

The Wasp* ABC: Frequent questions, common misapprehensions



* This information also applies to hornets, our largest domestic wasp species. Therefore, the term “wasp“ is used here partly as an umbrella term, partly the hornet is mentioned separately. Please note that other species than mentioned in this guide may be found in countries other than Germany.

Wasps and hornets play an important role in the ecosystem and are also very useful for us. In search of nectar, they pollinate various plant species. For some plant species, this process is even essential, as they specialize in pollination by wasps. Wasps feed mainly on insects such as flies or mosquitoes, as they are dependent on a protein-rich diet. A large wasp colony catches as many insects as about 20 pairs of tits in the same period of time! A (smaller) hornet colony eats about half a kilogramme (!) of insects per day. Thus you will find very few pests such as flies and mosquitoes in the vicinity of the nest (hornets also eat other species of wasps). As scavengers, wasps also accelerate the natural decomposition process of carcasses and are themselves food for other animals in the cycle of nature.

If you tolerate nests in unproblematic places, you will help preserve our native flora and fauna in the long term. Please keep in mind that wasps are finding fewer and fewer nesting opportunities in our modern world and are therefore pushed to build nests closer to humans.

The animals often seem dangerous to us. Hornets in particular impress with their size and hum. But a peaceful co-existence is possible – the important thing is to behave appropriately. In this guide notes and tips are arranged by subjects, so you can easily find answers to your questions. In case of doubt, do not hesitate to contact the Untere Naturschutzbehörde (local nature protection authority) at Landratsamt. Here you will receive expert advice. Wasps are subject to general species protection and hornets to special species protection with strict regulations. If only to avoid a fine, it is advisable to contact the Untere Naturschutzbehörde at an early stage.

Important information and crucial rules of behaviour:

- In our latitudes, wasps only react aggressively when they feel threatened. Other than mosquitoes wasps only sting in defence, i.e. when they are squeezed or when they see their young / their nest threatened.
- Avoid fast movements near wasps. Do not thrash around wildly if a wasp flies towards you. The animals are often just on their way looking for food and definitely do not want to harm us.
- Bear in mind that wasps might sit lethargically on the floor, especially early in the morning during cold weather (cold-stiffness) and from September on (exhaustion).
- Do not shake the nest or breathe on it (wasps feel threatened by carbon dioxide in the breathing air).
- Do not block the “flight approach path”, but under no circumstances clog the entrance hole! A short distance away from the “flight approach path”, you can watch them, especially hornets, safely. For children this is a very special experience of nature.

Simple measures to help avoid stings...

...**First priority:** Do not thrash around wildly if a wasp flies towards you.

...**Outdoors:**

- Cover food and beverages. Wasps are attracted by the smell and learn where to find food. Check the inside before drinking. Clear away food leftovers as quickly as possible.

- Do not drink directly from cans or bottles, but use a straw and encourage children to do so.
- Use tight and self-closing waste containers.
- Essential oils can keep away wasps and also protect from mosquitoes, flies etc:
 - Spray essential oils or put them in a fragrance lamp (preferably clove oil, also suitable eucalyptus, tea tree, cedar, lavender or a mixture)
 - Stick cloves into lemon slices
 - Use lavender or pelargonium (scented geranium) as table decoration
- Avoid perfumes and strongly scented creams or shampoos – the smell can attract wasps
- Spray wasp with water atomizer
- Caution near windfall – never go barefoot. To avoid large wasp accumulations, remove fallen fruit daily.
- Search hedges for hidden wasp nests before cutting them. Cut widely around the nest.
- Do not squeeze or hit wasps caught in your clothes. Do not panic and remove the insect cautiously.

