analysed by computer. Some major logistical problems have had to be overcome; changes in political boundaries (the old counties are retained), changes in procedures of record keeping, and the enormous expansion of birding activity over the period.

Was it worth all the effort? I think the answer is very clearly yes: the data presented give a coherence to a multitude of isolated observations, and reveal patterns that are often wholly obscured in the month to month and year to year turmoil of fieldwork. It will be particularly valuable to its main audience, the British birders, in displaying the frequency and timing of vagrant occurrences. Patterns of occurrence can now readily be identified, providing a basis for further investigation: as with all such initiatives, the book will raise as many questions as it answers.

There are some weaknesses. For example, I wondered how many of the cardueline finches

had occurred in flocks, and I am still not sure. The vignettes are uneven in quality: the artists' lack of familiarity with some of these species is clear, and some sketches are simply inaccurate. Generally, however, the work is a thorough, well-produced and attractive publication.

The book's value to a North American audience is rather limited and the book is expensive for its potential uses. The records of North American species on the other side of the Atlantic make fascinating reading, and the concise summaries of identification characters could be useful, as in the case of Eurasian pipits. The approach will be of interest to Records Committees considering publications, and students of vagrancy and migration will find the material an excellent source of reference.

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Where Have All the Birds Gone?

By John Terborgh. 1989. Princeton University Press, Princeton, New Jersey. 207 pp., illus. Hard cover U.S. \$45.00, Soft cover U.S. \$14.95.

The subtitle of this stimulating book, Essays on the biology and conservation of birds that migrate to the tropics, provides a good summary of its contents. Other groups of birds are dealt with, but primarily to clarify the main thesis of the book that many neotropical migrants are threatened by human activities under way throughout their range. The author pulls together the admittedly rather scant data available to illustrate the mechanisms by which some neotropical migrants, most notably forest-dwelling species, are suffering, and the extent of the problem.

In outlining the current information base, Terborgh includes a useful discussion of bird population monitoring in North America. He credits the amateur naturalists who make feasible the Christmas Bird Counts, Breeding Bird Census, and Breeding Bird Survey, and who provide some of the best data available on the distribution, abundance, and habitat selection of species. However, he is critical of the methodologies of these surveys, stating that "it is time that these efforts be overhauled to accord with the best available scientific methods." He laments both the lack of long-term monitoring projects that would offer much-needed understanding of changing bird populations, and the lack of virgin timber stands that would provide the baseline data needed for comparison.

Terborgh's contention that "Conservation is essentially a debate over land-use policy" is borne

out through examples of how land-use affects bird populations throughout the Americas. The destruction of the eastern deciduous forests in the 19th and early 20th Century is described along with the current destruction of neotropical forests. Somewhat ironically, he suggests that the earlier destruction of the eastern forests so devastated the breeding populations of forest-dwelling neotropical migrants that the effects of forest clearing in the neotropics may not be noticed in North America for another 10 years: for the moment, there is still forest habitat enough for the relatively small numbers of most species returning to the tropics each winter. Given current trends, the declining area of tropical forest might be the limiting factor in some North American bird species by the turn of the century.

Where have all the birds gone? is readily accessible and highly recommended to scientists, naturalists, and conservationists. A useful summary of the current state of our knowledge of changing bird populations, it is also a call to arms. Its intent is to encourage immediate action by scientists and conservationists; "if we wait until all of the answers are in, we may find ourselves in a much worse predicament than if we had taken notice of the problem earlier." The book's final chapter explains what each of these groups can do to help prevent the further loss of neotropical migrant birds. It deserves to be widely read and acted upon.

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