Department of **Agriculture and Fisheries**
Biosecurity Queensland

Ferret/polecat

Mustela furo and M. putorius

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Contents

Introduction

Taxonomy

Species:	1. *Mustela furo* (ferret/domestic ferret) (Syn. *Martes furo*, *Mustela putorius furo*, *Putorius putorius furo*)
	2. *Mustela putorius* (polecat/European polecat)
Family:	Mustelidae
Related species:	*Mustela eversmannii* (steppe polecat), *Mustela nigripes* (black-footed ferret)

Is the ferret the same as a European polecat?

Ferrets have a long history of domestication that dates back to 1500 BC when the Egyptians kept them to control rats and mice. Over this time, the ferret has been subject to selective breeding and back-crossing with European polecats and perhaps even the steppe polecat (*Mustela eversmannii*). While the ferret has been split taxonomically from its wild ancestors, such splits appear questionable, based on the following facts:

- fertile hybrids can be produced between all three species, with polecat/ferret hybrids commonly occurring in Britain. (Davidson et al. 1999)
- ferrets only differ from their wild ancestors in subtle morphological and behavioural ways (ferrets tend to be slightly smaller and have more colour variation than polecats)
- the molecular phylogeny of ferrets is unresolved and currently there is no significant genetic distinction between the domestic ferret and the wild European polecat.

Moreover, Davidson et al. (1999) concluded that ferrets and polecats are inseparable genetically. Similarly, Long (2003) noted that they have the same karotypes and similar diets, habitats, social and reproductive traits.

Hence, this study suggests that the ferret is an artificially selected phenotype of the polecat—that only differs in the phenotypic expression of genetic material common to both forms.

This risk assessment will present information on both the polecat and its domesticated form, the ferret.

Description

Ferrets have long, slender bodies. They are sexually dimorphic, with males 38–40 cm long, and females 33–35 cm long. Their tail is an additional 7–10 cm. Males weigh 0.9–2.7 kg and females 0.3–1.1 kg. They have large canine teeth with 34 teeth in total. Their paws have five, non-retractable claws. Fur colour and pattern is variable, as a result of selective breeding. The most common colour is sable, with others being silver, black sable, albino, dark-eyed white, cinnamon, and chocolate. Pattern types include Siamese or pointed patterned, panda, Shetlands, badgers, and blazes (Animal Diversity Web, 2003). In wild ferrets (domestic ferrets that have formed feral populations) there are three dominant colours: sable, albino, and dark (Global Invasive Species Database, 2006).

Figure 1. Albino and sable coloured ferrets (*Mustela furo*).
(Photo: Viki. Image from Wikimedia Commons under a *GNU Free Documentation Licence*).

Polecats have a long, slender, sinuous body, with a long neck, small flattish head, blunt face, small ears, short legs, and a slightly bushy tail. They exhibit strong sexual dimorphism, with males almost twice the size of females. Male polecats have a body length of 33–45 cm and females 33–38 cm. Tail length is an additional 12–16 cm. Males weigh between 0.8–1.7 kg and females 0.5–0.9 kg. Fur colour is dark brown/purplish black with a creamy-coloured undercoat. The coat thickens in winter. They have a distinct dark mask around their eyes, with a white face and white-tipped ears. They have large canine teeth with 34 teeth in total (Animal Diversity Web, 2001; Wildlife1, undated).

Figure 2. Polecats (*Mustela putorius*).

(Photo: Malene Thyssen. Image from Wikimedia Commons under a *GNU Free Documentation Licence*).

Biology

Life history—ferret

Gestation period: average 42 days

Young per birth: 1–18 (average 4–8) (Landcare Research, 2008)

Birth interval: females can give birth up to three times per year

Weaning: 3–6 weeks (average 4.5 weeks)

Sexual maturity: 6 months

Sexual activity: unknown

Life span: 6–10 years in captivity

2–4 years in the wild (ISSG, 2006) (Animal Diversity Web, 2003)

Ferrets are polygnous (males breed with more than one female) and females have a polyestrous cycle. Males begin to 'rut' (display breeding behaviour) between December and July, and females go into heat from March to August. When they are in rut, males develop a discoloured, yellowish undercoat, which is caused by increased oil production from skin glands. Females that are ready to breed have a swollen pink vulva, due to increased estrogen levels.

