A Risky Business — Rhesus Monkey

Setting the scene

This scenario is set on a large research facility situated on the outskirts of a bustling country town. Approximately 150 Rhesus monkeys are housed in the facility and are part of a long-term research project.

Overnight, the research facility has been hit by a freak storm, severely damaging buildings, cage facilities and fencing. 90 adult Rhesus monkeys have escaped into the local environment which consists of grassland (grazing pastures), open forest (timber plantations) and rocky outcrops. The local rubbish dump is located on the outreaches of town. Every attempt is being made to recapture the monkeys but many are wary of people and this makes approaching them very difficult.

Using the pest risk assessment table, calculate the probability this animal will become an established pest.

What to do

The National Vertebrate Pests Committee which amongst other matters, advises the Commonwealth and state governments on the pest status of animals already in Australia has sought comment from your business, (Conservation Matters), on your views about the risk of Rhesus monkeys establishing as a pest in Australia.

1. Research the biology of the Rhesus monkey to assess the potential for this animal to become an established pest.

2. Use your findings to complete the pest risk assessment guide and create a score for each of the following sections:

    ▶ Risk to public safety

    ▶ Risk of establishing a wild population

    ▶ Risk of becoming a pest

3. Use the pest risk assessment table and calculate the probability of Rhesus monkeys becoming a pest in Australia if it escapes or is released from a research facility.

4. Review information about the characteristics of successful pests.

5. Prepare your response in the form of a detailed report to the National Vertebrate Pests Committee.
    Include in your response:

    ▶ the animal's threat status to Australia based on the completed risk assessment activity

    ▶ the characteristics that would aid this animal in becoming a pest

    ▶ the economic consequences if this animal established a wild population

        ▶ impact on primary industry

        ▶ global industry

        ▶ tourism industry

    ▶ the cultural / social consequences if this animal established a wild population

        ▶ safeguards, if any, that would be required to keep the public safe

        ▶ the risk of the spread of disease

        ▶ would public activity / outdoor recreation be affected?

- ► the environmental consequences if this animal established a wild population

  - ► competition with native animals and birds

  - ► are there any critically endangered species that may be adversely affected?

  - ► is there a particular habitat that may be adversely affected?

Feral fact

Exotic animals held in captivity have the potential to escape and become feral. In the late 1800s Palm Squirrels were deliberately released in the grounds of Perth Zoo. A wild population now occupies approximately 30 square kilometres around the zoo. There have even been reports of squirrels stealing food from students at a local High School.

Pest Risk Assessment Guide

Risk to public safety

Harm to people	no risk to people	0
	very low risk to people	1
	injuries, harm or annoyance likely to be minor and a few people at risk	2
	injuries, harm or annoyance minor but many people at risk	3
	injuries or harm severe or fatal but few people at risk	4
	injuries or harm severe or fatal and many people at risk	5
	AND	
Harm to property (includes damaging buildings, vehicles, fences and roads by chewing or burrowing or polluting with droppings or nesting material)	no harm to personal or public property	0
	very little damage to personal or public property	1
	moderate damage to personal or public property	2
	severe damage to personal and public property	3
	unknown damage potential	3
Spread disease	all birds and animals likely or unlikely to spread disease	2
	TOTAL SCORE A	

Risk of establishing a wild population

Reproduction	more than 4 offspring per year	3
	less than 4 offspring per year	1
Diet and feeding	a mammal that is a strict carnivore (only eats other animals) and arboreal (climbs trees)	3
	a mammal that is a strict carnivore but not arboreal	2
	a mammal that is a non-strict carnivore (eats animals and plants)	1
	a mammal that is primarily a grazer or browser	3
	other herbivorous mammal or not a mammal	0
	Unknown diet	3
	TOTAL SCORE B	
Competition with native fauna for tree hollows	can nest or shelter in tree hollows	2
	does not nest or shelter in tree hollows	0
	unknown	2
Habitat	can live in human-disturbed habitats (including agricultural and grazing land, plantations, urban environments)	3
	can only live in undisturbed (natural) habitat	1
	TOTAL SCORE C	
Overseas environmental pest status	the species is not an environmental pest in any country or region	0
	minor environmental pest in any country or region	1
	moderate environmental pest in any country or region	2
	major environmental pest in any country or region	3
	unknown environmental pest status	3
Overseas primary production pest status	the species does not damage crops or other primary production in any country or region	0
	minor pest of primary production in any country or region	1
	moderate pest of primary production in any country or region	2
	major pest of primary production in any country or region	3
	unknown primary production pest status	3
	TOTAL SCORE D	

