

Amphibian Biology

A previous volume in this series (Palaeontology) reviewed the origin and early history of amphibians as evidenced by their fossilized bones. In the present book, the scope is extended forward in geological time to the present by summarizing the osteology of extant forms. These two volumes are bridged by the first chapter in the present book which compares the dermal skulls of Recent amphibians with those of their Palaeozoic ancestors.

Then follow chapters treating osteology on various scales, first at the cellular level and then at the tissue level. The remainder of the chapters deal with the morphology of whole bones of the three Orders of modern amphibians. Two chapters treat salamanders. The osteology of caecilians is then covered. Finally, there is a treatment of the skull of anurans. This chapter also delves into the usage and synonymy of the names of bones and bone-parts.

The approach taken varies among authors, all chapters being primarily morphological, but some stressing functional aspects and others presenting phylogenetic interpretations. Many of the chapters have a strong developmental emphasis. In fact, most chapters either deal with skeletal development at length, or at least have some sections treating developmental features.

There is not complete unanimity of viewpoint among all authors. Differences of opinion stimulate further research and are a sign of a healthy and growing field of endeavour. Consequently, rather than attempting to reconcile divergent opinions, the editorial policy was to provide a forum where controversial topics could be aired by experts and contrasting views presented.

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.

FRONT COVER PHOTO

The lower jaw and hyobranchium of the salamander, *Amphiuma means* (family Amphiumidae). The animal was skinned and its muscles cleared to render them transparent. Then two kinds of stains were applied, Alizarin that stained the bones red, and Alcian Blue that stained cartilage blue.

Photograph by courtesy of Christopher Rose (see Chapter 4).

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The Set: ISBN 0 949324 53 1
This Volume: ISBN 0 949324 94 9