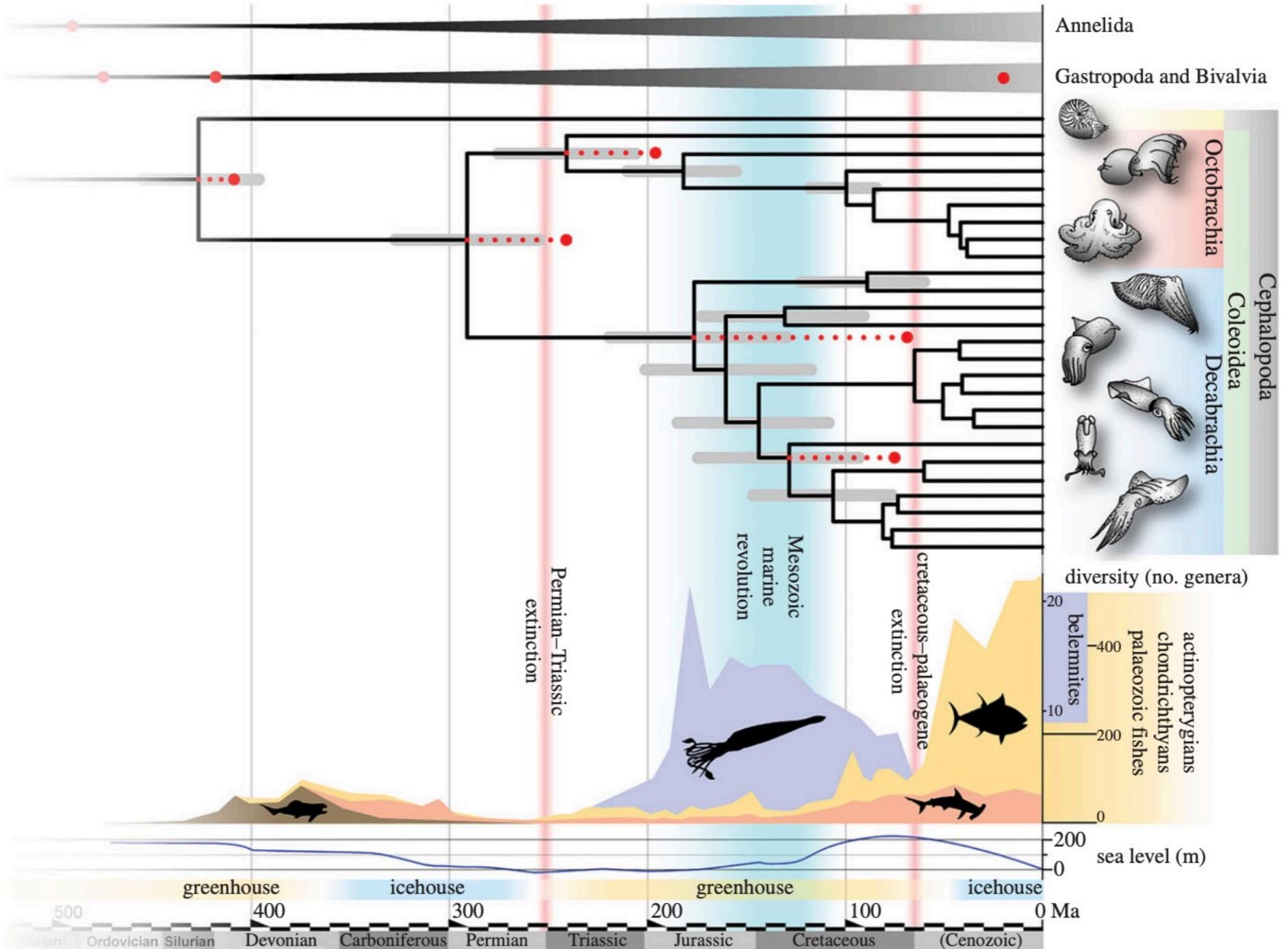
