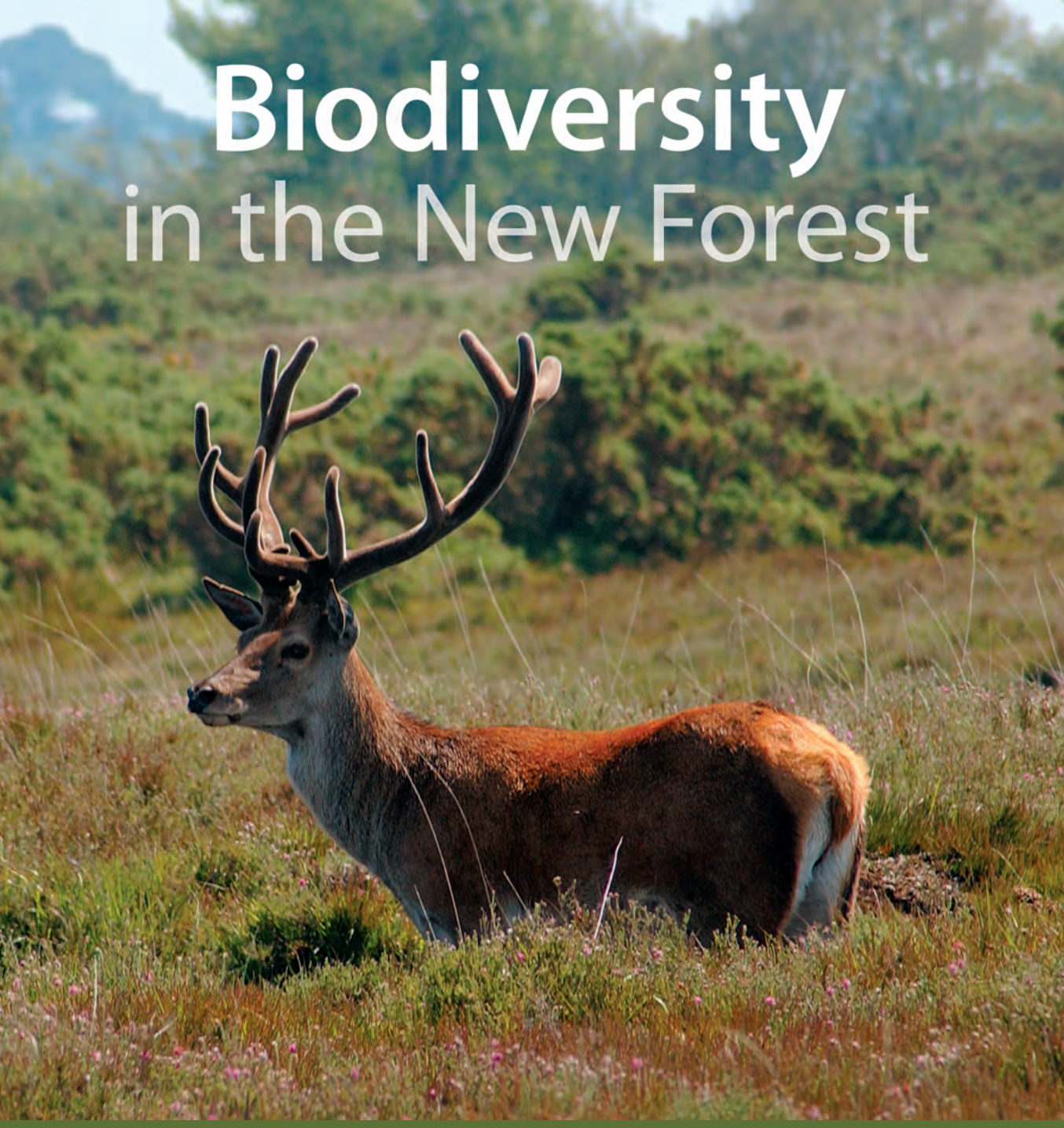
Biodiversity in the New Forest



Edited by Adrian C. Newton

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Dedicated to the memory of
Muriel Eliza Newton (1929–2009),
who loved the New Forest,
especially the donkeys.

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Back cover: Wood Crates (Adrian Newton)

The maps in this book are for illustrative purposes only, and do not represent the legal definition of National Park boundaries or any other feature

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Afterword

Clive Chatters

These comments are provided as a personal view, stimulated by the conference on which this book is based, and in particular, by some of the issues raised during the closing discussion session of the meeting that I chaired. Adrian Newton opened the conference with brief definitions of the Forest, from Colin Tubbs and from myself, together with an expression of a celebration of the Forest's extraordinary biodiversity. Within that celebration was a shadow, a question, as to whether that biodiversity was changing, and if so whether this change was for the better. The conference included many speakers and presentations. As always at conferences it is the conversations outside the formal sessions that have greatly added to mutual understanding of issues. Based on such discussions, as well as the material presented during the conference, I will endeavour to draw conclusions and to speculate on ways forward.