... Indoors:

- Fly screens on windows and doors are the best protection.
- Fit bead curtains to entrance door or set up a container with essential oils.
- Put up flower pots with lavender or pelargoniums.
- New construction or renovation: Get windows and doors equipped with built-in fly screen shutters.
- **If a wasp/hornet gets lost inside your house, you can easily catch it:**
Slowly put an empty glass over the insect and push paper or thin card between glass and base. This also works with other insects.
Or use an insect catcher (“Snapy”, live trap).
- Restaurants/bakeries: Use, for example, extraction hoods to create a slight vacuum, or create a draught. This prevents smells of food from spreading outside through the shop/ entrance door and attracting wasps.
- Nest in the garden shed: Let the petrol lawn-mower cool down before it is put back in the shed. Wasps feel threatened by the petrol fumes. If the nest is near the door, avoid slamming doors violently.
- Hornets also fly during the night (whereas other wasp species only fly during the day):
 - If lights inside are on, close doors/ windows.
 - No permanent outdoor lighting – install a motion sensor. Also protects other nocturnal animals such as moths and keeps your electricity bill low.
 - If a hornet gets trapped in the house: Switch off the lights inside and open the window. The “brightness” outside is usually sufficient, but if available you can additionally switch on a lamp outside.
Or catch the hornet and out it outside (see above).

By the way: If a hornet flies towards the window pane at night, this is not out of “aggression”. It just flies, following its instinct, to the light where it finds its prey.

Insect traps are useless. Better use “distraction feeding”.

They do not provide relief as they attract even more wasps, which, again, land on our food. Moreover, other useful insects such as bees and butterflies are attracted and, like the wasps, die painfully. Instead, you should, at an early stage, draw the wasps to another part of your garden by offering them a saucer with overripe fruit or diluted honey. Since wasps need also protein for their young, you can also add, for example, a small piece of sausage. Once the wasps have learnt that there is always food available there, they will prefer this place.

Insect sprays and electric vaporizers can harm your health

For many years, the German Federal Environmental Agency has warned not to use these products as they are by no means harmless. Many contain neurotoxins (synthetic pyrethroids) which also harm humans (children!) and domestic animals. These toxins are spread through the house dust, and as they decompose very slowly, they can be detected in the house for as long as a year (!). When the products are used outside, birds, bees and other animals are poisoned when they eat, for example, poisoned insects.

By the way: Most wasp species (also the hornets) are not interested in our sweets. Only the two dark-nesting wasp species (Common wasp and European/German wasp) can be found at our coffee table.

Furthermore, there are harmless hoverflies (Syrphidae) which are lookalikes of wasps, but are only bloom visitors and cannot sting (characteristics: often “stand” still in the air, do not hum, have no wasp waist and very short feelers).

How can I avoid nests at my house?

- Move shutters daily (morning and evening) starting in March. In **narrow** roller shutter boxes this can seriously disturb nest-building right from the beginning. However, if the space is large enough, this does not stop the queen from building a nest.
- Fix a small cotton-wool ball with a few drops of essential oils on both ends of the shutter box (preferably clove oil, also suitable eucalyptus, tea tree, cedar, lemon oils or a mixture). However, once the queen has started nest-building, she will most likely not be driven away by this.
- Spray the shutter box with a mixture of one part essential oil (see above) and ten parts alcohol (you can get such mixture at the chemist's).
- New building/renovation:
Shutter boxes become insect-proof by fixing a brush strip or a profiled rubber seal to the shutter stopper (important: brush strip or seal must reach out to the guard rails)
- Old nests do not have to be removed, because wasps no longer occupy them.

What do I do if there is a nest at my house or in my garden?

In addition to the rules of behaviour listed at the beginning, the following measures can help:

- You can influence an awkward flight direction from/to the nest by putting up “screens” (e.g. cloths, boards). Thus the wasps will be rerouted.
- Mark underground nests (e.g. with a flag) and border the entrance within a radius of 2 m using warning tape. Entrance holes can be secured by a wooden frame or a coarse wire basket turned upside down. Do not use a lawn-mower in the area and avoid directing a jet of water straight on the entrance hole.
- To avoid danger to your and your family's health, do not use insecticides as they also harm inhabitants of the house.

