

Responses from Dr Rob Higgins to questions from Sunday (Oct 4)

- -How can people eradicate pavement ants in their home? Are there methods that don't disrupt beneficial insects? - Karina Sinclair

Pavement ants are fairly easy to brush back using bait stations but next to impossible to eradicate. First, take a close look at them and see if you see a variation in the size of the workers. Pavement ants (*Tetramorium immigrans*) have single queen colonies and they produce workers of various sizes (unlike the uniform size of most native ants in BC). Bait stations (using something like boric acid) will usually knock out a colony after a couple of weeks but unfortunately, when they turn up in homes it is because there are a sea of colonies in the surrounding landscape. In a few months (or maybe just one month) a new colony will move into the vacated space. Thus they tend to be a chronic issue given that you simply can't eradicate the hundreds of colonies around homes. I first found these ants back in 2004 in Tsawwassen (they were a new invasive back then) and that home still has them. They also have been invading a surgical room at a hospital in Manitoba, and returning after treatment, shutting down surgeries. Not good news here I am afraid. Just settle down to managing them with bait stations when they turn up. They don't bite or sting but are a nuisance. Regarding protecting beneficials. Bait stations are designed to be accessed by ants and most beneficial insects (beetles/predatory flies etc.) won't be attracted to them. Bait stations with boric acid (same as Borax laundry soap) are a good choice as the tiny amount of boric acid in the station isn't a risk to other animals. I've seen some gardeners put out piles of icing sugar and boric acid (Borax) in some gardens and warned them that the quantities they were using could be dangerous to dogs and cats.

- -If the only control method is to kill the ant colony, are there preventive measures we can take so colonies don't move to our gardens? – Swetha Bala

Most species of ants don't really need to be controlled and it is best to just learn to co-exist. Garden soil, heat (as gardens are not usually under a deep/heavy canopy) and moisture from irrigation are just perfect for ants. Paving stones, decorative stone edging, wood planks are all great for holding heat through the night. Unfortunately, our gardens seem to have been designed by ants as their perfect homes. Unless the ants are very aggressive (biting) or stinging, I would simply accept them as part of the garden.

- - We had an ant invasion in our apartment on the 5th floor of our building. Is this common? How high will they go? – Brian Egan

It depends on the species of ant. The European fire ant (*Myrmica rubra*) seldom walks more than 5 metres from it's colony horizontally, but seems to be perfectly comfortable walking at least a few stories upward. Pharaoh's ants form colonies in

walls that bud off from each other when disturbed (e.g., someone using ant killer in an apartment kitchen), and I've seen apartment towers higher than 20 stories with Pharaoh's ants in pretty much every apartment. Again the species matters and if you are seeing what might be Pharaoh's ants, they should be identified and the full building treated using bait stations. Individual unit treatments don't work for long and if something like an ant spray is used, they will bud and spread. If in doubt, I can do identifications to help with a treatment plan.

- -Could a gas-powered flame, sometimes used for weed control, be used for heating the soil to get rid of the ants? – Joan Bentley

I have experimented using heat guns with trying to get very hot air into nests but the tunnel structure collapses too quickly to distribute the heat. A gas flame won't really affect the soil very deeply and might kill an isolated colony but probably not. You also have the issue to potentially starting a burn both on the ground and underground. If someone could develop a very gentle heat gun, it might work, but I think tunnel and colony wall collapses would foil the attempt.

- -At what time of year do pavement ants enter homes? – Ann Keir

Alas, in the Metro Vancouver/Southern Van Island area they can do so pretty much anytime of the year. While colonies outside are likely dormant in deep winter, those snuggled up against or under foundations where it is warmer can move to take the place of a colony that has died off. As a note pavement ants' colonies are really aggressive against each other and are constantly at war and thus moving into new habitat. Certainly spring is the most common but anytime of the year is possible.

- -Are ants good pollinators? We hear about ants and peonies and wondered if they are effective at pollinating..

Peonies release nectar that attracts ants that in turn keep defoliators and other plant pests off the flower buds. However, they are very poor pollinators themselves. As they live mostly in humid soil, they are bathed in microorganisms and thus have evolved a lot of antimicrobial compounds that they secrete onto their exoskeletons. Those antimicrobials seem to sterilize pollen.