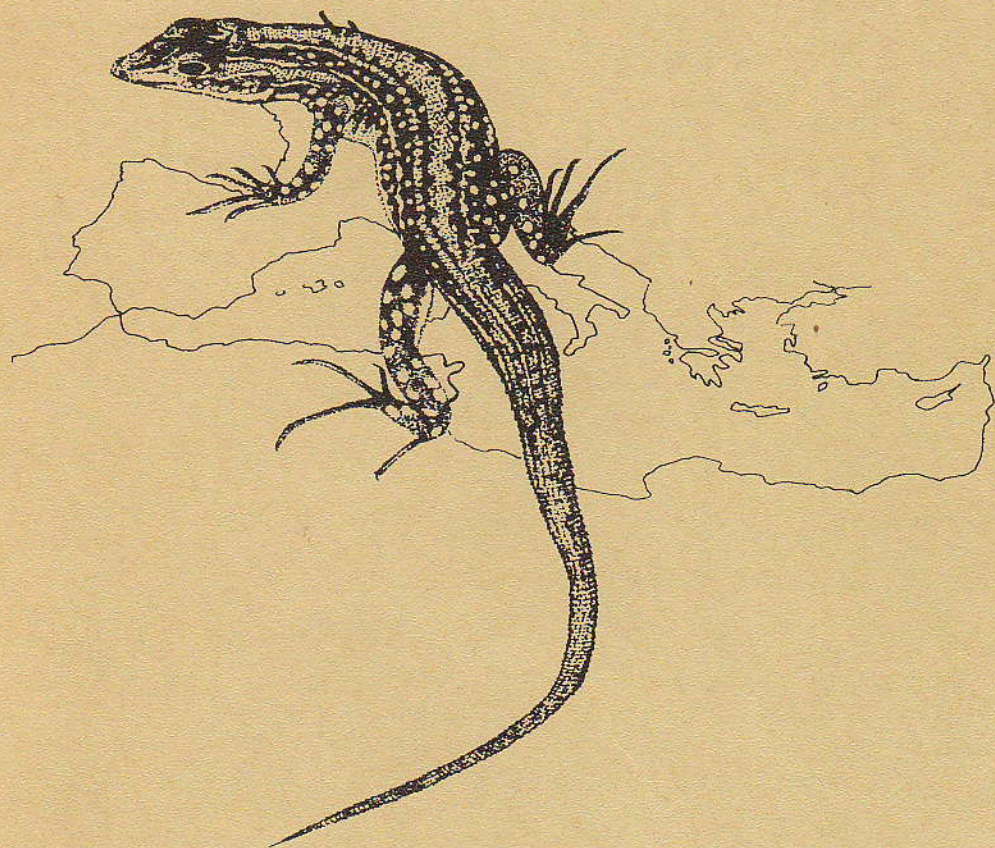


HELLENIC ZOOLOGICAL SOCIETY

Lacertids of the Mediterranean region

A Biological approach



Edited by

E.D.Valakos
W. Bohme
V. Perez- Mellado
P. Maragou

Athens, Bonn, Alicante
1993

Contents

Contents	I-II
Preface	III-IV
Phylogeny and the Lacertidae	
E.N. Arnold	1-16
Zoogeography of the lacertid lizards of the western Mediterranean basin	
W. Böhmé & C. Corti	17-33
Comparative morphology of the adrenal gland in some Mediterranean species of the family Lacertidae	
V. Laforgia, A. Capaldo, L. Varano, R. Putti, A. Cavagnuolo .	35-42
Clinal variation in some meristic characters of the Italian wall lizard <i>Podarcis sicula</i> (Rafinesque-Schmaltz, 1810)	
B. Lanza, P. Garavelli, C. Corti	43-49
Chromosome G-banding comparison among some mediterranean lacertid lizards	
G. Odierna, T. Capriglione, V. Caputo & E. Olmo	51-59
The karyology of Mediterranean lacertid lizards	
E. Olmo, G. Odierna, T. Capriglione	61-84
A systematic survey of the Iberian rock lizard <i>Lacerta monticola</i> Boul., 1905	
V. Pérez-Mellado, L. J. Barbadillo, F. Barahona, R. P. Brown, C. Corti, F. Guerrero, B. Lanza	85-105
An immunocytochemical study of the endocrine pancreas in three genera of lacertids from the Mediterranean basin	
R. Putti, M. Maglio, A. Della Rossa, V. Laforgia, L. Varano .	107-119
The many dimensions of a lizard's ecological niche	
E. R. Pianka	121-154
Feeding of two sympatric lacertids in a sandy coastal area (Ebro Delta, Spain)	
M. A. Carretero & G. A. Llorente	155-172

