Fauna surveys

spice
secondary teachers' enrichment program

THE UNIVERSITY OF WESTERN AUSTRALIA
Achieving International Excellence

Government of **Western Australia**
Department of **Education**

Why conduct fauna surveys?

- To increase our understanding of Western Australian ecosystems.
- To determine the effect of humans and environmental impacts on species numbers and diversity.
- To monitor recovery from major ecosystem disturbances.

Who conducts fauna surveys?

- environmental scientists from Government agencies
- environmental consultancies
- scientists from universities

Surveys are conducted as part of Environmental Impact Assessments (EIAs) and ecosystem recovery studies.

Environmental impact assessments

EIAs are conducted to determine under what conditions development and planning proposals may proceed to ensure satisfactory protection of the environment.

They may be associated with:

- mining and industrial operations,
- forestry,
- urban development, and
- infrastructure.

Ecosystem recovery studies

Research is conducted to monitor the effect of major ecosystem disturbances, both natural and human influenced.

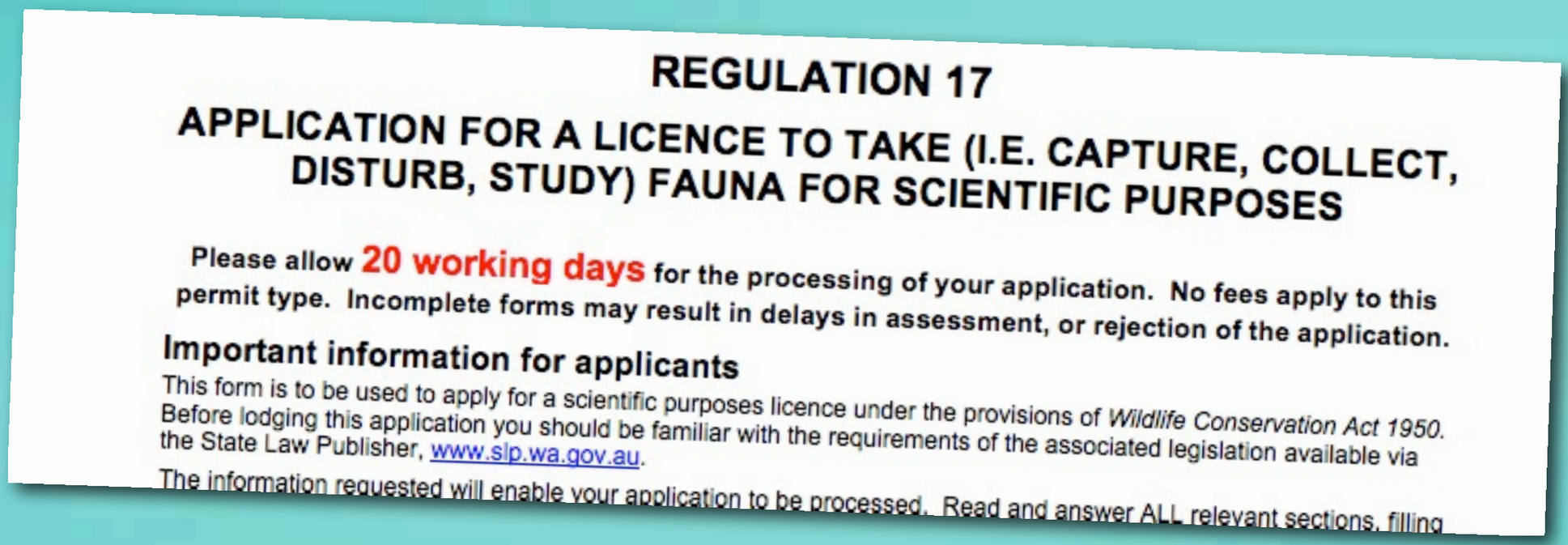
- wildfire
- feral animal predation
- dieback
- salinity
- pollution
- climate change

This provides scientists with baseline data required to establish plans for future management and research.

Terrestrial fauna surveys

What does a research scientist need to know beforehand?

- the animal to be monitored
- the environment in which the animal lives
- legal requirements of the research



REGULATION 17

APPLICATION FOR A LICENCE TO TAKE (I.E. CAPTURE, COLLECT, DISTURB, STUDY) FAUNA FOR SCIENTIFIC PURPOSES

Please allow 20 working days for the processing of your application. No fees apply to this permit type. Incomplete forms may result in delays in assessment, or rejection of the application.

Important information for applicants

This form is to be used to apply for a scientific purposes licence under the provisions of *Wildlife Conservation Act 1950*. Before lodging this application you should be familiar with the requirements of the associated legislation available via the State Law Publisher, www.slp.wa.gov.au.

The information requested will enable your application to be processed. Read and answer ALL relevant sections, filling

Types of trap

- Different species require different traps.

Sheffield (cage) trap

Types of trap

Different species require different traps.

Elliott trap

Types of trap

Different species require different traps.

pitfall trap

Types of trap

Different species require different traps.

funnel trap

Types of trap

Different species require different traps.

tube trap

Other monitoring techniques

Other monitoring techniques include:

- radio-tracking (using collars),
- spotlighting, and
- use of sand plots (for footprints of feral animals).

What data is collected?

This varies, but may include:

- weight
- body and tail length
- head length
- foot (pes) length
- condition
- sex
- age (approximate)
- reproductive status (pouched young)

What data is collected?

More invasive methods are research specific.

They are usually carried out for physiological, genetic and reproductive studies.

They include:

- blood sampling
- isotope injections
- urine and faeces collection

Analysing data

Once it has been collected, how is data used?

- population estimates and growth (% abundance) over time
- presence or absence of species
- presence of rare or threatened species
- return of individual animals
- specific physiological research
- reproduction and genetic research

Conclusions and recommendations

Analysed data collected from terrestrial fauna surveys may:

- provide information about native species and biodiversity, as baseline data for future reference;
- be used for Environmental Impact Assessments that impact on future use of land; and
- help government agencies develop management plans for ecosystems or species.

spice
secondary teachers' enrichment program (science)