eWasp ©
Research & Monitoring Programs

CoreEnviro™
SOLUTIONS
Environmental Pest & Weed Management

European Wasp Spring Queen Trapping Program 2024

Amtech Grasslands

ACT Parks & Conservation Services

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December 2024

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Directors Summary

CoreEnviro Solutions European Wasp (eWasp™) Spring Queen Trapping Program Report 2024 to ACT Parks & Conservation Services. The information in this report is for the period 6 October - 27 November 2024.

About us

CoreEnviro Solutions is a Canberra-based service provider specialising in the delivery of noxious/environmental, agricultural, horticultural, aquatic pest and weed management, and pest control solutions.

Our main objective is to save our native species. We are committed to educating the public on invasive and beneficial species.

Innovation

CoreEnviro Solutions Pty Ltd is committed to minimising the establishment and spread of eWasps in Australia. We are committed to research and implementing new and improved innovative programs in environmental pest management, this is achieved through improved nest reporting along with insect and arachnid information and identification via both the eWasp mobile app and website.

Notes on Data

Count is the number of European wasp queens trapped and removed from the trap station.
The SQ count is the count day in which the European wasp queen counts were conducted.
European wasp season runs from September through to April.
(eWasp Spring queen survival rate is approx. 30%)

Locations Grasslands is the main paddock.

Acronyms

eWasp	European wasp
eSQ	eWasp Spring Queen
APWSQ	Asian paper wasp spring queen

Executive Summary Table

- 9 non-chemical lure trap stations were deployed at Amtech Grasslands.
- 41 eWasp queens were trapped and removed from the environment.
- $9,020.00 estimated total savings on eWasp nest treatments (based on if all queens produced viable nests).
- Prevented an estimated 164,000 worker wasps impacting the environment (if all eWasp queens produced viable nests).
- Prevented an additional 12,300 next generation eWasp queens from establishing nests (based off 30% survival rate).
- Saved ACT Parks & Conservation Services staff 82 hours or 10 working days in time spent treating eWasp nests.
- Significantly reduced the use of pesticide required, 8.2Kg of Permethrin dust, (200gms per nest), to control established nests in the Amtech Grasslands.
- Vespex is a non-chemical carbohydrate-based lure proved to have low impact on the environment and native species.

Trap AMTECH 4, Jerrabomberra Creek, saw an overall total of 20% or 8 eWasp spring queens.

Directors Comments

Welcome to the European Wasp Spring Queen Trapping Program Report for 2024. The trapping program was conducted in Amtech Grasslands by CoreEnviro Solutions Pty Ltd for ACT Parks & Conservation Services.

Canberra is the bush capital of Australia and has a total of 39 nature reserves in and around Canberra.

Amtech Grasslands is situated along Jerrabomberra Creek, between Fyshwick and Hindmarsh Drive Symonston, Canberra. The grassland backs a commercial area where there has been significant eWasp activity over the years affecting businesses and staff. Jerrabomberra Creek runs through the lower western side of the grassland, making it an ideal location for eWasp activity.

The grassland is a natural temperate grassland and is over 20 hectares of protected area. The grassland is a breeding and nursery to the highly endangered Grassland Earless Dragon *(Tympanocryptis pinguicolla)*.

CoreEnviro Solutions Pty Ltd was approached by ACT Parks & Conservation Services to conduct an eWasp spring queen trapping program at Amtech Grasslands alongside the Jerrabomberra East Grasslands Nature Reserve program.

The aim of the program is to reduce eWasp numbers in the grassland to protect native species in the grassland, and lower the risk of sting incidents to staff, contractors', and businesses in surrounding areas. Nuisance wasps can prevent the public from enjoying outdoor amenities such as parks and open spaces in the vicinity.

The 2024 spring queen trapping program deployed 9 traps in and around Amtech Grasslands. The program used a non-chemical product called Vespex by Sundew, see here for product information.

During the program, 4 Asian paper wasp queens were caught and removed from the environment.

The Asian paper wasp is around 1.3 – 2.5 cm in length with a slender body. They are black and yellow in colour and have orange legs and antennae. The Asian paper wasp looks very similar to the European paper wasp, difference is the two distinctive dots on the European paper wasp thorax, behind the head.

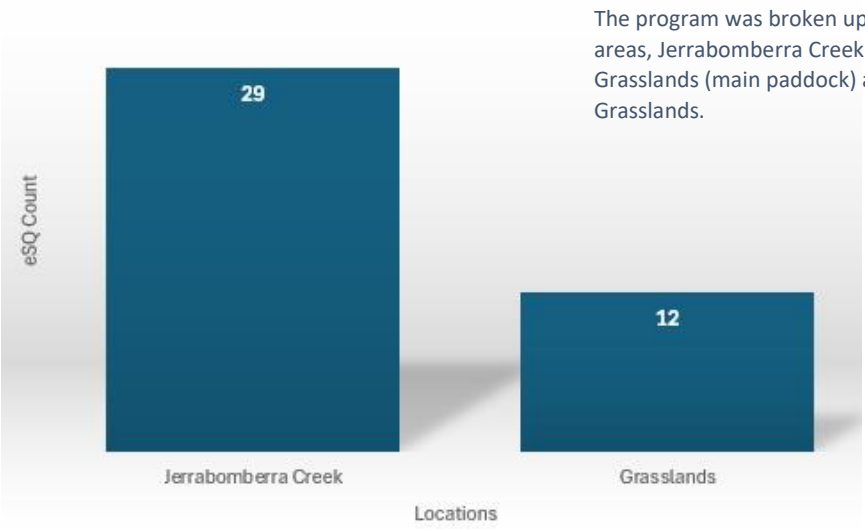
Asian paper wasps can occur at high densities of more than 200 nests per hectare and 6300 wasps per hectare. The potential impact of such high densities of these wasps on native ecosystems is a concern, although the full extent of this impact requires further research. Asian paper wasps prey mainly on invertebrates, especially caterpillars, and are capable of consuming 957g per hectare per season of invertebrate biomass. They also compete with other insects for nectar and honeydew resources[1].

[1] Northland Regional Council New Zealand - Asian paper wasp - Pest control hub - Northland Regional Council (nrc.govt.nz)

Program Results

There were 9 European wasp spring queen traps deployed at Amtech Grasslands. The program ran from 6 October to 27 November 2023.

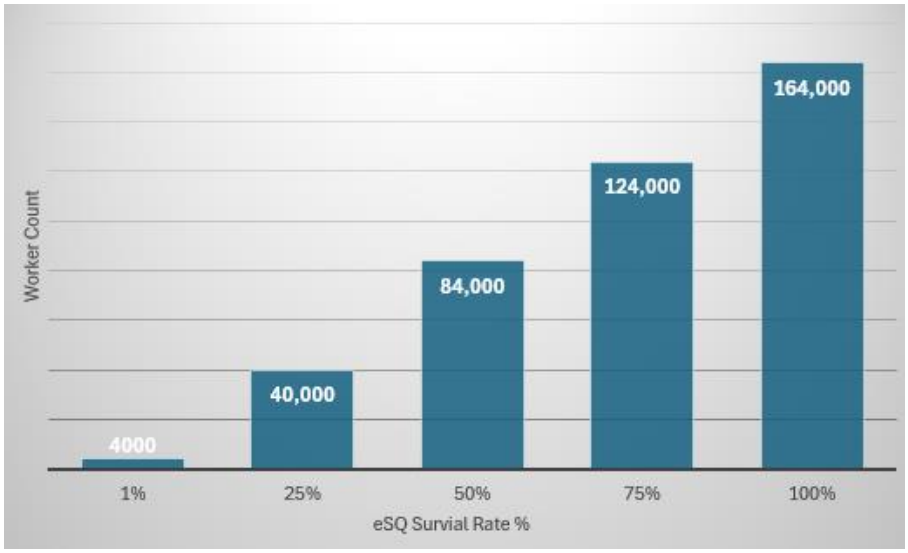
Chart 1 shows the total count by location.



