

## Pest Wasps in Tasman - Nelson - What's the Difference?

New Zealand has thousands of native wasp species, most of which are parasitic, and help to control other native insects. All are solitary wasps and therefore do not build multi-celled nests. Most of them do not have a venomous sting.

Introduced wasps can spoil peoples' enjoyment of the outdoors, as well posing a health risk. They also affect the profitability and safety of industries such as beekeeping, horticulture, forestry and tourism, and upset the ecological balance in native ecosystems.

In 1945, the German wasp (*Vespula germanica*) was inadvertently introduced into New Zealand, and the common wasp (*Vespula vulgaris*) became established here in the 1970s. These two wasp species are social wasps and build large, multi-celled, papier-mâché nests, often below the ground. They belong to the *Vespula* genus and look almost identical, with subtle differences in body and head markings distinguishing the two apart. Both are very aggressive, and are capable of stinging multiple times. They compete directly with native birds for nectar and insects.

Common wasps are the dominant species in Nelson Lakes National Park, where worker wasps in the honeydew beech forests of the area can reach up to 10,000 per hectare. It is estimated that in one season, wasps eat more insects in the beech forests of the northern South Island than all the birds of these forests do in one year. Some native insect species are now at risk of extinction as a result.

Both of these wasp species will also feed on carrion.



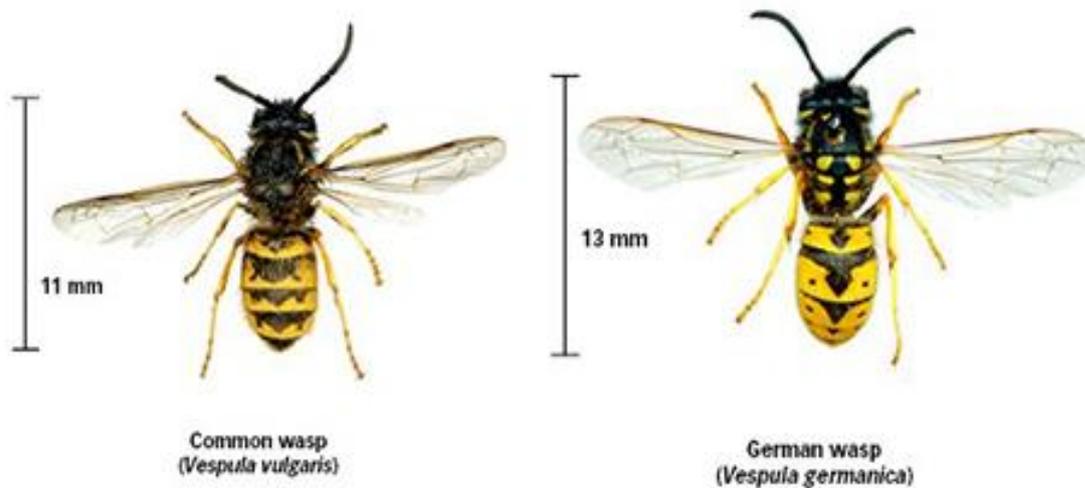
Common Wasp *Vespula vulgaris*

German Wasp *Vespula germanica*



Common Wasp

German Wasp



In 1979, the Asian paper wasp (*Polistes chinensis*) was accidentally introduced in to the Auckland area. They eventually arrived in the Tasman - Nelson region during the 1990s.

These wasps build small, fist-sized papier-mâché nests that can often be seen dangling like a lantern from a central attachment point in vegetation or on outdoor structures. These wasps have long, slender bodies and extra-long back legs that dangle down when they are in flight.

A more recent arrival, the European paper wasp (*Polistes dominula*), is thought to have arrived in the Tasman - Nelson region sometime around 2010.

This wasp looks almost exactly like the Asian paper wasp, with the exception of two small additional yellow dots on the top of the thorax, just behind the head. These wasps went unnoticed for several

years, before it was discovered that they were in fact another species of wasp.



European Paper Wasp

Asian Paper Wasp

Asian paper wasp female

European paper wasps build bigger nests than Asian paper wasps, usually about twice the size once fully established. Unlike Asian paper wasps, they often build nests in eaves and in ceiling cavities.

After the queens leave the nest, they can often be found hibernating in wood piles, waiting for warmer days to start building a new nest. These wasps sting, but are not particularly aggressive.



European paper wasp nest in roof space (Image: Hungarian Natural History Museums publications).

The European paper wasp may be displacing the Asian paper wasp in our region, as it is now by far the most common species encountered. The rapid rate at which these wasps have spread and established throughout our region is concerning.

### **Control of Vespula wasps (common and German wasps)**

A number of wasp poison powders are available for treating nests that have an obvious entry/exit point or tunnel to the nest. These may be purchased through hardware or agricultural/horticultural supply outlets. The powder is usually puffed in to the nest using a puffer bulb. Nests are best treated at night when all the worker wasps have returned to the nest, and a red light should be used rather than a white light to see what you are doing. Please observe all handler safety precautions recommended by the manufacturer of the powder.

For larger-scale Vespula wasp control, a new poison is available called Vespex. The active ingredient in Vespex is fipronil, which is a slow acting poison. At specific high-wasp densities, Vespex is placed into bait stations for worker wasps to forage. The workers ingest the Vespex bait and then regurgitate it back at the nest to feed the queen and developing larvae. This results in the death of all nest occupants, which usually occurs within 24 hours.

The advantage of this method is that you do not have to track down the wasp nests in your area, as the worker wasps are doing all the poisoning work for you.

To purchase and use Vespex, you need to become an “approved operator”, which requires passing an online test. The website to visit for this is: <https://www.merchento.com/vespex.html>

### **Control of Polistes wasps (European and Asian paper wasps)**

Unlike the Vespula wasps, both paper wasp species will not feed on carrion or feed from bait stations. They will only hunt living insects, and this difference makes them more difficult to control, especially if they are nesting in an inaccessible part of a ceiling cavity.

All wasp species are highly susceptible to fly spray, so nests in accessible places are easily treated using a regular can of fly spray. Dusk is the best time to treat the nest. Approach the nest slowly, and holding the can of fly spray about 30 - 40 cm from the nest, spray it directly for 4 – 5 seconds. Unlike the aggressive Vespula wasps, the paper wasps are highly unlikely to try and attack you. It is a good idea to re-visit the nest the following day after the wasps have died to totally destroy it, as paper wasps will repair and re-use abandoned nests.

If the paper wasp nest is in a place where access is difficult, you may need to engage the services of your local pest control operator.

For further information, contact the Biosecurity team at Tasman District Council.