

Assessment Report and Application  
To Amend the List of Specimens Taken to be Suitable for Live Import

(LIVE IMPORT LIST)

**1. Provide information on the taxonomy of the species:**

Common Name: Emerald Tree Monitor  
Scientific Name: Varanus Prasinus  
Kingdom: Animalia  
Phylum: Chordata  
Order: Squamata  
Family: Varanidae  
Genus: Varanus  
Subgenus: Euprepiosaufus  
Species: V. Prasinus

The Emerald Tree Monitor, *varanus prasinus*, is a monitor Lizard native to New Guinea (Indonesia and Papua New Guinea) as well as several adjacent islands and Northern Torres Strait Islands. They are listed in the IUCN Red List that their current presence in Queensland Australia is uncertain.

**2. Provide information on the status of the species under CITES:**

CITES Listing Appendix 2  
IUCN Red List Status: Least Concern

The Emerald Tree Monitor (*varanus prasinus*) is Appendices 2 listed CITES. There are no suspensions in place for this species. They are listed on the IUCN Red List as Least Concern. "It is unlikely that any major threats are impacting this species. It is present in the pet trade, but is unlikely that current harvest levels pose a significant threat, and the species is captive-bred."

**3. Provide information about the ecology of species.**

- **Population Numbers:**

The IUCN notes that there is a stable wild population with a listing of least concern. No specific numbers are offered.

- **Lifespan:**

No wild lifespan data is available, however, zoo records indicate individuals life up to 20 years.

- **Size and Weight Range:**

This species has been recorded growing up to 90cm long, with a snout to vent (base of the tail, cloaca) length of 30cm. Records at Hgle Zoo put the weight at 298 grams.

They are a very slender species.

- **Natural Geographic Range:**

The IUCN state their geographic range as: “Extant (resident) Indonesia (Papua); Papua New Guinea (Papua New Guinea (Mainland Island groups)). Presence uncertain Australia (Queensland)”

Harold G Cogger in 1975 first mentioned unconfirmed records of tree monitors from the Northern Cape York Peninsular. In 1980 Czechura published the first record of *V. Prasinus* for mainland Australia.

In 1986 Harold G Cogger described the distribution area of *V. prasinus* as including the Northern Cape York Peninsula. In 1988 Wilson and Knowles listed *V. Prasinus* from Australia. *Varanus prasinus* is also recorded in the Torres Strait Islands.

- **Habitat:**

Found in Habitats including monsoon, rain and palm forests, as well as lagoons and mangroves. They are a tropical species.

- **Diet:**

Emerald Tree Monitors are predominantly insectivorous preying on tree dwelling arthropods such as katydid, stick insects, cockroaches, beetles, spiders and crabs. They will occasionally eat small birds or mammals.

- **Social Behaviour:**

The Emerald Tree Monitors are social lizards, living in small groups made up of a dominant male and several females.

- **Threats:**

IUCN “It is unlikely that any major threats are impacting this species. It is present in the pet trade, but is unlikely that current harvest levels pose a significant threat, and the species is captive-bred.”

- **Characteristics that may cause harm to humans and other species:**

There are no characteristics that have been recorded to suggest causing harm to humans or other species (with the exception of its prey of predominantly insects).

#### 4. **Reproductive Biology:**

Emerald Tree Monitors generally reach sexual maturity between one to two years old. (However, this is more related to size and growth rate than age.) They have been recorded to lay up to three clutches a season, which is generally from November to April. Clutch sizes generally contain up to five eggs, and once laid have been recorded to incubate from 187 days

to 205 days at around 29°C.

The mating process can occur over several days, with 'lock ups' lasting a few minutes to several hours. After mating it will generally be four to eight weeks before the female lays her eggs. Females will dig several test burrows before settling on a site to lay her eggs.

**5. Provide information on whether this species has established feral populations, and if so, where those populations are:**

The Emerald Tree Monitor is kept in captivity throughout Europe, America and in Queensland, Australia, and there are no recorded feral populations.

