10. RED-EARED SLIDER TURTLES

A case study of the risks associated with illegal pet keeping.

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Species: Red-eared slider turtle (*Trachemys scripta*, subspecies *elegans*)

Origin: southern United States

Australian occurrence: Breeding populations have been found in NSW and Qld, and individual specimens have been detected in the wild in Victoria, ACT and WA.[180] The Queensland populations have probably been eradicated. We do not know the status of the NSW or ACT populations.

Potential environmental impacts: On the IUCN list of 100 examples of the world's worst invasive species.[181] A risk assessment by the Queensland government found there is 'considerable evidence that red-eared sliders can negatively affect locally native turtle species' – they mature more quickly than locally native turtle species, are more aggressive, have higher fecundity and grow larger.[182] They could impact on rare frogs and other aquatic prey. Tadpoles of native frog species may not be able to recognise a new exotic predator.[183] There is a significant risk of captive bred red-eared slider turtles spreading diseases and parasites into wild reptile populations.[184] This may be a greater risk for biodiversity than the turtles themselves. [185] There is evidence that a malaria-like blood parasite was transferred to two native turtle species from infected red-eared slider turtles in the Lane Cove River, Sydney.[186] Burgin (2006) said they show 'all of the hallmarks of being the reptile equivalent to the carp' for their impacts on wetland biodiversity.

Potential social and economic impacts: The costs of control to protect biodiversity could be substantial. The Queensland government spent close to $1 million to eradicate them from 7 sites, and removed them from at least 10 additional locations.[187] This investment could be wasted unless there is continued education and vigilance to prevent the establishment of new populations. They are regarded as an aquaculture threat in the US.

Pathways: Red-eared sliders are released into the wild by people illegally keeping them as pets. They are the world's most commonly traded reptile, due to low price, small size and easy maintenance. [188] But they can live for decades and when mature can inflict painful bites, which results in many being dumped into the wild.[189]

Summary of biosecurity issues: There is a high risk of continued illegal releases of this threatening invader into the wild. There have been varying degrees of action by state governments ranging from a concerted

[180] Csurhes and Hankamer (2012)
[181] Lowe et al. (2000)
[182] Csurhes and Hankamer (2012)
[183] Polo-Cavia et al. (2010)
[184] Csurhes and Hankamer (2012)
[185] Illegally smuggled specimens are likely to have passed through Asian wet markets, where they are housed in terrible conditions with multiple species from all over the world. Reptile diseases are hard to detect, with some having long incubation periods (Scott O'Keefe, personal communication).
[186] Department of Agriculture and Food (WA) (2009)
[187] Csurhes and Hankamer (2012), Scott O'Keefe (personal communication)
[188] Csurhes and Hankamer (2012)
[189] Csurhes and Hankamer (2012)

eradication effort by Queensland to very little action by NSW. To prevent it establishing and spreading, Australia needs a national strategy and a concerted education and compliance program to stop illegal keeping.

Particular biosecurity issues

Quarantine: Red-eared sliders are one of the most common smuggled, illegally kept and illegally released wildlife species in Australia. From 1999-2010, at least 67 were seized in 5 interceptions at the border in 3 states, at least 115 were seized in at least 38 or more incidents of illegal keeping and more than 235 were detected in the wild in 24 incidents in the ACT, NSW, Qld, Vic, WA. [190] The extent of illegal activity detected suggests a very high risk of new incursions and a high risk of new disease introductions. Henderson and Bomford (2011) recommend 'priority be given to educating the public, particularly through media coverage, about the risks posed by red-eared sliders, so that people are less likely to keep or release them, and are more likely to recognise and report sightings.'

Queensland response: A population of red-eared sliders was detected in Queensland in 2004 in six dams and one private breeding facility in the Pine Rivers Shire north of Brisbane. An eradication campaign, combined with a public awareness campaign, resulted in the detection of 2 other naturalised populations in south-east Queensland.[191] The outbreak in Queensland was traced to an illegal breeding facility. Eradication of the known populations is thought to have been successful.[192] It cost about $1 million.[193] It was the first program of its kind to eradicate these turtles. New DNA probe technology developed as a result of the project has the potential to reduce the cost of future eradication/management programs substantially, perhaps by a factor of ten.[194]

NSW response: A breeding population of red-eared sliders were found at Yeramba Lagoon (south Sydney) in 2006 (along with another species of feral turtle).[195] NSW authorities commenced a surveillance and delimiting program, but funding was withdrawn. 'The implications of the find were not recognised'.[196] It is currently not known whether the lagoon still supports a breeding population of red-eared slider turtles.[197] Individuals, including gravid females, have been found elsewhere in Sydney with no response reported.[198] Burgin (2006b) warned that the cost of immediate removal of emerging populations would 'be insignificant in comparison to the longer term management of their impacts'.

WA and Victoria responses: Several have been removed from urban waterbodies n these states.[199] In Victoria a 2008 detection resulted in removal of three turtles from a Melbourne lake.[200]

Enforcement: In 2004, there was an 8-week national exotic reptile amnesty granting exemption from prosecution for those who forfeited illegally kept animals (including 18 red-eared slider turtles). As part of the eradication program in Queensland, there was an active enforcement program targeting illegal keeping. One person in Queensland who bred and dispersed the red-eared slider turtles was prosecuted.[201] But the fine was small, and no conviction was recorded.

Prevention: Participants at a 2006 workshop on red-eared slider turtles proposed: the development of a national strategy by the Vertebrate Pests Committee; to include a formal risk assessment; a national taskforce to coordinate activities; standard operating procedures for management; a review of ways in which risks of

[190] Henderson and Bomford (2011)
[191] Csurhes and Hankamer (2012)
[192] DAFF (2012)
[193] Csurhes and Hankamer (2012)
[194] Scott O'Keefe (personal communication)
[195] Burgin (2006a), Csurhes and Hankamer (2012)
[196] Burgin (2006b)
[197] OEH (2013)
[198] Department of Agriculture and Food (2009)
[199] Department of Agriculture and Food (2009)
[200] Department of Environment and Primary Industries (nd)
[201] Anonymous (2009)

invasion from the exotic reptile trade could be reduced; and a communications plan and research. [202] The strategy has not eventuated.[203]

Issues for the inquiry

Contingency planning and pathway analysis

- Has there been sufficient focus on the risks of exotic reptiles establishing due to illegal keeping?
- Should there be a national strategy to coordinate responses to threats such as red-eared slider turtles?

Eradication

- What is the current state of red-eared slider turtle populations? Has there been any effort to eradicate the population of red-eared slider turtles at Yeramba Lagoon?

Enforcement

- Do the enforcement agencies responsible for preventing the illegal animal trade coordinate their activities to prevent external and internal trade in red-eared slider turtles?

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OEH. 2013. The Vertebrate Fauna of Georges River National Park. NSW Office of Environment and Heritage, Sydney.

[202] O'Keefe (2006)

[203] There has been considerable work on Europe on this species. France, Italy, Portugal and Spain have a cooperative control program based on techniques initially developed in the Qld program (Scott O'Keefe, personal communication). They have made substantial use of detection dogs and ground penetrating radar to locate nests.

O'Keefe M (ed). 2006. Red-eared Slider Turtles in Australia and New Zealand. Status, Impacts Management. Workshop, Brisbane.