

RSPB/NE Countdown 2010: Bringing Reedbeds to Life Project

Wildlife surveys

CHAPTER 11: Recommendations for future research

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On 3rd March 2011, a workshop was held to review these results, discuss the implications for reedbed management, and outline the knowledge gaps still remaining. This event was attended by 25 delegates, each contributing a different area of expertise. Representatives of various invertebrate specialist groups, water voles, amphibians and fish all added points to the debate. In addition RSPB, Natural England, Wildfowl and Wetlands Trust, Broads Authority and Wildlife Trusts staff attended. Reviews of invertebrate, amphibian, and water vole results were presented by experts on these taxonomic groups. The implications for reedbed management practices were discussed and we reached an improved shared understanding of reedbed conservation.

The outcomes of this workshop have been used to inform the write up and interpretation of results presented in this technical report. Recommendations for future research and conclusions coming from the workshop are presented here. It is hoped that this project has not only answered questions about how wildlife uses reedbed habitat, but has also presented new questions and provided baseline data on which future research can be built.

Future research

Some recommendations for future research have been presented in each individual chapter. In addition, here are some suggestions for additional research that would build on the results of this project and further our understanding of reedbed wildlife and management.

- Find out if the findings from Bringing Reedbeds to Life research are true for a wider variety of sites and in different years. Use this data as a baseline to look at changes in reedbeds over time under different management practices.
- Set up hydrological gradients for long term monitoring on reedbed sites.
- Examine the impact of oxygen availability in reed litter on fauna, and how management affects this.
- Investigate trends in litter biomass along reedbed hydrological gradients.
- Improve the recording of water levels on sites, perhaps using data loggers.
- Find out at what point the core reedbed invertebrate assemblage breaks down along hydrological gradients and what the tolerance of invertebrates is to wetting and drying of reedbed.
- Investigate how fast a newly created reedbed that is not near existing reedbed be colonised by reedbed specialist invertebrates. This could inform scope for invertebrate translocations in the light of climate change.
- Use larval searches to investigate reedbed specialist invertebrates.
- Refine survey methods for reedbed specialist invertebrates.
- Investigate the importance of edges between reed patches of different phase in cutting cycles for invertebrates.
- Improve the recording of management history at sites, so that variables such as cutting regimes can be linked to biodiversity.

- Survey toads and the habitat they use within reedbeds.
- Find out what niches need to be present, in sufficient quantity, to support all the special species and habitat typical assemblages of invertebrates.
- Link the reedbed habitat preferences of different species to the wider reedbed habitat resource (this could tie in with the RSPB Bringing Reedbed to Life audit surveys of 30 reedbed sites across England).
- Radio track water voles to reveal more detail on how they use internal parts of reedbed as a refuge from mink predation.
- Investigate the role of marsh frogs in reedbed ecosystems. Evaluate whether they have a negative impact on native amphibians.
- Look into how reedbed creation can be adapted in the light of changing species distributions with climate change.

Data from Bringing Reedbeds to Life

A digitised database of the 2009-2010 Bringing Reedbeds to Life surveys is held at RSPB. Data from the project will be freely available through the National Biodiversity Network.

Conclusions

All parts of the hydrological gradient within reedbeds are important for biodiversity. Reedbeds are dynamic systems and maintaining the processes of reedbed formation and succession is vital. The early successional stage is important for reedbed and wetland specialist invertebrates. Ephemeral pools are important for amphibians. Having a variety of ditches and open water bodies is important for aquatic invertebrates and macrophytes. Older drier parts of the reedbed contain high invertebrate diversity and many species with conservation statuses. Reedbed away from large linear ditches can be an important refuge for water voles in avoiding mink predation. Temporal and spatial variation in habitats is vital in maintaining a high diversity of flora and fauna in reedbeds.

Next Steps

The work summarised in this report forms an essential element of one of the largest co-ordinated programmes of reedbed research, assessment, advice and knowledge sharing for a decade. This includes the undertaking of reedbed habitat and management audits across over 30 key sites, and additional bittern and predator analysis, to form a compelling and enhanced understanding of reedbed habitats and their associated wildlife and management requirements. This emerging understanding has been shared with partners through an extensive programme of free training courses, workshops and conferences.

Coordinated findings of the programme will be used to help design new reedbeds to provide maximum wildlife value, assist in restoring or managing those reedbeds we already have to maintain and enhance their value and identify what further information and research we need.

Having rebuilt a vibrant partnership, our collective challenge now is to assimilate this new information and knowledge in to a coherent strategy for reedbed wetland conservation for the next decade. Thanks to all who have contributed to this so far; we look forward to building on this work in the future.