

INTRODUCED WILDLIFE IN NEW ZEALAND

A SURVEY OF GENERAL PUBLIC VIEWS

Instructions

This questionnaire is in four parts. Please complete each part as well as you can. If you cannot provide an answer for some questions or would prefer not to answer, leave it blank and pass on to the next question.

Most questions can be answered simply by placing a tick (✓) or number in the appropriate box. Where a range of animal species or other options are listed, they are not in any particular order, so this should not affect your answers.

Several questions are prefaced by some relevant information. In some cases this may cause you to rethink previous answers. However, it is vital that you do not alter your initial answers in the light of any background information presented with later questions. The order of the questions has been carefully chosen to avoid any bias that could be caused in this way.

PRIZE DRAW DETAILS

Everyone who completes and returns this questionnaire in the postage-paid envelope provided by 25 March 2012 will be entered into a draw for the following prizes –

- **Air New Zealand travel voucher (value \$400)**
- **Petrol Vouchers (value \$200)**
- **Petrol Vouchers (value \$100)**

General knowledge and experience

1. The only native mammals present in New Zealand are two species of bats.
How many species of introduced mammals (wild and feral only) are there
in New Zealand? (tick one box)

- ☐ less than 10 ☐ 11-20 ☐ 21-30 ☐ 31-40 ☐ more than 40

2. Which of the following organisations are responsible for managing or
controlling our introduced wild animals? (tick one or more boxes)

- ☐ Animal Health Board
☐ Dept of Conservation
☐ Forest & Bird Society
☐ Ministry of Agriculture & Fisheries
☐ NZ Deerstalkers Association
☐ Regional Councils
☐ Don't know

3. In the last 5 years have you visited either a national park or any other
large forest area in New Zealand? (tick one box)

- ☐ Yes ☐ No

If you answered "No", go straight to question 6.

4. During your visit(s) to a national park or forest area, did you see any of the
following introduced animals - deer, chamois, thar, goats, pigs, possums,
wasps? (tick the box for each species seen)

- ☐ Deer
☐ Chamois or thar
☐ Goats
☐ Pigs
☐ Possums
☐ Wasps

If you did not see any of the above animals, go straight to question 6.

5. Did these sightings add to or detract from your interest or enjoyment of the visit? (tick the appropriate box for each species seen)

[illegible]

Attitudes to introduced species

6. We would like to know how you feel in general about the following introduced animals. Choose a category for each species, depending upon whether you consider them to be a pest or a resource. If you choose "pest", this will indicate that you think the New Zealand environment would be better off without the impact or modification caused by this species. If you choose "resource", this will indicate that you value their presence and the aesthetic, recreational, or commercial opportunities that they present. You may select "Don't know" if you do not have an opinion on a particular species. (*tick one box for each species*)

Species of wild animal	Pest	Resource	Both pest and resource	Don't know
Deer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pigs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chamois	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wallabies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hares	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rabbits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Possums	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feral cats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mustelids (ferrets, stoats, weasels)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rodents (rats and mice)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feral horses (Kaimanawa herd)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wasps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. Do any introduced animals cause you a problem directly? (tick one box)

☐ Yes ☐ No

If your answer to this question is "Yes", please list the species and state why they are a direct problem to you.

8. If you were in the New Zealand bush or high country and saw the following wild animals, what would be your reaction? (tick one box for each species)

Species of wild animal	Would enjoy seeing this animal	Would not enjoy seeing this animal	Don't know
Deer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pigs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chamois	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wallabies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hares	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rabbits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Possums	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feral cats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mustelids (ferrets, stoats, weasels)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rodents (rats and mice)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Feral horses (Kaimanawa herd)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wasps	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. The larger wild animals (deer, chamois, thar, pigs, and goats) now present in New Zealand offer widespread recreational hunting opportunities. Do you consider that the modification of our native forests and grasslands that these animals have caused is an acceptable price to pay for these recreational opportunities? (tick one box)