Ecological considerations

Whilst everyone seems to be delighted that the Forest has this extensive wealth of biodiversity we have heard many speakers focus on just one part of the New Forest, the Open Forest, and within that group of ownerships many speakers have focused on the subset of the Crown lands as managed by the Forestry Commission. The Open Forest is a remarkable place, indeed the defining landscape of the National Park, however it is a component part of a much larger and more complex series of landscapes, seascapes and habitats. We have yet to start to understand the collective ecological character and functioning of the whole Forest.

Most biodiversity is unseen and unknown. In the New Forest we are fortunate in the range of species that have been studied. We have a history of biological recording going back to the early 17th century, with great strides made with the coming of the railway in the mid 19th century and a particularly productive period in the mid/late 20th century. There are still enormous gaps in information and with a place as complex as the Forest, and this will probably always be the case. The Forest regularly appears to be amongst the richest localities of whatever group of species comes under investigation. The ecosystem is relatively intact and the range of niches highly diverse. It is interesting that the importance of the Forest does not appear to derive from it being intrinsically "special" as a source of endemism, but because of the large-scale survival of what was formerly much more widespread.

Some of our speakers have touched on the important role of large herbivores in maintaining the particular character of the Open Forest. In the historic period, large herbivores have been a mixture of domestic livestock alongside native and non native deer. The domestic livestock are a manifestation of the ancient practice of commoning; in turn commoning is dependant on a coherent community and supportive economy. If that chain breaks at any point, the biodiversity of the Forest will fundamentally change. What has only been touched on at this conference is the relationship between biodiversity and the economy, and the legal and social fabric of the Forest. There are social scientists, economists and others investigating these issues. There is already some connectivity between these lines of research and the biological sciences, with considerable scope for greater understanding.

We have had some interesting but inconclusive forays into the debate on the nature of naturalness. One person's minimal intervention is another person's traditional management. We must remember that the Forest is very much a cultural working landscape. Everywhere has an anthropogenic element to some degree. To the tutored eye, the Open Forest is far from a wilderness, it is decidedly near natural but it is a landscape that reflects its culture, community and economy.

Within the Open Forest, we felt comfortable with the quality and condition of biodiversity associated with two interrelated ecological processes. The first of these is associated with grazed woodlands with abundant old-growth stands, with their highly diverse structure. The structure ranges in scale from micro-habitats within individual trees to landscape-scale diversity of shade, glades and margins. The other processes with which we found comfort were associated with a broad range of well-illuminated low fertility habitats, stressed by continuous grazing by large herbivores. These habitats are frequently of low biomass but high biodiversity. A degree of upheaval within extensive periods of continuity appears important to provide the full range of habitats upon which Open Forest species are dependant. The scale of the Open Forest is important in providing sufficient opportunities over time for species to persist in an ever-changing environment. The stresses upon the Forest mean that it is in a suboptimal but adequate condition for many species; the constraining influence of stress derived from large herbivores suppresses competitive exclusion and supports a high biodiversity.

Concerns about declines in biodiversity have focused on two areas. The first are species vulnerable to disturbance at certain parts of their life-cycles. Disturbance is arising from the understandable attractiveness of the Forest for informal recreation combining with the growth of the urban areas on the Forest's edge. The second concern relates to species dependant on herbaceous vegetation with a higher biomass than that currently present in the Open

Forest. An important line for future work is exploring how the management of the enclosed landscapes within the matrix of the Open Forest and beyond can contribute to addressing these concerns. It is interesting that only at the very end of the conference was there any mention of the current dramatic changes in the sediment shore habitats of the Forest, with consequent losses of and changes to biodiversity.

There were a number of important elements of the Forest that we heard either nothing about, or just a little, in passing. The Forest's coastline is one of the less urbanised parts of the Solent system. This is regarded as of international importance for its habitats and species. The important species are both sedentary and migratory, and are a small part of a very much larger series of related wetlands, on scales ranging from the sub-regional to the northern hemisphere and beyond. The habitats are highly dynamic, and in the face of relative sea level rise, are likely to undergo fundamental change in the foreseeable future. The marine environment of the Forest's coastline is similarly recognised to be of international importance and, to a great degree, is still undescribed.

The majority of the enclosed landscapes of the Forest have received little attention, despite containing very extensive habitats comparable and complementary to those of the Open Forest. The biodiversity of the enclosed lands is part of the same pastoral social and economic system upon which the management of the Open Forest is dependant. The biodiversity of the enclosed landscapes is poorly understood. What little we know suggests it is undergoing dramatic changes, involving simplification of its biodiversity, with changes in land management driven by agricultural and leisure use intensification, or, in contrast, by neglect. The social, cultural and economic relationship of the enclosed landscapes to the management of the Open Forest is now better understood. The biological interactions between these two types of land tenure remain poorly understood.

