

## The problem of the relationship between agnathan and gnathostome vertebrates

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*Acta Palaeontologica Polonica* 26 (1), 1981: 9-18

Materials of the earliest vertebrates: Heterostraci and Thelodonti, were studied and compared with these of sharks. It is concluded that the main features of Heterostraci (olfactory apparatus, brain, lateral line sensory system, gill pouches) are similar with sharks. At the same time sharks display their own distinctive archaic features that bring them close to the Thelodonti. It cannot be excluded that the roots of Elasmobranchii were connected with the Thelodonti.

**Key words:** Agnatha, Gnathostomata, evolution, phylogeny, morphology.

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