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Birds are important organisms for studies of environmental change in sensitive habitats because they are relatively abundant, conspicuous in diurnal activity, and readily identified to species with field guides. Birds and Habitat contributes to avian conservation and landscape ecology with a combination of review articles and empirical studies of different avian guilds. Contributors to the volume are firmly rooted in the British Commonwealth with a senior editor affiliated with the British Trust for Ornithology, 25 contributors from the United Kingdom, Canada, and Australia, and another seven authors from continental Europe. The 20 chapters of the volume are organized into three major themes: patterns and processes, empirical case studies, and wider perspectives. The patterns and processes part reviews key concepts in habitat selection, identifies the main ecological and environmental factors driving habitat associations, and relates research findings to conservation objectives. The review chapters provide a great overview of the field and are particularly effectively at integrating recent research findings from a variety of landscapes on different continents. One intriguing topic is the difference in ecological responses of birds (and cultural perspective of researchers) to forest fragmentation in North America and Australia versus the older agricultural landscapes of Europe. Chapters of the first part provide a solid foundation for understanding the habitat relationships of birds, and will be especially useful to students reviewing for a candidacy exam or preparing a first research proposal.

The case studies draw examples from different guilds of birds, including wet meadows, freshwater marshes, temperate woodlands, arctic-alpine habitats, and coastal estuaries. Here, the chapters are narrowly focused on the avifauna of northwest Europe. Later chapters consider forest birds in other regions, but birds of tropical, desert, and other biomes are omitted. Many of the case studies are based on presence-absence data that fail to account for imperfect detection. Better analytical techniques separate the latent process of habitat use from the observation process of bird monitoring, including occupancy models for detection-nondetection data, N-mixture models for count surveys, and radio telemetry. In one nice example, radio-tracking data showed that hoopoes and other farm birds require bare ground to forage on invertebrates in agricultural landscapes. Chapters in the wider perspectives part link habitat use of birds to foraging ecology, life-history strategies, and seasonal phenology of food resources. The final chapter concludes that habitat preferences are not a fixed trait in birds, and several species are shown to have variable ecological requirements in different parts of their range. Most contributors identify potential effects of climate change, but flexible habitat use and other uncertainties make predictions difficult. In the future, a growing number of citizen science initiatives are expected to generate a wealth of new data and will be integral to investigations of the links among habitat use, distribution, abundance, and population dynamics of birds.


In 1965 the English scientist, James Lovelock, then working in California for the space agency, had an epiphany. The planet Earth is no lifeless globe, circling endlessly and pointlessly around the sun. It is a living organism. It is alive and has a right to its existence no less than any other plant or animal. A year or two later, Lovelock was joined in his enthusiasm by Lynn Margulis, already on the way to deserved fame as the person who promoted the symbiotic origin of the eukaryotic cell from simpler prokaryotic cells. And that was about the end of things as far as the scientific community was concerned. Critics, notably Richard Dawkins, weighed in and the consensus before long was that Lovelock had way overstepped the mark. Literally or metaphorically, Earth is no living being.

Now, nearly half a century later, Earth system scientist Toby Tyrell covers the evidence for Gaia, pro