

# Science Publications 1999

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

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DOC Science Publications  
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## ***Department of Conservation Science Publications***

DOC Science Publications group record the output of science investigations undertaken by departmental staff and consultants. Research is published as stand-alone books, posters, pamphlets, and as reports in several series.

DOC Science Publications currently publish the following series:

- *Science for Conservation* presents the results of scientific investigations by DOC staff and external consultants. This series is peer reviewed.
- *Department of Conservation Technical Series* presents instructional guidebooks, reviewed to ensure best-practice standards.
- *Science & Research Internal Reports* are progress reports on scientific matters on-going in the Department.
- *Conservation Advisory Science Notes* present the results of scientific services and advice provided by DOC staff and external consultants.

Science Publications also produces a bimonthly newsletter, ConScience, and a monthly update of new publications. If you would like to receive either of these please ask to be put on our mailing list.

## ***Sales catalogue***

This catalogue lists the items that were released by DOC Science Publications during 1999. 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 2000 can be found on the internet at: <http://www.doc.govt.nz/cons/scires/scires.htm>

DOC staff also publish research in professional journals and other external publications. More information about these publications is available in the **Reference Catalogue of DOC Science Publications** (\$20.00 including GST, from DOC Science Publications). Please note: journal articles and other external publications are NOT available from DOC Science Publications.

Please use the order form provided on page 33.

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# Science for Conservation

133. Powlesland, R.G.; Kneegtmans, J.W.; Styche, A. 1999. **Impacts of aerial 1080 possum control operations on North Island robins and moreporks at Pureora in 1997 and 1998.** 20 p. \$12.50 incl. GST.

Describes the results from the second and third years of a three-year programme to determine the costs and benefits of aerial 1080 possum control operations to North Island robins and moreporks in Pureora Forest Park. During the 1997/98 nesting season, the nesting success of robins was significantly better in the treatment area than in the non-treatment area.

132. Parkes, J.P.; Thomson, C. 1999. **Impact of Himalayan thar (*Hemitragus jemlabicus*) on snow tussock in the Southern Alps.** 46 p. (incl. 7 colour pages.) \$29.50 incl. GST.

This study aimed to determine if indicators of alpine vegetation condition changed as expected when thar densities were below, at, or above target densities set in the National Himalayan Thar Control Plan. Neither the thar density relative to the intervention density set in the plan, nor trends in thar densities, predicted the trends in the vegetation condition indices in all cases.

131. Gardner, P.; Wilson, K.J. 1999. **Chatham petrel (*Pterodroma axillaris*) studies—breeding biology and burrow blockading.** 37 p. (incl. 1 colour page.) \$13.50 incl. GST.

Part one: Aspects of the breeding biology of the Chatham petrel. Part two: Burrow competition between Chatham petrels and broad-billed prions: the effectiveness of burrow blockading as a management strategy.

130. Whitaker, A.H.; Alspach, P.A. 1999. **Monitoring of Hochstetter's frog (*Leiopelma hochstetteri*) populations near Golden Cross Mine, Waitekauri Valley, Coromandel.** 36 p. (incl. 1 colour page.) \$13.50 incl. GST.

There is no evidence that the activities of the Golden Cross Mine have impacted on the Hochstetter's frog populations in the study streams. Recommendations for further research are made.