Wild (feral) ferrets in New Zealand have a breeding season between August and January, giving birth to nine young from one or two litters (Global Invasive Species Database, 2006).

Male ferrets are called *hobs* and neutered males are called *gibs*. Females are called *jills* and spayed females are called *sprites*. Ferrets less than a year old are called *kits* and a group of ferrets is a *business* (Wikipedia, 2008).

Life history—polecat

Gestation period: 40–42 days

Young per birth: 2–12 (average 3–7)

Birth interval: one litter per year, may re-breed if litter is lost

Weaning: 4 weeks

Sexual maturity: 6 months

Sexual activity: unknown

Life span: 4–6 years

Males in nearby territories sometimes compete for access to reproductive females. During mating, the male polecat will grab a female by the back of the neck and drag her back and forth until the female is completely limp. This behaviour stimulates ovulation. Male and female polecats exhibit the same physical changes as ferrets during rut.

Breeding occurs during late March to April. Females will care for young until approximately three months of age (Animal Diversity Web, 2001; Skandinavisk Dyrepark, undated; Wildlife 1, undated).

Social organisation

Wild (feral) ferrets are primarily nocturnal and may also be crepuscular (active early morning and late afternoon). They hunt either in pairs or individually.

In New Zealand's high country, home ranges for males are 100–120 hectares and females from 80–100 hectares. In the lowlands, males have home ranges of 30 hectares and females 12 hectares (Landcare Research, 2008). Home ranges often overlap, which indicates high levels of social contact, even outside the breeding season. During the breeding season, ferrets are more active, more vigilant, move about and interact more regularly with other ferrets. Ferrets will scent mark using anal scent gland secretions and urine. Scent-marking increases during the breeding season (Clapperton, 2001).

In captivity, ferrets exhibit many behaviours that can be interpreted as inherited from their wild ancestors. They will act aggressively toward each other, with neck biting the most common behaviour. In young ferrets it is believed they are practicing their killing technique. Small moving objects will also be actively 'hunted'. When introduced to a new ferret, they can initially become territorial and violent, before accepting the new ferret. Ferrets can act offensively towards a perceived threat (such as a human) by defensive posturing, hissing, screaming, and jaw snapping. They will try and burrow into any suitable material, and also hide food and objects in their den areas, similar to a wild ferret's behaviour when faced with surplus kill. Scent marking occurs even after removal of anal glands. Pet ferrets will sleep 14–18 hours a day and are crepuscular. They are extremely active while awake and are described by their owners as energetic, curious and playful (Brown, 2002; Wikipedia, 2008).

Polecats are solitary, with individuals interacting only during the mating season. They defend their territory strongly and have home ranges of approximately 100–150 hectares each. Home range size varies, depending on type of habitat, prey availability, sex of the polecat and its social status. Females have a smaller home range than males. Indirect social interaction occurs via the use of scent marking (Konjevic, 2005). A polecat can travel up to four kilometres per day within its home range and is predominantly crepuscular and nocturnal (Animal Diversity Web, 2001; Wildlife 1, undated)

Diet and hunting behaviour

Ferrets and polecats are entirely carnivorous and have similar prey preferences and hunting strategies.

In New Zealand, where ferrets have naturalised, they are considered to be opportunistic generalist predators. Prey items vary depending on location. In pastures and forests, rabbits and hares are a primary food item (Smith et al. 1995), with insects and rats secondary. In other areas, birds are the primary prey item, particularly ground-nesting birds. These include species such as yellow-eyed penguins, blue penguins, banded dotterels and adult kiwis (McLennan et al. 1996, (Clapperton, 2001). Other prey items include possums, bird eggs, lizards, hedgehogs, frogs, eels, invertebrates and carrion (Global Invasive Species Database, 2006).