The program was broken up into two (2) areas, Jerrabomberra Creek and Grasslands (main paddock) at Amtech Grasslands.

The trapping trial was successful in capturing 41 eWasp spring queens with little impact on the environment and native species. By removing the queens from the environment, we have eliminated the potential of over 100,000 invasive wasps impacting the environment at Amtech Grasslands.

Chart 2 shows the worker count by spring queen survival rate.



By removing eWasp spring queens from the Amtech Grasslands environment, it has prevented the possible establishment of 41 nests, that is an estimated 164,000 worker wasps, and 12,300 next generation queens, (at 30% survival rate), from impacting the environment.

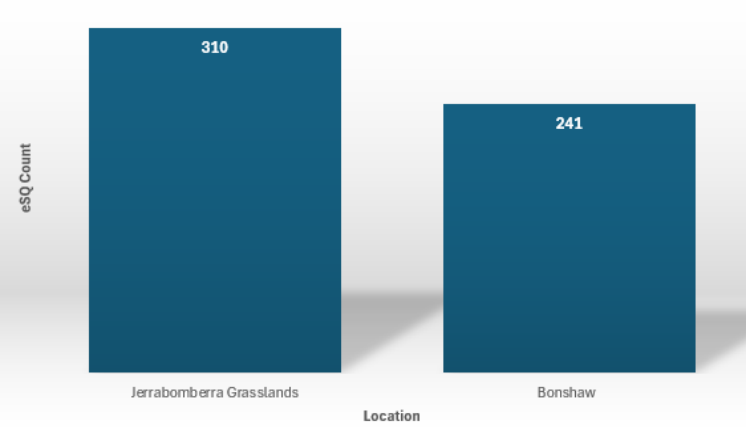
Although the program has been successful in capturing and removing 41 eWasp spring queens from the environment, it is impossible to capture every queen.

Other PCS Programs 2024

CoreEnviro Solutions Pty Ltd conducted an additional two (2) eWasp spring queen trapping programs for ACT Parks & Conservation Services, Jerrabomberra East Grasslands Nature Reserve and Amtech Grasslands.

The Jerrabomberra East Grasslands Nature Reserve program was broken up into two (2) areas, Jerrabomberra Grasslands and Bonshaw, a total of 551 eWasp spring queens were removed from the environment.

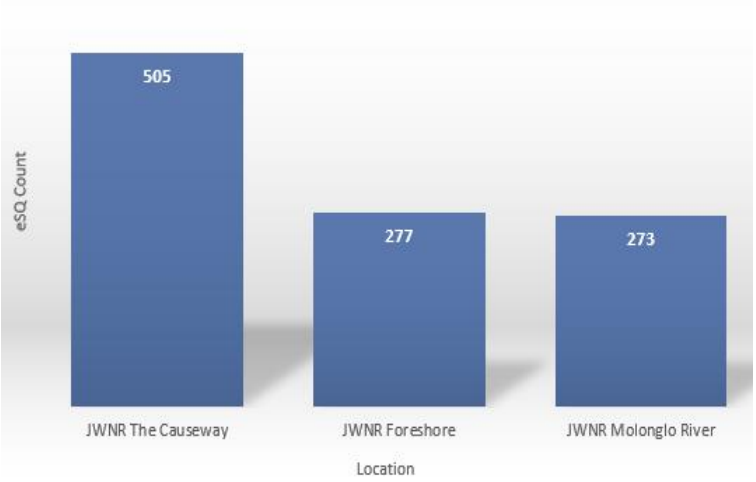
Chart 3 shows the number of eWasp spring queen by location.



The results for Jerrabomberra East Grasslands Nature Reserve are as follows; there were 42 traps deployed, a total of 551 spring queens were trapped and removed from the environment. Jerrabomberra Grasslands had the highest share of eWasp spring queens with 56% or 310.

The Jerrabomberra Wetlands Nature Reserve program was broken up into three (3) areas, JWNR The Causeway, JWNR Foreshore & JWNR Molonglo River, a total of 1,055 eWasp spring queens were removed from the environment.

Chart 4 shows the number of eWasp spring queen by location.



The results for Jerrabomberra Wetlands Nature Reserve are as follows; there were 22 traps deployed, a total of 1,055 spring queens were trapped and removed from the environment. JWNR The Causeway had the highest share of eWasp spring queens with 48% or 505.

European Wasp Impact

European wasps have a negative impact on our native species and environment. The European wasp has no predators, therefore putting pressure on native species by consuming substantial amounts of insects which are normally preyed upon by native insects, reptiles, and birds.

The above images are of eWasps foraging on a Kangaroo Carcass at Mulligans Flat Road in Forde, ACT, eWasps foraging on a prey mantis, and eWasps foraging on a Brown snake at Googong Dam, ACT.

Native scavenging animals find it difficult to feed off carcasses due to large numbers of European wasps present on the carcass. Flies have been observed being attacked by European wasps and at times their heads decapitated.

An average European wasp nest can contain an estimated 4,000 wasps during the peak of the season, between February - March, and each nest can produce an additional 1,000 queens at the end of the season; survival rate for spring queens is unknown, Dr Philip Spradbery' s research shows the queen survival rate was around 30%, but further studies would need to be conducted.

Through data collection, we have seen the European wasp favours areas where a body of water is present, e.g. rivers, creeks, ponds. The location is ideal due to a good supply of water, food and building materials for the nest's survival. Data has shown us the European wasp will establish a nest near other nests, if the environment is ideal.

Through data collection, we have seen the European wasp favours areas where a body of water is present, e.g. rivers, creeks, ponds. The location is ideal due to a good supply of water, food and building materials for the growth and survival of the nest. Data has shown that the European wasp will establish a nest near other nests, if the location is ideal.

Nuisance wasps that forage in large numbers prevent the public from enjoying outdoor areas such as nature reserves, parks, and open spaces, and pose a high risk to public safety.

It is known that European wasp's impact European honey bee hives, they prey on honey bees returning to the hive, rob the hive of honey and attack the brood which weakens the hive. There is no information or evidence that supports the impact of native bee hives/species.

A publication in the New Zealand Journal of Zoology, 1991, stated the European wasp's diet consists of Diptera, fly & mosquito species, lepidopteran larvae, caterpillars – moths – butterflies, and arachnids, are also an important food, this was also documented in Europe and North America.

The wasp population at Amtech Grasslands has impacted surrounding businesses such as cafes and commercial building with nuisance wasps. The nuisance wasps have prevented the public from enjoying outdoor amenities. In situations such as this, there is a considerable risk to public safety.

Benefits of a Spring Queen Trapping Program

The benefit of an eWasp spring queen trapping program is to minimise the impact the European wasp is having on native species and protect ecosystems, as well as minimise the risk of stinging incidents to the public, staff, and contractors.

Treating nests on average for a Ranger can take up to two hours, from set up, to treatment, to waiting for nest activity to settle down. There is also a considerable risk of a stinging incident occurring.

Tracking European wasps back to the nest is extremely time consuming and does not always pay off; most Rangers do not have the time and capacity for such a time-consuming task. Reported European wasp nests on public land are treated by ACT Parkes and Conservation Services, however, there are many nests that go unreported and untreated in the reserves, these nests produce next generation queens which continue to impact the environment.

From the 41 European wasp queens captured and removed from the environment, if all queens captured were to establish nests, 41 nests, the Parks and Conservation Services Ranger would have spent an estimated time of 82 hours or 10 working days treating nests, if a private company were to treat the nests at a cost of $220.00 per nest, the total cost would be $9,020.00

The European wasp spring queen trapping program has also reduced the quantity of insecticide used at Amtech Grasslands, 8.2kg of Permethrin dust, which benefits the environment and reduces the cost of purchasing insecticides.