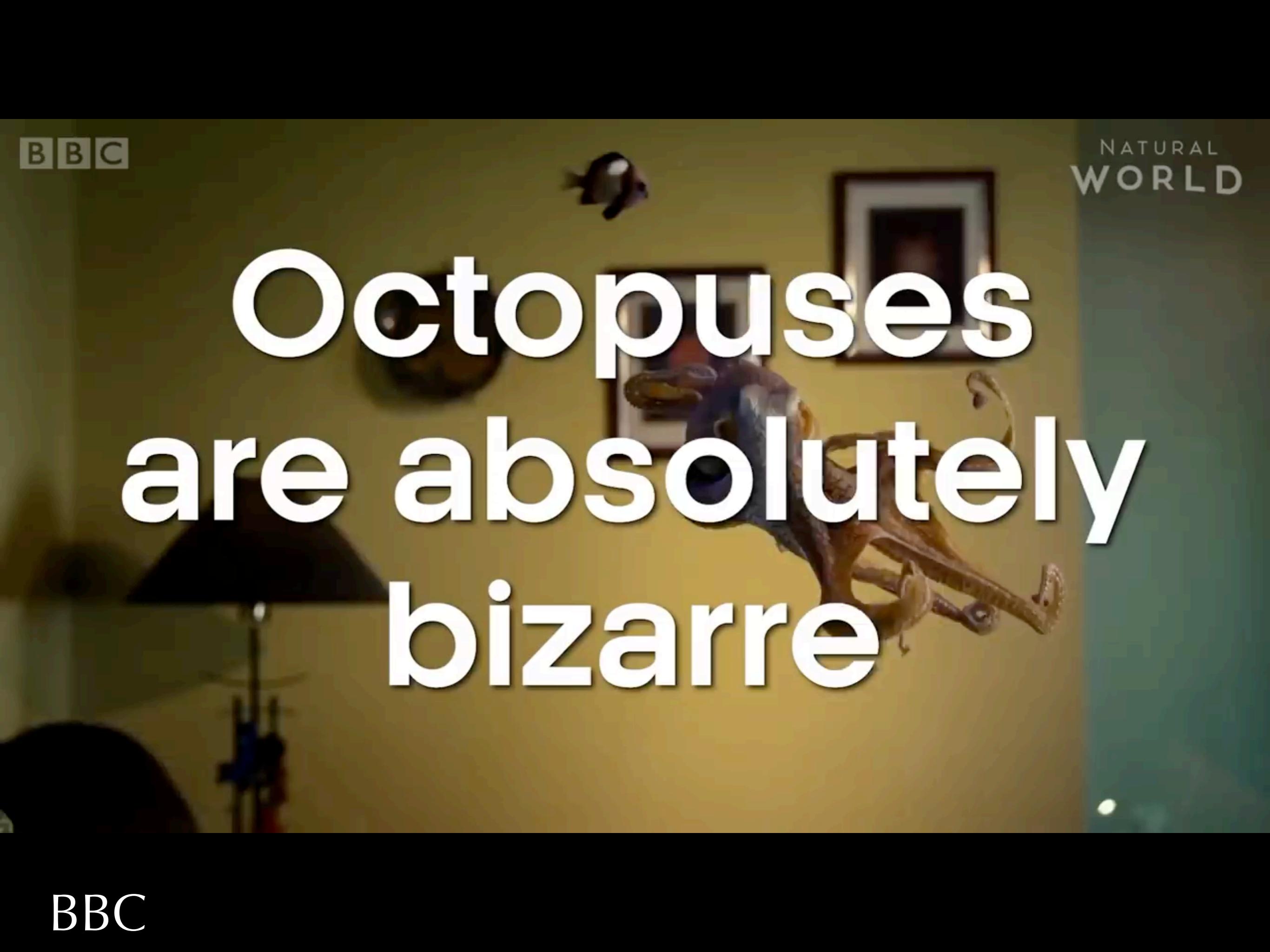


