



European paper wasps, besides preying on other insects to feed their larvae, actively seek sugary substances for food. Their orange antennae is the easiest characteristic to see that distinguishes them from native paper wasps. Their presence at hummingbird feeders can deter the birds from feeding.

EUROPEAN PAPER WASP, A WORLD TRAVELER, FINALLY ARRIVES IN WYOMING

Perfectly at home in areas that give the wasp a competitive edge

Scott Schell

The European paper wasp (EPW) made its presence known in Wyoming last summer.

We are fortunate it took so long to arrive, as this insect has caused problems in Colorado and Utah for over 15 years. The wasp is now found in suitable habitats over the world, except Antarctica. The wasp was first discovered in the U.S. in Massachusetts in the late 1970s.

EPW (*Polistes dominula*) is a member of the family Vespidae, in the order Hymenoptera and is native to a large portion of the European and Asian continents. They will frequently nest in close proximity to human

habitations and damage ripening fruit in orchards and gardens and directly affect native insect species via predation.

Such severe losses of ripening fruit have been reported in fruit orchards and vineyards that, in some cases, producers had no marketable crops left.

The EPW might go unnoticed when first arriving in a state because it looks similar to the native paper wasp species. Later, when the EPW populations increase, their “bad behaviors” soon grabs people’s attention. The EPW will readily sting in defense of its paper nest when feeling threatened.

At Home Anywhere

Several factors give EPW a competitive edge.

- Few enemies - So far, none of native species of insect parasitoids that attack native paper wasp populations recognize EPW as potential hosts.
- The life cycle of the EPW has the overwintering queen becoming active earlier in the spring than native paper wasp species. Frequently, multiple EPW queens work together to found a colony the next spring. This is in contrast to the single founding queen life cycle of the native paper wasp species. This gives EPW a

competitive advantage over our native species.

- Human activities create abundant nesting habitats in towns and suburban areas. The new queens seek out protected overhangs, nooks, and cavities to start nests. The nests are created from the paper mache'-like mixture of wasp saliva and plant fibers. They don't have an outer cover like a bald-faced hornet or aerial yellowjacket nest does for weather protection. A cavity such as a bird nest box or the underside of the nest box can be an ideal colony site. EPW can drive out insect-feeding bird species from their nest boxes (such as bluebirds and tree swallows).
- This species ignores the wasp traps developed for native species

of paper wasps and yellowjackets.

- The broad diet range of the EPW also works in its favor. Insect prey, such as the caterpillars of butterflies and moths, and the adults of many other insect species, are all suitable prey. The EPW directly competes with native insect predators and song birds for food because it is such an effective predator.

Entomology Professor Whitney Cranshaw of Colorado State University no longer talks about butterfly gardening (the practice of growing host plants for the larva of butterflies) to Master Gardener classes he teaches. Such gardening is futile with arrival of the EPW.

Such excessive predation might be good news if you battle the

Prolific pests

The European paper wasp at a Michigan wildlife preserve went from one observed colony in 1995 to 62 percent of all the paper wasp colonies observed there by 2002. This makes EPW a threat to our native species of paper wasps that have long coexisted in balance with other native fauna.



(Photo by Kathy Keatley Garvey)

The European paper wasp is a voracious predator that preys on a broader range of insect species' larvae and adults than our native paper wasps. Here is a European paper wasp attacking a Gulf fritillary butterfly.



Bill Rathburn photo

The addition of yeast to a mixture of damaged raspberries, Squirt soda pop, and a little dish soap as a wetting agent increased the catch from three European paper wasps to over 100 when it was placed at the edge of a Sheridan County raspberry patch.

caterpillars of cabbage white butterflies every year in your garden but sad news if you enjoy seeing various butterflies, such as swallowtails or fritillaries, around your town.

Utah Wasp Wisdom

Utah State University Extension has advocated management techniques that help reduce the populations of EPW to levels that mitigate their effects on the environment, crops, and reduce the risk of stings on humans.

Entomology Professor Diane Alston of Utah State University has found that homemade traps, or factory-made traps, baited with fermenting fruit juice lure EPW quite well. Start trapping early in the spring to eliminate emerging overwintering queens

and lure the first workers to their deaths. This method will greatly reduce the size of EPW population later in the summer.

The bait selectiveness of EPW was confirmed by a Sheridan County resident when, what he originally thought were yellowjacket wasps, started raiding his raspberry patch last summer. Wasps in numbers he had never seen before were damaging the berries but were not responding to conventional wasp traps. After a local news story informed him EPW was the likely culprit, he contacted me for confirmation of the identity of his wasps and suggestions for management.

Researchers have found that EPW are attracted to fermentation, so he

No western yellowjacket competitor

The scavenging, ground nesting, frequent stinging, and all-around nuisance western yellowjacket, *Vespula pensylvancia*, is not a competitor with EPW, so their population probably won't be affected.

concocted a bait mixture of damaged raspberries, some yeast, Squirt pop, water, and a little dish soap. The presence of alcohol from fermentation in the bait increased his catch rate of EPW significantly. He will be ready for EPW this spring.

Hopefully, we will all be ready for EPW for years to come as this world traveler is here in Wyoming for the long-term.



The European paper wasp at right better be watching for Scott Schell. He is a University of Wyoming Extension entomologist and can be reached at (307) 766-2508 or sschell@uwyo.edu.