129. Brook, F.J. 1999. **Distribution and conservation status of the dune snail *Succinea archeyi* Powell (Stylommatophora: Succineidae) in northern New Zealand.** 29 p. \$12.50 incl. GST.
- Surveys were carried out from 1994 to 1998 to determine the location, size, habitats and conservation status of the endemic dune snail *Succinea archeyi* Powell. Threats to their continued survival are identified and management actions are suggested.
128. Coleman, J.D.; Thomas, M.D.; Pracy, L.T.; Hansen, Q. 1999. **Fluctuations in possum numbers in the Pararaki Valley, Haurangi State Forest Park.** 16 p. \$12.50 incl. GST.
- Summarises annual possum-trapping and necropsy data collected from permanent trap lines in the Pararaki Valley, Haurangi State Forest Park, from 1965 to 1997. The data is compared with similar data gathered elsewhere in New Zealand.
127. Department of Conservation 1999. **Progress in mammal pest control on New Zealand conservation lands.** 74 p. \$22.50 incl. GST.
- A collection of reports from related research projects, including: **Developing a long-life toxic bait and lures for mustelids**, by E.B. Spurr; **Sound lures for stoats**, by E.B. Spurr and C.E. O'Connor; **Feasibility of using wax-blocks to measure rodent and possum abundance and changes in population size**, by M.D. Thomas; **Preliminary trial of a water-resistant bait for feral pig control**, by M. Thomas and N. Young; **Literature search for mustelid-specific toxicants**, by M.L. Wickstrom and C.T. Eason; **Development and evaluation of baits for feral cat control**, by M. Wickstrom, M. Thomas, R. Henderson, C.T. Eason.
126. Lee, W.G.; Loughnan, A.; Lloyd, K.; Fenner, M. 1999. **Long-term (20 years) effect of artificial defoliation of mid-ribbed snow tussock, *Chionochloa pallens*, in the Murchison Mountains, Fiordland, New Zealand.** 17 p. \$12.50 incl. GST.
- To determine the long-term impact of deer on *C. pallens*, biomass, tillering, and mineral nutrient levels were measured in tussocks 19.5 years after clipping and removal of green lamina material. While most tussock features appear to have recovered in approximately two decades, tussock biomass will take a further 5 years to recover.

125. Jamieson, I.G.; Ryan, C.J. 1999. **Causes of low reproductive success of translocated takahe (*Porphyrio mantelli*) on predator-free islands.** 65 p. \$22.50 incl. GST.  
Reviews the possible causes of low reproductive success of translocated takahe breeding on predator-free islands. Recommendations are made for future management.
124. Sorrell, B.; Partridge, T. 1999. **Conservation values and management of the Kongahu Swamp, Buller District.** 50 p. (incl. 7 colour pages.) \$29.50 incl. GST.  
Kongahu Swamp is now a highly modified system, with a mosaic of vegetation types ranging from near pristine to highly degraded. Management options are explored.
123. Ferreira, S.M.; McKinlay, B. 1999. **Conservation monitoring of the Cromwell chafer beetle (*Prodontria lewisii*) between 1986 and 1997.** 34 p. \$12.50 incl. GST.  
Cromwell chafer beetles were studied during the spring and summer months of 1986, 1989, 1993, 1994, 1996 and 1997. A change in the sampling regime is recommended and studies directed at investigating the factors influencing chafer distribution are proposed.
122. Bergin, D.O.; Kimberley, M.O. 1999. **Rehabilitation of coastal foredunes in New Zealand using indigenous sand-binding species.** 52 p. (incl. 5 colour pages.) \$27.50 incl. GST.  
Techniques for revegetation of foredunes in New Zealand were investigated using three indigenous sand-binding species: pingao, spinifex and sand tussock.
121. Stephenson, G. 1999. **Vehicle impacts on the biota of sandy beaches and coastal dunes. A review from a New Zealand perspective.** 48 p. \$22.50 incl. GST.  
Previous research into vehicle impacts on the biota of sandy beaches and coastal dunes in other countries is summarised, and is examined for its relevance to the management of these resources in New Zealand.

120. Fahey, B.; Wardle, K.; Weir, P. 1999. **Environmental effects associated with snow grooming and skiing at Treble Cone Ski Field.** 62 p. (incl. 5 colour pages.) \$27.50 incl. GST.  
Part one: Vegetation and soil disturbance. Part two: Snow properties on groomed and non-groomed slopes.
119. Taylor, C.N.; Gough, J.; Warren, J.; McClintock, W. 1999. **Social and economic impacts of Kahurangi National Park.** 62 p. \$22.50 incl. GST.  
This report considers the social and economic effects of Kahurangi National Park on local economies, tourism and recreational use, as well as management issues and interactions with communities.
118. Lawrence, B.L.; O'Donnell, C.F.J. 1999. **Trap spacing and lay-out: experiments in stoat control in the Dart Valley, 1992–95.** 13 p. \$12.50 incl. GST.  
Trials of trap lay-outs showed control of stoats using perimeter trapping around a 100 ha block can be as effective as intensive grid trapping with 100 m trap spacing. Trials were undertaken while stoat densities were low, and the implications of this are discussed.
117. Langer, E.R.; Davis, M.R.; Ross, C.W. 1999. **Rehabilitation of lowland indigenous forest after mining in Westland.** 41 p. \$22.50 incl. GST.  
An investigation of rehabilitation techniques for native forest illustrated the difficulty of establishing native tree and shrub species on unmodified mine spoils where there had been minimal soil replacement, and indicated the necessity of correct site preparation techniques to overcome such factors as poor drainage. Management lessons are discussed.
116. Wong, V.; Hickling, G.J. 1999. **Assessment and management of hare impact on high-altitude vegetation.** 40 p. \$12.50 incl. GST.  
A review of literature on assessment and management of hare impacts on high-altitude vegetation.