Polecats consume mainly hares, rabbits, small rodents, birds, amphibians and snakes, as well as bird eggs, invertebrates and fish.

Polecats and ferrets both rely on their sense of smell and hearing to track prey, as they have poor eyesight. By attacking and biting the necks of their prey, polecats and ferrets can kill animals larger than themselves. Given the opportunity, polecats and ferrets will 'surplus kill', meaning they will kill a much higher number of prey items than they can eat at one time (Wildlife1, undated).

Preferred habitat

Polecats and ferrets are adapted to temperate climates and prolonged exposure to temperatures over 29°C can cause heat-related problems (Matulich, undated). Hence, in the wild, they are absent from subtropical and tropical areas.

Ferrets that have formed naturalised populations show a preference for forested and semi-forested areas near water sources. In Europe, they have naturalised in dune systems where there is a ready supply of rabbits. In New Zealand, they inhabit grassland, scrub, pastures, riverbeds, forests, forest fringes, urban and suburban areas and have established den sites in gorse, dense scrub, rabbit holes, buildings, rubbish piles and hay barns. They are strong swimmers and will readily cross waterways to access new habitat (Global Invasive Species Database, 2006). They are poor climbers and are not arboreal (Long, 2003).

In New Zealand, ferrets can be found from sea level up to an altitude of 600 m. Within their range, annual rainfall can be up to 2500 mm (Clapperton, 2001).

Similarly, polecats occupy a variety of habitats: woodland, forest plantations, wide hedge banks, pastures, farmland, marginal land, marshes, river banks, sea cliffs, sand dunes, rubbish tips and occasionally cities. They also prefer areas near water and are found at altitudes from sea level up to 920 m. Polecats will den in crevices, hollow logs, burrows made by other species, under buildings and will also dig their own dens (Wildlife1, undated).

Predators and diseases

Ferrets can suffer from a number of diseases, parasites and viruses:

- adrenal disease
- insulinoma (cancer of the pancreas)
- lymphoma
- heartworm
- epizootic catarrhal enteritis (ECE)
- Aleutian disease virus (ADV)
- canine distemper
- congestive heart disease
- females can die from hyperestrogenism (estrogen-induced anemia), if they are unspayed and unmated.

Ferrets and polecats can carry the following zoonoses:

- rabies
- avian, bovine and human strains of mycobacteria that can cause tuberculosis
- fleas and mites
- ringworm
- salmonella (MU College of Veterinary Medicine, 2002).

In the wild, ferrets and polecats are killed by birds of prey such as hawks and owls and large carnivorous mammals such as wolves, lynxes and foxes (Animal Diversity Web, 2003; Wildlife1, undated).

Use

Ferrets have been kept by people for centuries, mainly for hunting rabbits. The first documentation of 'rabbiting' is from the 14th century. In modern times, ferrets have been used for fur production, rabbit hunting, biomedical research and more recently as pets (Fox, 1998).

Distribution and abundance

Australia

It is estimated that up to 150 000 domestic ferrets are kept as pets in Australia (Olsen & Jensz, 2005). There are ten ferret welfare societies and clubs in Australia (located in every state except the Northern Territory) (Oz Ferret, 2008).

Small numbers of wild (feral) ferrets have been seen at South Arm, Tasmania, where efforts to detect a naturalised population have so far failed (M. Statham pers. comm., DPIW TAS, 2006). Small numbers have also been seen in the southwest of Western Australia (Western Australian Museum, 2003). However, a wild population has not been confirmed.