Some speakers have touched on how the Forest may respond to the challenges of climate change. What we reached agreement on is that the Forest is a relatively large ecosystem that is biologically dynamic, with management processes that maintain the creation of niches for colonisation and thus opportunity to respond to change. Such ecosystems are likely to be more robust than smaller sites. The Forest is still a fragment, albeit a large one, and currently lacks adequate connectivity with other wildlife rich habitats. The potential for connectivity is being diminished through the processes of urban growth within and around the Forest. Will it be possible both to expand the Forest and to reconnect it to the Dorset Heaths and other important fragments, ultimately to enable species to migrate to stay within their climate space? Will a measure of success for Forest conservation be in providing the wherewithal for the biodiversity we care about to be able to migrate out of the Forest, and a new biodiversity to establish itself in its stead? The future Forest will be different from the present, but to what degree we cannot reasonably predict. Despite the pace of change, we have yet to find a consensus as to what we need to do to rise to these challenges, and how we refocus our finite resources to make a difference on the ground.

Conservation considerations

Our conference has touched on the debate as to how conservationists relate to the Forest. The Open Forest is unlike any other place in lowland Britain, as the land tenure and management is a large-scale modern manifestation of a pre-enclosure movement landscape. The exceptional biodiversity of the Open Forest is to a large degree an accidental by-product of that legal and social system. The Forest is unlike a nature reserve. Nature reserves are managed by sequences of considered interventions. The wildlife in the Open Forest is just that, it is wild, it is the biological expression of the Forest's history, culture and economy.

If biologists and conservationists wish to participate in management decisions on the Forest, they need to understand how those decisions are made. We need to respect the long-standing rights and sensitivities of those whose lives and livelihoods are bound up in that landscape. To illustrate this, the science of lichenology (Chapter 9) has been very influential in guiding the management of the ancient woodlands. A sound science base has been articulated in a way that identifies strategic priorities. The science guided tentative experiments, which in turn supported a larger scale series of works. The nature of these works were welcomed not only by those who own and manage the land, but also by other interest groups ranging from those appreciating the landscape to other biologists.

However, I strongly advise against single interests expecting the Forest to be changed to accommodate their personal enthusiasms. The Forest does not work that way.

There have been successful conservation interventions. We have been shown the restoration of Open Forest biodiversity from 19th and 20th century timber plantations. Similarly, wetlands within the plantations have been restored (Chapter 17). In some cases, what has happened is the restoration of the ecological and hydrological processes disrupted by past decisions. I believe that the measure of a successful restoration is that the ecological functioning of the landscape is restored, and no further interventions are required. Monitoring of all interventions is needed and the findings disseminated (Chapter 20).

What additional data on biodiversity do we need? Existing data reflect personal enthusiasms and I'm sure that this will also underpin future work. Most data are gathered by volunteers for the many reasons that individuals engage with wildlife. The work of naturalists over the centuries unpins our knowledge of the Forest's biodiversity. Of priority to managers is baseline data, particularly relating to places where interventions are being considered. It is surprising what baseline data do not exist, for example there is no definitive map of the extent of the Open Forest.

There are many opportunities within both Inclosed and enclosed landscapes to maintain and enhance, to understand and enjoy, what makes the biodiversity of the Forest special. To date this aspect of the Forest's biodiversity has received less attention than the Open Forest, yet it is an exceptional resource in its own right.

Where next?

One of the issues that arose, even before the Conference opened, was an appreciation that a lot is currently going on. Research into the biodiversity of the Forest is being undertaken by a number of communities and individuals. Communication between individuals and even within communities is imperfect. In some respects this is understandable, particularly amongst those where the control of data gives access to budgets and career enhancement. On many occasions during the last two days it has been very apparent how little connection the academic world has with a substantial body of research and knowledge that exists in the Forest outside academia. I hope that all knowledge can be mutually respected. Data are there to be shared. The Hampshire Biodiversity Information Centre liaises with its equivalent in Wiltshire to store and manage biodiversity data for the Forest. Please invest in it and use it. In addition the Forest has a dedicated library, the Christopher Tower Library, in Lyndhurst. The library can accommodate any literature or manuscripts associated with the Forest. The library has an important and growing collection of both published and grey literature. Please use it.

If people are considering research, please remember there is an existing great depth of knowledge and experience in the Forest. Do draw on that experience and knowledge in helping identify research priorities and project design.

With the establishment of the National Park, there are now opportunities for everyone to contribute to the National Park's Management Plan and the Biodiversity Action Plan. These plans will, I hope, deal with the strategic issues both inside and outside the Park boundaries that impact upon biodiversity. It will be really helpful for those engaging with these plans to take a strategic view themselves: how does their particular field of interest relate to the future of the Forest? Please do take up the opportunities to inform this debate.

Over the last two days there have been many references to the work of the late Colin Tubbs on the Forest. He was a colleague and a friend to many and he remains a great inspiration in our work. Colin's *New Naturalist* book (Tubbs 2001) on the New Forest remains the standard reference. The opening lines of the editor's preface succinctly sums up our thoughts of the last two days: 'There is nowhere in the world quite like the New Forest' .

Reference

Tubbs, C. R. (2001). *The New Forest. History, ecology and conservation*. New Forest Ninth Centenary Trust, Lyndhurst.