

Preface

I want to thank Cambridge University for allowing me to produce the English version of my Spanish book and for the continuous help and support. For this version, I have updated some content and references, correcting a few minor errors present in the Spanish version. I want to thank Professor Carlos López-Fanjul for having read the complete draft, making additional comments to improve the book, and to Professor Peter Keightley for reading Chapters 7 and 8 and making useful suggestions and corrections. I also want to thank Raquel Sampedro for help in managing the text and Miguel Toro, Beatriz Villanueva, Antonio Carvajal and Humberto Quesada for helpful discussions on specific parts of the book. Any errors in the content are, however, my sole responsibility, and I would appreciate any comments in this regard. Finally, I want to express my gratitude to my family for their understanding and support during the preparation of the manuscript.

Preface to the Spanish Version

Quantitative genetics is the branch of genetics dedicated to the study of quantitative traits, which are all those biological attributes with continuous variation. The vast majority of traits of evolutionary interest and commercial value in animals and domestic plants are quantitative, so that quantitative genetics contributes to the understanding of adaptation and evolution of living beings and provides the necessary tools for the genetic improvement and conservation of biological resources. A large number of human diseases are also of a quantitative nature, so that the study of quantitative genetics is fundamental for their understanding.

This book aims to build the foundations on which the subject is based, trying to maintain a balance between explanations of the most basic concepts and the most modern methods of analysis. It is therefore intended to be not only an introduction for students, particularly postgraduates, but also a reference book for researchers. Understanding this subject requires an elementary knowledge of mathematics and statistics, and, whenever possible, I have attempted to explain, or at least indicate, the origin of the equations that reflect the different concepts. Either the original sources of the main contributions or useful reviews or books have been cited so that the reader can get more insight into each subject. Each of the 11 chapters includes some problems and questions, solved at the end of the book, and there is a glossary of the most important terms.

I want to express my gratitude to several colleagues who have contributed with data or comments or by amending errors. First of all, and especially, I have to thank Professor Carlos López-Fanjul for having read the complete draft and for making numerous corrections, comments and suggestions that have substantially improved the content and its presentation. I owe him, as well as Professor Bill Hill of the University of Edinburgh, a great deal of my knowledge in this field, as well as teaching me how to carry out high-quality research. I also want to thank Professors Aurora García-Dorado and Miguel Toro for their help with various chapters. Other colleagues have contributed comments and discussions for specific topics or have contributed data, photos or figures, among whom are my colleagues from the University of Vigo, Humberto Quesada, Paloma Morán, Emilio Rolán-Alvarez, Juan Galindo and Daniel Estévez-Barcia, and from other institutions, Beatriz Villanueva, Jesús Fernández, Almudena Fernández and Andrés Legarra. I also want to express my gratitude to the coordinator of the series of which this book is a part, César (Mario) Benito, for reading the complete draft, making corrections to the text and suggesting improvements. Any errors that remain in the book are, however, my responsibility. Finally, I have to thank my wife, Esther, and my children, Alberto and Laura, for their understanding and support during the long work sessions.