There is anecdotal evidence that a small population of feral ferrets has managed to persist for many years in a small area of forest near Inglewood (southern Queensland) (J. Mitchell, pers. comm.). This population may have existed since the first rabbit plagues, when professional rabbit hunters used ferrets to hunt rabbits. Occasional sightings of lone ferrets have also been reported from various parts of north Queensland, such as near Townsville and Cairns (J. Mitchell pers. comm., R. Hynes, pers. comm.). However, these could be escaped pets and a naturalised population has never been confirmed.

Overseas

Ferrets have naturalised in New Zealand (both North and South Islands), Europe, North America, Japan, Russia and the Canary Islands (Jurek, 2001; Long, 2003).

In Europe, wild populations exist on the Isle of Arran, Isle of Lewis, Isle of Man, Isle of Anglesey; Sardinia, Sicily (in Italy), as well as reported sightings from the Azores (Portugal), the Netherlands, Inner Hebrides, Orkney Isles, Outer Hebrides, Shetland Isles (United Kingdom) and parts of mainland United Kingdom. Some of these populations (e.g. Isle of Man) are thought to have established from escaped domestic ferrets (Varnham, 2005).

In North America, feral ferrets have been found in Alaska, New Mexico and Washington (Jurek, 2001). An estimated one million ferrets are kept as pets in North America (Nowak et al. 1999).

The natural range of polecats extends from the Mediterranean north to central Scandinavia and Finland, and east to about central Kazakhstan, Russia, Romania, Hungary, Czech Republic, Serbia and Montenegro, eastern China and Mongolia, south to the Himalayas. Polecats are also found in Britain, but absent from Ireland (Long, 2003).

The population of polecats in Europe is thought to be in decline. For example, in Croatia, interbreeding with domestic ferrets is considered desirable in order to stabilise the population, since ferrets are considered to be domestic polecats (Konjevic, 2005). However, there are concerns over the potential impact of polecat/ferret hybrids in recovering polecat populations in Britain and whether this hybridisation will impact upon the genetic integrity of the polecat (Davidson et al. 1999; Morris, 1993).

Figure 3. Worldwide distribution of polecats and wild (feral) ferrets.

(Source: www.globaltwitcher.com/artspec.asp?thingid=36025).

History as a pest overseas

Wild (feral) ferrets have had serious negative impacts on native wildlife in a number of countries. In New Zealand, ferrets were introduced in the 1880s as part of a rabbit control program and subsequently formed the largest population of wild ferrets in the world. They currently pose a serious threat to the survival of many endangered or threatened endemic species (Smith et al. 1995) and have been found to prey on ground dwelling birds such as yellow-eyed penguins, little blue penguins, and white-flippered penguins; ground nesting shorebirds such as banded dotterels, New Zealand dotterels, wrybills, variable oystercatchers, Caspian terns, fairy terns, burrowing seabirds such as adult sooty shearwaters and other bird species such as black stilts, southern crested grebes and wekas (Clapperton, 2001). The northern brown kiwi (*Apterygiformes mantelli*) population is declining at 5.8% per annum. Feral ferrets and dogs were found to be the main predators of adult kiwis, responsible for approximately 60% of adult kiwi deaths. Ferrets were also found to eat kiwi eggs and prey on chicks and juvenile birds (McLennan et al. 1996). The diet of ferrets in New Zealand includes skinks, rare invertebrates such as the robust grasshopper, native frogs and kauri snails (Clapperton, 2001).

A major concern in New Zealand is the transmission of bovine tuberculosis (Mycobacterium bovis) by ferrets to cattle, which could affect trade in beef. Bovine tuberculosis can be transmitted by ferrets that consume infected carrion or prey such as rabbits, hares, possums, ferret carcasses and hedgehogs (Caley & Hone, 2002).

In the Azores, populations of Bulwer's petrel (*Bulweria bulwerii*) and Manx shearwater (*Puffinus puffinus*) have been significantly reduced by ferrets. Currently, ongoing predation by introduced rats, ferrets, cat and dogs prevents the majority of seabird species from breeding on the main islands (Monteiro et al. 1996).

