CERAMAH TEKNIK TECHNICAL TALK

The early evolution and diversity of the Chondrichthyes (cartilaginous fishes - sharks, rays, etc.)

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Abstract: It is often said that sharks are "living fossils", that is, they have not changed much since their emergence in the early Silurian (ca. 430 million years ago). This short review of Palaeozoic chondrichthyans aims at demonstrating that this is not the case and that modern chimaeras, sharks, skates and rays show a disparity and a diversity, which is much more reduced than the one of their Palaeozoic ancestors. The phylogenetic relationships of the Chondrichthyes with the rest of the jawed vertebrates (Gnathostomata), which accounts for more than 90% of all living vertebrates, is currently in a state of flux, and the relationships of the fossil forms remain sometimes difficult to decipher. This is mostly due to a poor fossil record of articulated specimens, although a consensus phylogeny seems now to emerge. Finally, the cartilaginous skeleton of the chondrichthyans is not a plesiomorphic (primitive) feature, and sharks do not represent a proxy for plesiomorphic conditions among gnathostomes.

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