**6. Provide information on, and the results of any other environmental risk assessments undertaken on the species, both in Australia and overseas, including any risk analysis undertaken by Bio Security Australia:**

The Emerald Tree Monitor is not included in the Vertebrate Pests Committee's 2007 "List of Exotic vertebrate animals in Australia". No environmental risk assessments have been completed for the Emerald Tree Monitor, although a number of other varanid species are approved and eligible for import:

"List of specimens taken to be suitable for live import (29/11/2001)"

Varanus Jobiensis	Peach Throat Monitor, Schmidt's Monitor Sepik Monitor	Eligible Non commercial purpose only, excluding household pets
Varanus Komodoensis	Komodo Dragon	Eligible Non commercial purpose only, excluding house hold pets

**7. Assess the likelihood that the species could establish a breeding population in the Australian environment, should it ever be released from effective human control:**

Emerald Tree Monitors are native inhabitants to the Mainland Australia, specifically far north Queensland, in the Cape York area. They are only found in this small pocket of Australia due to environmental needs of this species to survive and reproduce. In any other parts of Australia it would be impossible without artificial environmental needs being met.

The Emerald Tree Monitor is also held in a small number of private zoo collections throughout Australia.

Exhibits are secure and routinely checked for signs of damage, and [REDACTED] high operational and husbandry guidelines also greatly reduce the chance of animals escaping.

The Emeralds Tree Monitor do not have any specific characteristics that would give it an advantage in the Australian environment, (outside its natural range of far North Queensland).

**8. Provide a comprehensive assessment of the potential impact of the species should it establish feral populations in Australia:**

– similar niche species (i.e. competition with other species for food, shelter, etc.):

The Emerald Tree Monitor *Varanus Prasinus* is native to Australia in far North Queensland. The environment is not suited for them outside this range, and as they are a native Australian species, there is no risk of a feral population establishing.

**- Is the species susceptible to, or could transmit any pests or diseases?**

Pests/Parasites:

In 1989 specimens of tree monitor wild caught from South East Asia were infested with amoeba.

Wild caught specimen can also carry ticks and mites

Disease

In 2004 Four green tree monitors were found to have varanid herpesvirus 1

Prior to export/import, individuals will require comprehensive health assessments to ensure they are pest and disease free. A secondary health assessment and quarantine will be carried out on arrival.

**- Probable prey/food sources, including agricultural crops:**

*Varanus Prasinus* are carnivorous with the majority of their diet consisting of small invertebrates. A study conducted in 1986 showed katydids were the most abundant prey item along with grass hoppers. Other prey includes centipedes, spiders and a few coleopteran larvae.

Although primarily insectivorous they also eat small arboreal or semi-arboreal mammals.

**- Any control/eradication programs that could be applied in Australia if the species was released or escaped.**

In the unlikely event of an escape this species *varanus prasinus* is already an Australian native, however, environmental factors restrict it to its range of far North Queensland. Should it somehow survive further south of its range it would be unable to successfully propagate (as the temperature and humidity do not suit this species).

**9. What conditions or restrictions, if any, could be applied to the import of the species to reduce any potential for negative environmental impacts?**

It is recommended that the species be considered for listing under Part 2 of the Live Import List and applying the condition Eligible non-commercial purpose only, excluding household pets.

**10. Provide a summary of the types of activities that the specimen may be used for if imported into Australia:**

- *varanus prasinus* be featured in mobile and stationary zoo based educational

displays, focusing on evolutionary adaptations of Australia's diverse array of varanid species.

- A certain number will be bred for other Licensed Educational facilities.

#### **- Potential trade in the species**

Trade of any potential offspring of imported animals would only be to appropriately licensed organisations.