Ferrets are known to act as a vector of rabies and as such, could pose a serious health risk in countries with the disease (Holmala & Kauhala, 2006). In addition, their habit of inflicting serious bites is a significant problem. Over a ten-year period there were 64 unprovoked attacks by ferrets on infants and young children in the United States. Fatal attacks have occurred in England and the United States. In attacks on infants, ferrets have bitten babies so badly that their faces have been damaged beyond recognition (Hitchcock, 1994).

Ferrets are also potential vectors of other human diseases, such as leptospirosis and campylobacteriosis, carried by animals and transmitted either directly from the animal or its waste products, or via contaminated water.

Potential distribution and impact in Queensland

Climate is a primary factor that determines a species' distribution. Climate-modelling software was used to predict the area of Australia where climate is considered suitable for ferrets. (Figure 4).

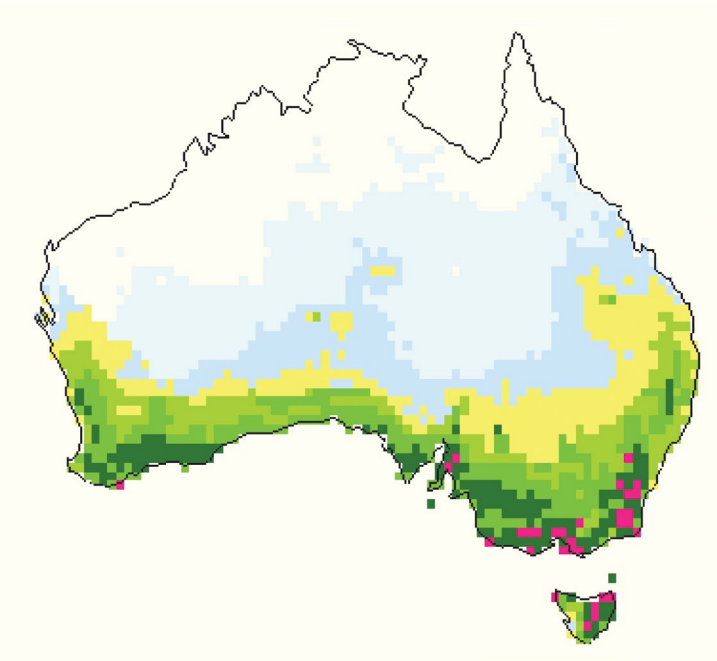

Figure 4. Potential distribution of ferrets in Australia (red indicates areas where climate is most suitable, decreasing to yellow, green and light blue, with white being unsuitable) (map courtesy of Agriculture and Food, Western Australia).

Based purely on an assessment of climate, wild ferrets/polecats are most likely to survive in cooler, upland areas of south-east Queensland, where climate can be described as warm temperate. Subtropical and tropical areas appear to be unsuitable. It is important to note, however, that other habitat requirements, such as the availability of food, will also influence range and abundance.

Ferrets and polecats occupy a wide variety of habitats, with a preference for habitats with readily available freshwater. Hence, within their preferred climatic envelope, they are predicted to survive in a wide range of habitats, including open grasslands, pastures, forests and semi-rural (township) areas.

If ferrets ever naturalise to fill their full potential range in Queensland, their primary impact is likely to be as a new predator of small to mid-sized native animals, such as possums, bandicoots, birds, bird eggs, lizards, frogs, fish and invertebrates. As has occurred in New Zealand, ground-dwelling or ground-nesting birds are particularly at risk.

Domestic species such as poultry may also be at risk, especially given the ferret's tendency to 'surplus kill' when presented with large numbers of prey.

Of significant concern is the ability for ferrets to transmit diseases of economic importance such as rabies and bovine tuberculosis (Mycobacterium bovis). Queensland (and the rest of Australia) is currently free of bovine tuberculosis and rabies. In the event of an outbreak, populations of feral ferrets could act as reservoir hosts and exacerbate the spread of the disease, as well as making containment and eradication extremely difficult, if not impossible.

