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Edited by R. J. Berry, T. J. Crawford and G. M. Hewitt

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GENES IN ECOLOGY

THE 33RD SYMPOSIUM
OF THE BRITISH ECOLOGICAL SOCIETY
UNIVERSITY OF EAST ANGLIA

1991

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Frontmatter

[More information](#)

CONTENTS

Preface ix

PART 1: GENES IN ECOLOGY

- 1 Genes and ecology in history 3
 A. J. CAIN* and W. B. PROVINE[†] **Department of Environmental and Evolutionary Biology, University of Liverpool, P.O. Box 147, Liverpool L69 3BX, UK; [†]Division of Biological Sciences, Corson Hall, Cornell University, Ithaca, NY 14853, USA*
- 2 Stochastic processes in populations: the horse behind the cart? 29
 J. R. G. TURNER *Department of Genetics, University of Leeds, Leeds LS2 9JT, UK*
- 3 Population dynamics, natural selection and chaos 55
 H. C. J. GODFRAY*, L. M. COOK[†] and M. P. HASSELL*
 **Department of Biology and NERC Centre for Population Biology, Imperial College at Silwood Park, Ascot, Berkshire SL5 7PY, UK; [†]Department of Environmental Biology, Williamson Building, Oxford Road, Manchester M13 9PL, UK*
- 4 Life-history evolution 87
 R. SIBLY* and J. ANTONOVICS[†] **Department of Pure and Applied Zoology, University of Reading, Reading RG6 2AJ, UK; [†]Department of Botany, Duke University, Durham, North Carolina 27706, USA*
- 5 These hierarchical views of life: phylogenies and metapopulations 123
 P. H. HARVEY*, S. NEE*, A. Ø. MOOERS* and L. PARTRIDGE[†] **Department of Zoology, University of Oxford, South Parks Road, Oxford OX1 3PS, UK; [†]Department of Zoology, University of Edinburgh, West Mains Road, Edinburgh EH9 3JT, UK*

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Edited by R. J. Berry, T. J. Crawford and G. M. Hewitt

Frontmatter

[More information](#)

iv

Contents

- 6 The coevolution of plant–insect and host–parasite relationships 139
 D. J. FUTUYMA* and R. M. MAY† **Department of Ecology and Evolution, State University of New York, Stony Brook, NY 11794, USA;* †*Department of Zoology, University of Oxford, South Parks Road, Oxford OX1 3PS and Imperial College, London SW7 2BB, UK*

PART 2: MOLECULES IN ECOLOGY

- 7 Adaptation in bacteria: unanswered ecological and evolutionary questions about well-studied molecules 169
 J. P. W. YOUNG* and B. R. LEVIN† **Department of Biology, University of York, York YO1 5DD, UK;* †*Department of Biology, Emory University, Atlanta, GA 30322, USA*
- 8 Enzymes and adaptation 193
 A. G. CLARK* and R. K. KOEHN† **Genetics Program and Department of Biology, Pennsylvania State University, University Park, PA 16802, USA;* †*Department of Ecology and Evolution, State University of New York, Stony Brook, NY 11794, USA; present address, 210 Park Building, University of Utah, Salt Lake City, UT 84112, USA*
- 9 Molecular variation and ecological problems 229
 T. BURKE*, W. E. RAINEY† and T. J. WHITE‡ **Department of Zoology, University of Leicester, Leicester LE1 7RH, UK;* †*Museum of Vertebrate Zoology, University of California, Berkeley, CA 94720, USA;* ‡*Roche Molecular Systems Inc., 1145 Atlantic Avenue, Suite 100, Alameda, CA 94501, USA*
- 10 Ecological genetics of parasitism 255
 R. ENNOS *Institute of Ecology and Resource Management, University of Edinburgh, Darwin Building, Mayfield Road, Edinburgh EH9 3JU, UK*
- 11 Genes and ecology: two alternative perspectives using *Drosophila* 281
 M. KREITMAN*, B. SHORROCKS† and C. DYTHAM† **Department of Ecology and Evolutionary Biology, University*

Cambridge University Press

978-0-521-54936-3 - Genes in Ecology: The 33rd Symposium of the British Ecological Society University of East Anglia

Edited by R. J. Berry, T. J. Crawford and G. M. Hewitt

Frontmatter

[More information](#)

