Book Reviews

Heatwole, H. (Ed.) (2005): *Amphibian Biology. Volume 6: Endocrinology*. Surrey Beatty & Sons, Chipping Norton (Australia). Pages 2221-2405. ISBN 0-949324-95-7 (hardcover).

This book is the sixth one in the famous collection "Amphibian Biology", which started in 1994 with a volume on the integument and continued with volumes on social behaviour, sensory perception, paleontology, and osteology. As for the other books of the series, it is divided into chapters that can be read independently of each other and are written by specialists of the covered topic. This new volume on endocrinology was particularly awaited because of the emergence of this field in other sciences, such as the study of amphibian behaviour and life-history traits. More particularly, despite the existence of books on animal endocrinology, sometimes presenting specific chapters on amphibians, there was a lack of a detailed account of the current knowledge on the hormones and their regulation in amphibians. The text is quite easy to read for non-specialists as it provides clear descriptions. It allows thus a good summary of the field of endocrinology, independently of the fact that it is targeted on amphibians.

The first chapter includes the anatomy of the neuroendocrine system, consisting of the brain and pituitary gland, the downstream endocrine glands affected by this system and some endocrine tissues that are not affected by the neuroendocrine system. The second chapter is the longest one of the book (133 pages). It focuses on the hormonal regulation of the reproductive cycles. After depicting the situation in males and then in females, it points out the brain-pituitary-gonadal interactions and environmental effects. The third and fourth chapters deal with the hormonal control of sexual behaviour and metamorphosis respectively, with additional discussions on autoinduction of receptors and cell depth. The fifth chapter depicts the hormonal regulation of both morphological and behavioural secondary sexual traits, and also the sexually dimorphic sites in the central nervous system. The sixth and seventh chapters are devoted to the hormonal regulation of metabolism and growth, with a focus on prolactin and growth hormones. The eighth chapter focuses on the endocrine control of water and electrolyte balance. In the ninth chapter, the accent is placed on the hormonal regulation of colour change and in the tenth chapter, on the link between the immune system and hormones.

Although the last cited reference dates from 2001, the book represents a very useful state of knowledge at that date in the field of amphibian endocrinology. It should be of great interest for all endocrinologists in summarizing for them an abundant literature, but it should also attract behavioural, community, developmental and evolutionary ecologists working on amphibians in offering them, in only one package, very specific and diverse pieces of information that are often not well known.

Mathieu Denoël
FNRS Research Associate,
University of Liège,
Belgium