

Science Publications 2000

Science & Research Unit
Department of Conservation
PO Box 10 420, Wellington, New Zealand

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DOC Science Publishing
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Department of Conservation Science Publications

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This catalogue lists the items that were released by DOC Science Publishing during 2000. Also included are a limited selection of other DOC publications, including Biodiversity Recovery Unit publications and some policy documents.

Publications released in previous years are listed in separate catalogues. The full catalogue from 1987 to 2001 can be found on the internet at: <http://www.doc.govt.nz/cons/scires/scires.htm>

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Science for Conservation

167. **Burrow competition between broad-billed prions (*Pachyptila vittata*) and the endangered Chatham petrel (*Pterodroma axillaris*)**
N.W. Was; W.J. Sullivan; K.J. Wilson. 2000. 41 p. \$23.50 incl. GST.
Discusses nesting burrow occupancy by prions that form a major threat to the endangered Chatham petrel which occurs only on South East (Rangatira) Island in the Chathams.
165. **Review of control methods for pampas grasses in New Zealand**
D.S. Gosling; W.B. Shaw; S.M. Beadel. 2000. 32 p. \$22.50 incl. GST.
Pampas grasses from South America are ecological weeds in NZ. Control methods are discussed, and delivery systems for the application of herbicides to 'difficult' sites are described.
163. **Distribution and biology of the endangered kauri snail *Paryphanta busbyi watti***
I.A.N. Stringer; R. Montefiore. 2000. 42 p. \$23.50 inc GST.
Describes studies to determine the distribution and biology of this species in the three distinct locations on the end of the Aupouri Peninsula, New Zealand, to which it is restricted.
162. **Aerial poisoning of wasps**
R.J. Harris; J.S. Rees. 2000. 26 p. \$22.50 incl. GST.
The feasibility of the aerial application of bait to kill wasps was investigated as a technique for large-scale poisoning of wasps in areas of 1000-5000 ha. Bait attractiveness to wasps was determined and interest in baits by non-target species recorded.
159. **Community perceptions of landscape values in the South Island high country**
S.R. Swaffield; R.J. Foster. 2000. 54 p. \$22.50 incl GST.
Results of a literature review of published surveys of community perceptions of landscape values in the South Island high country are reported, and a range of survey methods evaluated.
158. **Feasibility of immunocontraception for managing stoats in New Zealand**
L.A. Hinds; C.K. Williams; R.P. Pech; D.M. Spratt; A.J. Robinson; G.H. Reubel. 2000. 109 p. \$25.00 inc GST.