Pest Risk Assessment Guide

Risk to public safety

Taxonomic group	a mammal in one of the orders that cause serious effects on prey abundance and/or habitat destruction (Carnivora, Artiodactyla, Rodentia, Lagomorpha, Perissodactyla and Marsupialia)	2
	a mammal in one of the families that cause agricultural damage resulting in loss of revenue (Canidae, Mustelidae, Cervidae, Leporidae, Muridae and Bovidae)	2
	a bird in one of the families that cause agricultural damage resulting in loss of revenue (Psittaciformes, Fringillidae, Polceidae, Sturnidae, Anatidae and Corvidae)	2
	none of the above	0
	TOTAL SCORE E	
Overseas range size (including today's range and the past 300 years)	overseas geographic range less than 10 million square kilometres	0
	overseas geographic range 10 – 30 million square kilometres	1
	overseas geographic range greater than 30 million square kilometres	2
	overseas geographic range unknown	2
Migration pattern	does not migrate in its native range	1
	migrates in its native range	0
	migration unknown	1
	TOTAL SCORE F	
Reproduction	maximum offspring per year is greater than 4	3
	maximum offspring per year is less than 4	1
Diet and feeding	a mammal that is a strict carnivore (only eats other animals) and arboreal (climbs trees)	3
	a mammal that is a strict carnivore but not arboreal	2
	a mammal that is a non-strict carnivore (eats animals and plants)	1
	a mammal that is primarily a grazer or browser	3
	other herbivorous mammal or not a mammal	0
	unknown diet	3
	TOTAL SCORE G	
Competition with native fauna for tree hollows	can nest or shelter in tree hollows	2
	does not use tree hollows	0
	unknown	2
Habitat	can live in human-disturbed habitats (including agricultural and grazing land, plantations, urban environments)	3
	can only live in undisturbed (natural) habitat	1
	TOTAL SCORE H	
Overseas environmental pest status	the species is not an environmental pest in any country or region	0
	minor environmental pest in any country or region	1
	moderate environmental pest in any country or region	2
	major environmental pest in any country or region	3
	unknown environmental pest status	3
Overseas primary production pest status	the species does not damage crops or other primary production in any country or region	0
	minor pest of primary production in any country or region	1
	moderate pest of primary production in any country or region	2
	major pest of primary production in any country or region	3
	unknown primary production pest status	3
	TOTAL SCORE I	

Transfer these scores to the Pest Risk Assessment Table to complete your assessment of the animal.

Pest Risk Assessment Table

Add the following scores together in each category and record the total.

	SCORES	TOTAL
Risk to public safety	A	
Risk of establishing a wild population	B + C + D	
Risk of becoming a pest	E + F + G + H + I	

Locate the level of risk for each category.

Level of risk	LOW	MODERATE	HIGH	EXTREME
Risk to public safety	2	3 – 5	6 – 8	9 – 10
Risk of establishing a wild population	2 – 5	6 – 9	10 – 13	14 – 17
Risk of becoming a pest	2 – 7	8 – 13	14 – 19	20 – 22

Locate the level of risk for each category and record the threat status.

Risk of becoming a pest	Risk of establishment	Risk to public safety	Threat status
extreme	extreme	extreme, high, moderate, low	EXTREME
high	extreme	extreme, high, moderate, low	EXTREME
moderate	extreme	extreme, high, moderate, low	EXTREME
low	extreme	extreme, high, moderate, low	EXTREME
extreme	high	extreme, high, moderate, low	EXTREME
high	high	extreme, high, moderate, low	EXTREME
moderate	high	extreme, high, moderate, low	SERIOUS
low	high	extreme, high, moderate, low	SERIOUS
extreme	moderate	extreme, high, moderate, low	EXTREME
high	moderate	extreme, high, moderate, low	SERIOUS
moderate	moderate	extreme, high	SERIOUS
moderate	moderate	moderate, low	MODERATE
low	moderate	extreme, high	SERIOUS
low	moderate	moderate, low	MODERATE
extreme	low	extreme, high, moderate, low	SERIOUS
high	low	extreme, high, moderate, low	SERIOUS
moderate	low	extreme, high	SERIOUS
moderate	low	moderate, low	MODERATE
low	low	extreme, high	SERIOUS
low	low	moderate	MODERATE
low	low	low	LOW