García-París, M., A. Montori & P. Herrero (2004): Amphibia. Lissamphibia. – Fauna Iberica, vol. 24, Museo Nacional de Giencias Naturales, Consejo Superior de Investigaciones Gientificas. Madrid, 640 pp., ISBN 84-00-08292-3

No other European nation has over the last decade published such a wealth of country-specific herpetological works at consistently high scientific and production quality levels, as has Spain. These range from identification guides (Barbadillo et al. 1999, Salvador & Pleguezuelos 2002, Salvador & Garcia-Paris 2001), via distribution atlases (Pleguezuelos 1997, Pleguezuelos et al. 2002), to comprehensive monographic treatises of individual species (Salvador 1998, Garcia-Paris et al. 2004). The unfortunate fact of their being little known even in the Mediterranean region is likely due to their being published exclusively in the Spanish language.

Here to be presented is now the latest of the above-mentioned works. It is the 24th volume of a series of handbooks, "Fauna Iberica", published by the Museo Nacional de Ciencias Naturales in Madrid. Covering the first 41 pages, general chapters create an introduction to amphibian systematics, morphology, anatomy and biology, and there is a section that is dedicated to observation techniques and data gathering in the field. A total of 440 pages are then used for the description of the fifty amphibian species native to the Ibero-Balearic region plus the five introduced ones (Bufo mauritanicus, Rana ridibunda, Rana kl. esculenta. Rana lessonae, Rana catesbeiana). All taxonomic units are furnished with dichotomous identification keys and comprehensive diagnoses in which phylogenetic aspects are discussed in depth. Three species that were traditionally accommodated in the genus *Triturus* are here assigned on the basis of their skull anatomy and molecular biological results to Mesotriton (M. alpestris), and Lissotriton (L. boscai, L. helveticus), respectively. Alytes cisternasii is referred to the subgenus Ammoryctis, and the green frogs are placed in the subgenus Pelophylax. The species accounts strictly follow the order of a morphological description - sexual dimorphism - larva - cellular genetic and biochemical data (including caryograms for the Caudata) – variability – geographic distribution – habitat – activity rhythm – diet – predators – parasites – reproduction and development – population structure and dynamics - threats and protection status. Species are described in great detail based on a complete analysis of the existing literature of nearly 1,900 references. The treatise ends with a

list of synonyms of the individual species and 51 colour plates. Included in the text are drawings of adults, larvae (missing for *Triturus pygmaeus*, *Pelodytes ibericus*, *Rana pyrenaica*), and the oral discs of anuran larvae (missing for *Bufo viridis*, *Rana dalmatina*, *pyrenaica* and *temporaria*), as well as of the lower sides of hands and feet. The illustrations are of high quality almost throughout and to the point. Those of the larvae of *Alytes muletensis* and *Alytes cisternasii* are identical, though, with both showing that of *A. cisternasii*, which is an error that leaves *A. muletensis* without an illustration of its larva.

The texts are authored with so much competence and relay the current state of knowledge through an almost oppressive wealth of references so completely that any critical comment must appear as nitpicking. This reviewer can, however, not refrain from making one. It arises from the fact that the herpetological region explored here is shared by two states, but the authors are herpetologists representing only one of them. This has resulted in the locally herpetofaunistic Portuguese literature having not been taken into consideration with the same thoroughness as have the respective Spanish sources. It becomes evident in five small errors in the distribution maps, for example in the cases of Pleurodeles waltl, "Lissotriton" helveticus, Pelodytes punctatus, in altitudinal data (e.g., Discoglossus galganoi 790 instead of 1200 m [Malkmus 1995], Hyla meridionalis 600 instead of 900 m [Malkmus & Schwarzer 2000]), information on sympatry (e.g., the sympatric occurrence of Hyla arborea and H. meridionalis is not limited to "en diversos puntos ... del centro de Portugal", but continuous in south-western Portugal (Malkmus & Schwarzer 2000), and an incorrect and inconsistent usage of Portuguese place names that were in part translated into Spanish (e.g., Sierra de la Estrella instead of Serra da Estrela, Losa instead of Lousä). The distribution maps also need to be commented on: the distribution pattern of each species is illustrated with a map that contains provincial borderlines and a UTM grid of 100 by 100 km for easy navigation. The border points of the distribution then form the limits of a grey-shaded distribution area. This unfortunately makes the distribution gaps that exist for many species less obvious than in maps using dot records in 10 by 10 km UTM grids (comp. Malkmus 1995, Pleguezuelos et al. 2002), or even 5 by 5 km grids (MALKMUS 2004). Systematic cartographic work has meanwhile been conducted throughout the entire Iberian Peninsula and the resultant amount of data (at present more than

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500,000 locality records) is so great that larger white spots can no longer be presumed to possibly be cartographic gaps. The latter mentioned distribution maps therefore depict real distribution patterns quite accurately, and should be given preference in a possible second edition.

These critical notes are neither intended nor suitable to negatively affect the overall rating of this book. In fact, it may be characterized as follows: the opulence of information and assertive illustration with its bibliographic treasure chest that is this book, is an absolute must for everybody with an interest in the amphibians of the Iberian Peninsula.

Bibliography

- Barbadillo, J., J. Lacomba, V. Pérez-Mellado, V. Sancho & L.F. López-Jurado (1999): Anfíbios y reptiles de la Península Ibérica, Baleares y Canarias. Geo Planeta, Barcelona, 419 pp.
- MALKMUS, R. (1995): Die Amphibien und Reptilien Portugals, Madeiras und der Azoren. – Westarp Wissenschaftern, Magdeburg, 192 pp.
- MALKMUS, R. (2004); Amphibians and reptiles of

- Portugal, Madeira and the Azores-Archipelago. Gantner-Verl., Ruggell, 447 pp.
- MALKMUS, R. & U. SCHWARZER (2000): Die Verbreitung der Amphibien und Reptilien in Südwest-Portugal. Zeitschr. Feldherp., Bochum, 7: 57-75.
- Pleguezuelos, J.M. (ed.)(1997): Distribución y biogeografía de los anfíbios y reptiles en España y Portugal. Monogr. Herp. 3, Granada, 542 pp.
- Pleguezuelos, J.M., R. Márquez & M. Lizana (2002): Atlas y libro rojo de los anfibios y reptiles de España. Asoc. Herp. Esp., Madrid, 584 pp.
- SALVADOR, A. (Coord.)(1998): Reptiles. Fauna Iberica, Vol. 10, Mus. Nac. Cienc. Naturales, Madrid, 705 pp.
- SALVADOR, A. & M. GARCÍA-PARÍS (2001): Anfibios españoles. – Canseco-Esfagnos. Talavera de la Reina, 269 pp.
- Salvador, A. & J.M. Pleguezuelos (2002): Reptiles españoles. Canseco-Esfagnos. Talavera de la Reina, 490 pp.

RUDOLF MALKMUS, Wiesthal