

Queen Ant Wildlife Trade Operation Proposal

1.1 & 1.2 Scientific and Common Names

This proposal outlines the harvest of ant species included in Attachment A. The list includes an annual quota that will not be exceeded.

1.3 Location of harvest

The location of harvest will be as follows:

- 20 acres near Panton Hill 3759, Victoria;
- 20 acres near Macs Cove 3723, Victoria.

1.4 Description of what is being harvested

The harvest is of newly mated live adult queen ants of differing species outlined in Attachment A.

1.5 Is the species protected under State or Federal legislation?

Victoria does not protect non-listed invertebrates and therefore these species are unprotected under Victorian legislation. Under Federal legislation the only protection to these species relates to the export of native wildlife.

The applicant will therefore not harvest any species listed under the EPBC Act as threatened (excluding the conservation dependent category) or listed as endangered or vulnerable or least concern under Victorian legislation.

2. Statement of general goal/aims

For the past 2 years the applicant has been trading queen ants throughout Victoria. Since the launch of a new website exhibiting queen ants the applicant has received strong interest from overseas markets.

The aim of the current application is to seek approval for a valid WTO to obtain a license to export queen ants internationally.

3. Harvest Details

3.1 Details of the area where harvesting is to take place

The areas where harvesting will take place are as follows:

- 20 acres of dry sclerophyll forest near Panton Hill, Victoria. (Refer to photograph in Attachment B)
- 20 acres of dense pine plantation near Macs Cove, Victoria. (Refer to photograph in Attachment C).

3.2 Details of land ownership

The applicant privately owns the properties.

3.3 Quantity intended on harvesting

The amount harvested will vary based on demand. However, annual quotas have been set for each species (Refer to Attachment A).

3.4 Method of harvesting and equipment used

The method of harvesting including equipment used is as follows:

- Lights are used to attract ant queens, not to trap. A light is suspended in front of a white sheet, which the ant queens land on. All unharvested ant queens and undesired insects fly away when the light is either switched off or daylight appears.
- The search and collection method involves simply walking through the forest looking for ant queens after and around nuptial flights.

3.5 Timing and duration of harvesting period:

Typically, but not limited to, the warmer months of the year ranging from September to April.

4. Impact of Harvest on the Taxa and the Relevant Ecosystem

- The harvest sites are located on relatively large private properties and the harvesting by the applicant will only affect a very small area of the property. The harvest sites are accessed on foot with little to no impact on the surroundings.
- The method of harvesting is via light attraction, rather than trapping, where by all specimens are caught live and only required species are kept. This eliminates the capture of undesired taxa as they are released back into the wild alive.
- It is estimated that for each species' nuptial flight, there are many thousands of queen ants per sq/km. The harvest size outlined in Attachment A is relatively small in comparison. Due to environmental factors, including weather conditions, queen ant numbers found in a specific area will vary and is not a reflection of declining conservation status. Where harvest results show a decline in numbers the applicant will consider reducing harvest of that particular species.

5. Monitoring and Assessment

5.1 Has there been a resource assessment of distribution and abundance for the harvest area.

There has not been an official assessment of the population of ants in the harvest area. However over the last few years of collection the applicant has seen no decrease in distribution and abundance across the sites, taking seasonal variation into account.

5.2 Will there be independent supervision of the harvesting?

The applicant will monitor the number of queen ants found in each harvesting area. If a reduction in harvest numbers is observed, collection of that particular species will be revised and reduced, with the potential to cease collection.

5.3 Outline the methods to be employed to monitor the harvesting of the specimens to identify whether the species or other species in the ecosystem are affected by the harvesting.

The applicant will record the number of queen ants collected per species per property and compare this to previous years' harvest. Should a decline in numbers be observed in any

species of both desired or undesired taxa, the applicant will revise collection numbers as outlined in item 5.2.

5.4 Describe any other biological and environmental monitoring proposed for the harvesting area.

Ant nests in the harvest area have been identified and protected to ensure a strong population of queen ants to sustain ongoing collection.

6. Management Strategies

Specimens are harvested only as required. Harvest numbers will be revised upon observation of a decline in any given species of queen ants compared to previous years. The applicant will collect only every other ant queen they find to preserve ant numbers. Over the last few years of harvest for local trading, queen numbers have not shown any reduction.

7. Compliance

Through several years of experience and research the applicant has acquired extensive knowledge in relation to ant species identification. If a taxonomic classification of any specimen is unknown, the applicant will have the species identified prior to commercial export.

Should the applicant successfully obtain a permit, we will ensure that only ants that have been collected under the authority of the permit are exported.

8. Reports

The applicant will report as required to the Australian Government Department of the Environment. The report will include harvest details for each species by month for each harvest site. The applicant will provide additional reports to the Department of the Environment on particular taxa if required.

