

What do flea treatments, rivers and bird nests have in common?

If you have a dog or a cat, the chances are you've used a flea or tick treatment at some point. You might have a monthly reminder pinging on your phone, or a box of spot-on pipettes sitting in the cupboard. But increasingly, pet owners are starting to wonder whether their animals really need treating quite so often.

It's an interesting question – and one that vets, scientists and environmental organisations are increasingly asking too.

Let's be clear from the start: fleas and ticks aren't harmless. They can cause real problems for our pets, and parasite treatments have an important role to play in animal health and welfare. This isn't about telling people to stop looking after their animals.

It's about asking whether we can look after our pets *and* the natural world around us. Because, as it turns out, some of the chemicals we use to deal with fleas and ticks don't always stay where we put them.



From pet to river

Some flea and tick treatments contain insecticides such as fipronil and imidacloprid. These chemicals are very good at killing insects – which is rather the point when you're trying to kill fleas.

The trouble is that they don't necessarily distinguish between a flea and other insects once they reach the wider environment.

Research has found these chemicals in UK rivers, where they can affect aquatic invertebrates including mayflies and caddisflies. These tiny creatures might not get much attention from us as we walk along a riverbank, but they provide food for fish such as brown trout, as well as birds, bats and other wildlife.

This matters particularly in our chalk streams, which depend on healthy communities of aquatic insects. When something happens at the bottom of the food chain, it doesn't necessarily stay there.



The chemicals can reach waterways in several ways. Washing a treated pet or its bedding can potentially send residues into the wastewater system, as can washing hands after applying some treatments. A treated dog swimming in a river is another possible route.

But here's the bit that really made me stop and think: **the birds are involved too!**

Recent UK research has found residues of pet flea-treatment chemicals in bird nests. Birds are resourceful little creatures, and fur shed by our cats and dogs is apparently pretty good nesting material. Unfortunately, if that fur has residues of insecticides on it, those chemicals can end up in the nest too.

Researchers detected fipronil in **every single** nest they studied, with imidacloprid found in the vast majority. The chemicals were also found to transfer into eggs and developing chicks, raising concerns about potential effects on breeding birds.

So this isn't only a story about dogs splashing happily through rivers. A cat sitting on your sofa, shedding fur, could potentially contribute to the story too – and a blue tit might unknowingly take some of that fur away to build a nursery.

The same chemicals have also raised concerns for pollinators. Fipronil and imidacloprid have faced restrictions on agricultural uses because of their toxicity to bees and other insects. The evidence linking pet flea treatments specifically to declining bee populations is less clear, so we shouldn't overstate the case. But it does reinforce a fairly simple point: if a chemical is designed to kill insects, it is worth thinking carefully about where it ends up.

So what can we do?

The encouraging news is that veterinary advice is changing.

Dr Enid Frantilla, a vet at Elston Veterinary Clinic in Shrewton, has lived near the River Till for many years. Concern about biodiversity is what makes this issue particularly important to her.

"I am concerned about the alarming loss of biodiversity in the UK, and I think it is important to share what things we can do to help stop further losses," she says. "The

possibility of having a positive effect on our environment is inspiring and hopeful to me.”

Dr Frantilla says her practice now takes a more individual, risk-based approach to parasite control, considering factors such as a pet’s age, health, lifestyle and access to the outdoors.

“We now discuss a risk-based approach and treat the pets who need it when they need it,” she explains.

That doesn’t mean every pet should suddenly be left untreated. Some animals genuinely need regular protection, and nobody wants to see a beloved pet suffering from a serious flea infestation or tick-borne disease.

But it does mean we can ask a slightly different question: **Does my pet need this treatment, at this frequency, at this time?**



Dr Frantilla points out that we already understand the idea of treating according to risk in other areas of life.

“We don’t treat children prophylactically for nits, or adult humans prophylactically for ticks, this is usually well understood,” she says.

There are also simple things we can do ourselves. Regular grooming and using a flea comb can help identify fleas early, before an infestation becomes established. Tick hooks are an effective way of removing ticks safely and completely. And if treatment is needed, talk to your vet about the options available.

Different products contain different active ingredients, and their environmental impacts can vary. Dr Frantilla’s practice prefers tablets rather than spot-on treatments for suitable pets, although more research is needed into what happens to these medicines after they are excreted in urine and faeces.

There isn’t a magic, one-size-fits-all answer. Cats that roam, dogs that swim and pets with particular health needs may all have different requirements.

The important thing is that we don’t have to choose between loving our pets and loving our rivers.

Most pet owners would never knowingly harm wildlife. And most of us are simply doing what we’ve been told is best for our animals.

Now that the evidence is growing, we have an opportunity to do things a little differently.

So next time that reminder pops up telling you it's time for the monthly flea treatment, perhaps pause for a moment and have a chat with your vet.

It might be better for your pet. It might save you a few pounds. And, in a small but meaningful way, it might be better for the river, the mayflies, the trout – and perhaps even the blue tits building their nests in your garden.

Lyndsay White – Volunteer on Our Healthy Headwaters Project

Sources for this article

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