115. Harris, R.J.; Read, P.E.C. 1999. **Enhanced biological control of wasps**. 39 p. \$12.50 incl. GST.

*Sphécophaga vesparum burra* (Hymenoptera: Ichneumonidae) has been released in large numbers at two sites as a biological control agent for wasps. Measurements need to be made of the proportions of spring nests killed by parasitoid attack to be able to predict more accurately the eventual impact of *Sphécophaga*.

114. Howard-Williams, C.; Pickmere, S. 1999. **Nutrient and vegetation changes in a retired pasture stream. Recent monitoring in the context of a long-term dataset**. 41 p. (incl. 3 colour pages.) \$25.50 incl. GST.

This report records water quality and vegetation changes in the Whangamata Stream, Lake Taupo catchment from 1995 to 1998. The data represent the latest three years of a 24-year study on changes to this pasture stream since riparian strips were established in 1976, to retire the margins of the stream from pastoral farming.

113. Burns, B.R.; Smale, M.C.; Merrett, M.F. 1999. **Dynamics of kahikatea forest remnants in middle North Island: implications for threatened and local plants**. 23 p. \$12.50 incl. GST.

The probability that threatened or local plant species will be present in any remnant stand of kahikatea-dominated forest depends on the regional species pool, if the stand fulfils the requirements of candidate species and if the stand has been a persistent part of the landscape.

112. Williams, P.A.; Ogle, C.C.; Timmins, S.M.; La Cock, G.; Reid, V. 1999. **Biology and ecology of *Senecio glastifolius* and its spread and impacts in New Zealand**. 23 p. (incl. 1 colour page.) \$13.50 incl. GST.

*Senecio glastifolius* has been naturalised in New Zealand for 30 years. Where it is invading native species in sand dune and similar sites it should be controlled as part of a site-led weed control programme. Plants beyond its present range should be eradicated as part of a weed-led control program to prevent further spread of the species.

111. Edwards, E.D.; Logan, R. 1999. **Ecological assessment of two islands in west Otago lakes for potential re-introduction of buff weka (*Gallirallus australis hectori*).** 25 p. (incl. 2 colour pages.) \$14.50 incl. GST.  
A detailed ecological evaluation of two islands in west Otago lakes to assess the food resource for buff weka and consider the vulnerability of resident invertebrates, birds and lizards to buff weka.
110. Jamieson, C.D. 1999. **Distribution and abundance of *Sigaus cbildi* Jamieson (Orthoptera: Acrididae), a Central Otago endemic grasshopper.** 28 p. (incl. 3 colour pages.) \$15.50 incl. GST.  
*Sigaus cbildi* is a distinct grasshopper species which is restricted to the Alexandra area, Central Otago. Recommendations are made for grasshopper reserves, and a monitoring programme is suggested.
109. Hutcheson, J.; Walsh, P.; Given, D. 1999. **Potential value of indicator species for conservation and management of New Zealand terrestrial communities.** 90 p. \$22.50 incl. GST.  
The use of indicator species is reviewed within a context of the need for broader understanding of biological systems and the effects of management on biodiversity. The understanding needed to guide appropriate land management requires the integrated study of communities and systems in order to derive the basic principles operating.
108. Espiner, S. 1999. **The use and effects of hazard warning signs: managing visitor safety at Franz Josef and Fox Glaciers.** 40 p. (incl. 1 colour page.) \$23.50 incl. GST.  
Examines the extent to which visitors to Fox and Franz Josef Glaciers demonstrate an awareness of hazards, and the effectiveness of both existing and introduced hazard warning signs on visitor awareness and behaviour.
107. Rogers, G. 1999. **Coastal turfs of mainland New Zealand—their composition, environmental character, and conservation needs.** 83 p. (incl. 13 colour pages.) \$30.00 incl. GST.  
Coastal turfs were recorded from six coastal zones in mainland New Zealand. The distinctiveness of turfs warrants their recognition as a separate coastal ecological unit, if not ecosystem. Carefully monitored grazing as a maintenance tool is recommended for many situations.