☐ Yes ☐ No ☐ Don't know

10. The wild deer populations in New Zealand forests have provided the basis for a pastoral deer farming industry worth approximately \$300 million annually. Do you consider the modification of our native forests caused by deer has been an acceptable price to pay for the present deer farming industry? (tick one box)

☐ Yes ☐ No ☐ Don't know

11. In your opinion, is enough being done to manage or control introduced animals to limit or reduce their impacts on the environment? (tick one box)

☐ Yes ☐ No ☐ Don't know

12. Given that a small part of your taxes are being spent on the control of introduced animals, which species would you prefer to see this money directed towards? (assume that your annual tax contribution for animal control is \$100 - divide this amount between the species listed)

\$_ Deer control	\$_ Rabbit control
\$_ Thar control	\$_ Wasp control
\$_ Goat control	\$_ Predator control (rats, mustelids)
\$_ Possum control	\$_ Other (please specify)

13. Most of our introduced animals have been present in New Zealand for 100 years or more. Should these species now be considered part of our "natural" fauna? (tick one box)

☐ Yes ☐ No ☐ Don't know

14. In your opinion, how long does an introduced animal species need to be present before it can be considered as part of the "natural" fauna? (state number of years or tick another box)

___ Years ☐ Never ☐ Don't know

15. In your opinion, what sort of management is most appropriate for the following species of wild animals? (*tick one box for each species*)

Species of wild animal	Exterminate	Control at low numbers	Manage as a recreational or commercial resource	Do nothing	Don't know
Deer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pigs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chamois	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wallabies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rabbits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Possums	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mustelids	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rodents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. If you were in the New Zealand bush or high country and saw the following animals, how would you rate the experience? (*give each box a number from 1 to 5: 1 = least pleasure ... 5 = greatest pleasure*)

☐ Deer ☐ Takahe ☐ Kiwi ☐ Bat ☐ Possum ☐ Weta

17. In recent years it has become possible to permanently 'eradicate' introduced mammals from some areas such as islands or fenced reserves. What do you believe is the best method for management of introduced mammals on the mainland? (*tick one box*)

☐ Do nothing ☐ Ongoing low-cost control
☐ One-off high cost eradication ☐ Don't know

Attitudes to animal management

18. All of our larger wild animals (deer, thar, chamois, goats, pigs) have changed our native forests and grasslands and also compete with some native wildlife for food. Introduced predators (cats, ferrets, stoats, weasels, rats) directly kill many native species, particularly birds. Rabbits and hares are agricultural pests and compete with farm stock for pasture. Possums are both agricultural pests (by contributing to the spread of the disease bovine tuberculosis) and conservation pests (because of the damage they cause to native forests and competition with native wildlife for food). Wasps compete with native wildlife (insects and birds) for food and also make it unpleasant for the public to use many forests and other recreation areas, particularly during the summer months. Given that there is a limited amount of money available for research and control, where do you think the effort and expenditure should go? Rank the following animals in order of priority. (*give each box a different number from 1 to 4; use "1" for the most important, "2" for the second most important, etc.; if you consider that no action is required, use a dash, "-", in the relevant box*)

Rank for research and
control effort and expenditure

Introduced herbivores which affect our native forests and grasslands (deer, chamois, thar, goats, pigs) ☐

Introduced predators which affect native wildlife (cats, ferrets, stoats, weasels) and rodents (rats, mice) ☐

Introduced herbivores which affect conservation values and the national economy (rabbits, possums) ☐

Introduced wasps which affect native wildlife ☐

19. For possums, are you more concerned about the threat they pose to agriculture (through the spread of the disease bovine tuberculosis and its potential effect on our \$15-17 billion dairy and beef industries) or to conservation (through damage to our forests with the resulting effects on native plant and animal species)? (*tick one box*)

Mainly concerned about the threat to:

☐ Agriculture ☐ Conservation ☐ Both ☐ Don't know

20. Deer control can be carried out by poisoning or shooting the animals from helicopters and leaving them where they fall, or it can be carried out by commercial venison recovery operators who retrieve the carcasses for processing and sale. Similarly, possums can simply be poisoned or they can be trapped and the meat and skins sold. Where animal control is necessary, would you prefer to see the animals being used for some commercial purpose as part of this control, as long as the control objectives are still met?