Legislative restrictions

Overseas

In South Africa, the keeping of ferrets has been banned due to concerns that they might escape and naturalise (Pets4U, 2008).

In California, it is illegal to import or possess domestic ferrets (under the Fish and Game Code, Section 2116–2127) (California Law, undated). This restriction was developed in response to concerns that escaped or released ferrets could: (1) pose a threat to rabbit-size and smaller native ground-dwelling mammals, birds, amphibians, reptiles, (2) attack domestic poultry; and (3) act as a vector for diseases such as rabies (Jurek, 2001).

Ferrets are strictly prohibited as pets in Hawaii as they are a potential vector for the rabies virus. There is also concern over the tendency of ferrets to bite infants and young children (Department of Agriculture, State of Hawaii, 2000).

In New Zealand, ferrets are listed as an 'unwanted organism' under the *Biosecurity Act 1993*. Unwanted organisms are banned from sale, distribution and liberation throughout New Zealand. Ferrets are also declared as a 'pest' in many regional pest management strategies for which other restrictions apply and/or management actions are outlined.

Australia and Queensland

The list of specimens suitable for live import (as defined by the *Environment Protection and Biodiversity Conservation Act 1999*) does not list the ferret or the polecat. Hence, ferrets and polecats cannot be imported into Australia.

Ferrets are a prohibited invasive animal under the Biosecurity Act 2014 and only certain entities, such as zoos, can apply for permits to keep ferrets (pets are prohibited).

Ferrets are illegal in the Northern Territory where they are listed as 'Prohibited Entrants' under the *Territory Parks and Wildlife Conservation Act 2007*.

Ferrets are legal in all other states: a licence is required in the ACT under the *Nature Conservation Act 1980* (ACT Parliamentary Counsel, 2008) and a licence may also be required in Victoria depending on local council laws.

Without restrictions on possession and sale, the risk of pet ferrets escaping is considered to be high. Online forums discuss the tendency for ferrets to constantly escape (Pets Oz, undated). There are often reports of missing or found ferrets, for example half a dozen ferrets escaped from a cage in Orange, New South Wales (Murray, 2008).

Numerical risk assessment using the Bomford assessment

A numerical risk assessment system developed by Bomford (2006) is widely applied in Australia to assess the level of risk posed by particular vertebrate species. This approach enables numerical ranking and prioritisation of large numbers of species. First, a species' potential distribution is predicted using climate-modelling computer programs. The remaining steps involve allocation of scores for a number of attributes relevant to a species' pest status, including biology, costs to the economy, the environment and society, and management efficacy.

Using the Bomford system, ferrets in Queensland were assessed as an 'extreme' threat species (refer to Appendix 1).

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Appendix 1

Using the Bomford (2006) system, ferrets were assessed as an *extreme* threat species in Queensland.

Species:		*Mustela furo* (Ferret)
Date of assessment:		27 August 2008
Literature search type and date:		See references
Factor	Score	
A1. Risk to people from individual escapees (0–2)	2	Ferrets kept as pets have attacked unprovoked, causing serious injuries that require hospitalisation, and death of infants.
A2. Risk to public safety from individual captive animals (0–2)	0	Apart from someone entering an enclosure or otherwise being in reach of a captive animal, there is nil or low risk to public safety.
Stage A. Risk posed by captive or released individuals = Sum of A 1 to 2. (0–4)	2	Highly dangerous
B1. Climate match (1–6)	3	Moderate climate match in Australia CMI = 737.
B2. Exotic population established overseas (0–4)	4	Feral populations of ferrets have established in New Zealand, United Kingdom and Europe.
B3. Taxonomic class (0–1)	1	Mammal.
B4. Non-migratory behaviour (0–1)	1	Non-migratory.
B5. Diet (0–1)	1	Generalist diet includes a variety of prey species: rabbits and hares, birds, possums, bird eggs, lizards, hedgehogs, frogs, eels, and invertebrates. Ferrets are also known to eat carrion.
B6. Habitat (0–1)	1	Broad range of habitats from open grassland, pastures to forests. Commensal, adapting well to human-disturbed environments.
B7. Overseas range size (0-2)	1	Moderate range, including naturalised and native populations.
B. Probability escaped or released individuals will establish a free-living population = Sum of B 1 to 7. (1–16)	12	Serious establishment risk
C1. Taxonomic group (0–4)	4	Carnivora, family Mustelidae.
C2. Overseas range size including current and past 300 years, natural and introduced range (0–2)	1	20 million square kilometres (approximately).
C3. Diet and feeding (0–3)	2	Strict carnivore but not arboreal (see B5).