The Vespex lure is a non-chemical carbohydrate that lures and traps European wasp spring queens and has proven minimal impact on the environment and native species.

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Data Overview

Weather

Table 1 shows the weather conditions at **Canberra Airport** for the months of October and November 2023 and 2024.

eWasp Program Weather Conditions		
Statistics	Oct-23	Nov-23
Highest daily	29.7 °C	33.3 °C
Lowest daily	14 °C	15.8 °C
Monthly mean	21.9 °C	25.5°C
Rainfall	32.6 mm	134.2 mm
Statistics	Oct-24	Nov-24
Highest daily	28.3 °C	31.5 °C
Lowest daily	15.5 °C	18.6 °C
Monthly mean	22.3 °C	22.3°C
Rainfall	18.8 mm	25.7 mm

Weather data obtained from the Bureau of Meteorology2.

- The weather conditions for October 2024 show an increase for the monthly mean by 1.8% and a decrease in rainfall by 42%.
- The weather conditions for November 2024 show a decrease for the monthly mean by 13% and an increase in rainfall of 81%.

More detailed weather observations can be found here.

[2] Australian Capital Territory - Daily Weather Observations (bom.gov.au)

Trap Locations

The trapping program was broken up into two (2) areas. The program traps were deployed and monitored between 6 October - 27 November 2024.

- Amtech Grasslands
  Jerrabomberra Creek
  Traps AMTECH 1 – AMTECH 4
- Amtech Grasslands
  Grasslands (main paddock)
  Traps AMTECH 5 – AMTECH 9

Map

eWasp Spring Queen Trap locations at Amtech Grasslands.

Program Data

Table 2 shows trap number, trap set up date, GPS coordinates and location/reserve, 2024.

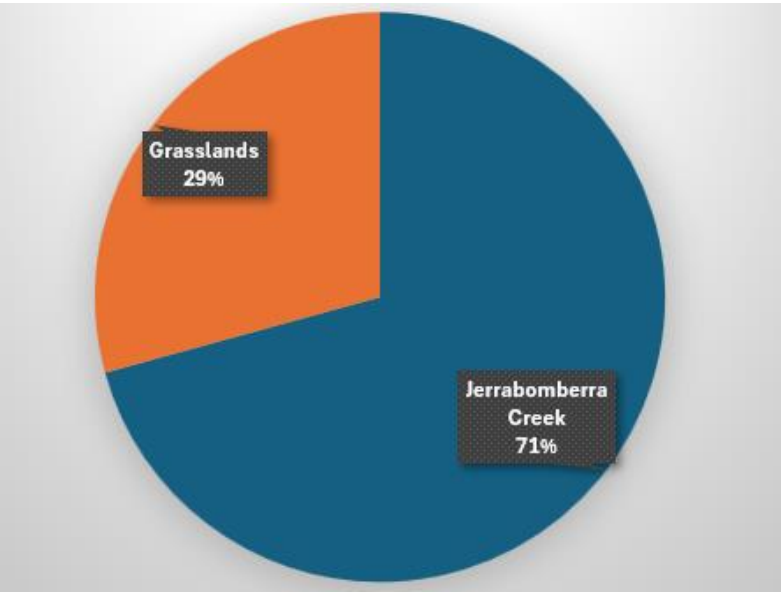
Trap Number	Latitude	Longitude	Location/Reserve
AMTECH 1	-35.33694657	149.1637577	Jerrabomberra Creek
AMTECH 2	-35.337361	149.165946	Jerrabomberra Creek
AMTECH 3	-35.33759888	149.166339	Jerrabomberra Creek
AMTECH 4	-35.33902519	149.166968	Jerrabomberra Creek
AMTECH 5	-35.33845111	149.1677167	Grasslands
AMTECH 6	-35.3382252	149.1687524	Grasslands
AMTECH 7	-35.33820332	149.169606	Grasslands
AMTECH 8	-35.33752448	149.1703054	Grasslands
AMTECH 9	-35.33722691	149.1709816	Grasslands

Table 3 shows the total count by location.

Location	Totals
Jerrabomberra Creek	29
Grasslands	12
Grand Total	**41**

Jerrabomberra Creek had the highest count of eWasp queens with 71% or 29.

Chart 5 share of eWasp spring queens by location.



Jerrabomberra Creek had the highest total count of eWasp spring queen with 71% and Grasslands had a share of 29%.

Table 4 shows the count of eWasp spring queens by location, trap number.

Location & eSQ Trap Number	Totals
Jerrabomberra Creek	29
AMTECH 1	5
AMTECH 2	5
AMTECH 3	7
AMTECH 4	12
Grasslands	12
AMTECH 5	0
AMTECH 6	2
AMTECH 7	0
AMTECH 8	5
AMTECH 9	5
Grand Total	41

Trap AMTECH 4 had the highest number of eWasp spring queens with 29% or 12.

Table 5 shows the count of eWasp spring queens by trap and count number, 2024.

Trap Number	eSQ Count 1	eSQ Count 2	eSQ Count 3	eSQ Count 4	Totals
AMTECH 1	2	1	2	0	**5**
AMTECH 2	0	0	2	3	**5**
AMTECH 3	1	1	2	3	**7**
AMTECH 4	0	0	8	4	**12**
AMTECH 5	0	0	0	0	**0**
AMTECH 6	0	0	0	2	**2**
AMTECH 7	0	0	0	0	**0**
AMTECH 8	4	1	0	0	**5**
AMTECH 9	1	3	1	0	**5**
Totals	**8**	**6**	**15**	**12**	**41**

eSQ Count 3 had the highest count of eWasp spring queens with 37% or 15.

Chart 6 shows the counts by trap number.