9. Background Information

Ants are the ultimate survivors. Able to tolerate temperatures above 50 degrees Celsius and below freezing. With over 14,000 ant species on earth and over 1,300 of those native to Australia, ants come in all shapes and sizes. Native Australian ants are generally found in large numbers across the country due to their unique ability to survive and find a home in almost any environment. Their “more is more” approach to breeding almost guarantees their survival.

Most ant species will breed during a brief nuptial flight, which takes place over a period of 1-4 weeks each year. Each species will wait for a unique set of environmental conditions before setting off on their flight. Most species will fly in the warmer months, whereas a minority of other species will fly during the cooler temperatures of late Autumn.

This breeding process starts much earlier in the year. Months before a species prepares for its nuptial flight, they have been busy producing alate queens and drones. Hundreds and sometimes thousands of these alates continue to develop in the nest waiting for their environmental cue to begin the nuptial flight. When the conditions are perfect, ants of a particular species will begin to swarm outside the nest, in unison across the state.

Hundreds of alates from each nest will usually climb to the highest point in their immediate surroundings to begin their nuptial flight. It is here, high in the air, that they will mate. Because of this requirement, nearly every species of ant will not mate unless it's at a certain altitude in the sky. This is why ants cannot be bred in captivity. The queens then fall back down to the ground where they begin their search for a suitable place to start a new colony. The drones will die immediately after mating. It is with these huge breeding numbers each year that ensures the species' survival.

At this point, we (the applicant) begin our search for the newly mated queens. If they fly during the evenings or at night, the use of a UV light for attraction works well. If they fly during the morning or during the day, the simple method of search and collect is used.

We estimate that only a very small percentage of what is available is actually harvested. For any particular species, many queens will found their new nest under ground long before we (the applicant) have had a chance to harvest them. Furthermore, we will typically only collect 50% of the queens found in a particular area on a particular day.

We believe that these harvest numbers will ensure the health and survival of a species in any given area.

Over the past few years, we have been involved in the study of Myrmecology with a minority group of enthusiasts. What started as a hobby soon turned into a part-time job. The applicant would spend numerous hours walking through private native bushland observing the different species of ants. All three harvest properties have access to native bushland within their boundaries. It is in this native flora that native ants thrive.

The first property near Pantom Hill, Victoria was home to numerous species. So many in fact that new species are still being found years on. As queen ants were found, the applicant would collect them to start a private colony of ants at home, and as the hobby became more popular, the applicant would trade queen ants with friends in the local area. With growing interest, we began to sell the queen ants to keep up with demand. In a typical year the applicant would sell no more than 50 queens of any particular species, in line with the demand at the time.

The sustainability of any ant species that is collected in the harvest area is of top priority to the applicant. The very large colonies at the harvest sites are identified and then protected from predators to ensure that they continue to produce healthy numbers of queens to offset the harvest. Since this protection method was implemented several years ago, encouragingly the applicant has witnessed neither an increase nor decrease in queen numbers.

Ant keeping as a hobby continues to grow. Australia, home to many unique native ants, has become a hot spot for collectors and demand from international collectors has dramatically increased over the last few years. Many native ants that can only be found in Australia are being sold illegally on international on-line stores. More alarmingly, this has given rise to an ant trade black market with the recent arrest and prosecution of a German man caught trying to export over 3,000 ants from Western Australia.

The applicant feels strongly that should a WTO and permit be granted, it would immediately eliminate the illegal ant trade and help to sustain ant populations.

References:

AAP, 'German man fined for Aussie smuggling ants from Perth', *WA Today*, 11 November 2011, <http://www.watoday.com.au/wa-news/german-fined-for-aussie-smuggling-ants-from-perth-20111111-1nbj9.html>, (accessed 3 June 2016).

Shattuck, S (1999). *Australian Ants*. Melbourne: CSIRO Publishing. 221.

Hölldobler, B & Wilson , E (1990). *The Ants*. USA: Belknap Press. 732.

Attachment A

Taxa covered by the proposal.

Relevant to properties at Panton Hill and Macs Cove

Note: The proponent can harvest any species included in the taxa listed except for species listed under the EPBC Act as threatened (excluding the conservation dependent category) or listed as endangered, or vulnerable.

TAXA COVERED		ANNUAL QUOTA PER SPECIES PER PROPERTY
FAMILY:	FORMICIDAE	
GENUS:	Amblyopone	100
GENUS:	Anonychomyrma	100
GENUS:	Aphaenogaster	100
GENUS:	Camponotus	100
GENUS:	Cerapachys	100
GENUS:	Dolichoderus	100
GENUS:	Iridomyrmex	100
GENUS:	Leptomyrmex	100
GENUS:	Mayriella	100
GENUS:	Melophourus	100
GENUS:	Meranoplus	100
GENUS:	Monomorium	100
GENUS:	Myrmecia	100
GENUS:	Oecophylla	100
GENUS:	Podomyrma	100
GENUS:	Polyrachis	100
GENUS:	Rhytidoponera	100
GENUS:	Technomyrmex	100

Attachment B

Panton Hill property



Attachment C

Macs Cove property