Contents

v

of Princeton, Princeton, NJ 08544, USA: present address, Committee on Evolutionary Biology, University of Chicago, 1025 East 57th Street, Chicago, IL 60637, USA; †Drosophila Population Biology Unit, Department of Pure and Applied Biology, University of Leeds, Leeds LS2 9JT, UK

PART 3: ECOLOGY IN GENETICS

- 12 Genetic heterogeneity and ecology 315
 J. A. ENDLER *Department of Biological Sciences, University of California, Santa Barbara, CA 93106, USA*
- 13 Density and frequency dependence in ecology: messages for genetics? 335
 M. BEGON *Department of Environmental and Evolutionary Biology, University of Liverpool, P.O. Box 147, Liverpool L69 3BX, UK*
- 14 Density and frequency dependence: a genetical view 353
 B. C. CLARKE and M. A. BEAUMONT *Department of Genetics, Queens Medical Centre, Clifton Boulevard, University of Nottingham, Nottingham NG7 2UH, UK*
- 15 Functional biology of adaptation 365
 M. E. FEDER* and W. B. WATT† **Department of Organismal Biology and Anatomy and Committee on Evolutionary Biology, University of Chicago, 1025 East 57th Street, Chicago, IL 60637, USA; †Department of Biological Sciences, Stanford University, Stanford, CA 94305 and Rocky Mountain Biological Laboratory, P.O. Box 519, Crested Butte, CO 81224, USA*
- 16 Life history and mechanical constraints on reproduction in genes, cells and waterfleas 393
 J. S. JONES*, D. EBERT† and S. C. STEARNS‡
 **Department of Genetics and Biometry, University College London, 4 Stephenson Way, London NW1 2HE, UK;*
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Edited by R. J. Berry, T. J. Crawford and G. M. Hewitt

Frontmatter

[More information](#)

vi

Contents

- 17 Conservation biology: the ecology and genetics of endangered species 405
 A. P. DOBSON*, G. M. MACE[†], J. POOLE[‡] and
 R. A. BRETT[‡] **Department of Ecology and Evolutionary
 Biology, University of Princeton, Princeton, NJ 08544–1003,
 USA;* [†]*Institute of Zoology, Regents Park, London NW1 4RY,
 UK;* [‡]*Kenya Wildlife Service, P.O. Box 40241, Nairobi,
 Kenya*
- 18 Genes in the real world 431
 R. J. BERRY* and A. D. BRADSHAW[†] **Department of
 Biology, University College London, London WC1E 6BT, UK;*
[†]*Department of Environmental and Evolutionary Biology,
 University of Liverpool, P.O. Box 147, Liverpool
 L69 3BX, UK*
- PART 4: TECHNIQUES AND PROTOCOLS
- 1 Use of PCR techniques in *Drosophila* population biology 453
 L. O'BRIEN, D. COATES, J. ARNOLD and
 B. SHORROCKS *Drosophila Population Biology Unit,
 Department of Pure and Applied Biology, University of Leeds,
 Leeds LS2 9JT, UK*
- 2 Polymerase chain reaction 456
 I. ARNAU and S. COOPER *School of Biological Sciences,
 University of East Anglia, Norwich NR4 7TJ, UK*
- 3 The detection of organisms at family, genus and species level
 using the polymerase chain reaction to amplify specific target
 DNA sequences 459
 R. A. MCKEE, C. M. GOODING, S. D. GARRETT and
 H. A. POWELL *AFRC Institute of Food Research, Norwich
 Research Park, Colney, Norwich NR4 7UA, UK*
- 4 Selection of DNA sequences for use as probes 463
 R. A. MCKEE, C. M. GOODING, S. D. GARRETT,
 H. A. POWELL, B. M. LUND and M. R. KNOX *AFRC
 Institute of Food Research, Norwich Research Park, Colney,
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Edited by R. J. Berry, T. J. Crawford and G. M. Hewitt

Frontmatter

[More information](#)