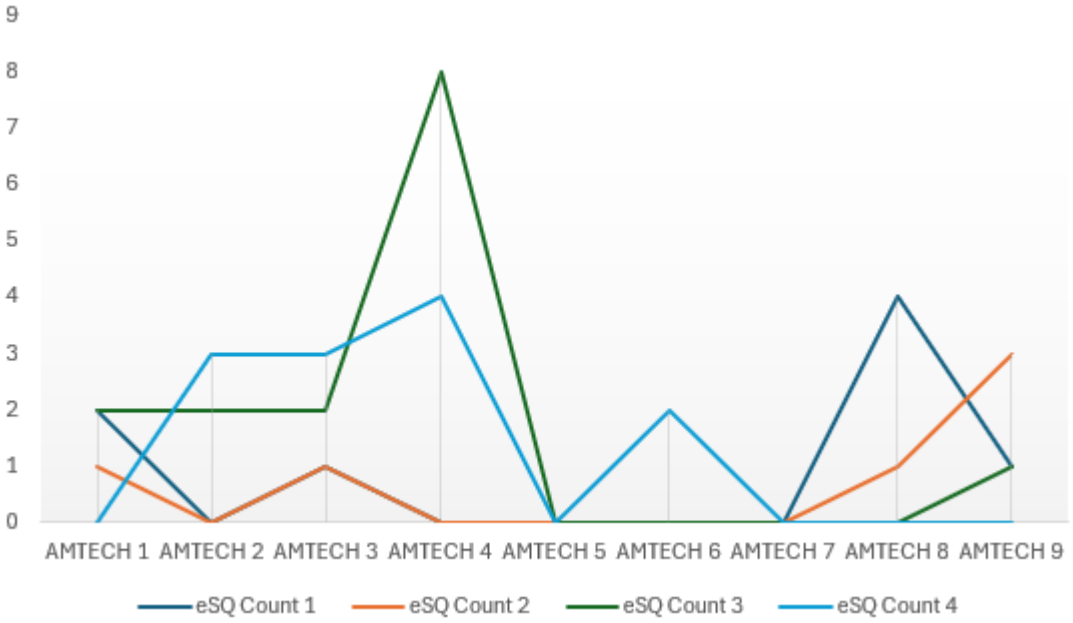
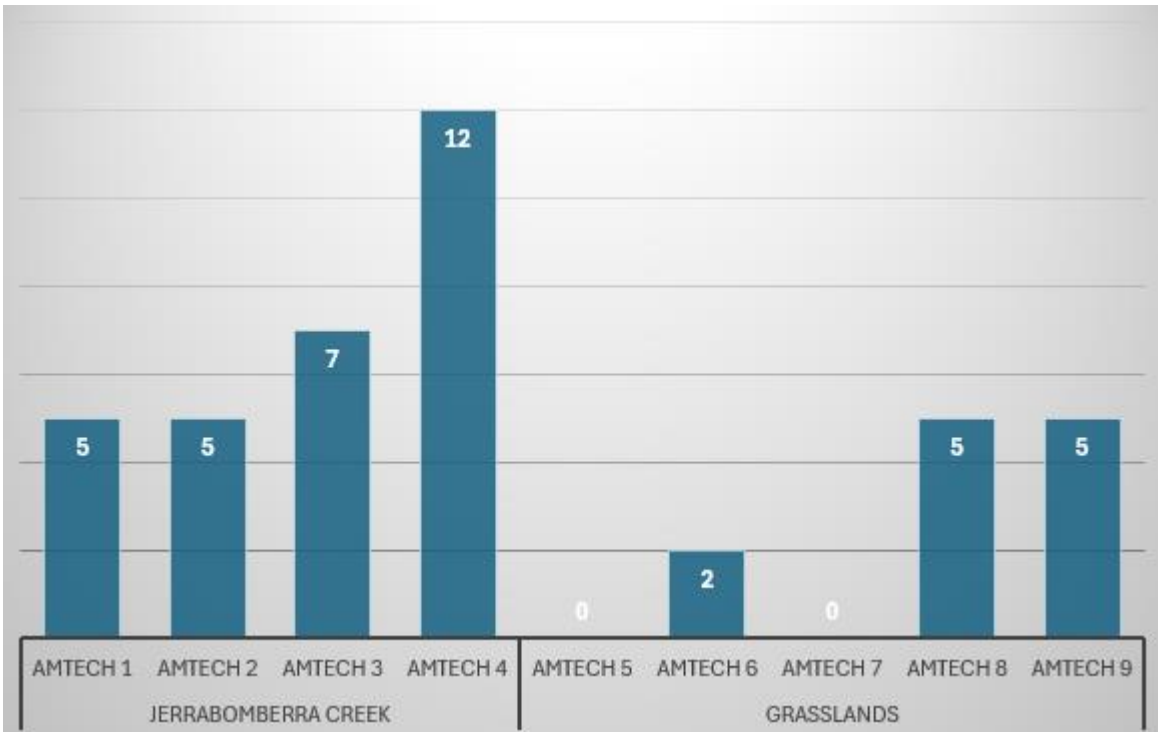


Chart 7 shows the total count by trap number and location.



eWasp Reporting

About the eWasp mobile app

The eWasp mobile app is an easy-to-use GPS mapping tool that allows the user to report a European wasp (eWasp) nest or sighting, European honey bee hive or swarm, Fire ant nest or sighting, by dropping a location pin on a map, on public, commercial & residential land. Users have access to submit a report with camera capability (take photo or upload), view map, insect information, ID an insect or arachnid with camera capability (take photo or upload), first aid & safety, listed pest control companies, the eWasp website and eWasp contact details. We feel we have covered what the public has requested, and with the ability to modify or add to the app when needed.

The eWasp app map displays active reports on public and commercial lands only, once the reports have been actioned, the location pin will be removed from the app map. The location of the nests and information will remain in the eWasp database. Users can use the app map to view/search locations for active reports; simply tap on the location pin and it will display the report type. e.g. eWasp nest, Fire ant nest, see image above. For more information on the eWasp app, please visit eWasp Mobile App - eWasp.

eWasp Research Programs & Information Centre

The eWasp Research Programs & Information Centre monitors the distribution of invasive species through data collection to create programs with the aim of protecting native and endangered species.

Through education, we believe we have saved numerous native species. eWasp is open Australia wide and with the support of the public, we believe we have and can further reduce the number of invasive species in and around suburban areas, and nature reserves.

European honey bee

European honey bee hive reporting was initially added to the app due to the volume of reports we were receiving.

We realised that having honey bee hives visible on the app map, and in the eWasp database, would be beneficial for public awareness, but in the event of a disease or pest outbreak such as the Varroa mite. If this were to occur, the data captured would assist in the inspection of hives and take any action that is required.

European honey bee swarm reporting allowed us to assist in the relocation of the hives, this was done in conjunction with the ACT Beekeepers Association. This in turn would keep the bees out of the environment, such as in wild hollow trees where native animals would normally take up residence.

Download on Google play Available on the App Store

The eWasp mobile app can be downloaded for free from both the App & Google Play stores.

Results by Location

Amtech Grasslands

Jerrabomberra Creek

Background

Amtech Grasslands, Jerrabomberra Creek location, runs through the lower western side of the grassland.

2024 eWasp Spring Queen Trap Locations

Trap Number	Latitude	Longitude	Location/Reserve
AMTECH 1	-35.33694657	149.1637577	Jerrabomberra Creek
AMTECH 2	-35.337361	149.165946	Jerrabomberra Creek
AMTECH 3	-35.33759888	149.166339	Jerrabomberra Creek
AMTECH 4	-35.33902519	149.166968	Jerrabomberra Creek

Mapped Traps

Traps AMTECH 1 – AMTECH 4 deployed at Amtech Grasslands, Jerrabomberra Creek.

2024 eWasp Spring Queen Count

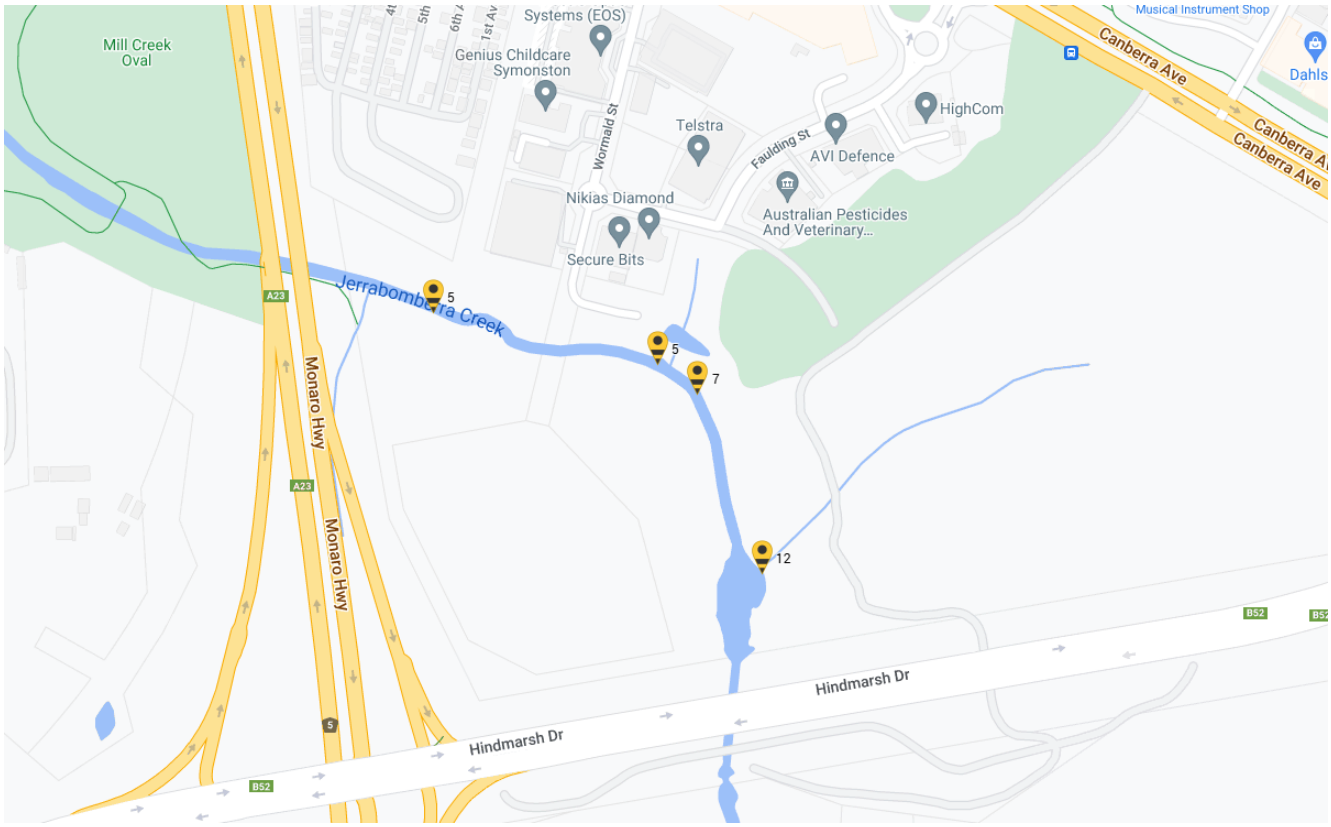
Table 6 shows the eWasp spring queens count by trap and count number.

