

**Proposal for Wild Harvest and Export of Invertebrates;
Submitted for approval under the *Environment Protection and Biodiversity
Conservation Act 1999***

• **Introduction**

The purpose of this proposed Small Scale Wildlife Operation is to supply local and overseas collectors and scientists with legally harvested insect specimens, either by direct sale, or by trading (swapping) with overseas material for study.

The applicant has a good working knowledge of invertebrate identification and collection having grown up in various countries including Zambia and Papua New Guinea, where they were exposed to a broad range of invertebrates. The applicant will also be assisted by an invertebrate collector who has studied, collected, and supplied insects for scientific study, for over 50 years in Great Britain, Zambia, Papua New Guinea and Australia. The applicant and the agent are fully conversant and familiar with the species in the proposed area.

This proposal is for a small-scale operation on freehold applicant-owned land near Gympie in South East Queensland.

None of the insects to be collected are protected by State or Federal legislation.

• **Taxa covered**

This proposal covers the harvest of species in the taxa listed in the Appendix, except for those species listed under the EPBC Act as threatened or listed as endangered, vulnerable, rare, near threatened or least concern under Queensland legislation. The list includes an annual quota that must not be exceeded.

The list can be amended by the Department of the Environment, Water, Heritage and the Arts (DEWHA) if additional information becomes available on any particular species.

The list can be amended by:

- reducing the quota or stopping the harvest of a particular taxa or species; or
- including conditions relating to the harvest or export of that taxa or species.

The list is amended when DEWHA has notified the applicant of the amendment, in writing.

- **Location of harvest**

The location is two acres of privately owned freehold property near Gympie, Queensland. The applicant has permission from the owner/agent to collect from the property.

- **Description of what is to be harvested**

Insect specimens are to be caught live. Only selected perfect adult specimens are to be kept. Any specimens that are caught in a juvenile, worn or damaged state will be released to continue their life cycles.

All insects to be exported will be dead and dried. Insects may be pinned, 'papered', folded, dry, or in paper or glassine envelopes.

- **Is the species protected under State or federal legislation?**

This proposal covers the harvest of the species in the families listed in the Appendix, except for those species listed as threatened under the EPBC Act or protected under Queensland legislation. In the case of invertebrates, Queensland protects species classified as endangered, vulnerable, rare, near threatened or least concern.

Queensland does not protect non-listed invertebrates and therefore these species are unprotected under Queensland legislation.

Under Federal legislation the only protection to the proposed species relates to the export of native wildlife.

- **General goals of proposal**

- To supply local and international collectors/scientists with high quality, legally harvested/bred insect specimens;
- To increase the knowledge of distribution, diversity, and life histories of Australian invertebrates.

- **Details of the area where harvesting/captive breeding is to take place**

Harvesting/captive breeding will take place on a two acre rural residential block designated by the agent as a Private Native Frog Sanctuary.

Originally dry sclerophyll forest, this property has since been extensively planted with several hundred species of both native and exotic plants, shrubs and trees. This planting has been deliberately attuned to both the needs of frogs/reptiles/birds/mammals and for the provision of food plants for a wide and diverse insect fauna. The site also has an established fresh-water dam of approximately 410 square metres of surface area. Surrounding this block are uninhabited semi-cleared blocks of similar size.

- **Details of land ownership**

The property is freehold and fully owned by the agent.

- **Proposed quantities of harvesting**

The amount of insects harvested will depend on demand, which is expected to be very small-scale in amount.

Proposed maximum annual quotas are set for each species within each taxa. Refer to Appendix.

- **Harvesting methods**

- Light attracting: A strong light source (typically 200W, occasionally 400W) mercury vapour or UV lamp. The light is to be suspended in front of a vertical white sheet to attract moths and beetles. The light will not be left unattended and will be switched off well before dawn to allow any unwanted insects to make good their escape.
- Butterfly net
- Hand

All specimens are to be caught live. All unwanted insects are to be released unharmed.

Proposed harvesting will take place all year round, but with strong emphasis on the wet/hot months October through to March.

- **Impact of Harvest on the taxa and the local environment**

Hand selected insect collecting is a 'minimum impact' activity. The numbers to be collected in this particular proposal are so small as to make no impact whatsoever on populations, or biodiversity of the environment, from which they are to be taken.

All effort will be made to ensure that a wide range of healthy food plants will be available at all times, irrespective of weather conditions. The harvest area is, and will remain, a completely organic, pesticide/herbicide free environment. This will greatly help local insect populations to maintain a sustainable breeding stock and a defense against disease and wasting due to food deprivation.

The proposed harvesting methods, when compared to land clearing, the use of insecticides, and the use of non-selective insect electrocution traps, will result in a negligible species survival impact.

- **Monitoring and Assessment**

Insect populations are notorious for extreme fluctuation cycles. The applicant's agent has closely studied these fluctuations for many years and is permanently on-site to monitor and reduce capture amounts, if and when a period of temporary low numbers is apparent for any species.

- **Management Strategies**

Specimens are to be harvested only as required. This limits any impact on the local environment and on species numbers in general.