Wasps are getting used to many circumstances and do not become alarmed anymore. There have been many cases of peaceful co-existence between humans and for example hornets.

Please keep in mind: By the time you discover the nest, it has usually existed for many weeks (nest-building starts in March to May, depending on the wasp species). As early as August, the population of some wasp species decreases or their life cycle ends. As temperatures drop, hornets, European/German wasps and Common wasps also die (usually from mid-October, night frost!). Only the young queens hibernate, very few of them survive and build a new nest in spring.

Do wasps/hornet damage fruits?

Often you can hear people say that wasps nibble at fruit at trees or vines. The following observation disproves this claim: Wasps only nibble at fruit whose skin has been damaged by birds, osmosis or falling from a tree.

Bear in mind: Wasps are not only “pest controllers” in your garden; they also prevent spreading of mould fungus by eating rotten fruit. Wasps/hornets use sap for their own energy supply (“aviation fuel”), but also stay near fruit to catch other insects which they use as a source of protein for their young.

How dangerous are stings of wasps and hornets?

If you have a sting in the mouth/throat or if you have signs of an allergic reaction, such as shortness of breath, swelling of the face, dizziness or vomiting, you should seek medical treatment immediately (emergency doctor). In the case of an allergy sufferer, the body overreacts to the proteins injected by the insect through the sting. An assumed allergy should be tested by a specialist doctor who can then do a desensitisation treatment or you should carry an emergency kit with you. By the way: If you are allergic to bee stings, it does not mean you are necessarily allergic to wasp stings.

What do I do when I have been stung?

- Do not hit the insect from above, but "wipe it away" from the side with your hand.
- Cool with ice cubes in a tea towel or cooling poultice of 70% alcohol or acetic clay. Use rich cream to prevent skin from drying out through the alcohol.
- Some household remedies: Apply onion half; rub in salt; rub in spit. Stir cold curd cheese (quark), possibly mixed with healing clay or siliceous earth, until creamy. Apply generously and let sit until dry.
- BiteAway stick: Battery-operated stick with small heating surface which heats up to about 50 degree Celsius for a few seconds. Placed on the sting, it can deactivate the insect protein and thus minimize itching and swelling.

Please note: The body’s natural defence system learns from every sting and this reduces the risk of an allergic reaction.

Children and wasps/hornets

In addition to the behavioural tips already mentioned, the following measures can reduce the risk of your child being stung by a wasp/hornet:

- Place net or net curtain tightly over pram.
- Clean cheeks and mouth of children with a wet cloth after meals.
- Make sure that children do not drink directly from bottles or cans, but pour the drink into a glass.
- Guide the children at an early age to a calm and safe interaction with the animals and explain the benefits of the animals to them.

And if your child should nevertheless be stung, please remember that a sting also reduces the risk of developing an allergy later on in life. The immune system learns particularly well in childhood.

Common errors /questions

“Hornet stings are very dangerous: Three stings kill a human, seven a horse.”

Nonsense. A bee sting has a stronger effect than a wasp's/ hornet's. Unlike a bee sting, the wasp's sting is smooth and has no barbs. Less venom enters your body and the sting does not get stuck. The truth is that stings of hornets hurt more than those of wasps or bees as their sting is larger. However, hornets are so peaceful that very few people have ever been stung by a hornet.

“The nest would not be a problem for us. But what do we do if the animals extend it every year?”

In our climatic zone, wasp nests are annual only (exception: polistine wasp which builds very small nests – see next page). In spring, the few young queens which have survived the winter build a new nest. They do not use an old nest.

“There are always so many wasps when we eat outside. If we don't remove the hornet nest, there will be hornets around when we are having dinner!”

Only European/German and Common wasps which usually nest in dark attics and cavities will visit for example our dining table. Hornets and wasps with freely suspended nests are not interested in our food, cakes, sweets etc.