Figure 4. Chronogram of cephalopods, plus 26 bivalve and gastropod molluscs, one scaphopod and four annelids as outgroups and calibration nodes; 36 156 amino acid positions analysed under CAT-GTR substitution model, CIR clock model, Yule birth–death process, soft bound of 0.05, and a root prior of 565 Ma with a standard deviation of ± 10 Ma. Bars at nodes represent 95% confidence intervals (recent nodes not labelled with bars to aid clarity). Red dots indicated calibrated nodes (electronic supplementary material, table S1 and figure S3); red dotted lines represent extent of calibration minima. Environmental conditions and sea-level curve simplified from Miller *et al.* [45]. Curves for belemnite, actinopterygian, chondrichthyan and Palaeozoic fish diversity are based on fossil observations on diversity, data from Palaeobiology Database (pbdb.org), electronic supplementary material, table S5. Red vertical lines represent major extinction events. Aqua-blue vertical bar signifies the extent of the Mesozoic Marine Revolution [10].



Octopuses
are absolutely
bizarre



National Geographic

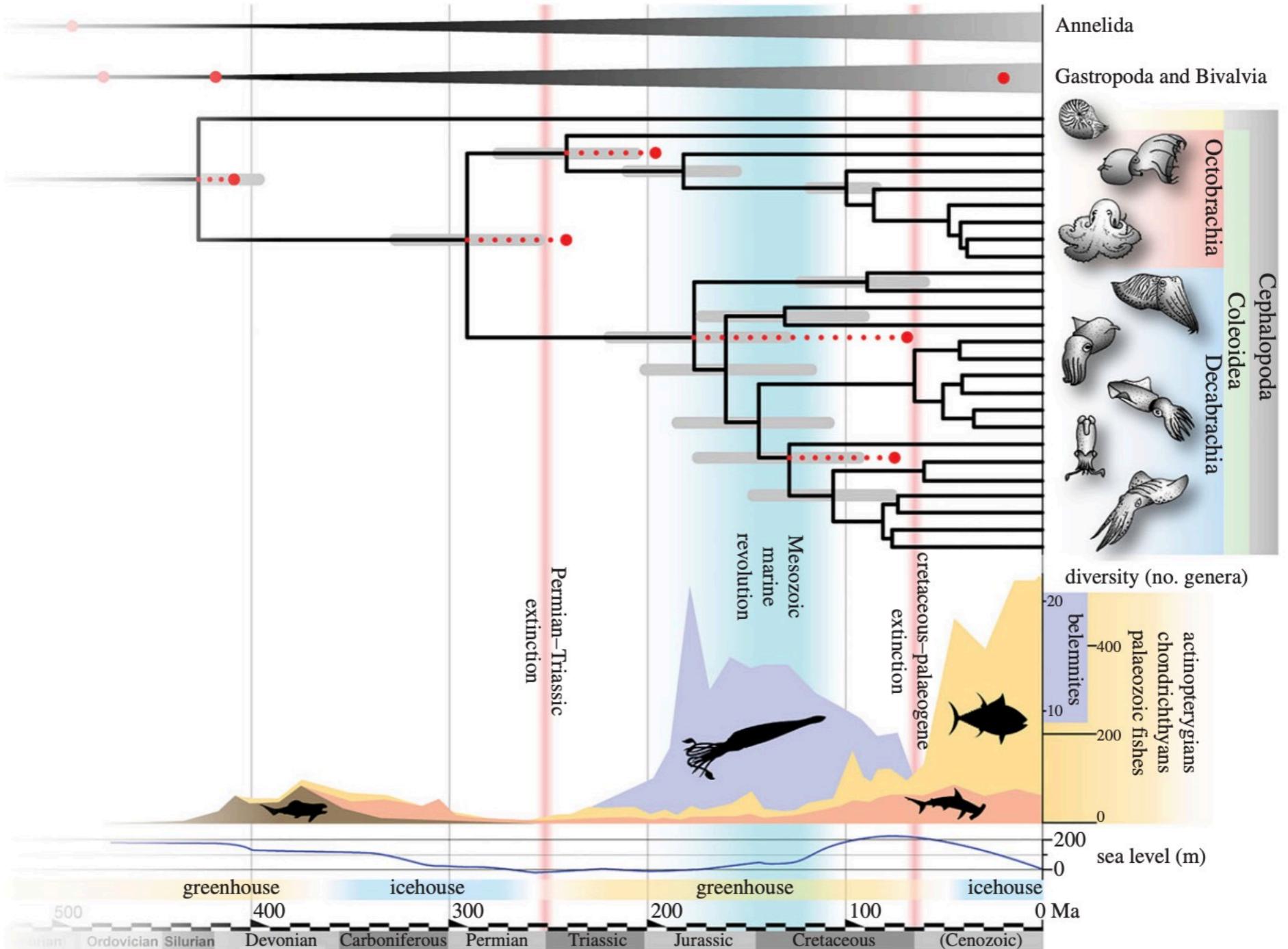


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National Geographic



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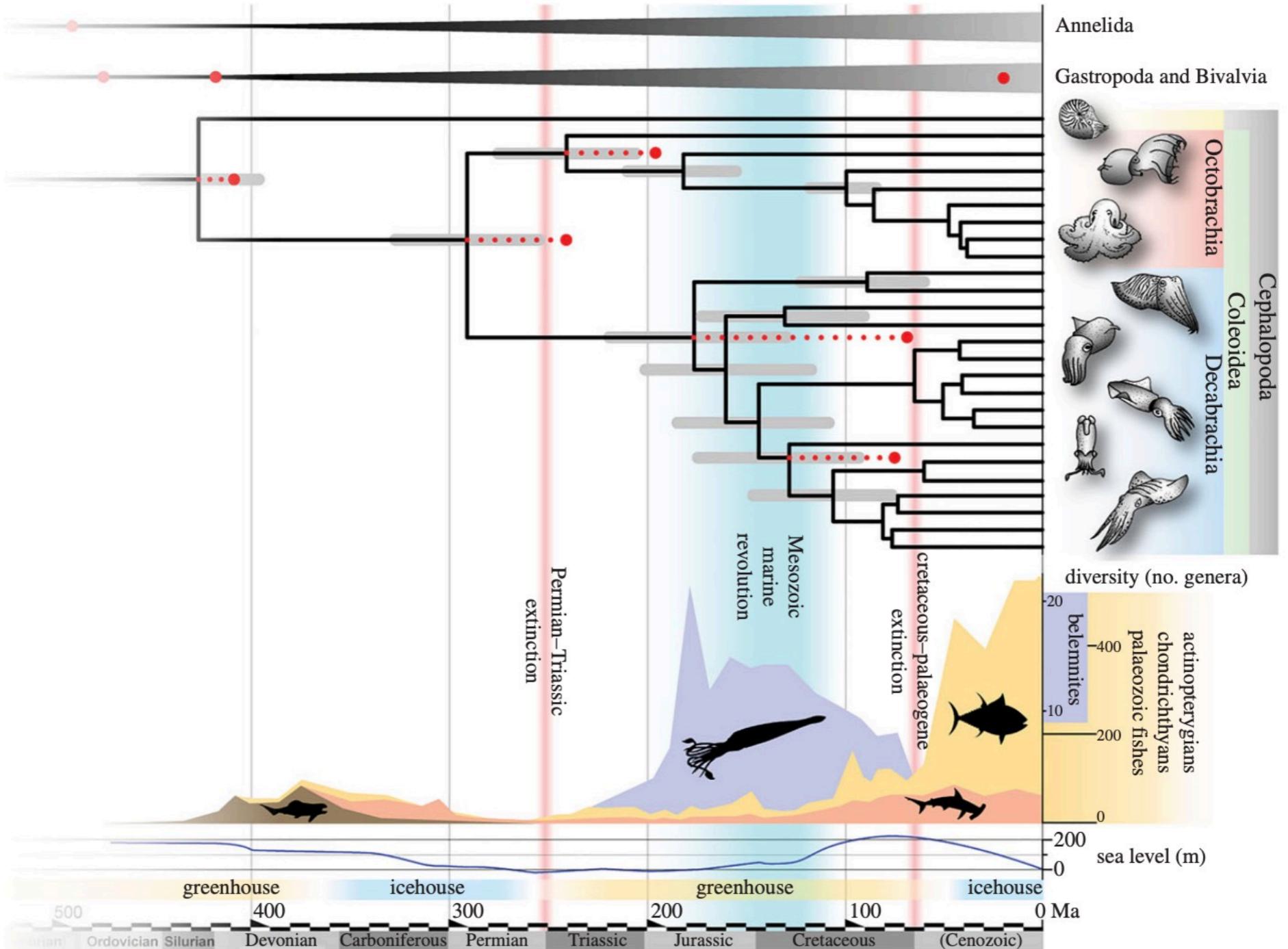


