

Available topics for Bachelor and Master Theses in Vertebrate Palaeobiology

Taxonomy & Systematics

Available projects

- Mio- and Pliocene fishes from Greece⁹
- Miocene killifishes (Cyprinodontiformes) of Ecuador
- The ethmoidal region in sciuriforms and teomyids
- The 'septal compass' and 'septal formula' in mammals⁸

Evolutionary Morphology

Available projects

- Homology and homoplasy in the nervous system of the teleostean caudal fin
- Inner ear and middle ear character evolution in vertebrates³
- Phenotypic plasticity and vertebral numbers in a Miocene fish community
- Cope's Rule & the evolution of body size in chondrichthyans
- Divergence estimates of fishes
- Ecomorphological disparity¹⁰
- Environmental constraints of early vertebrates
- Climatic shifts of chondrichthyans in the last 150 years

Quantitative Palaeobiology

Available projects

- Faunal relationships of Cenozoic fishes¹
- Growth patterns in extinct angel sharks
- Morphospace occupation²
- The fossil record and origin of herbivory in teleostean fishes
- Evolutionary trends in stem group teleosts
- Evolution of the Mediterranean fish fauna: Tethyal relicts and non-indigenous elements
- Palaeobiogeographic patterns⁵
- Evolutionary & biogeographical patterns of deep-sea cold seep and hydrothermal vent fishes
- Taphonomic processes¹¹

Functional Morphology

Available projects

- Micro-wear patterns of rostral teeth in extinct sawfishes
- Musculotendinous system of bony and cartilaginous fishes⁴
- Functional morphological investigations of the inner ear in vertebrates⁶
- Feeding and food-web reconstructions⁷
- Nervous system of the caudal skeleton in actinopterygian fishes
- Morphological structure and diurnal-nocturnal variation in Late Jurassic bony fishes of the Solnhofen Archipelago (South Germany)

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