

Contents

List of contributors [ix]

Foreword [xiii]

Acknowledgements [xiv]

I Introduction [1]

HEIDI C. HAUFFE AND VALERIO SBORDONI

Statistical approaches, data analysis and inference [23]

2 Statistical methods for identifying hybrids and groups [25]

ERIC C. ANDERSON

3 How to use MIGRATE or why are Markov chain Monte Carlo programs difficult to use? [42]

PETER BEERLI

4 Nested clade phylogeographic analysis for conservation genetics [80]

JENNIFER E. BUHAY, KEITH A. CRANDALL AND DAVID POSADA

5 A comparison of methods for constructing evolutionary networks from intraspecific DNA sequences [104]

PATRICK MARDULYN, INSA CASSENS AND MICHEL C. MILINKOVITCH

Molecular approaches and applications [121]

6 Challenges in assessing adaptive genetic diversity: overview of methods and empirical illustrations [123]

AURÉLIE BONIN AND LOUIS BERNATCHEZ

7 Monitoring and detecting translocations using genetic data [148]

GIORGIO BERTORELLE, CHIARA PAPETTI, HEIDI C. HAUFFE AND
LUIGI BOITANI

- 8 Non-invasive genetic analysis in conservation [167]

BENOÎT GOOSSENS AND MICHAEL W. BRUFORD

- 9 The role of ancient DNA in conservation biology [202]

JON BEADELL, YVONNE CHAN AND ROBERT FLEISCHER

From genetic data to practical management: issues and case studies [225]

- 10 Future-proofing genetic units for conservation: time's up for subspecies as the debate gets out of neutral! [227]

MICHAEL W. BRUFORD

- 11 Genetic diversity and fitness-related traits in endangered salmonids [241]

KATRIINA TIIRA AND CRAIG R. PRIMMER

- 12 Genetics and conservation on islands: the Galápagos giant tortoise as a case study [269]

CLAUDIO CIOFI, ADALGISA CACCONI, LUCIANO B. BEHEREGARAY, MICHEL C. MILINKOVITCH, MICHAEL RUSSELLO AND JEFFREY R. POWELL

- 13 Evolution of population genetic structure in marine mammal species [294]

A. RUS HOELZEL

Future directions in conservation genetics [319]

- 14 Recent developments in molecular tools for conservation [321]

CRISTIANO VERNESI AND MICHAEL W. BRUFORD

- 15 Theoretical outlook [345]

MARK BEAUMONT

Software index [374]

Species index (common name) [376]

Species index (Latin name) [379]

Subject index [382]

The colour plates are situated between pages 210 and 211