(tick one box)

- ☐ Poisoning or shooting and leaving them where they fall
☐ Integrate control with commercial use of the animals

21. Where populations of introduced animals are subject to control operations, several methods are generally available for this control. For each species, choose the method you feel is most acceptable. (tick one box for each species; n.a. = not applicable)

Species of wild animal	Shooting	Poisoning	Hunting using dogs	Trapping	Biological control (e.g., diseases, parasites)
Deer	<input type="checkbox"/>	<input type="checkbox"/>	n.a.	n.a.	n.a.
Pigs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	n.a.	n.a.
Goats	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	n.a.	n.a.
Possums	<input type="checkbox"/>	<input type="checkbox"/>	n.a.	<input type="checkbox"/>	<input type="checkbox"/>
Rabbits	<input type="checkbox"/>	<input type="checkbox"/>	n.a.	<input type="checkbox"/>	<input type="checkbox"/>
Cats	<input type="checkbox"/>	<input type="checkbox"/>	n.a.	<input type="checkbox"/>	<input type="checkbox"/>
Stoats	n.a.	<input type="checkbox"/>	n.a.	<input type="checkbox"/>	<input type="checkbox"/>
Rodents	n.a.	<input type="checkbox"/>	n.a.	<input type="checkbox"/>	<input type="checkbox"/>

22. Should the methods used for controlling our wild animal populations meet some minimum standards for humaneness? (tick one box)

- ☐ Yes ☐ No ☐ Don't know

23. Do you think that government departments, regional councils, farmers, and other landholders should be allowed to use poisons such as "1080" (sodium monofluoroacetate) to control possums and other problem animals? (tick one box)

- ☐ Yes ☐ No ☐ Don't know

24. Do you favour the introduction of pest-specific diseases or parasites to biologically control some of our introduced pests? By "pest-specific", we mean that they cannot infect any species except the one being controlled. (tick one box)

- ☐ Yes ☐ No ☐ Don't know

Personal information

25. Are you male or female? (tick one box)

- ☐ Male ☐ Female

26. Which one of the following age groups do you belong to? (tick one box)

- ☐ 20 and under
☐ 41-50 years
☐ 21-30 years
☐ 51-60 years
☐ 31-40 years
☐ Over 60 years

27. Do you live in an urban or rural area? (tick one box)

- ☐ Urban ☐ Rural

28. Are you? (tick one box)

- ☐ European ☐ Maori ☐ Other Polynesian ☐ Other (please specify)

29. What range does your annual income fit into? (tick one box)

- ☐ Less than \$20,000
☐ \$20,000 - \$40,000
☐ \$40,000- \$60,000
☐ \$60,000 - \$80,000
☐ Over \$80,000

30. What region do you live in? (tick one box)

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> Northland | <input type="checkbox"/> Wellington |
| <input type="checkbox"/> Auckland | <input type="checkbox"/> Tasman |
| <input type="checkbox"/> Waikato | <input type="checkbox"/> Nelson |
| <input type="checkbox"/> Bay of Plenty | <input type="checkbox"/> Marlborough |
| <input type="checkbox"/> Gisborne | <input type="checkbox"/> West Coast |
| <input type="checkbox"/> Hawke's Bay | <input type="checkbox"/> Canterbury |
| <input type="checkbox"/> Taranaki | <input type="checkbox"/> Otago |
| <input type="checkbox"/> Manawatu-Wanganui | <input type="checkbox"/> Southland |

You should now use the postage-paid reply envelope to return the questionnaire to University of Auckland by 25 March 2012 and you will be entered into the PRIZE DRAW.

Thank you very much for your cooperation in completing this questionnaire.