106. Constantine, R. 1999. **Effects of tourism on marine mammals in New Zealand.** 60 p. \$22.50 incl. GST.
- Past and current research projects evaluating the effects of tourism on marine mammals are reviewed. Concern is expressed over the number of permits being issued and the lack of knowledge about their impacts. The need to consider further revisions to the regulations has been identified and is being actioned.
105. Chambers, G.K.; MacAvoy, E.S. 1999. **Molecular genetic analysis of hybridisation.** 30 p. \$12.50 incl. GST.
- Part one: Molecular genetics and the study of hybridisation in natural populations. Part two: Mitochondrial DNA sequence from black and pied stilts.
104. Svavarsdóttir, K. 1999. **Assessment of the Recovery Index for Narrow-leaved Snow Tussock (*Chionochloa rigida*) in Otago.** 12 p. \$12.50 incl. GST.
- An assessment of the Recovery Index for Narrow-leaved Snow Tussock (RINST) at different geographical locations. It is concluded that the specific critical levels identified in the index are acceptable and that it is a useful tool for managers to assess the recovery of narrow-leaved snow tussock.
103. Bellingham, P.J.; Wiser, S.K.; Hall, G.M.J.; Alley, J.C.; Allen, R.B.; Suisted, P.A. 1999. **Impacts of possum browsing on the long-term maintenance of forest biodiversity.** 60 p. \$22.50 incl. GST.
- Examines the long-term changes in five conifer/broad-leaf rainforests. Infrequent and broad scale possum control has had little apparent effect in arresting the declines of some palatable tree species. A better understanding of life histories of vulnerable tree species should identify better approaches to possum control.
102. Hunt, M.; Sherley, G.; Wakelin, M. 1998. **Results of a pilot study to detect benefits to large-bodied invertebrates from sustained regular poisoning of rodents and possums at Karioi, Ohakune.** 18 p. \$12.50 incl. GST.
- Describes a pilot study to test the methods that might be suitable for detecting gross changes in invertebrate abundance and diversity resulting from control of pest mammals. No clear trends in invertebrate abundance could be determined, but the study did indicate how sampling methods could be improved.

101. Efford, M. 1998. **Distribution and status of native carnivorous land snails in the genera *Wainuia* and *Rhytida***. 48 p. (incl. 1 colour page.) \$23.50 incl. GST.
- Describes the distribution and conservation status of species of carnivorous land snails in the endemic genera *Wainuia* and *Rhytida*. There is a need for conservation action to improve the outlook for some populations of snails.
100. Williams, P.A.; Timmins, S.M.; Mountford, N. 1998. **Control of Japanese honeysuckle (*Lonicera japonica*), climbing dock (*Rumex sagittatus*), and bone-seed (*Chrysanthemoides monilifera*)**. 15 p. \$12.50 incl. GST.
- Three weeds of high conservation concern were sprayed with a range of herbicides. The weeds, and their associated native vegetation, were monitored to determine their response to spraying.
99. Williams, P.A.; Timmins, S.M. 1999. **Biology and ecology of Japanese honeysuckle (*Lonicera japonica*) and its impacts in New Zealand**. 27 p. \$12.50 incl. GST.
- Japanese honeysuckle is underestimated as a weed—but it is likely to be highly detrimental to conservation values. The world literature on Japanese honeysuckle, and observations made throughout New Zealand on its history of introduction and spread, biology, ecology, and impacts, are summarised.
95. Doorne, S. 1999. **Visitor experience at the Waitomo Glowworm Cave**. 43 p. \$22.50 incl. GST.
- Overcrowding at tourist sites has the potential to pose problems for environmental management and erode the visitor experience to the extent that commercial sustainability is threatened. This report examines issues of satisfaction, crowding and the visitor experience at the Waitomo Glowworm Cave and suggests a framework for management of the visitor experience.

# Department of Conservation

## Technical Series

21. Fitzgerald, G. 1999. **Community involvement in conservation management issues. A New Zealand action research project.** 59 p. \$22.50 incl. GST.