- An examination of the literature to assess the potential for fertility control of stoats, especially immunocontraception, to contribute to the sustainable conservation of endemic New Zealand birds.
- 157. Inventory of New Zealand's active dunelands**
M. Hilton; U. Macauley; R. Henderson. 2000. 28 p. \$27.00 incl GST.
An inventory of active dunelands in New Zealand including maps of active duneland in the 1950s, 1970s, 1980s and 1990s. Changes in the areas of activity are noted.
- 156. Risk assessment for establishment of polistine (*Polistes* spp.) and vespine (*Vespula* spp.) wasps on the Three Kings Islands in the Far North of New Zealand**
J.J. Dymock. 2000. 18 p. \$12.50 incl. GST.
Three main variables affecting establishment on the Three Kings Islands were: the number of vessels passing the islands within the flight range of a queen wasp, the probability of one of those vessels harbouring a queen wasp, and the availability of resources on the islands.
- 154. Archaeology of the Taranaki-Wanganui region.**
A. Walton. 2000. 64 p. \$22.50 incl. GST.
Reviews the history of the Taranaki-Wanganui region. Includes chapters on resource use, settlement patterns, change in prehistoric times, historical archaeology, and future research directions.
- 153. Variation in reproduction and condition of northern tuatara (*Sphenodon punctatus punctatus*) in the presence and absence of kiore.**
C. Tyrrell; A. Cree; D.R. Towns. 2000. 42 p. \$22.50 incl. GST.
Aspects of reproduction and condition in northern tuatara were studied between 1996 and 1998. None of the variations noted in egg production were associated with the presence of kiore. The presence of kiore was associated with lower body condition in female tuatara. Size-class distributions indicate an under-representation of juvenile and subadult tuatara on kiore-inhabited islands.
- 152. Effectiveness of aerial baiting of possums in different seasons and different forest types.**
D.R. Morgan; J.D. Coleman; P. Sweetapple. 2000. 25 p. \$12.50 incl. GST.
Trials were conducted in three different forest types to see whether season affects the amount of aerially dispersed bait eaten by possums. Bait acceptance was not affected by season, and was very similar in the three forest types.
- 151. Review of permanent plots for long-term monitoring of New Zealand's indigenous forests.**
P. Bellingham; S. Wiser; D. Coomes; A. Dunningham. 2000. 75 p. (incl. 6 colour pages) \$28.50 incl. GST.
Monitoring status and trends in indigenous forests can assist in the evaluation of conservation performance and the measurement of conservation achievement. This report reviews a number of national permanent plot systems from overseas, then presents a three-tier option for a national system in New Zealand.
- 150. Rodent baits and delivery systems for island protection.**
C.E. O'Connor; C.T. Eason. 2000. 25 p. \$12.50 incl. GST.
Reviews the effectiveness and environmental safety of currently available rodent baits, lures, toxicants, and delivery systems. Includes recommendations for the development of an island protection system.
- 149. Archaeological mapping of Awa-te-Take Pa and Ngangana Pa, Taranaki.**
W. Gumbley. 2000. 13 p. \$12.50 incl. GST.
Presents large scale maps of the earthworks of Awa-te-Take Pa and Ngangana Pa. The maps have uses in research, site management, and interpretation of the site for visitors.
- 148. Ecology and distribution of the freshwater crayfish *Paraneobroops zealandicus* in Otago. Implications for conservation.**
N. Whitmore; A.D. Hurny; C.J. Arbuckle; F. Jansma. 2000. 42 p. \$22.50 incl. GST.
Examines the distribution of the crayfish *Paraneobroops zealandicus* (koura) in the Taieri River catchment, Otago, with respect to land use and drainage history.
- 147. Water abstraction impacts on non-migratory galaxiids of Otago streams.**
R.M. Allibone. 2000. 45 p. (incl. 3 colour pages.) \$25.50 incl. GST.
Part one: Assessment techniques for water abstraction impacts on non-migratory galaxiids of Otago streams. Part two: Water abstraction impacts on the non-migratory galaxiids of Totara Creek.
- 146. Significant coastal lagoon systems in the South Island, New Zealand. Coastal processes and lagoon mouth closure.**
R.M. Kirk; G.A. Lauder. 2000. 47 p. \$22.50 incl. GST.
Identifies and examines river mouth lagoons and coastal lakes on the east and south coast of the South Island.

- 145. Conservation status of two rare New Zealand geometrid moths.**
B. Patrick. 2000. 21 p. (incl. 1 colour page.) \$13.50 incl. GST.
Investigates the conservation status of *Asaphodes stinaria* and *Xanthorhoe bulbulata*. Recommendations for further study are made.
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Considers factors influencing rates of re-infestations of possums after control measures, and makes recommendations for minimising re-infestations.
- 143. Assessing the risk to indigenous New Zealand biota from new exotic plant taxa and genetic material.**
P.A. Williams; E. Nicol; M. Newfield. 2000. 42 p. \$22.50 incl. GST.
Describes the potential risks to New Zealand natural areas and indigenous biota from the importation of new plant taxa and additional material of taxa already here.
- 142. Threats to New Zealand's indigenous forests from exotic pathogens and pests.**
G.S. Ridley; J. Bain; L.S. Bulman; M.A. Dick; M.K. Kay. 2000. 68 p. \$22.50 incl. GST.
Assesses the likelihood and consequences of the arrival and establishment of insect and fungal pathogens in New Zealand's indigenous forests and other natural ecosystems. The report focuses on the Araucariaceae, Podocarpaceae, Nothofagaceae and Myrtaceae families of trees.
- 141. Border control for potential aquatic weeds. Stage 1. Weed risk model.**
P.D. Champion; J.S. Clayton. 2000. 48 p. \$22.50 incl. GST.
The first of three stages in the development of a border control programme for aquatic plants that have the potential to become ecological weeds in New Zealand. A new weed risk assessment model for aquatic plants is presented.
- 140. Status and conservation role of recreational hunting on conservation land.**
K.W. Fraser. 2000. 46 p. \$22.50 incl. GST.
Explores conservation benefits of recreational hunting and also options for enhancing benefits. Compares recreational hunting and commercial hunting.
- 139. Preliminary study of the effects of honey bees (*Apis mellifera*) in Tongariro National Park.**
C. Murphy; A. Robertson. 2000. 18 p. \$12.50 incl. GST.
Examines the impact of honey bees on the pollination of heather, flax, manuka and *Hebe stricta*. Honey bees were found to play a role in determining the structure of pollinator communities and may be a threat to local native biodiversity.
- 138. Development of a method for evaluating the risk to New Zealand's indigenous fauna from the introduction of exotic diseases and pests—including a case study on native parrots.**
R. Jackson; R.S. Morris; W. Boardman. 2000. 94 p. \$22.50 incl. GST.
Suggests a framework and approach for assessing risks to indigenous wildlife populations from exotic diseases. Psittacines are used as a case study, in order to identify the risks to this group and make recommendations on how the proposed approach could be applied to other indigenous wildlife.
- 137. Invertebrates seen on cereal baits. A study of video and manual observation methods.**
M.D. Wakelin. 2000. 36 p. \$12.50 incl. GST.
A comparison of a video observation method and a manual observation method of determining which invertebrates are at risk from pest mammal control programmes.
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B.H. Patrick; J.S. Dugdale. 2000. 33 p. \$12.50 incl. GST.
New Zealand moths and butterflies were assessed for species of conservation interest using criteria devised by Molloy and Davis. 114 endemic species in 22 families were assessed as having conservation significance.
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K. Schöps. 2000. 37 p. \$12.50 incl. GST.
An investigation of the interactions between the endangered endemic monophagous coxella weevil and its host plant, Dieffenbach's speargrass.

