

# The European Paper Wasp

*Polistes dominulus*

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The European paper wasp is native to Europe and parts of Asia and Africa and was first recorded in North America in 1981. It is a highly successful colonizer and it expanded its range in the eastern and midwestern USA in the next 20 years. It appeared in California and Washington in 2001 or 2002, and in Colorado in 2003. The initial Colorado records were from Fort Collins, but it had become well established in the Grand Junction area by June 2003.



Paper wasps are very similar to yellow jackets and the Western Colorado native species of paper wasp, *Polistes fuscatus aurifer*. *P. dominulus* is smaller than *P. fuscatus aurifer*, with a narrower abdomen. The yellow banding on the abdomen is similar in both species. The "waist" is very thin in all paper wasps. When flying, the hind legs trail below the body in an extended manner. This characteristic is useful in distinguishing between paper wasps and yellow jackets.



The nests of paper wasps are distinctive. They are formed in an upside-down umbrella fashion, and the open cells can be seen from below. Nests are constructed in protected area, under eaves of structures, in hollowed out holes, or when voids can be accessed through a small entrance. Nests have been reported from exterior lighting fixtures, animal skulls, parking meters, bird boxes, gas grills, automobiles and many other sites. Paper wasps over winter as fertilized queens which begin new colonies each year. They spend the winter in any of a variety of protected areas. Queens will occasionally use a previous years nest to begin a new colony. The queen deposits a small elongated egg in each cell of a nest, which hatch in a few days. She will collect caterpillars and other insects which are masticated and fed to the developing larvae. After the first brood of larvae mature, pupate, and emerge as adults of the worker caste, the queen will limit her activity to laying eggs. The workers assume all of the food collecting and nest protection duties. With summertime temperatures and a plentiful food supply, a generation can be completed in 40 days. The European paper wasp has already largely replaced the native species in much of the region. Some reasons for the competitive advantage to *P. dominulus* over our native paper wasps include: Earlier establishment of colonies in the spring, which allows it a competitive advantage

in collection of early season prey. Early nest establishment also avoids some bird predation, and allows the production of early season workers to hunt for prey and protect developing larvae.

The habit of using protected nesting sites provides protection from predation. The European paper wasp utilizes small holes and voids to make nests, which are sites the native species does not exploit to the same extent.

The native paper wasps prey on caterpillars, while the European paper wasp capture a variety of insects from several orders. The varied diet of our new invader gives it a distinct advantage over the native species.

European paper wasps reuse nests that have been abandoned for various reasons, while our native species do not reuse nests. European paper wasps have an advantage in being able to establish colonies more quickly than the native paper wasps.

European paper wasps aggressively protect their nests. They can detect movement up to 20 feet away, but usually don't attack unless the threat is within inches. The habit of building nests in small voids increase chances of a person being stung. This wasp is extremely common in urban settings, which means many people are potentially exposed to it. Management of European paper wasps takes two forms: preventative and controlling nests and adults. Preventative measures include limiting suitable nesting sites. Repair holes in walls, caulk cracks in soffits and eaves, screen vents. Eliminating early season nests will aid in controlling later season nests. Single queens are much easier to control than nests with many workers. Wasp and Hornet sprays in aerosol cans are a preferred method of controlling nests with workers that are easily accessed. These shoot a spray of insecticides up to 20 feet. Most contain pyrethroid insecticides that are safe to use and have quick knockdown and residual activity against wasps. Treatments should be made at night when all workers and the queens are on the nest. Remove and destroy the nest after you are sure all wasps are dead. This ensures that it will not be reused. Nests located within voids can be treated with dusts which are blown into the entrance holes. Many pest control firms provide wasp control services.