This action research project develops and tests the participatory development of community-based management of pests and weeds, and other conservation issues. Strategies for those working with communities are drawn from the researcher's experience with the project.

20. in press

19. Blackford, C. 1999. **Methodology for evaluating DOC's public awareness activities.** 36 p. \$12.50 incl. GST.

Guidelines for DOC staff to use when evaluating the effectiveness of public awareness activities in achieving conservation advocacy.

18. Booth, K.L.; Jones, N.C.; Devlin, P.J. 1999. **Measuring the effects of aircraft overflights on recreationists in natural settings.** 46 p. \$22.50 incl. GST.

Part one is a detailed implementation guide for monitoring the effects of aircraft activity on recreationists in natural settings. Part two outlines the issues and concepts explored during the development of the monitoring method and evaluates potential approaches.

17. Moore, P.J.; Blezard, R. 1999. **Photographs of Campbell Island mollymawk colonies: a guide to photopoints, historical comparisons and counting mollymawks.** 106 p. (incl. 11 colour pages.) \$45.00 incl. GST.

Comparisons of photographs suggest that mollymawk populations on Campbell Island have declined since the 1940s. Ground counts were conducted in 1995-97 to establish a population baseline. This report outlines the techniques used for photographing colonies, comparing historical views and counting mollymawks from the photos.

16. Moore, P.J. 1999. **Counting mollymawks on Campbell Island: a guide to techniques and field procedures.** 89 p. (incl. 21 colour pages.) \$45.00 incl. GST.

Comparisons of photographs suggest that mollymawk populations on Campbell Island have declined since the 1940s. Ground counts were conducted in 1995-97 to establish a population baseline. This report outlines techniques used for counting mollymawks and through the use of photographs and maps describes colony sectors and boundaries for dividing up the census.

14. Trotter, C.M.; Brown, L.J. 1999. **Monitoring forest canopy condition by remote sensing.** 44 p. (incl. 8 colour pages.) \$30.00 incl. GST.

Examines the accuracy of remotely sensed data for assessing forest canopy defoliation. Data acquired from airborne sensors should provide ratings of percentage canopy that are accurate to within 20%.

# Science & Research Internal Reports

171. Cessford, G. 1999. **Social impacts of visitors to conservation lands. Part 1. Research and information needs.** 38 p. \$12.50 incl. GST.  
Synthesis of the main research and information needs identified at the workshop: Social impacts on the recreation experiences of visitors to protected areas.
170. in press
169. Moore, P.J.; Blezard, R.; 1999. **Counting Campbell Island mollymawk colonies from photographs—data supplements.** 63 p. \$22.50 incl. GST.  
Tabulated data from counts of mollymawks on Campbell Island, conducted in 1990, 1993, 1997-1998.
168. Williams, A. 1999. **Threats to archaeological features within the redoubt and village area, Opepe Bush Scenic and Historic Reserve, Taupo.** 16 p. \$12.50 incl. GST.  
Threats to historic features within Opepe village and redoubt area include vegetation cover and regeneration, fossicking, definition of reserve boundaries and visitor impact. Signs are likely to be one of DOC's main ways to protect the historical features from adverse visitor impact.
167. Walton, T. 1999. **Assessing the archaeological values of historic places: procedures, methods and field techniques.** 30 p. \$12.50 incl. GST.  
Reviews some of the contexts in which assessments of archaeological values occur, examines the current framework and criteria for assessing archaeological significance, recommends standardisation of methods and procedures, and considers the techniques available to archaeologists to gather information for the assessment process.

166. Burrows, N.D. 1999. **Fire ecology and management information transfer from Western Australia to New Zealand.** 30 p. \$12.50 incl. GST.

DOC fire policy is to extinguish fires on or near land it administers. However, many ecosystems, such as tussock grasslands and some wetlands, depend on fire for their maintenance. Suggestions are made for improving fire management in New Zealand.