Food consumption of <i>Podarcis taurica ionica</i> (Lehrs, 1902) in the Ionian islands (Greece)	
B. Chondropoulos, P. Maragou, E. D. Valakos	173-182
An ethological study of feeding in the lizard, <i>Podarcis hispanica</i>	
E. Desfilis, E. Font, & A. Gómez	183-198
Trophic ecology of <i>Acanthodactylus erythrurus</i> in central Iberian peninsula. Is there a dietary shift?	
M. J. Gil, V. Pérez-Mellado, F. Guerrero	199-211
Chemoreception in the Lacertidae: exploration & conspecific discrimination in the Spanish wall lizard, <i>Podarcis hispanica</i>	
A. Gómez, E. Font, & E. Desfilis	213-230
Ecological similarity of lacertid lizards in the Mediterranean region. The case of <i>Ophisops elegans</i> and <i>Psammodromus hispanicus</i>	
V. Pérez-Mellado, E.D. Valakos, F. Guerrero, M.J. Gil-Costa	231-242
Captive breeding of <i>Podarcis filfolensis</i>	
J. Moravec	243-248
Studies of thermal biology: where should they go from here?	
R. A. Avery	249-252
Methods and aims in parasitology of Mediterranean reptiles, mainly lizards	
V. Roca	253-262
The place of the herpetofauna in the design of a nature reserve system: Hypotheses, concepts and structure of data	
A. Y. Troumbis	263-278
Index of genera, species and subspecies	279-281

PREFACE

Lizards of the family Lacertidae are the most common reptiles in the area of the Mediterranean basin. Of the 36 species recognized at present, that is more than 15% of the extant species recognized for this family (Arnold 1989), some are occupying vast distribution areas with a considerable variety of biotopes, whereas others are restricted to relictual refugias with highly specialized habitat requirements. The scientific study of the Lacertidae, in this area, dates back to the end of the 18th century, when Linnaeus (1758: *Systema naturae*) described some of them in the first nomenclaturally relevant manner. Early milestones of the study of Mediterranean lacertids were Bedriaga's (1886) "Beitraege zur Kenntnis der Lacertidenfamilie" (*Abh. senck. naturf. Ges.* 14), Mertens' (1916) "Studien zur Systematik der Lacertiden" (Berlin), Schreiber's (1874; 1912) "Herpetologia europea" (Braunschweig and Jena) and Boulenger's (1920) "Monograph of the Lacertidae" (London). Nevertheless, the works on ecology, biogeography and natural history have only recently known a substantial rise and the available data are scattered through a wide range of journals, monographs and languages so that it sometimes proves quite difficult to gather the necessary information in order to acquire a global view on a subject. The lack for synthetic works is distinct. Here, of course one should mention the work of Arnold (1973) "Relationships of the Palearctic lizards assigned to the genera *Lacerta*, *Podarcis*, *Algyroides* and *Psammodromus*" (*Bull. Brit. Mus. nat. Hist.* 25), and Böhme's (1981; 1984; 1986) "Handbuch der Reptilien und Amphibien Europas" (vol.1 and 2, Wiesbaden) that summarizes all the available information on the European Lacertidae and, in addition, covers, until its date of publication, the most important literature on lacertid lizards.

No one could expect or would have expected that the first informal meeting of people working with lacertids of the Mediterranean basin, during the First World Congress of Herpetology in Canterbury in 1989, would result, after only 4 years, in the present book that includes several papers on different topics and aspects of the biology of some of our favourite animals. However, it is our firm belief that we cannot understand lacertid lizards in their biological wholeness by individual approaches alone. Only with a close international co-operation of different biological specializations it will be possible to organize our results in time and space.

All the papers included in this volume were presented in the First International Congress on the Lacertids of the Mediterranean Basin, which was held in Mytilini on Lesbos island, Greece, in April 1992. Thus, the authors had

the opportunity to mutually discuss their results and make cross references. We hope that the result is a volume more fully integrated than a typical proceedings book. moreover, before publication, each paper was read by two independent reviewers.

In spite of the heterogeneity of the topics covered, that actually reflects the present trends in the study of Lacertidae and even delineates the future development, we have tried to organise the book in three main sections. In the first one (Chapters 1-8) we have included all the works referring to the phylogeny, biogeography and systematics of Mediterranean lacertids. Part 2 (Chapters 9-16) presents papers that deal with several aspects of ecology and natural history. The first one in this section (Chapter 9) is a paper that does not relate exclusively to the Lacertidae but is an overview of a lizards ecology. Finally, in the last but not least part (Chapters 17-19) methodological problems in thermal ecology, parasitology and conservation biology, are examined.

We would like to express our sincere thanks to the following colleagues for their help during the scientific and linguistic review of manuscripts: Dr. D. Bauwens (Belgium), W. Bischoff (Germany), Dr. R.P. Brown (Un. Kingdom), Dr. W.E. Cooper (U.S.A), Prof. K. Crimbas (Greece), Dr. H. Grillitsch (Austria), Dr. A. Haritos (Greece), Dr. K. Henle (Germany), Prof. M. Karandinos (Greece), Dr. A. Legakis (Greece), Dr. J. Lluch (Spain), Dr. W. Mayer (Austria), Dr. P. Navarro (Spain), Dr. H.-K. Nettmann (Germany), Dr. A. Salvador (Spain), Prof. M. Schmid (Germany) and Dr. F. Tiedemann (Austria).

Moreover, for their financial assistance during the congress and the publication of this volume, we would like to thank the Ministry of the Aegean (Greece), the University of the Aegean (Greece), the Ministry of Industry, Energy and Technology (Greece), the Deutsch Gessellschaft für Herpetologie und Terrarienkunde (Germany), the Municipality of Mytilini (Greece), the Prefecture of Lesbos (Greece) and the Olympic Airways. Finally the assistance of the Hellenic Zoological Society is gratefully acknowledged.

Athens, Bonn, Alicante, July 1993

The editors: Efstratios Valakos
Wolfgang Böhme
Valentin Pérez-Mellado
Panagiota Maragou