

Book Review:

ANDREA AMBROGIO, SERGIO MEZZADRI. *Girini d'Italia - Tadpoles of Italy*

EDOARDO RAZZETTI

Museo di Storia Naturale, Università degli Studi di Pavia, Piazza Botta 9/10, 27100 Pavia, Italy. E-mail: Razzetti@unipv.it

Writing a review of this book is quite difficult as it is unusual in some aspects, I would define it “a field guide to the tadpole of Italy” but since its dimensions are 21 × 30 cm I am afraid that it would not fit in the category of pocket size books. The text is completely bilingual and divided in two columns with Italian on the left and English on the right, this solution increases the total number of (coated) pages (102) and thus the weight of the book, but makes it more useful and interesting for many foreign batrachologists.

The frontispiece shows the logo of Societas Herpetologica Italica, which patronized the publication, and the handwritten notation of which copy out the set of 800 copies the particular book is (this is a limited edition of numbered copies). Another unusual solution is the cloth hardcover binding with just the title engraved in golden letters and no dust jacket, which again is atypical for a book published in the XXI century.

The book starts with a nice foreword by Giuliano Doria followed by an acknowledgment list. There is a long introduction that deals not only with general aspects of anuran larvae and their biology but also gives useful suggestions on how to breed them and take good pictures, which can be useful to obtain a reference set of images to compare when the identification is apparently not reliable. It is important to tell that the book was written as a tool for tadpole field identification through the observation of external morphology, colour pattern and behavioural features (!); while the “standard” study of cheratodonts was not reported because it is necessary to kill or anesthetize the tadpoles to adopt it.

Next is a proposal of a dichotomous keys for the identification of live tadpoles (34 to 39 Gosner stages); in general I do not rely too much on identification keys because they are based on a limited number of morphological characters that can easily bring to mistakes (cf.

Dubois, 1998), but I cannot deny the fact that these keys can be very useful to focus on the most useful characters or when experience is lacking. I would expect some data on young tadpoles (some species like *Bufo bufo* are easy to distinguish in the field) or egg masses identification but this monograph deals only with well-developed larval stages.

The core of the book consists of the species accounts and the plates that represent about the 90% of the book. The 13 full colour plates that depict the tadpoles are brilliant pieces of art. They are by far the best drawings of tadpoles I've ever seen, and I feel that Andrea Ambrogio succeeded well in the difficult task of giving the tadpoles a “living” appearance. One of the aspects of the plates that I appreciate most is that they do not depict the “standard” tadpole but they represent (when needed) different individuals to show variation in shape and colours which can be crucial to obtain a reliable identification. Each species account starts with a detailed description similar to the ones proposed by Bühler et al. (2007). Most of the characters proposed are new and allow to distinguish even difficult species like *Rana dalmatina*, *Rana latastei*, *Rana italica* and *Rana temporaria*; this is surprising as in the past I realized how can be tough to identify a brown frog's tadpole from the Northern Apennines or the Po Plain. It is difficult to know if these characters are really reliable, only time and experience will tell, but I am quite confident that, given the passion and experience of the authors, these have been carefully pondered. The rest of the species accounts deals in great detail with the biology of the larvae including geographic and altitudinal distribution, egg-laying habitat and period, water temperature at deposition, incubation and development time, diet, overwintering, predators and syntopy with other amphibians. The reference lists (each one located at the end of the species accounts) are accurate and complete.

Is this book really useful? To me the answer is absolutely yes: even if there are several guides that offer identification keys and descriptions for tadpoles (the “classic” ones: Lanza, 1983; Nöllert and Nöllert, 1992; Arnold, 2002; Lanza et al., 2007) most of them show drawings that are just modified version of previous authors works (sometimes of the XIX century). Ambrogi and Mezzadri correct some mistakes that have been repeated several times, including the corrugated superior part of the body of the American Bullfrog *Lithobates catesbeianus* (which is probably an artefact due to alcohol preservation) and point out some obvious identification characters previously omitted (in European literature) like the black spots on the body (again in *L. catesbeianus*).

As final argument I would like to add that the identification of anuran larvae can be an invaluable tool during amphibian surveys: just think that one of the most important (maybe the most important) Italian population of *Pelobates fuscus* has been detected, over 20 years ago, on the basis of few tadpoles only (Gentilli et al., 1994). Tadpoles of Italy can be purchased from the publisher’s website (<http://www.dranae.it/>).

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