Trap Number	eSQ Count 1	eSQ Count 2	eSQ Count 3	eSQ Count 4	Totals
AMTECH 1	2	1	2	0	5
AMTECH 2	0	0	2	3	5
AMTECH 3	1	1	2	3	7
AMTECH 4	0	0	8	4	12
Totals	**3**	**2**	**14**	**10**	**29**
	Total Number of eWasp Spring Queens				29

Amtech Grasslands, Jerrabomberra Creek, eSQ Count 3 had the highest count during the program period with 48% or 14.

Mapped Counts

eWasp spring counts by trap number

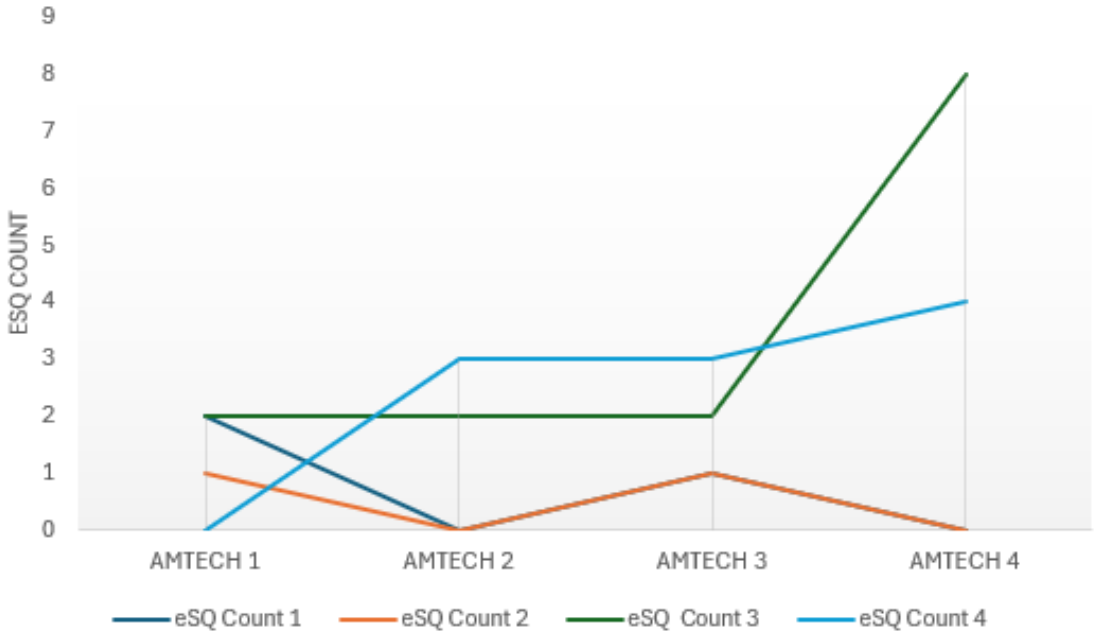


Results

Chart 8 shows the total count by trap number.

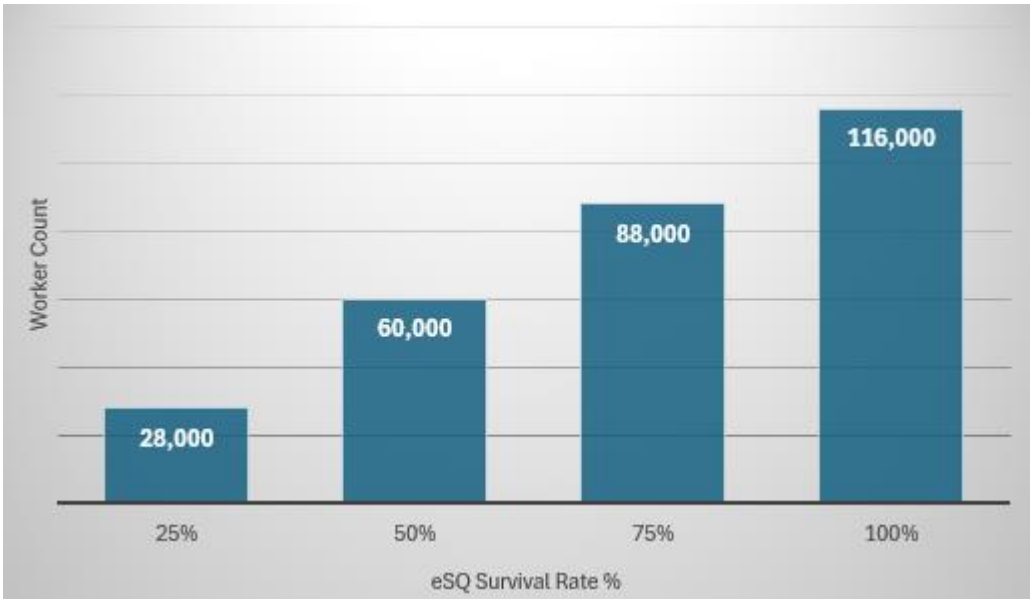
There were four (4) traps deployed at Amtech Grasslands, Jerrabomberra Creek which saw a total of 29 spring queens trapped and removed from the environment during the program period.

Chart 9 shows the eSQ count by trap and count number.



From the 29 eWasp spring queens trapped and removed from the environment, AMTECH 4 had the highest count with 41% or 12, followed by AMTECH 3 with 24% or 7.

Chart 10 shows the worker count by spring queen survival rate.



If all queens survived and established nests, there may have been an estimated 116,000 worker wasps and an estimated 8,700 next generation queens impacting the environment and surrounding areas.

Breeding and nursery location, Grasslands, to the highly endangered Grassland Earless Dragon *(Tympanocryptis pinguicolla)*.

Amtech Grasslands
Grasslands

Background

Amtech Grasslands, Grasslands location, is the main paddock of the grassland, and the primary breeding and nursery area for the Grassland Earless Dragon.