# Conservation Advisory Science Notes

259. Ward-Smith, T.; Potter, M. 1999. **Response of wild kiwi to orange and cinnamon lured possum baits.** 9 p. \$3.50 incl. GST.
258. Richardson, T. 1999. **DNA fingerprinting of maire, *Nestegis cunninghamii* tissue.** 4 p. \$3.50 incl. GST.
257. Clayton, J.S.; Wells, R.D.S. 1999. **Some issues in risk assessment reports on grass carp and silver carp.** 14 p. \$3.50 incl. GST.
256. Clayton, J.; Rowe, D.; McDowall, R.; Wells, R. 1999. **Cumulative impacts of multiple grass carp releases.** 11 p. \$3.50 incl. GST.
255. Blezard, R.H.; Burgess, J. 1999. **Observer reports from squid-jigging vessels off the New Zealand coast 1999.** 7 p. \$3.50 incl. GST.
254. Hamilton, W.J. 1999. **Potential threat of hedgehogs to invertebrates with a restricted range, Otago region.** 6 p. \$3.50 incl. GST.
253. Shaw, W.B. 1999. **Options for *Spartina* control in Northland.** 10 p. \$3.50 incl. GST.
252. Donovan, B.J. 1999. **Signs of South Island kokako *Callaeas cinerea* near Abut Head, South Westland.** 13 p. \$3.50 incl. GST.
251. Thorsen, M. 1999. **Resurvey of Archey's frogs, Mt Moehau, 24 December 1998.** 4 p. \$3.50 incl. GST.
250. Wilson, K.J. 1999. **Status and conservation of the sooty shearwater colony at Mt Oneone, Wanganui River, Westland.** 7 p. \$3.50 incl. GST.
249. Kelly, S. 1999. **Sugar Loaf Islands Marine Protected Area monitoring programme.** 10 p. \$3.50 incl. GST.

248. Keith, C. 1999. **Tori line designs for New Zealand domestic pelagic longliners.** 14 p. \$3.50 incl. GST.
247. Cessford, G.R.; Dingwall, P.R. 1999. **An approach to assessing the environmental impacts of tourism.** 18 p. \$3.50 incl. GST.
246. Molloy, J.; Walshe, K.; Barnes, P. (Comps) 1999. **Developmental stages of the underwater bait setting chute for the pelagic longline fishery.** 34 p. \$3.50 incl. GST.
245. Hosking, G. 1999. **The health of puriri (*Vitex lucens*).** 24 p. (incl. 5 colour pages.) \$8.50 including GST.
244. Jamieson, C. 1999. **Existing records of the carabid beetle *Oregus inaequalis* Castelnau in coastal Otago.** 12 p. \$3.50 incl. GST.
243. Johnson, P.N. 1999. **Kettle tarn vegetation, Lake Coleridge area.** 8 p. \$3.50 incl. GST.
242. Walls, G. 1999. **Rapid assessment of ecological condition and trend of conservation areas in Hawke's Bay.** 68 p. (incl. 15 colour pages.) \$18.50 incl. GST.
241. Miller, C. 1999. **Significant Natural Areas and Timberlands West Coast production forests.** 3 p. \$3.50 incl. GST.
240. Walls, G. 1999. **Visitor impacts on freshwater avifauna in New Zealand.** 69 p. \$3.50 incl. GST.
239. Wallis, G. 1999. **Genetic status of New Zealand black stilt (*Himantopus novaeseelandiae*) and impact of hybridisation.** 22 p. \$3.50 incl. GST.
238. McDowall, R.M. 1999. **West Coast whitebait fishing closed areas workshop.** 13 p. \$3.50 incl. GST.
237. Cassey, P. 1999. **Estimating animal abundance by distance sampling techniques.** 12 p. \$3.50 incl. GST.
236. Innes, J.; Whaley, K.; Owen, K. 1999. **Abundance and distribution of waterbirds of the Rotorua lakes, 1985–1996.** 46 p. (incl. 2 colour pages.) \$5.50 incl. GST.
235. Walls, G. 1999. **Forest monitoring on Pitt Island: “Just you ask the plants”.** 58 p. (incl. 12 colour pages.) \$15.50 incl. GST.
234. Lawrence, B. 1999. **Live rats and mice as lures for stoats.** 2 p. \$3.50 incl. GST.