<i>Contents</i>		vii
5	RAPDs: random amplified polymorphic DNAs D. HOWLAND and J. ARNAU <i>School of Biological Sciences, University of East Anglia, Norwich NR4 7TJ, UK</i>	466
6	DNA fingerprinting R. E. CARTER <i>Department of Genetics, Queens Medical Centre, Clifton Boulevard, University of Nottingham, Nottingham NG7 2UH, UK; present address, Eleanor Roosevelt Institute of Cancer Research, 1899 Gaylord Street, Denver, CO 80206, USA</i>	468
7	DNA fingerprinting using multilocus and single locus probes R. E. CARTER* and D. T. PARKIN <i>Department of Genetics, Queens Medical Centre, Clifton Boulevard, University of Nottingham, Nottingham NG7 2UH, UK; *present address, Eleanor Roosevelt Institute of Cancer Research, 1899 Gaylord Street, Denver, CO 80206, USA</i>	474
8	Fingerprinting fungi P. NICHOLSON, J. BROWN and M. ATKINSON <i>Cambridge Laboratory, John Innes Institute, Colney Lane, Norwich NR4 7UH, UK</i>	477
9	Analysis of genetic variation in populations: southern blotting and restriction fragment length polymorphism (RFLP) analysis S. NOBLE, R. OLIVER and A. DAVY <i>School of Biological Sciences, University of East Anglia, Norwich NR4 7TJ, UK</i>	481
10	The use of repetitive DNA probes in the analysis of natural populations of insects and parasites P. K. FLOOK, M. D. WILSON and R. J. POST <i>Department of Biological Sciences, University of Salford, Salford M5 4WT, UK</i>	485
11	C-banding and the characterization of heterochromatic regions J. M. RUBIO and C. FERRIS <i>School of Biological Sciences, University of East Anglia, Norwich NR4 7TJ, UK</i>	487
12	Silver staining C. FERRIS and J. M. RUBIO <i>School of Biological Sciences, University of East Anglia, Norwich NR4 7TJ, UK</i>	491

Cambridge University Press

978-0-521-54936-3 - Genes in Ecology: The 33rd Symposium of the British Ecological Society University of East Anglia

Edited by R. J. Berry, T. J. Crawford and G. M. Hewitt

Frontmatter

[More information](#)

viii

Contents

- | | | |
|----|---|-----|
| 13 | Use of a cellulose acetate system for allozyme electrophoresis | 494 |
| | I. R. WYNNE, H. D. LOXDALE and C. P. BROOKES
<i>Entomology and Nematology Department, AFRC Institute of
Arable Crops Research, Rothamsted Experimental Station,
Harpenden, Hertfordshire AL5 2JQ, UK</i> | |
| 14 | A device for producing multiple deep-frozen samples for
allozyme electrophoresis | 500 |
| | I. R. WYNNE and C. P. BROOKES
<i>Entomology and
Nematology Department, AFRC Institute of Arable Crops
Research, Rothamsted Experimental Station, Harpenden,
Hertfordshire AL5 2JQ, UK</i> | |
| | Index | 503 |

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Frontmatter

[More information](#)

PREFACE

Genetics and ecology are complementary disciplines, at least at the population level. Textbooks and courses are increasingly labelled 'population biology' instead of 'population ecology' and 'population genetics'. But this is logic, not reality. In practice geneticists and ecologists are frequently in different departments in universities; genetics tends to be relegated in ecology courses to a few simple notions in a subsidiary part of the subject called 'evolutionary ecology', instead of being fully integrated; geneticists graduate with little understanding of the life-style of different organisms, and hence how natural selection and population processes work. Indeed genetical and ecological emphases are often so different that the disciplines in which they are taught seem to be dealing with different concepts.

The BES 1991 Symposium faced up to this split in the heart of ecology and sought to bring geneticists and ecologists together to confront the implications of the others' discipline for their own work. Most papers were coauthored by a geneticist and an ecologist. The results were mixed; commensalism did not always lead to symbiosis. But there were some excellent examples of the importance of one discipline for the other, and the meeting (and this volume) was valuable in exposing the divisions within population biology, and hence providing a framework for dealing with the weaknesses. Two sessions at the meeting were devoted to practical demonstrations of molecular and genetical techniques that may be useful to ecologists; a selection of protocols is printed at the end of this book.

We offer this volume as an indication of the state of affairs in population biology, and hope that the concepts discussed and techniques described will lead to major advances for the understanding of 'genes in ecology'.

R. J. Berry
T. J. Crawford
G. M. Hewitt
April 1992