

Preface

Population indexing methods have been widely applied for many years in wildlife management and research. Their primary attraction undoubtedly is their ease of application. However, like all sampling procedures, indexing methods must be guided by statistical principles to produce valid inferences (Engeman 2003). In recent years, the use of indices insufficiently grounded in the concepts of statistical design has led to pointed criticism of their use (Anderson 2001). Moreover, indices tend to be indirect measures of abundance, adding to the difficulty in determining whether an index is appropriate for a particular use and how it is properly interpreted. I was asked to organize a symposium on indexing at the *3rd International Wildlife Management Congress in Christchurch*, New Zealand, to address the issues surrounding the valid application of indexing methods. This special issue of *Wildlife Research* is a compilation of papers from that symposium, 'Use of Indices to Monitor Wildlife Populations'. The intent of this collection of papers is to provide a reference source on a breadth of topics relevant to monitoring wildlife populations with indices. This issue includes papers that discuss the general use of indices, describe general indexing methodology and the associated statistical theory, present specific examples of indexing methods and how they were developed and tested, as well as demonstrating how some index-data collection may be converted to produce density estimates. Hopefully, the range of subjects covered will be generally useful for those wishing to apply or develop indexing procedures and calculations.

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References

- Anderson, D. R. (2001). The need to get the basics right in wildlife field studies. *Wildlife Society Bulletin* **29**, 1294–1297.
- Engeman, R. M. (2003). More on the need to get the basics right: population indices. *Wildlife Society Bulletin* **31**, 286–287.