233. West, C.J. 1999. **Poor Knights Island weed control programme.** 13 p. \$3.50 incl. GST.
232. Whitaker, T.; Hitchmough, R.; Chappell, R. 1999. **A striped gecko (*Hoplodactylus stephensi*) at Coromandel.** 17 p. (incl. 1 colour page.) \$4.50 incl. GST.
231. Webby, M.G. 1999. **Mt Ruapehu Crater Lake lahar hazard.** 19 p. \$3.50 incl. GST.
230. Whitaker, T.; Shaw, T.; Hitchmough, R. 1999. **Black-eyed geckos (*Hoplodactylus kabutarae*) on Mt Arthur, Kahurangi National Park.** 17 p. \$3.50 incl. GST.
229. Barr, K.; Slooten, E. 1999. **Effects of tourism on dusky dolphins at Kaikoura.** 28 p. \$3.50 incl. GST.
228. Tocher, M. 1999. **Big Bay skink (*Oligosoma* sp.): taxonomy, distribution and habitat requirements.** 21 p. (incl. 5 colour pages.) \$8.50 incl. GST.
227. Ferreira, S.M.; McKinlay, B. 1999. **Morphological variation in adult Cromwell chafer beetles *Prodontria lewisi*.** 6 p. \$3.50 incl. GST.
226. Jones, P. 1999. **Organochlorine contaminants in albatross from the South Pacific Ocean.** 14 p. (incl. 3 colour pages.) \$6.50 incl. GST.
225. Brook, F. 1999. **Invertebrate conservation in Northland.** 4 p. \$3.50 incl. GST.
224. Smale, M.C.; Whaley, P.T.; Smale, P.N. 1999. **Management of frost flat communities under threat from mouse-ear hawkweed invasion.** 7 p. \$3.50 incl. GST.
223. Wilde, R.H.; Trotter, C.M. 1999. **Detection of Himalayan thar using a thermal infrared camera.** 19 p. \$3.50 incl. GST.
222. Thomson, C.; Warburton, B.; Drew, K. 1999. **Kiwi-safe kill traps for possums.** 10 p. \$3.50 incl. GST.
221. Lentle, R.G.; Potter, M.A.; Springett, B.P.; Stafford, K.J. 1999. **Bait consumption and biology of tamar wallabies in the Rotorua region.** 18 p. \$3.50 incl. GST.

# Miscellaneous publications

Baker, A. (Comp.) 1999. **Unusual mortality of the New Zealand sea lion, *Phocarctos hookeri*, Auckland Islands, January–February 1998. Report of a workshop held 8–9 June 1998, Wellington, and a contingency plan for future events.** 84 p. \$22.50 incl. GST.

Blaschke, P.M.; Green, K. (Eds) 1999. **Biodiversity now! Joint societies conference, Wellington, 29 June–3 July 1997. Selected papers.** 62 p. \$25.00 incl. GST.

Includes papers by I.A.E. Atkinson, Theo Stephens, Chris Richmond and Victoria Froude. Dedicated to the late John Holloway, Director of Science and Research.

Boubée, J.; Jowett, I.; Nichols, S.; Williams, E. 1999. **Fish passage at culverts: a review, with possible solutions for New Zealand indigenous species.** 118 p. \$35.00 incl. GST.

Reviews the effects of culverts on migrating fish. Contains recommendations for culvert design. Includes the culverts testing program on floppy disc (for PC only).

Centre for Research, Evaluation and Social Assessment (CRESA) 1998. **Community consultation by the Department of Conservation. An independent review.** 40 p. \$25.00 incl. GST.

An assessment of community consultation by the Department of Conservation. Strengths and weaknesses of past consultation processes are identified and recommendations are made for improvements.

Miskelly, C. 1998. **Mana Island Ecological Restoration Plan. January 1999.** 149 p. \$22.50 incl. GST.

Rutherford, J.C.; Davies-Colley, R.J.; Quinn, J.M.; Stroud, M.J.; Cooper, A.B. 1999. **Stream shade: towards a restoration strategy.** 161 p. \$45.00 incl. GST.

Investigates the impact of shade on stream ecology. Includes recommendations for using shade to reverse negative stream changes and meet various management targets.

