
Preface

Natural selection is thought to be the major force of evolution. It favors the fitter over the less fit, and when the differences in the features underlying differential fitness are heritable, evolution occurs. But what are the objects that vary in fitness? At what level or levels does selection act? We have found the units-of-selection controversy exciting because these and other questions are of intrinsic biological and philosophical interest and have provoked mutually beneficial communication between the two fields. In recent years biologists and philosophers have published a large number of papers bearing on these questions. We hope that this anthology, which includes some of the most important of these papers, will stimulate further contact between the two communities. This hope has guided our selection of articles.

Our selection of articles was also guided by pedagogical considerations. Although the issues involved are difficult and sometimes highly technical, we have sought to include articles that are accessible to advanced undergraduates and graduate students in philosophy and biology.

This anthology was conceived during The Council for Philosophical Studies Summer Institute on Philosophy of Biology (1982), directed by Marjorie Grene. Like all collections of articles, this one is imperfect; however, it is far better than it would have been had we not received the suggestions of Robert Boyd, Ernst Mayr, Michael Ruse, and Michael Wade. We gratefully acknowledge their help.

The anthology is divided into three sections. The first focuses on the history of the topic. The second includes works explicating the conceptual issues at stake, and the third presents various models of selection, primarily models of kin and group selection. In addition to the general introduction we have written introductions to each section. Robert Boyd, James Collins, Robert Richardson, and Bruce Wallace have kindly read through all of this material and have made many helpful suggestions. We thank them. Of course, they should not be held responsible for our failure to heed all of their advice.

We also wish to thank John Maynard Smith, Ernst Mayr, and V.C. Wynne-Edwards for writing prefaces for their articles included in this volume.

Finally, for their forbearance during our long telephone conversations and harried attempts to meet deadlines, we want to thank our wives, Gloria and Linda, to whom we dedicate this volume.