Part IV
Applications for Conservation and Assessing Connectivity

A variety of recent developments now better support conservation planning and connectivity assessment. This module explores these tools and presents a user-friendly start for those less familiar with these approaches. Chapter 12 introduces the basic uses of network analysis (aka graph theory) for assessing connectivity from the perspective of different species and assumes no prior knowledge of network concepts and terminology. Chapter 13 introduces the basic components of Marxan, one of the most widely used conservation planning tools for reserve design decisions. The last two chapters in this module provide advanced tools most relevant for research in this arena. Chapter 14 explores advanced graph theoretic approaches using Conefor software, which is used widely throughout Europe for conservation planning. This software can assess network connectivity while incorporating habitat quality and identify critical source areas and stepping stones for different species. Chapter 15 requires the use of R software and demonstrates the statistical ways meta-communities can be examined across a landscape, incorporating important multispecies perspectives.