### **11. Provide detailed guidelines on the way in which the species should be kept, transported and disposed of in accordance with the types of activities that the species may be used for if imported into Australia.**

Emerald Tree Monitors can be held in both indoor and outdoor enclosures, in most parts of Australia. If kept outdoors they should be kept in a 'green house' type enclosure to achieve adequate heat and humidity levels year round. Artificial spray systems should be used in large enclosures to maintain humidity levels, and artificial heating and UVB lighting should be used where they do not have access to direct sunlight (e.g. being in indoor enclosures or if the materials used in the green house outdoor set up filter out UV light).

The "Standards for exhibiting Reptiles in NSW" under the 'Exhibited Animals Protection Act' are recommended in regards to enclosure size and construction.

As per the Exhibited Animals Protection Act, animals will be routinely vet checked by a nominated specialist Vet, and daily health checks carried out by the Keepers.

#### **- Transport Equipment**

Specialized transport crate/box should be used for this species. Transport enclosure should be constructed with rubber padding surrounding walls, roof and floor, fresh wood shavings covering the floor, plenty of ventilation holes and a 'snake bag'. It is also recommended that the construction have a split lid system (on lid of each half of transport enclosure).

As per the 'Standards For Exhibiting Animals at Mobile Establishments in NSW'.

#### Clause 6 – Requirements for animal containers and vehicles

1. An animal to be used in a mobile exhibition must be transported to and from a mobile establishment in accordance with the requirements set out in this clause.
2. An animal must be transported in a manner that protects the animal from being injured or exposed to unsuitable or stressful climatic or environmental conditions. The animal must not be transported in an uncovered section of a vehicle or trailer. Note. Adequate ventilation can be provided in the form of an air intake device or air conditioning. The space in which the animals are being transported may require modifications to ensure transport conditions are maintained at an appropriate ambient temperature (whether heating or cooling).
3. An animal must be transported within a container that:
  - a) is structurally sound so that it is crush proof and escape proof; and
  - b) is constructed in such a way that it will not injure any enclosed animal; and

- c) can be easily loaded and unloaded; and
- d) provides suitable barriers between the enclosed animals where there is risk of an animal injuring another; and Note. It is recommended that individual animals are transported in separate containers so they can be more easily monitored. This makes it easier to determine which animal is the source of any faeces, urine or blood that may be of concern.
- e) for terrestrial animals, has a non-slip floor and allows freedom of movement for the enclosed animals to stand, sit, lie down, turn around and stretch out their full length, with the following exceptions: equids must not be allowed room to turn around due to injury concerns; snakes and lizards may be transported in containers that do not allow them to stretch out their full length; and
- f) allows frequent visual or environment (for example, monitoring of ambient temperature) inspections to be undertaken; and
- g) includes an appropriate warning sign if it contains venomous or dangerous species; and
- h) is designed to allow ease of cleaning and disinfection.

4. An animal transport vehicle must incorporate:

- a) facilities to securely fasten animal transport containers to prevent them moving within the vehicle; and
- b) a vehicle exhaust system that does not pollute the air inside the animal transport container; and
- c) a barrier between the animal transport container and the driver's compartment strong enough to hold the weight of animals and their containers in the event of an accident.

5. A compartment within which animal containers are transported must:

- a) allow handling of transport containers without risk to the handlers; and
- b) be designed to control spillage of faeces and be disinfected after each use. Note. Animals are susceptible to injury or the exacerbation of sub-clinical infection during loading, handling and transportation. These problems often arise due to cumulative stresses. Common stressors include:
  - unusual yarding and handling;
  - deprivation of food and water;
  - changes in climatic conditions;
  - overcrowding or isolation, unfamiliar surroundings, noises and sensations;
  - inappropriate care during road transportation; and
  - physiological responses associated with pregnancy and lactation. The greater the number of stressful experiences that can be removed, the better the chances of the animal arriving at its destination in the same condition as it departed