The proposed harvest property will remain an eco-friendly, organic area. There are no future plans to change its bio-structure, apart from the replacement/additional planting, of required insect food plants.

Some captive breeding of lepidoptera (moths and butterflies) will be carried out when gravid females will be encouraged to deposit eggs, before being released. These eggs will then be protected and reared through all the stages of insect metamorphosis.

- **Management Strategies (cont)**

Some of the resulting progeny will be retained for commercial sale, or trading (swapping) with overseas material. A few might be kept for further generational breeding. The majority will be released into the environment to boost population numbers.

- **Compliance**

There is no independent monitoring of any harvest as the Queensland Government does not regulate the harvest of non-protected invertebrates.

However, the designated agent has extensive experience of insect collecting and identification in the proposed area, and will only export those species which have already been scientifically described.

- **Voucher Specimens**

The applicant and/or agent are required to lodge voucher specimens with the Queensland Museum. For each calendar year, one specimen from each species harvested must be lodged with the Queensland Museum. The voucher specimen should be lodged within one month from the date the first specimen of that species was harvested.

- **Reports**

The applicant will report to DEWHA annually with details of harvest.

The applicant will provide additional reports to DEWHA on particular species if so required.

APPENDIX I

The applicant/agent can harvest species from the species list submitted on 21 July 2008 under the families listed below, except for species listed under the EPBC Act as threatened, or listed as endangered, vulnerable or least concern under Queensland legislation. See Appendix II for species covered under the Nature Conservation (Wildlife) Regulation 2006.

This harvest list will be amended when DEWHA has given notification of the amendment in writing.

It is proposed that the annual maximum quota be twenty (20) individuals for each species from the families listed:

ORDER: COLEOPTERA (Beetles)

Scarabaeoidea...common name - Christmas beetles, Rhinoceros beetles, Dung beetles

ORDER: LEPIDOPTERA (Moths and Butterflies)

Aganidae...common name - Aganid Tiger moths

Agaristidae...common name - Day-flying moths

Anthelidae...common name - Anthelid moths

Arctiidae...common name - Tiger moths

Cossidae...common name - Wood moths

Ethmiidae...common name - None

Eupterotidae...common name - None

Geometridae...common name - Looper or Geometer moths

Hepialidae...common name - Ghost moths

Hesperiidae...common name - Skippers

Hyblaeidae...common name - None

Lasiocampidae...common name - None

Limacodidae...common name - Cup moths

Lycaenidae...common name - Blue butterflies

Lymantriidae...common name - Tussock moths

Noctuidae...common name - Cutworm moths

Notodontidae...common name - Prominent moths

Nymphalidae...common name - Nymph butterflies

Oecophoridae...common name - None

Papilionidae...common name - Swallowtail butterflies

Pieridae...common name - White butterflies

Psychidae...common name - Bag moths

Pterophoridae...common name - Plume moths

Pyralidae...common name - Grass moths

Saturniidae...common name - Emperor moths

Sphingidae...common name - Hawk moths
Thaumetopoiedae...common name - None
Tineidae...common name - Clothes moths
Uraniidae...common name - Uranid moths
Yponomeutidae...common name - None
Zygaenidae...common name - Forester moths

ORDER: HEMIPTERA (Sucking bugs)

Cicadidae...common name – Cicadas

APPENDIX II

Invertebrates prescribed as endangered, vulnerable or of least concern under the *Nature Conservation (Wildlife) Regulation 2006 (QLD)*.

Scientific name	Common name
Schedule 2 - Endangered	
<i>Argyreus hyperbius inconstans</i>	Australian fritillary butterfly
<i>Hypochrysops piceatus</i>	piceatus jewel butterfly
Schedule 3 - Vulnerable	
<i>Acrodipsas illidgei</i>	Illidge's ant-blue butterfly
<i>Hypochrysops apollo apollo</i>	apollo jewel butterfly
<i>Jalmenus evagoras eubulus</i>	
<i>Nacaduba pactolus cela</i>	bold blue-line butterfly
<i>Ornithoptera richmondia</i>	Richmond birdwing butterfly
Schedule 6 – Least concern	
<i>Allora doleschalli doleschalli</i>	peacock awl butterfly
<i>Chaetocneme critomedia sphinterifera</i>	banded red-eye butterfly
<i>Euschemon rafflesia alba</i>	
<i>Hypochrysops elgneri barnardi</i>	
<i>Liphyra brassolis</i>	moth butterfly
<i>Ornithoptera</i> spp. other than <i>Ornithoptera richmondia</i>	birdwing butterflies (other than the Richmond birdwing butterfly)
<i>Papilio ulysses</i>	ulysses butterfly
<i>Trapezites symmomus sombra</i>	
a scorpion of the family Uridacidae that is indigenous to Australia, other than an a scorpion that is extinct in the wild, endangered, vulnerable, rare or near threatened wildlife	
a spider of the family Theraphosidae that is indigenous to Australia, other than a spider that is extinct in the wild, endangered, vulnerable, rare or near threatened wildlife	