Away from the sandy hill of Bembi’s home, there is an old garden shed at the edge of a housing development. It seems abandoned.

But it is occupied! A wasp that is particularly good at making use of human-made structures lives there.

**Polistes dominula** lives here!

Polistes dominula, commonly known as the European Paper Wasp, is a species of social wasp. Social wasps are wasps that nest together. They form large nests that are cared for by female worker wasps controlled by one, or a few, dominant queens.
Like all social wasps, _Polistes dominula_ is protective of its nest and will attack intruders that stray too close.

**KEEP OUT!**

Worker wasps can identify outsiders based on how they look, but they have other methods too.

I can wear this disguise to look like a wasp, but I also need to smell like one too!

On the exoskeleton of _P. dominula_ there are chemicals called hydrocarbons, which are carbon molecules with hydrogen molecules attached to them.

These hydrocarbons are specific to each wasp nest. So even when wasps look the same, they can tell which ones belong to a particular nest.

Luckily, this disguise reeks of these chemicals and comes with wings!

And shrinking abilities!

All things I’ll need to fool these wasps into thinking I'm a new worker and will allow me to infiltrate the colony!
'I'll hide in one of these cells so they'll think I'm a recently pupated adult.'

'Anyone in here?'

'Hello! I'm your new worker, full of questions and here to learn from you.'
Carly’s Adventures in Wasp Land: Issue 3: Social Wasp Undercover

WASPS SMELL WITH THEIR ANTENNA. HOPEFULLY I PASS INSPECTION...

YOU’RE A BIT... ODD LOOKING

BUT YOU DO SMELL LIKE ONE OF US...

VERY WELL! COME ALONG, YOUNG COMRADE.

So what kind of jobs do young worker wasps do to keep the nest running?

IT IS NOT A JOB! BEING A WORKER IS A WAY OF LIFE!

Our first job... is to hunt. There!

A BIG FAT CATERPILLAR

Entomology note! The tomato hornworm (Manduca quinquemaculata) is a major pest in gardens and a favorite food of wasps.
Carly’s Adventures in Wasp Land: Issue 3: Social Wasp Undercover

So, how does you eating benefit the colony?

I’m not just feeding myself. I’ll regurgitate this caterpillar to feed larval wasps.

But if you are feeling hungry...

Uh no... I guess I’m more of a vegetarian?

You don’t say.

Mmhmm.
Do you know what...?  
...a worker's other job is?

It's our job to protect the nest—we're the defense force.

Oh, from what?

Oh, large animals most of the time. Squirrels, cats, the occasional human that gets too curious...

We workers will attack and defend the nest to the death!

But far more dangerous are parasite wasps that try to take control of the nest. They look like us, and can even smell like us if they stay in the nest.

And now that we've been flying around, you really don't smell right.

Get back here!

Oh no! The hydrocarbons have worn off!

Well, I think that's enough learning about paper wasps for today!
SIZE UP!

Sisters, ATTACK!

WELL, THAT'S Polistes dominula FOR YOU - HARD WORKERS AND GREAT DEFENDERS OF THEIR HOMES! NOW ON TO OUR FINAL WASPS - THE MISUNDERSTOOD PARASITOIDS!