#### Clause 7 – Transportation

1. A mobile exhibitor must ensure that a sufficient number of experienced staff accompany animals transported to and from a mobile establishment, to ensure compliance with these Standards.
2. A mobile exhibitor must ensure the person in charge of a mobile exhibition of the mobile exhibitor's animal(s) has a documented contingency plan detailing how the person in charge is to manage the animals in the event of an accident, breakdown or escape of animals while transporting the animals.
3. Veterinary assistance must be sought as soon as possible for any animal seriously injured during transportation to or from a mobile establishment.
4. Each animal must be checked as soon as possible upon arrival at a mobile establishment by the mobile exhibitor or his or her delegate.
5. Where an animal is to be displayed within an enclosure at a mobile establishment, it must, where possible, be released directly into the display enclosure from the transport vehicle or container. If the animal must be walked from the transport vehicle to the display enclosure the mobile exhibitor must ensure appropriate crowd control is in place and that the animal does not walk on unsuitable substrate; that is, slippery floors.

## **- Containment**

Australian States have respective regulatory agencies that oversee codes of practices with requirements for safe and secure housing for animals on public exhibition.

“NSW – General Standards for Exhibiting Animals Part 5 – ‘Enclosures Must be constructed of such materials and be maintained in sufficiently good repair as to ensure that they will contain the animals at all times and are safe for the animals; an animal cannot escape in circumstances that cannot reasonably be foreseen and guarded against’;”

## **- The disposal options for surplus specimens**

Surplus animals would be avoided by non incubating any eggs. Any reproduced animals would only be appropriately licensed and qualified organisations.

## **12. Provide information on all other Commonwealth, state and territory legislative controls on the species:**

- Queensland emerald tree monitors are on the Native animal keeping licence under a class 2 licence  
The regulation is: Nature Conservation (Animals) Regulation 2020, Schedule 3—Part 3 Section 8
- No other states specify the emerald tree monitor at this stage

### **References:**

**Standards for exhibiting animals at mobile establishments in new south wales**

[https://www.dpi.nsw.gov.au/\\_data/assets/pdf\\_file/0005/277952/Exhibited-Animals-Standards-for-Exhibiting-Animals-at-Mobile-Establishments-in-New-South-Wales-February-2019.pdf](https://www.dpi.nsw.gov.au/_data/assets/pdf_file/0005/277952/Exhibited-Animals-Standards-for-Exhibiting-Animals-at-Mobile-Establishments-in-New-South-Wales-February-2019.pdf)

**department of primary industries mobile animal exhibits**

<https://www.dpi.nsw.gov.au/animals-and-livestock/animal-welfare/exhibit/mobile-animal-exhibits>

**atlas of living Australia**

<https://bie.ala.org.au/species/urn:lsid:biodiversity.org.au:afd.taxon:ec11086e-c922-43f6-876e-c10d53281aa8>

**IUCN RED LIST emerald monitor**

<https://www.iucnredlist.org/species/42485751/101752115>

**SMITHSONIAN’S NATIONAL ZOO & CONSERVATION BIOLOGY INSTITUTE**

<https://nationalzoo.si.edu/animals/emerald-tree-monitor>

**NATIONAL LIBRARY OF MEDICINE**

<https://pubmed.ncbi.nlm.nih.gov/15627519/>

**BIAWAK journal of varanid biology and husbandry**

[http://varanidae.org/9\\_2\\_low.pdf](http://varanidae.org/9_2_low.pdf)

**ANIMAL DIVERSITY WEB**

[https://animaldiversity.org/accounts/Varanus\\_prasinus/](https://animaldiversity.org/accounts/Varanus_prasinus/)

**QLD recreational wildlife licence**

<https://apps.des.qld.gov.au/recreational-wildlife-licence/?search=emerald%20monitor#rwl-animal-finder>

**BOOKS**

**KEEPING AND BREEDING EMERALD TREE MONITORS the varanus prasinus group**

**Bernd eidenmuller**

**REPTILES AND AMPHIBIANS of AUSTRALIA updated 7<sup>th</sup> edition**

**Harold G Cogger**