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European wasp baiting trial, 2020

DPIRD-179

A Western Australian-first baiting program implemented by the department to eradicate European wasps from a 9 km stretch of rugged and largely inaccessible bushland of the Darling Scarp yielded promising results.

About the program

A WA-first baiting program targeting European wasps, *Vespula germanica*, was implemented by the Department of Primary Industries and Regional Development (DPIRD) during its 2019-20 European wasp surveillance season. The baiting program was initiated after established methods to locate and destroy nests proved inadequate in the rugged, largely inaccessible bushland of the Darling Scarp.

The surveillance program covered over 4590 ha of continuous bushland from Lesmurdie to Martin, encompassing the Victoria Dam and Reservoir, to delineate areas of European wasp activity. Information from published interstate and international baiting programs was drawn on to design and implement a targeted European wasp specific baiting program across 2500 ha.

This program comprised 257 baiting stations, distributed across a 300 m grid, and ran from 6 March to 9 April 2020. The bait consisted of a mixture of raw pink ling fish, and the insecticide Fipronil. The risk to non-target species was managed through mindful trap placement, monitoring, and careful selection of bait media. Non-target species (such as bees) displayed no interest in raw fish attractant or bait stations, providing confidence there were no impacts on bees or other beneficial insects. The unique scavenging behaviour of European wasps on carrion and animal protein allows it to be selectively baited, with negligible impacts to non-target species. Bait station design, deployment, and removal prevented impacts on native wildlife or risk to drinking water resources.



Image 1: A European wasp taking bait from a baiting station in Orange Grove bushland, WA



Figure 1: European wasp baiting area, shown in red, within the larger bushland surveillance area. The baiting area covered about 2,500 hectares of continuous bushland from Lesmurdie to Martin, WA