C4. Competition with native fauna for tree hollows (0–2)	0	Does not use hollow trees for nesting or shelter.
C5. Overseas environmental pest status (0–3)	3	Major environmental pest in New Zealand, as well as parts of Europe and United Kingdom.
C6. Climate match to areas with susceptible native species or communities (0–5)	5	Strong climate match (more than 20 grid squares within the highest two climate match classes, and more than 100 grid squares within the four highest climate match classes).
C7. Overseas primary production pest status (0–3)	1	Minor pest of primary production—will take poultry.
C8. Climate match to susceptible primary production (0–5)	1	Score = 16 (see Table 1).
C9. Spread disease (1–2)	2	All birds and mammals (likely effect on native species and on livestock and other domestic animals).
C10. Harm to property (0–3)	0	$0
C11. Harm to people (0–5)	4	Injuries or harm severe or fatal but few people at risk (see A1).
C. Probability an exotic species would become a pest (for birds, mammals, reptiles and amphibians) = Sum of C 1 to 11. (1–37)	23	Extreme pest risk
A = 0 = not dangerous; A = 1 = moderately dangerous; A ≥ 2 = highly dangerous	2	Highly dangerous
B. Risk of establishing a wild population		
For birds and mammals: B ‹ 6 = low establishment risk; B = 7–11 = moderate establishment risk; B = 12–13 = serious establishment risk; B › 14 = extreme establishment risk	12	Serious establishment risk
For reptiles and amphibians: B ‹ 3 = low establishment risk; B = 3–4 = moderate establishment risk; B = 5–6 = high establishment risk; B › 6 = extreme establishment risk		
C. Risk of becoming a pest following establishment		
C ‹ 9 = low pest risk; C = 9–14 = moderate pest risk; C = 15–19 = serious pest risk; C › 19 = extreme pest risk	23	Extreme pest risk
VPC threat category		Extreme

Table 1. Calculating total commodity damage score.

Industry	Commodity value index[1]	Potential commodity impact score (0–3)	Climate match to commodity score (0–5)	Commodity damage score (columns 2 × 3 × 4)
Sheep (includes wool and sheep meat)	10	0	Not estimated	0
Cattle (includes dairy and beef)	10	0	Not estimated	0
Timber (includes native and plantation forests)	10	0	Not estimated	0
Cereal grain (includes wheat, barley sorghum etc)	10	0	Not estimated	0
Pigs	2	0	Not estimated	0
Poultry and eggs	2	2	4	16
Aquaculture (includes coastal mariculture)	2	0	Not estimated	0
Cotton	2	0	Not estimated	0
Oilseeds (includes canola, sunflower etc)	2	0	Not estimated	0
Grain legumes (includes soybeans)	2	0	Not estimated	0
Sugarcane	2	0	Not estimated	0
Grapes	2	0	Not estimated	0
Other fruit	2	0	Not estimated	0
Vegetables	2	0	Not estimated	0
Nuts	1	0	Not estimated	0
Other livestock (includes goats, deer, camels, rabbits)	1	0	Not estimated	0
Honey and beeswax	1	0	Not estimated	0
Other horticulture (includes flowers etc)	1	0	Not estimated	0
Total commodity damage score (TCDS)	—	—	—	16