

Wildlife Trade Operation Proposal - Queen Ant Harvesting

1. Title and Introduction

1.1/1.2 Scientific and Common Names

Please refer to Attachment A, outlining the ant species subject to harvest, giving both scientific and common names where applicable (some species are only referred to by their scientific name) and the proposed annual harvest quota which will not be exceeded.

1.3 Location of harvest

Harvest will be conducted on two privately owned properties in McCrae Victoria, and one privately owned property at Forrest Lake in Queensland.

1.4 Description of what is being harvested

Please refer to Attachment A for an outline of the species to be harvested. The harvest is of live, newly mated, adult queen ants.

1.5 Is the species protected under State or Federal legislation

Ants are non-listed invertebrates and are as such unprotected under Victorian or Queensland State Legislation. Under Federal legislation the only protection to these species relates to the export of native wildlife, which this application seeks to satisfy.

No species listed under the EPBC Act as threatened (excluding the conservation dependent category) or listed as endangered, vulnerable or least concern under Victorian or Queensland legislation will be harvested.

2. Statement of general goal/aims

The applicant began collecting queen ants and watching them build colonies as a personal hobby, during which time he has identified strong interest from international collectors in acquiring species of ants found in Australia. The goal of this application is to seek approval for a WTO to export queen ants.

The ability to export queen ants will also increase the export sales of specialized ant keeping equipment, manufactured in Australia, to overseas ant keepers.

3. Harvest Details

3.1 Details of the area where harvesting is to take place

The area where harvesting will take place is as follows:

Two ½ acre privately owned properties in McCrae, 3938 Victoria and one 2.5 acre privately owned property at Forrest Lake, 4078 Queensland.

3.2 Details of land ownership

Letters of approval from the owners of each property to collect, harvest and keep queen ants and their associated colonies, along with photographs of each property, have been included (separately for privacy reasons) along with the application.

3.3 Quantity intended to be harvested

Please refer to Attachment A outlining the proposed annual quota. This quota will not be exceeded. However, the actual harvest amount will vary depending on time and place of nuptial flights and demand for queens.

The applicant, most likely, will harvest far less than the total quota and species as listed. However, because of the extreme unpredictability of nuptial flight times and places, and demands, the list has been constructed to cover potential possibilities for each species.

3.4 Methods of harvesting and equipment to be used

The applicant and two assistants will harvest all queen ants by hand. This means that the harvesting is completely selective and only species outlined in Attachment A will be collected.

Queen ants are located visually, day or night. At night they are attracted towards a light source and selectively collected. A trained eye can immediately identify a queen ant among hundreds of other insects clinging to fly screen doors or windows for example. There is no negative impact on any other insects.

Each queen is usually immediately individually placed in to an appropriately sized and prepared test tube.

3.5 Timing and duration of harvesting period

Queen ants generally emerge for nuptial flights throughout the warmer months of the year, ranging through September – April. This is not limiting however, and queen ants may be located throughout the year depending on local conditions, which have more bearing on Nuptial flight times than the calendar.

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

The applicant will only harvest from areas already cleared and will not disturb any bushland area not accessible via an established track or clear area. This means that the surrounding ecosystem will not be disturbed or impacted at all.

Given that all harvesting will be done by hand and is completely selective, it should not have any impact on any species not listed in attachment A.

The harvest quotas given in Attachment A are minutely small compared to the estimated number of queen ants emerging for nuptial flights for any given species. This means that the harvest will have little to no impact on the sustainability of the species.

Additionally, any known established colonies/nests on the properties are protected to ensure sustainability. It is in the applicants' best interest to preserve the status of the ants for ongoing viability of trade, as it is the abundance and vast majority of ant species already nesting on the properties that attracts alates (flying virgin queens and males) from other colonies to the properties in the first place.

We are 100% at the other end of the conservation scale to so called pest exterminators.

5. Monitoring and Assessment

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

No official resource assessment of distribution and abundance for the harvest area had been conducted. The applicant and assistants, however, monitors the properties closely and have not seen any significant decrease in populations or abundance since beginning an interest in ants or over the past 5 years. Newly found ant colonies, which have been discovered, are protected as best as practicable.

5.2 Will there be independent supervision of the harvesting

No independent monitoring or State/territory control is proposed at this stage. The applicant will monitor the abundance of queens during harvest and will amend or suspend harvesting quotas if any significant decrease is recorded for any species, however given the very small size of area being harvested, and relatively small expected quotas, any significant overall decrease is highly unlikely.

