

BOOK REVIEWS

GUIA DE LAS MARIPOSAS DIURNAS DE GALICIA, by Eliseo Higinio Fernández Vidal. 1991. Excmo. Diputación Provincial de A Coruña, Publicaciones. 291 pp., numerous color photographs and text figures. Hardcover, 24.5 × 29 cm, ISBN 84-86040-57-4. In Spanish. Available at a reduced price for lepidopterists from the author, Eliseo H. Fernández Vidal, Plaza de las Angustias, 4-2do; Ferrol 15403, La Coruña, Spain: \$20 U.S. plus postage (\$15 airmail; \$8 seamail).

Galicia is the region occupying the northwest corner of Spain and is wedged between Portugal to the south and the Bay of Biscay to the north, with the Atlantic Ocean to the west. It is one of the largest regions in the country, bigger than Belgium and Holland combined, and comprises four provinces: La Coruña, Lugo, Pontevedra, and Orense, of which only the latter does not border the sea. Culturally distinct from the rest of the country, Galicia lacks many of the familiar sights and sounds we Americans usually associate with Spain, such as bullfights and flamenco music and dancing. More or less isolated from the rest of the Iberian peninsula by mountain ranges on its southern and eastern borders, Galicia was never conquered by the Moors during the Middle Ages, and the region retains many ancient characteristics, including gallego—a language much older than the Castilian spoken elsewhere in Spain—as the predominant dialect. Today Galicia is dominated by cropland and managed woodlots, with only isolated patches of original forest scattered throughout its rolling hills. What remains of its original butterfly fauna had been little studied until the recent investigations of Eliseo Higinio Fernández Vidal.

Fernández Vidal is a native of Galicia, born in Ferrol, La Coruña, in 1944. Eleven years of service in the Merchant Marine brought him the opportunity to collect and observe butterflies in many places throughout the world, especially West Africa and South America. As a result, roughly one-third of his personal collection of nearly 14,000 specimens is tropical. But in 1974, Fernández Vidal decided to turn his attention to the butterflies of his native land, and he embarked on a detailed study of "la fauna gallega de mariposas." Convinced of the importance of careful field work, Fernández Vidal has devoted considerable time to exploring Galicia first hand, observing, photographing, and collecting its butterflies. The knowledge gained from these endeavors is being used to prepare a definitive two-volume work on the biology, ecology, and distribution of the butterflies of Galicia. The book reviewed here is a synopsis of this larger, as yet unpublished, effort and is designed as an easy-to-use guide for beginning lepidopterists and naturalists. As such, it succeeds admirably.

The book has two main sections and four appendices. The introductory first section (Las Mariposas) summarizes basic information about butterflies: classification and nomenclature, life cycle, adult morphology (including markings, scales, colors, and sexual dimorphism), bionomics (phenology, habitats, diapause), special habits (cannibalism, myrmecophily, gregariousness, pest status, etc.), geographical distribution, and conservation and protection of endangered species. Most of these topics are illustrated by well-executed line drawings.

The second and largest section (Claves y Fichas Específicas) provides dichotomous keys to families and genera, followed by detailed species accounts. The lack of keys to species is not really a drawback, especially for the Papilionidae, which has only one gallegan species for each of the four genera represented, so that generic keys serve as specific keys. For other groups, the generic keys are supplemented by clear drawings of important features to help separate easily confused species (e.g., differences in male tibial spurs and wing maculations between *Plebejus argus* and *P. idas*). At the end of each family section is a collection of photographs of live butterflies and caterpillars. These vary widely in quality from excellent (a few) to poor (many), the latter usually blurry from poor focusing, shallow depth of field, or subject movement. Use of an electronic flash would have improved clarity and sharpness tremendously. Photographs of pinned specimens of all species in the family, grouped and mounted over beige graph paper at much less than life size, complete each color section. These are uniformly of better clarity than the photographs taken in the field. The species accounts include entries for the following

categories: morphological description, habitat, foodplant, distribution, and subspecies. No common names are given, for the simple but surprising reason that no popular common names for butterflies have evolved in Galicia!

The four appendices provide a hint of the kind of useful data and detailed analysis to be presented in the forthcoming two-volume work. Appendix I discusses the origin, establishment, and composition of the butterfly fauna of Galicia in terms of geographic realms, fossil history, and Miocene and Pliocene refugia and dispersal routes. It concludes with a table that lists for each gallegan species Fernández Vidal's assessment of its geographical origin, geological time of establishment, and the probable route of passage by which it entered the region.

Appendix II is a checklist of butterflies of Galicia and their occurrence in the four provinces. There are 155 species recorded from the region, distributed among the provinces as follows: Lugo (146 species), Orense (133), Pontevedra (94), and (ironically) in Fernández Vidal's home province of La Coruña (92).

In Appendix III is given the date of the discovery of each of the species in the region, listing them chronologically in order of the published documentation of their occurrence in Galicia, from 1866 through 1991. Of the 155 species, Fernández Vidal himself has documented 40 between 1977 and 1991, including 18 reported for the first time in this book. In addition, Fernández Vidal has named thirteen new subspecies and forms from Galicia during this time period.

The final Appendix (IV) is a bibliography of the butterflies of Galicia, which contains only 31 entries. Significantly, fully half of the cited publications (15) are authored by Fernández Vidal, underscoring his important contribution to the better understanding of the butterflies of this little-known region of Spain.

The book is sturdily bound and attractively designed. There is an index to species, but not one to subjects—a major drawback. Although the photographs are not first-rate, the line drawings are excellent. Much of the information presented here is new and, especially in the appendices, of great interest. Of course, those unable to read Spanish will find much of this interesting information inaccessible. Although this book is an excellent introduction to the butterflies of Galicia, I look forward to the appearance of the more detailed two-volume publication with its greatly expanded coverage of the topics that are treated briefly, but tantalizingly, in the appendices of the present work.

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THE OWLET MOTHS OF OHIO—ORDER LEPIDOPTERA, FAMILY NOCTUIDAE, by Roy W. Rings, Eric H. Metzler, Fred J. Arnold, and David H. Harris. 1992. Bulletin of the Ohio Biological Survey (new series) Vol. 9, no. 2. vi + 223 pp., 8 color & 8 B/W plates. Softcover, 21.5 × 28 cm, ISBN 0-86726-110-8. \$20 (+ \$3 p & h). (Order from Ohio Biological Survey, 1315 Kinnear Road, Columbus, Ohio 43212-1192; Ohio residents add 5.75% tax.)

The appearance of this book in 1992—along with *The Butterflies and Skippers of Ohio* by D. Iftner, J. Shuey, and J. Calhoun—marks the first substantial fruits of what is probably the most well-organized state faunistic survey of Lepidoptera ever undertaken in the Americas. The book is an annotated checklist for 708 species of Noctuidae, but it is also much more.

Introductory sections include an abstract, acknowledgments, lists of figures and plates, and an Introduction giving historical perspective. Sections follow that are useful to users, from beginner to professional: Nomenclature and Systematics, Collection and Preservation of Specimens (accompanied by Ohio map of counties), Identification of Owllet Moths