

Amphibian Biology

Volume four deals with palaeontology and describes the fossil record of amphibians and how modern forms evolved.

Volume five will treat osteology and further volumes are being planned to cover such topics as embryology, endocrinology, biomechanics, ecology, populations, taxonomy, life histories, digestion, circulation, anatomy, cell biology and biogeography. The series is an ongoing one with topics to be added as sufficient information comes to hand to warrant a review.

Volume one deals with the skin and discusses its structure and the way it develops. The multiple function this organ fulfills in amphibians are explained, including its role as an accessory respiratory organ, and as an avenue of exchanging water and salts with the external environment. The importance of skin pigments in various aspects of amphibian life also is discussed. Amphibians are unique in the variety and amount of skin secretions they produce and the role these chemicals play in such vital processes as reproduction and defence are treated. Finally, the chemistry of amphibian skin secretions is reviewed and the benefits to human health and comfort arising from their use in the study or treatment of cancer, cardiovascular disease, mental disorders and bacterial and fungal infections are described. They are also the source of important pain relievers.

Volume two treats the social behaviour of amphibians, how they attract and compete for mates, care for their young, defend territories, recognize each other, and how these activities are affected by hormones, and how they evolved.

Volume three reviews the sensory perception of amphibians, how they smell, taste, see, detect water movements, and sense pain, temperature and pressure. Several less familiar senses are also discussed, such as the ability of amphibians to detect magnetic and electric fields.

FRONT COVER PHOTO

Two specimens of a fossil amphibian, *Acanthostega gunnari*, from the Upper Devonian (Famennian) of East Greenland. Specimen field number 1227 of the Museum Geologium Universitatis Hafniensis.

Photograph by Mrs Sarah M. Finney, used by courtesy of the Geological Museum, University of Copenhagen.

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