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

Given that all specimens will be collected by hand, the applicant will accurately record all queens harvested and note any significant changes in abundance. General changes may be due to factors such as climate and weather variations however the applicant will monitor changes and adjust collection numbers in accordance if any significant changes are noted compared to the previous years data.

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

Any known established ant nests/colonies in the area will be monitored and protected as is reasonably practical. This will ensure sustainability of the ant species to be collected. As stated above, the applicant will only harvest in accessible areas of the land, therefore protecting the bush areas and ecosystem of the property.

6. Management Strategies

As outlined above, given the relatively minute harvest quotas, collection is unlikely to create any significant population change. Population changes may occur for other reasons such as weather conditions and seasonal variations. If a decline for any harvested species is detected for any reason, collection will be revised to ensure ongoing sustainability.

It is in the applicants' commercial interest to retain, or even increase, sustainability of all species.

7. Compliance

All ants are harvest by hand and generally housed individually. This means that every ant can be correctly identified before entering trade. Methods of identification include general knowledge of the applicant and assistants or by the many online resources such as antweb.com. If for any reason identification cannot be achieved through these methods, the specimen will not be exported until a positive identification is achieved. Only ants collected under the authority of the WTO will be exported.

8. Reports

Required periodic reporting to the Australian Government Department of the Environment as specified in the declaration approving the operation will be provided by the applicant.

9. Background Information

Ants have been around for millions of years and it is thought that ants evolved from wasp-like ancestors. They are said to form 15-20% of the terrestrial animal biomass in ecosystems globally. There are reportedly around 20,000 known ant species, each with its own set of unique features, hence the incredible diversity of activity, which is what makes ant keeping such a popular and rewarding hobby.

Ants belong to a family of insects called Formicidae, within a greater order of insects known as Hymenoptera (which also include bees and wasps). Ants don't have a true brain like vertebrates but rather have brain-like groupings of nervous tissue called ganglia.

Ants have various stages of their life cycle. They begin life as an egg, hatch into a larva which molts and becomes a pupa. They then emerge as a member of the colony which can consist of the queen, minor and major workers, soldiers, queen alates and male alates (winged flying ants), which all perform tasks towards enhancing the species and colonies ongoing survival.

During a nuptial flight large numbers of queen alates per nest fly and mate with drones (male alates) from other colonies in the air. This is one of the main reasons that ants cannot be bred in captivity. After mating, the flying males die but the queen alates drop to the ground, usually break off their wings and search for a suitable location to start her new colony. It is during this time that the applicant will be searching for these newly mated queens. After mating, a queen ant can continue to lay fertilized eggs for the rest of her life, up to 30 years!

The earliest known record of the ant keeping hobby can be traced back to 1956 and continues to grow today due in some part to a series of incredibly interesting and informative videos on the internet.

Australia is home to many unique and highly regarded native ant species, resulting in high international demand for Australian ants within the ant keeping community. This application aims to expand the knowledge and interest of ant keeping by providing an ethical, sustainable and legal way for international enthusiasts to be able to keep and learn about our incredible native ants.

References:

AntsCanada- The Ultimate Ant Keeping Handbook

<https://www.nationalgeographic.com/animals/invertebrates/group/ants/>

Identification Guide to the Ant Genera of the World- Barry BOLTON (1994)

ATTACHMENT A

Proposed taxa for harvest and export.

Note: The applicant 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.

The applicant, most likely, will harvest far fewer than the total quota and species as listed. However, because of the extreme unpredictability of nuptial flight times and places, and demands, the list has been constructed to cover potential possibilities for each species.

FAMILY : FORMICIDAE

GENUS : Amblyopone – 100
Anonychomyrma – 100
Aphaenogaster – 200
Brachyponera - 100
Camponotus – 300
Calomyrmex - 100
Ceracaphys – 100
Crematogaster – 100
Dolichoderus – 100
Iridomyrmex - 200
Leptomyrmex – 100
Liponera - 100
Mayriella - 100
Melophorus – 100
Meranoplus – 100
Monomorium – 100
Myrmecia – 100
Notoncus - 100
Nylandera - 100
Opisthopsis – 100
Pheidole – 100
Podomyrma – 100
Polyrhachis – 100
Rhytidoponera – 200
Solenopsis – 100
Stigmacros – 100
Technomyrmex - 100