

Einladung zum Vortrag
im Rahmen des gemeinsamen Kolloquiums des Instituts für Biologie und
Umweltwissenschaften und des Departments für Neurowissenschaften

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Cognition in Sharks: Sharp Thinkers with Sharp Teeth

Over the past ten years my lab has looked at learning and memory functions in elasmobranchs (e.g. grey bamboo sharks, ocellate river stingrays) and teleosts (e.g. Malawi cichlids) both on a behavioural and neuronal level. Among others, topics of interest include visual discrimination, object categorization, perception of illusory contours, spatial orientation, memory retention and numerical abilities. Most behavioural studies are performed as two-alternative forced choice experiments, in which the positive stimulus is reinforced by a food reward (operant conditioning). For the longest time, sharks which represent the oldest extant jawed vertebrates, thereby holding a key phylogenetic position, were considered 'primitive fish with primitive brains'. However, results of our studies indicate that the here assessed cognitive abilities in bamboo sharks are as well developed as in teleosts and other vertebrates, aiding them in activities such as food retrieval, predator avoidance, mate choice and habitat selection.

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