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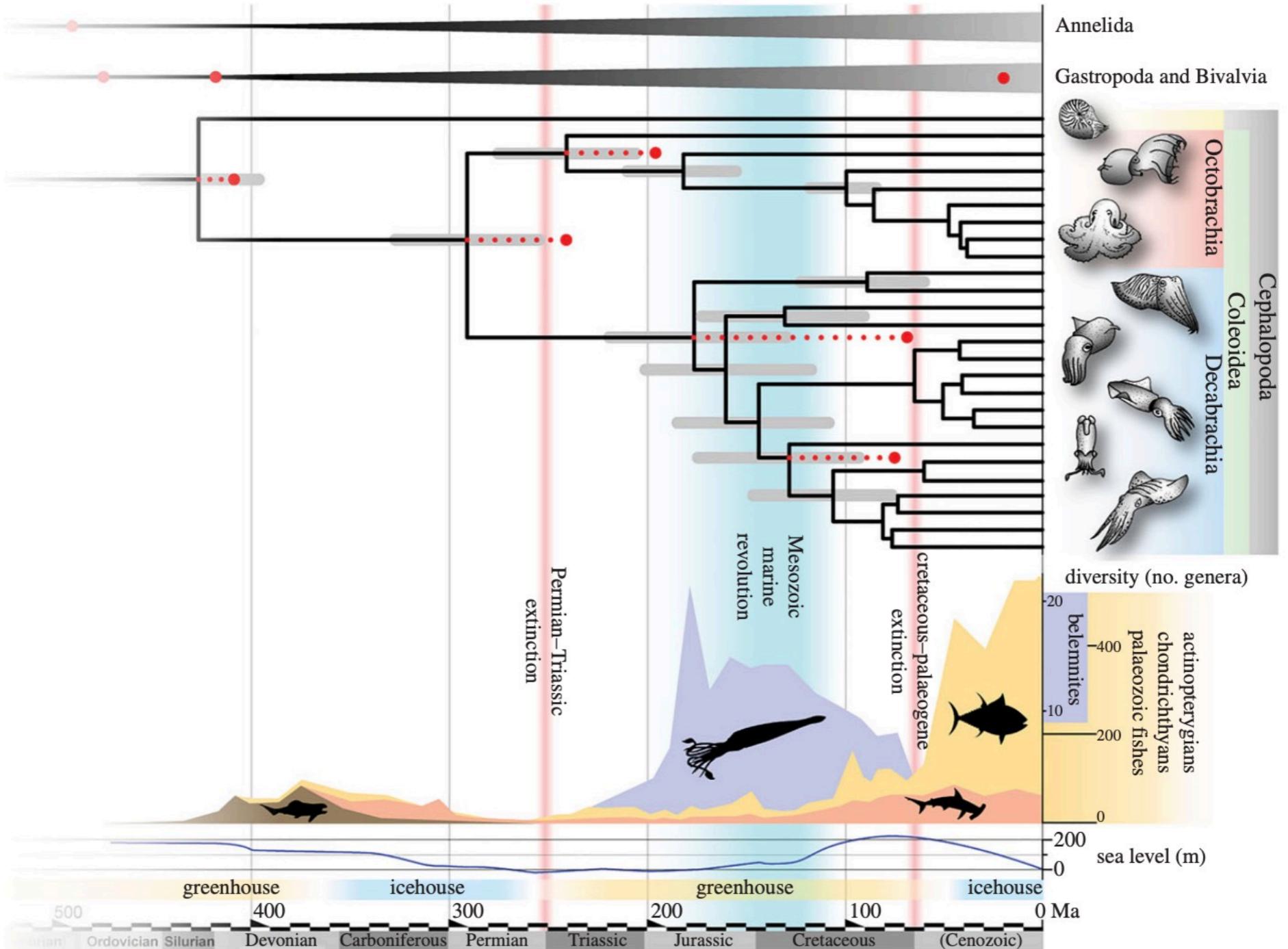


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BLUE PLANET II

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