
When David Ragge joined the staff of the Natural History Museum in London in 1952, he was already convinced that the calling songs of male orthopterans would be useful in taxonomic studies. In his 1965 book, Grasshoppers, crickets, and cockroaches of the British Isles, Ragge included song descriptions and diagrams of 24 species, and, with the help of the BBC, provided a companion long-playing record of the songs. By 1973 he had established an acoustic laboratory at the Museum and secured the help of W. J. Reynolds in recording and analyzing the songs of western European Orthoptera. The Songs of the Grasshoppers and Crickets of Western Europe, with its two accompanying CDs, is the culmination of their work. It describes and illustrates the songs of 71 species of western European grasshoppers (Acrididae), 10 crickets (Gryllidae and Gryllotalpidae), and 89 bush-crickets (Tettigoniidae).

No other work so thoroughly documents so many insect sounds. For each of the 170 species, there is a written description of the song and noteworthy variations, one or more recordings, a series of oscillograms, and a listing of previous references to song. The oscillograms and recordings are exceptionally well executed. For each species there are oscillograms at several time scales, often or two or more males, for a total of 1589 oscillograms. The 352 recordings are generally of studio quality, even though most were made in the field.

The emphasis throughout the book is on the use of calling song as a taxonomic and identification aid. The species that call in a particular geographic area at a particular time of year are almost always distinguishable by their songs—which is not surprising since sexually ready females usually first identify potential mates by their calling songs.

The mix of calling species in western Europe differs markedly from the mix in the United States. In western Europe there are few crickets and many acoustically advertising grasshoppers. In the United States, crickets are diverse (more than 120 species) and calling grasshoppers are few. Correspondingly, the detection of sibling species by their calling songs has chiefly involved crickets in the U.S. and grasshoppers in Europe.

Six introductory chapters precede the three long chapters containing the species-by-species accounts of songs. The first chapter details the purpose and organization of the book. The next specifies recording techniques and the terms adopted for describing the different and often complex songs of crickets, bush-crickets, and grasshoppers. Some of the terms have not been widely used by American workers (e.g., echeme, for a first-level grouping of basic song units), but their meaning and utility are carefully and logically explained.
A brief chapter on sound production and reception is followed by a longer one on the nature and function of the songs and how they may be classified based on their rhythmic patterns. Some 19 patterns are assigned to 10 broader categories—the last of which, by necessity, is songs that don’t fall in any of the other broader categories! A chapter on the value of the songs in taxonomy and identification includes a historical review and stresses that calling songs, which provide the basis for a mate recognition system, should be particularly reliable in indicating species limits. The chapter concludes with accounts of how studies of calling song pertain to the taxonomy of particular European species and species complexes.

The last introductory chapter is a key to singing Orthoptera of western Europe, based primarily on their songs. Following the systematic accounts of the 170 species are 36 color photographs of representative adult males, arranged in three plates; a checklist of species; detailed data for the 352 song excerpts on the CDs; a glossary; references cited (including those of the original taxonomic descriptions); an index to vernacular names; and a general index.

This book is carefully written and beautifully illustrated and produced. It will bring pleasure to all those who are interested in the singing orthopterans of western Europe or in insect bioacoustics.

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