# Science Posters

Posters are available in the following sizes:

Size		Price
AO	plain paper	\$50
A1	plain paper	\$20
A2	plain paper	\$10
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27. Wilkinson, I.; Childerhouse, S.; Duignan, P.J.; Gulland, F.M.D. 1999. **Infanticide and cannibalism in the New Zealand sea lion.**
26. Buddenhagen, C.; Geritzlehner, J. 1999. **Bringing science to weed control: monitoring methods for managers.**
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23. Smith, N.W.McL. 1999. **Longline sink rates on bottom autoline vessels.**
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21. Timmins, S.; Owen, S.J. 1999. **Eradicate this weed or not? Decision-making for weed-led control programmes.**
20. Reid, V.; Timmins, S. 1998. **Bone-seed: another yellow-flowered shrub invading New Zealand's coastal plant communities.**
19. Reid, V.; Timmins, S. 1998. **The impact of weeds on threatened plants.**
18. Murphy, E.; Brown, K.; Keedwell, R. 1998. **Predator diet in the Mackenzie Basin – after the release of rabbit haemorrhagic disease.**

17. Gillies, C. 1998. **Home range of introduced mammalian predators at Trounson Kauri Park, Northland, New Zealand.**
16. Pierce, R. 1998. **Kiore: their impact on two small seabird species in the Hen and Chicken Islands.**

# Biodiversity Recovery Unit publications

McHalick, O. 1999. **Translocation database summary.** *Threatened Species Occasional Publication 14.* 64 p. \$15.00 incl. GST.

The Translocation database contains information about the translocation of species. The database has not been updated since 1995. Before updating, a decision will be made as to whether or not there are justifiable reasons to continue developing it for future use.

Dopson, S.R.; de Lange, P.J.; Ogle, C.C.; Rance, B.D.; Courtney, S.P.; Molloy, J. 1999. **The conservation requirements of New Zealand's nationally threatened vascular plants.** *Threatened Species Occasional Publication 13.* 194 p. \$20.00 incl. GST.

This publication details the highest priority recovery actions required to halt the decline of New Zealand's 223 most threatened vascular plants. A profile of each plant includes details of threats, conservation work to date, priority sites for survey, objectives and priority sites for monitoring, research questions, and high priority management needs.

Innes, J.; Flux, I. 1999. **North Island kokako recovery plan.** *Threatened Species Recovery Plan 30.* 32 p. \$15.00 incl. GST.

The third edition of a recovery plan for North Island kokako. The plan's 20-year vision is to improve the status of North Island kokako from endangered, by restoring the national population to ca 1,000 pairs by the year 2020, in sustainable communities throughout the North Island. It recommends actions for the next 10 years.

Beauchamp, A.J.; Butler, D.J.; King, D. 1999. **Weka (*Gallirallus australis*) recovery plan, 1999–2009.** *Threatened Species Recovery Plan 29.* 94 p. \$15.00 incl. GST.

This plan aims to restore all living weka taxa to their traditional range as a significant component of mainland and island ecosystems. Twelve objectives are identified as necessary to achieve this aim.

Townsend, A.J. 1999. ***Pittosporum patulum* recovery plan, 1999–2009**. *Threatened Species Recovery Plan* 28. 12 p. \$15.00 incl. GST.

This plan identifies four goals required to achieve self-sustaining populations of *Pittosporum patulum* in the wild, throughout the natural range of the species.

Towns, D.R. 1999. ***Cyclodina* spp. skink recovery plan**. *Threatened Species Recovery Plan* 27. 69 p. \$15.00 incl. GST.

Reviews the conservation status and recovery actions required for *Cyclodina* skinks and sets broad recovery objectives for the next ten years.

Norton, D.A.; de Lange, P.J. 1999. **Coastal Cresses (Nau) Recovery Plan**. *Threatened Species Recovery Plan* 26. 71 p. \$15.00 incl. GST.

This recovery plan aims to restore and sustain populations of coastal cresses throughout their natural range. Ten objectives necessary to achieve this goal are outlined.

Sherley, G.H. 1998. **Threatened Weta Recovery Plan**. *Threatened Species Recovery Plan* 25. 46 p. \$15.00 incl. GST.

An initial guide for the recovery of all threatened weta species. Objectives include: gathering information about individual species; developing reliable monitoring techniques; implementing management programmes; and increasing public awareness and appreciation of weta.

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IR Science & Research Internal Report (page 15)  
MISC Miscellaneous Science & Research publications (page 20)  
Post Science Posters (page 21)  
SFC Science for Conservation (page 5)  
TS Department of Conservation Technical Series (page 13)  
TSOP Threatened Species Occasional Publication (See Biodiversity Recovery Unit publications, page 23)  
TSRP Threatened Species Recovery Plan (See Biodiversity Recovery Unit publications, page 23)

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