„I don't want to kill the animals; I just don't want them in my garden. I am sure it is fairly easy to just relocate the nest.“

Many people think it is as simple as that: Cut off the nest, put it in a carton and just place in the forest under a tree. A wasp population relocated in this way will, however, usually die after a short time. Professional relocation is time-consuming, and it is not guaranteed that the nest will survive.

"My neighbours are urging me to have the wasp nest removed from my property. Am I obliged to do so? I would like to leave the nest."

No, there is no such "obligation". On the contrary: Wasp nests must not simply be removed without a good reason, because the protection of wild animals does not only include species that – like the hornet – are specially protected. And since wasps look for food within a radius of +/- 3 km from their nest, wasps from other nests can certainly be found in the neighbours' garden too.

"I am concerned that the wasps will destroy the wood of the roof beams."

Wasps make their nests from wood mixed with saliva. They scrape off tiny bits of weathered wood (grey nest) or rotten wood (ochre nest). Such wood is usually not found in roof beams, and the removal of wood is so low that it should not result in any problems for a timber construction.

"Should I remove the wasp nest? When?"

A wasp nest can be removed when no more flight activity can be detected or, to be on the safe side, in the winter months. Disused wasp nests are often plundered by birds (there is often still dead brood in the combs – a protein-rich delicacy). But every wasp nest can remain in place as the wasps will not use old nests again.

All information and recommendations passed on here in short form resulted from research in specialist books and publicly accessible publications (e.g. Internet), from further training and practical experience. They do not claim to be complete, even with regard to further/latest scientific findings. And: Nature often surprises with deviations from the imaginary norm.

I hope this information will contribute to a relaxed co-existence with your black and yellow guests or tenants.

Margit Seifert

Wasp consultant at Mühldorf county (Bavaria)

Please turn over for brief overview of wasps

For interested people: Brief overview of wasps

Wasps are best identified by looking at their nest and their way of life. The species-typical markings on the forehead are more difficult to identify.

The most common wasps to be found in residential areas:

Common wasp (*Vespula vulgaris*), European or German wasp (*Vespula germanica*):

- Nest is usually in the dark, e.g. dark attics, behind panels, in shutter boxes, mouse holes
- Nest shell with air pockets
 - Shell ochre and brittle as made from rotten wood – Common wasp
 - Shell grey as made from weathered wood – German/European wasp
- The only species which are a nuisance during meals.

You will hardly have any contact with the following wasps as they are not interested in our food. An exception is when they see their nest in danger (e.g. sudden vibration or shaking, petrol fumes from the lawn-mower in the garden shed):

Saxon wasp (*Dolichovespula saxonica*):

- Nest with grey shell, heart-shaped, rather small, always above ground, freely suspended
- Flower pollinator
- Very frequent

Tree wasp (*Dolichovespula sylvestris*):

- Nest with grey shell, shell layers lie flounce-like on top of another (layers outside are shorter), round or lemon-shaped, rather small, above or under ground
- Flower pollinator

Polistine wasp (*Polistinae*):

- Very small nest without shell, i.e. the combs are visible, only very few individuals
- Outdoor nests protected from the weather or behind cladding, also e.g. in metal pipes
- Characteristic and easy to see: during flight they let their long hind legs hang
- Flower pollinator, very peaceful

Median wasp (*Dolichovespula media*):

- Nest is freely suspended in bushes or trees, but also at houses; grey, round with entrance nozzle
- Rather large animals
- Rare

Hornet:

- Nest is always in the dark, ochre/brown shell with air pockets
- Our largest wasps, but very peaceful

Except for the hornet, all other wasps only fly during the day.

All wasps mentioned here live in colonies. Apart from them, there are also solitary wasps, e.g. ichneumon wasps. All of them play an important role in the natural balance by keeping at bay other insects such as bark beetles and fruit tree pests.