2024 eWasp Spring Queen Location

Trap Number	Latitude	Longitude	Location
AMTECH 5	-35.33845111	149.1677167	Grasslands
AMTECH 6	-35.3382252	149.1687524	Grasslands
AMTECH 7	-35.33820332	149.169606	Grasslands
AMTECH 8	-35.33752448	149.1703054	Grasslands
AMTECH 9	-35.33722691	149.1709816	Grasslands

Mapped Traps

Traps AMTECH 5 – AMTECH 9 deployed at Amtech Grasslands, Grasslands.

2024 eWasp Spring Queen Count

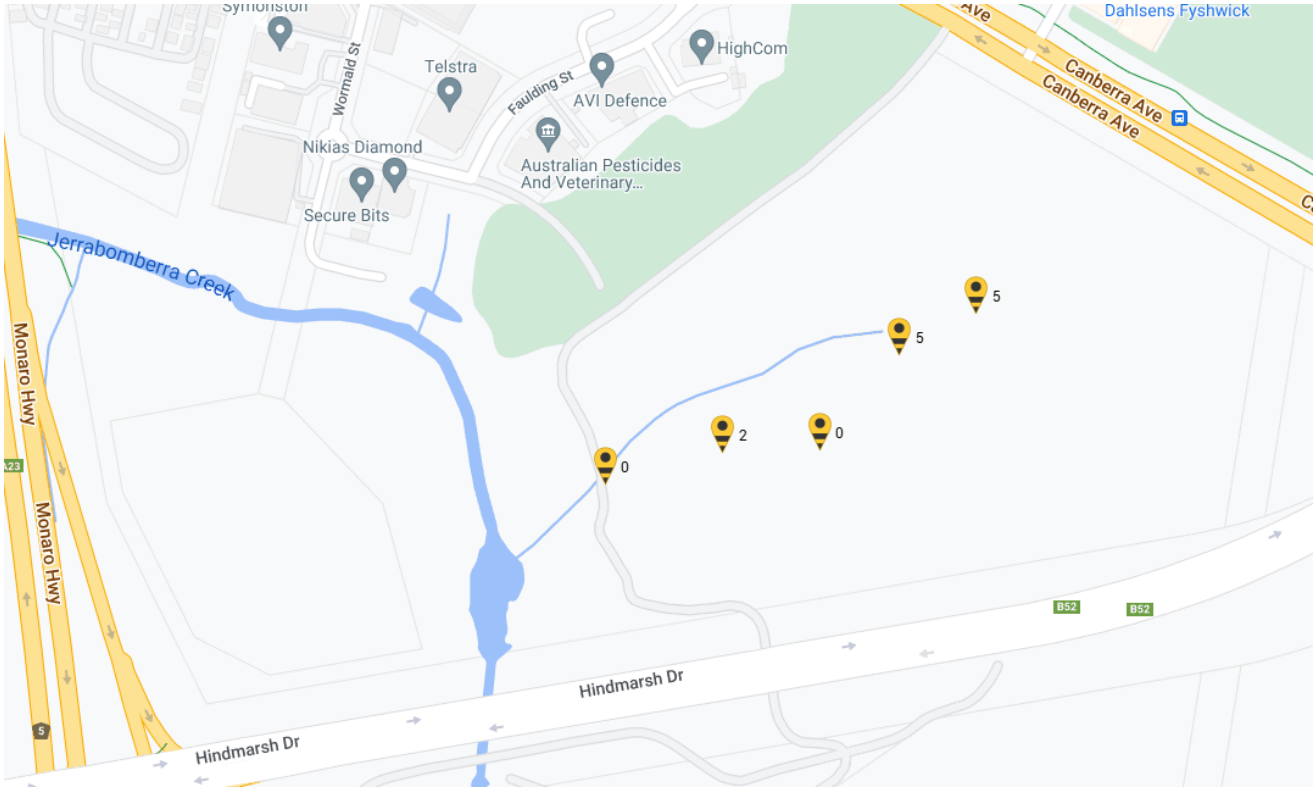
Table 7 shows the eWasp spring queens count by trap and count number.

Trap Number	eSQ Count 1	eSQ Count 2	eSQ Count 3	eSQ Count 4	Totals
AMTECH 5	0	0	0	0	0
AMTECH 6	0	0	0	2	2
AMTECH 7	0	0	0	0	0
AMTECH 8	4	1	0	0	5
AMTECH 9	1	3	1	0	5
Totals	**5**	**4**	**1**	**2**	**12**
	Total Number of eWasp Spring Queens				12

Amtech Grasslands, Grasslands, eSQ Count 1 had the highest count during the program period with 42% or 5.

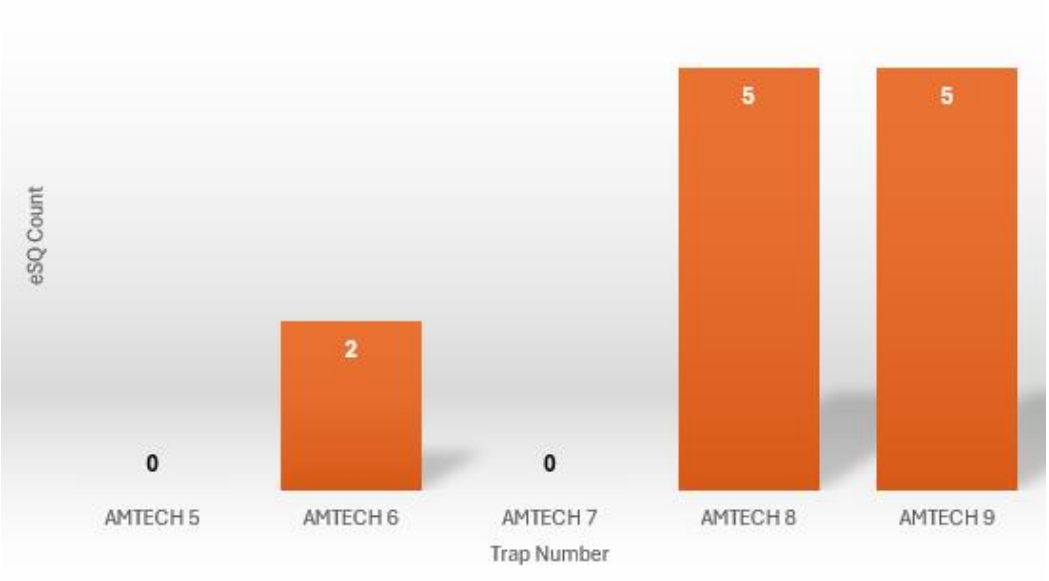
Mapped Counts

eWasp spring counts by trap number



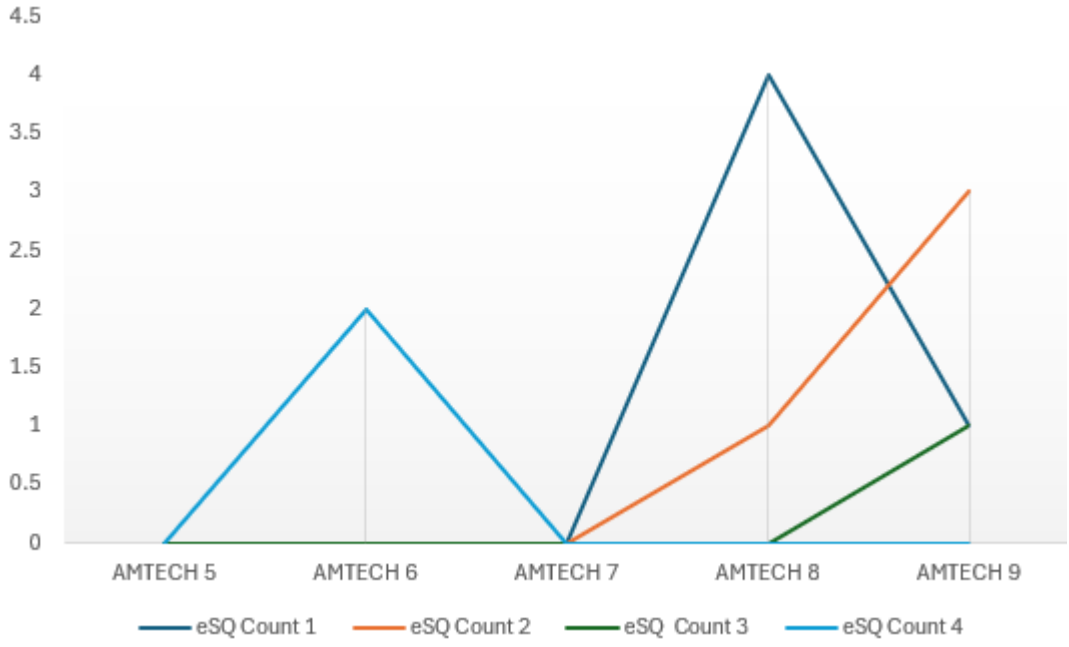
Results

Chart 11 shows the total count by trap number.



