

Arne Redsted Rasmussen

I am a Danish zoologist and researcher whose career has focused on marine reptiles, biodiversity, natural history, molecular science, forensic research, conservation, and natural heritage. Associated with the Royal Danish Academy, I have developed an interdisciplinary research profile, with particular expertise in sea snakes.

A central focus of my research has been the biology, taxonomy, evolution, distribution, and ecology of sea snakes. My work has combined field research, museum collections, morphological studies, and DNA analysis, contributing to a better understanding of the diversity and evolutionary history of these highly specialised marine reptiles. My research has included material collected during major international expeditions and has involved collaboration with scientists and institutions around the world.

I have also investigated the challenges and opportunities presented by museum specimens. My research into formalin preservation and DNA has explored how historical biological collections can be used for modern molecular research. This work demonstrates the continuing scientific value of museum collections, even when specimens have been preserved for many decades.

My interdisciplinary research extends into **enzymes and forensic science**. Work on enzymatic maceration has examined methods for removing soft tissue from skeletal material while helping to preserve biological information, including DNA. Such research illustrates how knowledge of biological processes can be applied beyond zoology to questions of forensic identification and scientific investigation.

I have also contributed to research at the intersection of biology and cultural heritage, including studies involving DNA, enzymes, glue, and paintings. These projects demonstrate how techniques developed in biological science can offer new approaches to examining, interpreting, and preserving museum and artistic materials.

An important dimension of my work concerns bioindicators and the health of marine ecosystems. Marine reptiles, including sea snakes, can provide valuable information about environmental conditions and changes in marine ecosystems. Understanding their distribution, diversity, and biology can therefore contribute not only to taxonomy and evolutionary research but also to broader assessments of marine biodiversity and environmental change.

I have further contributed my expertise to international assessments of the world's oceans, including working on IUCN Red Lists and participating in the United Nations' Third World Ocean Assessment. This work highlights research within a wider global context, connecting specialist knowledge of marine reptiles with the assessment and conservation of ocean biodiversity.

My work has been at the intersection of marine biology, zoology, molecular research, forensic science, museum collections, natural heritage, and ocean assessment. My extensive research on sea snakes and marine reptiles reflects a broader scientific commitment to understanding biodiversity and the changing marine environment, while my interdisciplinary

work demonstrates how biological knowledge can contribute to fields far beyond traditional zoology.