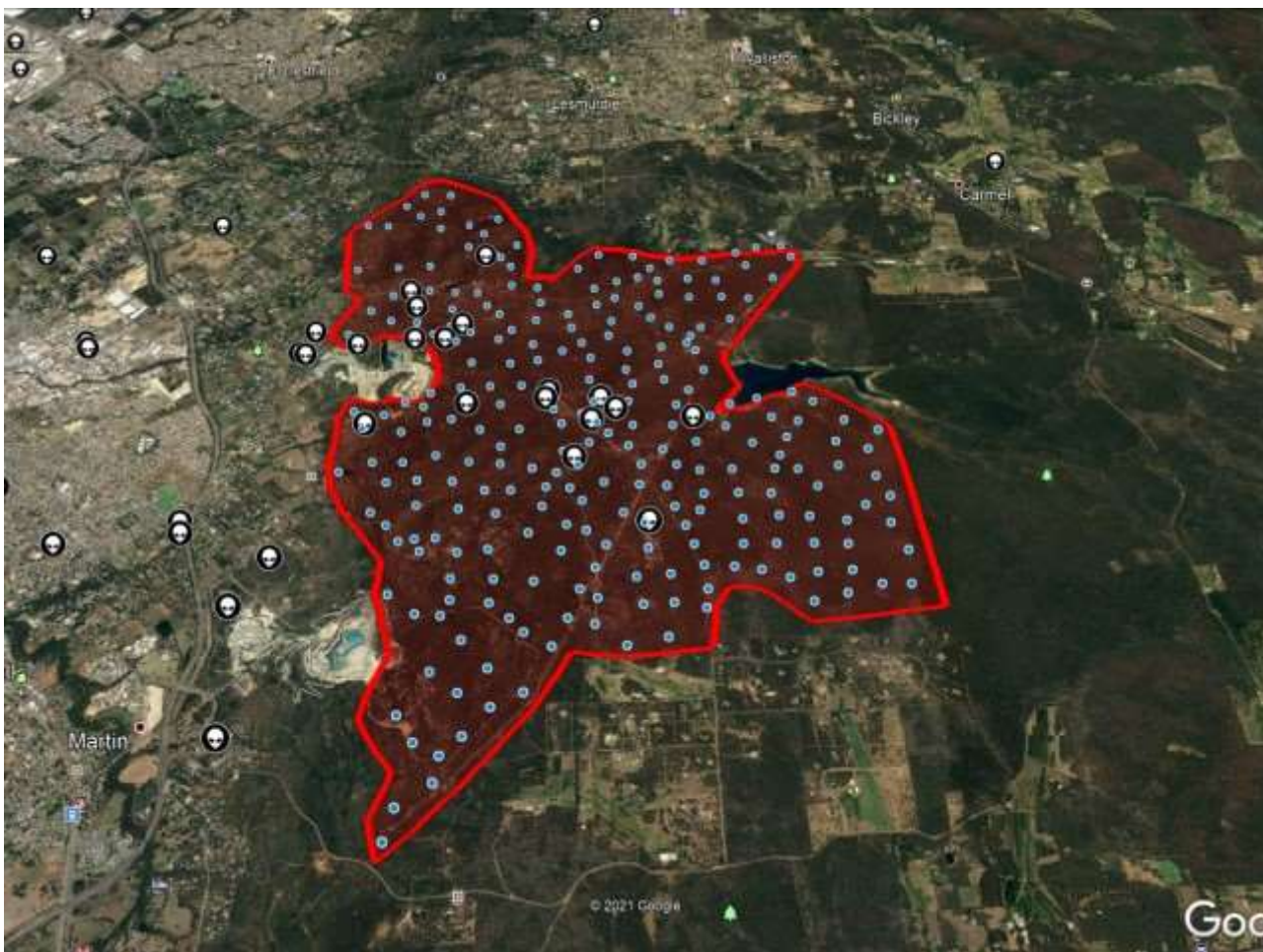


Figure 2: European wasp baiting area (shown in red). The blue dots indicate bait stations, and the black icons indicate nests detected during the 2019-20 season.

Results

No European wasp activity was detected in the baiting area after the program concluded, nor for the remainder of the season. The effect of the baiting program and its ability to remove European wasps from this environment could not be fully evaluated until completion of the 2020-21 surveillance season, where intensive trapping of the area would substantiate whether wasp activity remained. With the conclusion of the 2020-21 season and subsequent seasons following, in which surveillance and trapping has occurred, no evidence of European wasp activity has been detected.

This is an excellent result, and while it is a strong indicator the species has been eradicated from the trial area, surveillance in the area will continue in future seasons to monitor for new incursions and ensure no wasp nests have survived, undetected. The implementation of a safe and effective baiting program was necessary in removing European wasps from this challenging environment and preventing them from gaining a permanent foothold in the region. The effectiveness and application of baiting programs will be evaluated to determine future use as part of an integrated pest management strategy. It is not proposed to replace the existing surveillance strategy for European wasps in WA.

European wasps are a reportable declared pest species in WA under the *Biosecurity and Agriculture Management (BAM) Act 2007*. Control and eradication of this pest is undertaken by the department.

Learn more

The Perth Hills and Darling Scarp support large natural areas, including national and regional parks and water catchment areas. It is also a site of significant horticultural production, including mixed fruit orchards and vineyards. Apiarists provide pollination services and produce honey in these areas. Should European wasps establish in this region, their impacts would extend across social, environmental, and agricultural areas.

A baiting program that intended to eradicate wasps from this terrain has not previously been attempted or required in WA, nor has a coordinated baiting program of this size been completed in Australia. Baiting to manage or suppress European wasps is not an uncommon practice, interstate and internationally. Baiting activities and pilot programs in New South Wales, Victoria, Tasmania, and internationally use a protein source (for example, sardine, chicken, seafood, catfood) laced with the insecticide Fipronil.

Acknowledgements

The success of the European wasp surveillance and eradication program relies on collaboration between the public, businesses, industry, and government. The benefits of a successful program are shared by all. Completion of this time-critical work would not have been possible without the collaborative efforts or assistance from the Water Corporation, Department of Biodiversity, Conservation and Attractions (DBCA), City of Gosnells, and the surrounding community.

Acknowledgement also goes to the City of Kalamunda and its fire mitigation team, which was integral in the deployment and monitoring of traps and bait stations throughout the challenging bushland terrain.



Image 2: The City of Kalamunda fire team assisted with European wasp surveillance and baiting activities during the 2019-20 season

Contact us

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