

9. Acknowledgements

We thank the following people for their assistance during the study and in preparing this report:

- Jennie Pearce for performing all analyses of variance and preparing all trellis graphics in Sections 4 and 7, and for advising on techniques for testing the predictive accuracy of models.
- Bob Pressey for providing encouragement and contributing many useful ideas throughout the consultancy, and both Bob and Vicki Logan for providing data from their study in arid north west NSW.
- Katrina McKay for preparing the report cover and maps, and both Katrina and Tessa Lock for assisting with report layout and production.
- Pru Peart for assisting with computer processing.
- Harry Hines, Dianne Brown and Gordon Lingard for extracting biological survey data from the NEFBS databases.
- Louis Rau for providing computer hardware support.
- Doug Binns (NSW State Forests) for providing additional floristic survey data.
- Ken Moxon (NSW State Forests) for providing the classification of forest types into ecological associations.
- Jeremy Bruhl (UNE Herbarium) and Gwen Harden (National Herbarium) for providing herbarium data.
- Leanne Wallace, Malcolm Stephens and Peter Wilson for supporting and facilitating completion of the project from within NSW NPWS.
- David Boughey, Peter Komidar and Lachlan Wilkinson for supporting and facilitating completion of the project from within DEST.
- Andrew Taplin (ANCA) for general support and encouragement throughout the study.
- Mike Austin (CSIRO), Mick Brown (Tasmanian Forestry Commission), Ross Cunningham (ANU), Dan Faith (CSIRO) and David Peters (Tasmanian Parks and Wildlife) for reviewing the proposed methodology for evaluating surrogates.
- David Peters (Tasmanian Parks and Wildlife) for assisting in the implementation of CORTEX and for general discussion concerning surrogates and modelling.
- Mike Austin (CSIRO) for many valuable discussions over the past few years, particularly in relation to predictive species modelling.
- Henry Nix (CRES) for general inspiration in relation to the development and application of environmental surrogates.

- Quality and quantity of environmental and biological data may vary greatly between regions. The results presented here are specific to datasets available for north east NSW.
- All of the modelling techniques evaluated are open to refinement. This study did not evaluate the effect of varying how each technique was applied (e.g. different stepwise selection procedures, stopping rules, link functions). Such variation may significantly affect, and in some cases improve, the performance of each technique (see for example Austin and Myers *in press*).
- The modelling techniques evaluated in this study represent only a subset of all techniques currently in use throughout Australia. Other techniques worthy of evaluation, but beyond the scope and resources of this consultancy, include HABITAT (Walker and Cocks 1991), DOMAIN (Carpenter *et al.* 1993), rule sets derived using genetic algorithms (Stockwell and Noble 1992) and neural networks (Lees 1994).
- This consultancy has evaluated models only in terms of their predictive accuracy. As detailed in Section 6.6 accuracy is only one of a number of criteria that should be considered when assessing models. Other criteria include interpretability, computational efficiency, required skill level, ecological rationality and capacity to deal explicitly with uncertainty.

Readers interested in gaining a more comprehensive overview of the performance of predictive species models are strongly advised to access reports generated by two related consultancies performed for ANCA by CSIRO Wildlife and Ecology (Austin *et al.* 1994; Austin 1994; Austin and Meyers 1995; Austin *et al.* 1995) and by NSW NPWS (Pearce and Ferrier 1996).