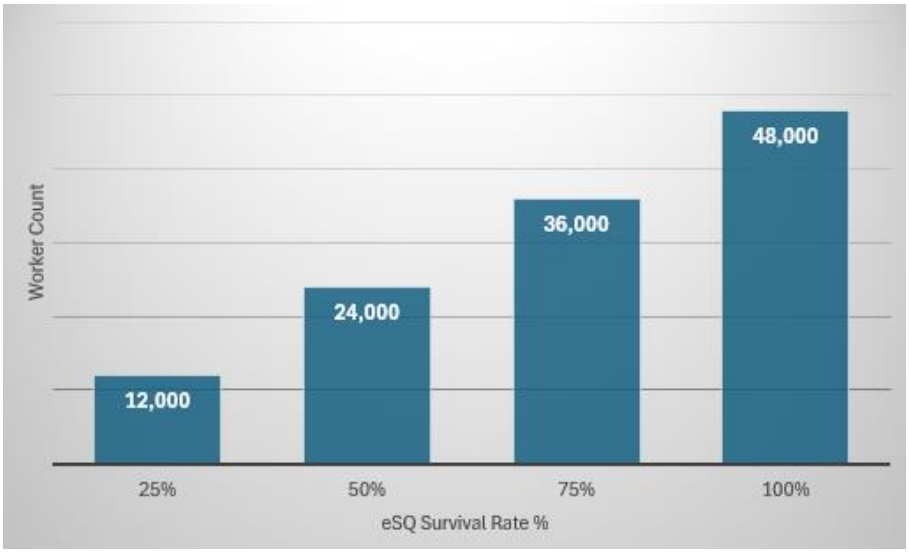
There were five (5) traps deployed at Amtech Grasslands, Grasslands, which saw a total of 12 spring queens trapped and removed from the environment during the program period.

Chart 12 shows the count by trap and count number.



From the 12 eWasp spring queens trapped and removed from the environment, AMTECH 8 & AMTECH 9 had the highest counts with 42% or 5.

Chart 13 shows the worker count by spring queen survival rate.



If all queens survived and established nests, there may have been an estimated 48,000 worker wasps and an estimated 3,600 next generation queens impacting the environment and surrounding areas.

Recommendation

From late January to March 2024, the eWasp population and activity should be high and noticeable, therefore, an inspection to identify and treat nests in Amtech Grasslands is recommended. This will prevent spring queens from emerging in spring 2025 and establishing nests.

If eWasp activity is high in January to early February, and nests cannot be located, a baiting program may be required.

It is recommended that eWasp spring queen trapping programs continue in the future to preserve the ecosystem in Amtech Grasslands.

In spring 2025, it is recommended 3 - 4 spring queen traps are deployed to monitor spring queen activity, before commencing a full trapping program. Due to queens still being trapped at the last count, a longer program would be more beneficial to the environment.

It is also recommended that PCS collaborate with TCCS in future trapping programs to preserve the ecosystems in ACT Nature Reserves and surrounding areas.

A significant number of Asian paper wasp queens were removed from Jerrabomberra East Grasslands Nature Reserve, with several at Amtech Grasslands, therefore, it is recommended more traps are deployed to capture Asian paper wasp queens; Asian paper wasp queens don't fly as far as European wasp queens from their hibernating site. Due to both Jerrabomberra East Nature Reserve and Amtech Grasslands having the Asian paper wasp present, it is recommended that trapping programs be conducted in other reserves where endangered invertebrates are present.

Report all nest and significant sightings to the eWasp team, this enables us to monitor the distribution of eWasps at Amtech Grasslands.

Weather Observations BOM

October 2024 Daily Weather Observations, Canberra, ACT

Canberra, Australian Capital Territory
October 2024 Daily Weather Observations
Observations from Canberra Airport.

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Tu	2.5	21.6	0.2			E	41	20:36	10.9	78	8	W	9	1024.3	20.1	41		NNW	22	1020.1
2	We	9.1	19.2	0			NE	39	13:17	14.5	69	8	ENE	20	1029.9	18.5	50	6	NNE	17	1028.0
3	Th	6.2	20.9	0			N	37	12:36	13.5	63	4	E	7	1030.4	20.2	39		NNE	19	1024.9
4	Fr	2.8	20.1	0			NW	44	10:34	13.2	74	6	W	4	1020.3	18.1	54	8	NNW	26	1013.8
5	Sa	12.3	20.0	5.8			NW	52	13:24	16.7	53	4	W	20	1008.3	18.1	43	5	WNW	28	1006.5
6	Su	9.4	17.5	0			WNW	61	05:59	14.4	55		WNW	41	1010.6	15.9	54	8	NW	24	1012.9
7	Mo	8.5	22.5	0			WNW	59	13:06	15.7	63		NW	19	1018.0	20.5	45	8	WNW	37	1015.9
8	Tu	7.4	17.0	0			E	43	19:29	9.9	74	8	SSE	17	1022.1	14.9	52	1	NE	17	1020.8
9	We	0.4	17.7	0			NE	33	14:32	9.3	62	8	ESE	11	1026.9	16.9	42	1	NE	13	1023.3
10	Th	-0.3	22.7	0			NNW	52	12:37	10.5	74		NW	4	1023.2	22.3	36		N	30	1019.1
11	Fr	4.4	24.9	0			NW	46	14:23	12.8	73	7	W	6	1024.6	23.7	37		NW	26	1019.5
12	Sa	9.9	19.6	0			NNE	39	14:09	11.0	60	8	SSE	19	1026.7	18.8	33		NNE	24	1024.6
13	Su	3.0	21.2	0			NNW	26	10:28	11.3	57		SSE	9	1026.7	20.2	29		N	13	1021.0
14	Mo	7.3	22.9	0			S	48	15:15	14.9	64	8	W	2	1019.7	19.3	52	8	S	19	1016.4
15	Tu	8.1	15.5	5.8			ENE	33	14:27	11.8	79	8	SE	13	1025.4	14.5	62	7	NE	20	1023.5
16	We	3.6	22.0	0			N	31	13:53	10.1	70		SSE	9	1022.3	20.8	45		N	17	1017.5
17	Th	4.6	25.0	0						12.7	75			Calm	1018.4						
18	Fr	12.7	21.9				NNW	61	12:04	15.7	100	7	NNE	15	1009.4	20.2	81	8	NNW	35	1003.2
19	Sa	11.7	24.4	6.8			SSE	31	16:37	16.1	86	3		Calm	1009.5	21.0	62	8	NNW	19	1011.1
20	Su	3.9	26.3	0.2			SSE	37	09:58	14.8	57		SSW	13	1019.9	24.8	29		SSW	19	1017.4
21	Mo	5.2	24.1	0			NNE	33	16:17	13.3	65		SSE	13	1023.7	23.0	34		S	9	1018.5
22	Tu	4.1	26.8	0			NNW	30	15:15	9.7	99	8	SE	6	1017.7	26.3	36		N	19	1013.1
23	We	8.1	24.1	0			WSW	41	15:47	15.7	71	3		Calm	1012.6	23.3	43	8	NNW	17	1009.3
24	Th	6.5	21.5	0			NNW	46	14:53	15.8	43		NNW	13	1011.3	20.7	24		NNW	22	1008.9
25	Fr	1.3	18.9	0			ESE	28	16:24	10.3	69		WNW	4	1015.1	16.5	30	8	NW	7	1014.0
26	Sa	-1.3	19.3	0			N	33	15:22	9.1	40		SSE	15	1022.2	17.5	21		N	17	1018.3
27	Su	4.6	25.0	0			NW	41	13:35	11.7	65	5	S	7	1019.8	21.8	29	8	N	20	1016.3
28	Mo	3.7	27.7	0			WNW	54	11:31	13.6	60	4	NW	6	1018.5	26.7	17		NW	30	1015.4
29	Tu	7.2	25.6	0			N	35	14:16	14.2	64		NNW	2	1023.4	24.2	36		NNE	17	1019.3
30	We	9.9	28.3	0			W	44	14:26	15.1	73	3	SSW	7	1018.2	27.1	17		WNW	31	1012.6
31	Th	5.0	26.1	0			W	50	13:07	15.8	48	3		Calm	1011.5	23.8	23	8	WNW	30	1008.6
Statistics for October 2024																					
Mean		5.9	22.3							13.0	67	5		10	1019.7	20.7	39	6		21	1016.5
Lowest		-1.3	15.5							9.1	40	3		Calm	1008.3	14.5	17	1	NW	7	1003.2
Highest		12.7	28.3	6.8			#	61		16.7	100	8	WNW	41	1030.4	27.1	81	8	WNW	37	1028.0
Total				18.8																	