Department of Conservation Technical Series

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E.B. Spurr; R.G. Powlesland. 2000. 52 p. \$22.50 incl. GST.
Provides protocols for determining bait quality, monitoring the impacts of pest control operations on populations of non-target species, and collecting tissues from dead animals and samples of water for toxicity testing.

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Conservation Advisory Science Notes

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K. McBreen. 1999. 17 p. \$3.50 incl. GST.

Miscellaneous publications

What's happening with stoat research? Report on the five-year stoat research programme. January 2000.

Department of Conservation. 2000. 12 p. Free.

What's happening with stoat research? 2nd report on the five-year stoat research programme.

Department of Conservation. 2000. 31 p. Free.

Weed surveillance plan for the Department of Conservation

H. Braithwaite. 2000. 24 p. Free.

A review of Department of Conservation mainland restoration projects and recommendations for further action.

A. Saunders. 2000. Department of Conservation. 220 p. (incl. 6 colour pages.) \$25.00 incl. GST.

New Zealand as ecosystems. The ecosystem concept as a tool for environmental management and conservation.

G.N. Park. 2000. 96 p. \$17.00 incl. GST.

Outdoor Recreation in New Zealand. Volume 1. A review and synthesis of the research literature.

P.J. Devlin; R.A. Corbett; C.J. Peebles. 1995 (reprinted 2000). 259 p. \$35.00 incl. GST.

Science Posters

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J. Molloy; C. Keith; S. Anderson. 2000.
29. **Northern Royal Albatross behaviour deduced from prototype loggers.**
D.G. Nicholls; C.J.R. Robertson; J. Catsoulis; K. Lay. 2000.

Biodiversity Recovery Unit publications

Inland *Lepidium* recovery plan. 2000–2010.

R.B. Allen. 2000. *Threatened Species Recovery Plan* 32. 25 p. \$15.00 incl. GST.

Lepidium sisymbrioides and *L. kirkii* are small, cryptic, perennial herbs, restricted to small, scattered populations in the semi-arid grasslands of central Canterbury and Otago. This plan provides the basis for improving our understanding of these plants, and ensuring that viable, self-sustaining populations are established or restored in the wild.

Shrubby tororaro (*Muehlenbeckia astonii* Petrie) recovery plan 2000-2010.

P. de Lange; C. Jones. 2000. *Threatened Species Recovery Plan* 31. 24 p. \$15.00 incl. GST.

Summarises the distribution and ecology of *Muehlenbeckia astonii*, and outlines priority recovery goals and objectives for the next ten years.

Action Plan for Seabird Conservation in New Zealand.

Part B: Non-Threatened Seabirds.

G.A. Taylor. 2000. *Threatened Species Occasional Publication* 17. 201 p. \$20.00 incl. GST.

Action Plan for Seabird Conservation in New Zealand.

Part A: Threatened Seabirds.

G.A. Taylor. 2000. *Threatened Species Occasional Publication* 16. 234 p. \$20.00 incl. GST.

Brown Teal Captive Management Plan.

G. Dumbell. 2000. *Threatened Species Occasional Publication* 15. 30 p. \$15.00 incl. GST.

The goal of the plan is to maintain, manage and develop the brown teal captive breeding programme to retain known genetic diversity, annually supply known quality birds for release in the quantities and at the times required by the recovery programme, and to contribute to brown teal advocacy.

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IR Science & Research Internal Report (page 11)
MISC Miscellaneous Science & Research publications (page 18)
Post Science Posters (page 19)
SFC Science for Conservation (page 5)
TS Department of Conservation Technical Series (page)
TSOP Threatened Species Occasional Publication (see Biodiversity Recovery Unit publications, page 20)
TSRP Threatened Species Recovery Plan (see Biodiversity Recovery Unity publications, page 20)

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