

Wildlife Research in a changing world

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Abstract. Wildlife populations on both land and in the sea are under increasing pressure from both direct and indirect anthropogenic impacts. Threats to wildlife, such as over-exploitation, habitat loss, invasive species, infectious disease and climate change persist; yet in some situations, wildlife populations are the subject of management to reduce their unwanted impacts on economic, agricultural and conservation interests. The contrasting requirements of declining and overabundant populations, sometimes existing as part of the same ecosystem, mean that wildlife management needs to be viewed increasingly as part of an integrated social–ecological system. Moreover, solutions to wildlife-management problems may require new combinations of ecological knowledge, technological innovation and an understanding of the social and economic factors involved. The disciplinary scope of *Wildlife Research* will be broadening to reflect these changes. *Wildlife Research* has tended to focus on terrestrial systems in the past, but research approaches and findings are increasingly relevant across different environments, and consequently, we will also be expanding our coverage of freshwater and marine systems. We are planning to publish at least one Special Issue each year, to highlight new areas of research and the increasing internationalisation of wildlife management, and we welcome suggestions for these. We are also pleased to be able to offer fast-track publication of papers that contain results of high topical significance or policy relevance. We hope that the increased topical, disciplinary and geographical coverage of *Wildlife Research* will enhance its position as one of the leading international journals in applied ecology and environmental management.

Introduction

At a time when we are experiencing an unprecedented rate of anthropogenic environmental change, human pressures on ecosystems worldwide continue to increase. In less developed countries, growing populations combined with the need for economic growth to enhance basic standards of life and health are giving rise to a greater frequency and intensity of human–wildlife conflicts, with negative consequences for both humans and wildlife (Baker *et al.* 2008; White and Lowe 2008). We have made considerable progress in protecting wildlife both on land and in the sea through legislative controls of exploitation and the establishment of protected areas (Roberts *et al.* 2001; Dryden *et al.* 2008; Caro *et al.* 2009). However, in many countries, wildlife outside protected areas and in the areas immediately surrounding the protected areas is under greater pressure than ever before (Gadd 2005; Wittemyer *et al.* 2008). Threats to our wildlife, such as over-exploitation, habitat loss, invasive species (Clout and Russell 2008), infectious disease (Smith *et al.* 2009) and climate change (Brook 2008), persist despite global recognition of the importance of biodiversity for the provision of ecosystem functions and services on which human health and wellbeing depend (Hooper *et al.* 2005; Balvanera *et al.* 2006; Boyd and Banzhaf 2007; Luck *et al.* 2009). Yet, in some situations, such as the spread of disease (White *et al.* 2008a; Kilpatrick *et al.* 2009) and species introductions (Dolman and Wäber 2008), wildlife

populations may have considerable adverse impacts on economic, agricultural and conservation interests.

The contribution of *Wildlife Research*

Research published in *Wildlife Research* has made significant contributions to reducing some of these problems in the past, in particular in the area of invasive species. For example, research published in the journal on the biological control of rabbits using disease has enhanced our ability to control rabbit populations in areas such as Australia (e.g. Myers 1962; Parer *et al.* 1985; Cooke and Fenner 2002; Bruce and Twigg 2005; Henzell *et al.* 2008). The journal has been at the forefront of developments in technological innovations in wildlife management such as fertility control (Caughley *et al.* 1992; Barlow *et al.* 1997; Kerr *et al.* 1998; Chambers *et al.* 1999; Cowan *et al.* 2008; Fagerstone *et al.* 2008; Humphrys and Lapidge 2008; Gionfriddo *et al.* 2009; Lohr *et al.* 2009), as well as in considerations of welfare issues in management (Marks *et al.* 2000, 2009; Littin *et al.* 2002; Gigliotti *et al.* 2009; Marks 2009). These fields of research are likely to grow in importance as the actions of wildlife managers come under increasing scrutiny from the public, and wildlife conflicts arise increasingly in areas with high human population densities (Baker *et al.* 2008; Cowan and Hinds 2008; Markovchick-Nicholls *et al.* 2008).