Observations were drawn from Canberra Airport {station 070351}
Some cloud observations are from automated equipment; these are somewhat different to those made by a human observer and may not appear every day.

November 2024 Daily Weather Observations, Canberra, ACT

Canberra, Australian Capital Territory
November 2024 Daily Weather Observations
Observations from Canberra Airport.

Australian Government
Bureau of Meteorology

Date	Day	Temps		Rain	Evap	Sun	Max wind gust			9am						3pm					
		Min	Max				Dirn	Spd	Time	Temp	RH	Cld	Dirn	Spd	MSLP	Temp	RH	Cld	Dirn	Spd	MSLP
		°C	°C	mm	mm	hours		km/h	local	°C	%	eighths		km/h	hPa	°C	%	eighths		km/h	hPa
1	Fr	9.3	24.0	0			E	50	17:28	16.1	61	1	NE	17	1015.5	22.3	33	4	NNE	13	1013.5
2	Sa	4.7	23.0	0			NE	35	16:28	12.7	66	8	SE	4	1023.0	20.8	43	2	NNE	11	1018.6
3	Su	8.1	31.4	0			NW	70	15:50	19.0	62	5	NW	24	1014.5	30.4	16	2	WNW	39	1009.9
4	Mo	12.4	27.0	0			NW	50	13:41	23.5	35	6	NNW	19	1011.3	24.7	26		NNW	31	1011.2
5	Tu	12.2	26.9	0			NE	35	17:08	14.8	76	8	NNE	11	1017.8	25.2	40	2	NNE	11	1013.6
6	We	9.0	32.3	0			NW	46	12:54	19.2	73		NW	2	1013.9	31.5	25	1	WNW	19	1010.4
7	Th	15.9	27.7	0			NNW	63	10:34	24.0	49	7	NNW	13	1009.0	26.0	34		WNW	31	1006.8
8	Fr	8.9	22.7	0			W	54	16:33	15.2	61	1	NW	20	1012.4	21.9	29	1	W	30	1011.0
9	Sa	6.0	25.3	0			N	37	12:31	16.4	61	8	N	9	1020.2	23.4	30	7	WNW	11	1016.8
10	Su	8.7	27.6	0			ESE	54	15:30	19.3	35		N	9	1020.8	27.3	22		WNW	13	1017.5
11	Mo	12.3	23.2	0						14.7	65	8	ESE	4	1021.9	21.6	45	3	NNE	11	1017.5
12	Tu	11.6	25.4				NE	37	16:22	17.5	69	8	ESE	7	1018.4	24.4	36	7	NE	19	1013.9
13	We	12.8	25.1	0			NNW	52	11:24	19.2	64		ENE	4	1012.5	23.0	47	6	WNW	20	1009.1
14	Th	7.8	26.8	0			SE	52	16:24	16.1	77	8	WSW	7	1016.1	24.1	41	1	NNE	15	1013.2
15	Fr	13.1	25.4	0						15.0	73	8	ENE	15	1021.4	21.9	43	5	E	15	1018.3
16	Sa	14.6	31.1	0			NE	52	17:32	18.8	64	4	NNE	6	1021.8	29.6	29	1	NW	13	1017.2
17	Su	12.3	27.5	0			NNW	57	10:16	22.6	63		WNW	9	1013.8	18.6	100	8	NW	26	1011.2
18	Mo	10.3	24.7	22.8			NW	46	11:28	16.0	47		NNW	22	1014.5	23.4	26		WNW	30	1014.1
19	Tu	8.4	26.3	0.2			E	48	17:17	15.6	69	8	WSW	7	1022.3	24.0	32		SE	9	1019.0
20	We	13.4	27.3	0			E	50	17:13	17.6	65		W	6	1023.5	26.2	33		SW	13	1020.5
21	Th	15.1	28.1	0			NW	33	12:44	19.3	56		NE	9	1026.3	27.0	33		NNW	17	1021.7
22	Fr	10.8	31.3	0			E	35	18:45	19.5	63		NW	6	1024.7	28.8	30	4	W	20	1020.1
23	Sa	12.9	33.5	0			NW	35	14:55	23.0	52			Calm	1021.7	32.6	22		WNW	17	1017.1
24	Su	12.1	34.3	0			NW	44	14:56	24.4	38	7	NNW	7	1018.3	32.7	24	5	NW	24	1014.5
25	Mo	12.6	35.3	0			N	50	14:10	21.9	55		WNW	6	1015.2	32.5	23	2	NNW	33	1010.8
26	Tu	15.7	32.8	0			NW	54	11:57	25.5	42	2	NW	13	1012.0	29.7	36	4	WNW	24	1010.4
27	We	16.2	28.2	0			NW	61	10:51	23.7	54	1	NW	22	1009.3	20.8	94	8	NNW	20	1009.9
28	Th	18.3	29.8	2.8			E	52	17:20	22.0	77	8	NW	13	1014.5	27.0	51		N	19	1013.2
29	Fr	15.1	22.3	0			E	33	15:50	20.1	74	8	E	13	1019.5	21.5	81	8	E	17	1017.0
30	Sa	17.3	19.7	14.8			ENE	37	11:16	19.0	98	8	NE	19	1010.6	19.6	99	7	N	15	1006.3
Statistics for November 2024																					
Mean		11.9	27.5							19.1	61	6		10	1017.2	25.4	40	4		19	1014.1
Lowest		4.7	19.7							12.7	35	1		Calm	1009.0	18.6	16	1	SE	9	1006.3
Highest		18.3	35.3	22.8			NW	70		25.5	98	8	NW	24	1026.3	32.7	100	8	WNW	39	1021.7
Total				40.6																	

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Weather statistics provided by the Bureau of Meteorology, Australian Government

Vespex European Wasp Lure

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Jim Bariesheff, Director, CoreEnviro Solutions Pty Ltd; Data collection, environmental impact and recommendations.

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