The challenge for *Wildlife Research* is to remain at the forefront of developments in wildlife management and conservation and to continue to make a significant contribution to knowledge surrounding the reduction in threats to biodiversity. The origins of the journal in wildlife ecology and pest management have dictated the core of journal content over much of its history. More recent emphasis on wildlife as part of an integrated social–ecological system (Plowright *et al.* 2008; White *et al.* 2008b; Miller 2009) mean that the face of wildlife research is changing. It is now recognised that many wildlife management problems are in fact conflicts between humans with different viewpoints and priorities (Bennett *et al.* 2007; Gusset *et al.* 2008). Solutions to these problems may require new combinations of ecological understanding, technological innovation and an understanding of the social and economic factors involved (Miller 2003; Redpath *et al.* 2004; Nimmo and Miller 2007; Curtin and Western 2008; Frost and Bond 2008; Horan *et al.* 2008; Smart *et al.* 2008; Miller 2009). Rather than being a question of finding ecological solutions to ecological problems, effective management solutions require a systems-level understanding, which frequently necessitates a more interdisciplinary approach to research, including insights from genetics and molecular ecology (Piggott and Taylor 2003; Searle 2008; Sarre and Georges 2009) as well as from social science and policy (Fernando *et al.* 2005). Moreover, developments in understanding and technology are increasingly global in their scope and applicability.

Changes to the editorial structure and journal scope

Wildlife Research has risen to these new challenges by establishing a new editorial structure. Charles Krebs is continuing as Chair of the Editorial Board and he is joined by three new Editors – Stan Boutin (North America), Piran White (Europe) and Andrea Taylor (Australasia). Camilla Myers remains associated with the journal as Journal Publisher at CSIRO Publishing, with responsibility for coordinating publication and for business and strategic development of the journal. The Editors will be supported by a team of over 30 Associate Editors with a range of expertise from all continents, to ensure that *Wildlife Research* continues to enhance its global coverage.

The journal will continue to provide an international forum for the publication of original and significant research and debate on the ecology, conservation and management of wild vertebrates in natural and modified habitats. However, the disciplinary scope, traditionally focused on population ecology and pest management, will be broadened to encompass a wide range of increasingly relevant disciplines, including molecular genetics, parasitology, epidemiology, animal behaviour, community ecology, landscape ecology, wildlife management in a changing environment, bio-economics, human–wildlife interactions and conflict resolution, conservation and management policy. Journal content has tended to focus on terrestrial systems in the past, but research approaches and findings are increasingly relevant across different environments, and we are keen to expand our coverage of the ecology and management of freshwater and marine systems.

Developments in journal content and format

Recent Special Issues of *Wildlife Research* on topics such as fertility control (Cowan and Hinds 2008), aerial survey techniques (Fleming and Tracey 2008), invasive species (White *et al.* 2008c), and population ecology and management (Hone 2009) have highlighted key research advances and placed *Wildlife Research* at the forefront of theoretical developments and practical applications in wildlife management. Building on the success of these recent Special Issues, we are planning to publish at least one new Special Issue each year, to highlight new and expanding areas of research and the increasing internationalisation of wildlife management. In addition to these Special Issues, we are also making some changes to the format and the types of papers we accept. We welcome enquiries from authors regarding topics for review articles and we also welcome papers on new methodologies that have potentially far-reaching impacts on research and development. We are particularly pleased to be able to offer, for the first time, fast-track publication of papers that contain results of high topical significance or policy relevance.

Communicating Wildlife Research

As part of the above changes, we are seeking to make *Wildlife Research* more accessible to researchers, policy-makers and wildlife managers. To this end, we will be introducing a standard format for the Abstract of each research article, as follows: Context, Aims, Methods, Key results, Conclusions, Implications. Abstracts will be a maximum of 350 words. In addition, for accepted papers, authors will be asked to provide a practitioner summary for early publication on the journal web site (www.publish.csiro.au/journals/wr). These practitioner summaries will focus on the outcomes and applications of the research, and together will provide an accessible digest of each issue published.

We hope that the increased topical, disciplinary and geographical coverage of *Wildlife Research* will resonate with our increasingly international readership, and that these changes will enhance the position of *Wildlife Research* as one of the leading applied ecology and management journals worldwide.

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