Sedgefield Island CONSERVANCY

Pest Control in the Conservancy

Introduction

There is an ongoing conversation in the Sedgefield Island Conservancy about the use of pesticides to control the things we classify as 'pests', i.e. rats, mice, weeds, and our least favourite, ants. We are often asked:

why we shouldn't use poisons and,

if we don't use them, which alternatives will work?

This article tries to answer these questions.

Need help or advice? Contact the Sedgefield Island Conservancy on Whatsapp: **Hélia on 082 332 2206 or Lawrence on 083 376 7846**

Why we shouldn't use poisons

An adult owl can eat hundreds of rodents in a year. A single poisoned rat can kill an owl. Using poisons that kill the predators makes no sense.

Spraying against caterpillars on a fruit tree will also kill the butterflies, bees and other pollinators that keep your trees bearing fruit. Using poisons that kill the beneficial insects makes no sense.

Weed killers kill the food sources of tortoises and leave a toxic load in terrestrial insects, plants, the water and the soil. Using poisons that eradicate our tortoises and birds makes no sense.

Chemical poisons are effective but non-specific, killing or affecting many other species.

Solutions that Work

Solutions that work depend on the organism and species. In summary, the following:

- If you have **a rat or mouse problem**, discourage them by removing food sources and catch them in a humane trap, available from the Conservancy.
- If you have **an ant problem**, there are many mixtures of household products such as baking soda, lemon juice, vinegar, or essential oils that will help. See the main section on Ants.
- If you have **weeds**, first ask yourself if you really need to remove them—they are some other creature's food. Remove them by hand, cover them with mulch, or use a guaranteed organic weedkiller *after first checking on what else is affected by the weedkiller. If the label says, 'Toxic to fish/birds/ pets…', do not use it!*

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Commercial Pest Control

A Google search identifies dozens of pest control companies, (almost) none of whom profess to be environmentally friendly. Using a company that doesn't even claim 'green' credentials is opening yourself and The Island's environment up to dangerous chemicals. They may well tell you that their chemicals "don't harm pets/fish/birds"—take that claim with a large pinch of salt and ask for proof.

Then there are the pest control companies with environmentally friendly claims. I found just one around Sedgefield in what was, admittedly, a quick search. They make the claim that their services are 'eco-sensitive', while admitting that there are problems for which they have no eco-friendly solutions. However, they offer a 1-year guarantee, thereby limiting their options. They also use anti-coagulant rat poison, the difference being that their chemical biodegrades more quickly than the standard chemicals and is used in lower doses.

The bottom line: commercial pest control is not an approach that we can recommend or even condone on The Island.

Carry on reading for more detail….

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Rather than eliminating pests entirely, the goal should be to manage their populations in a way that minimizes conflicts with humans while preserving their role in the ecosystem.

Pest Control – Rats and Mice

The Valuable Role of Rodents

Rodents play a crucial role in urban ecosystems. As prey species, they support a wide range of predators, including owls, snakes, and small carnivores. Their burrowing also helps aerate the soil, promoting plant growth and nutrient cycling. In some cases, rodents act as seed dispersers, contributing to the regeneration of plants.

Rats on The Island

We have three main species of rats here:

- Black Rat or Roof Rat (*Rattus Norvegicus*): Often brown, known for chewing electrical wires and living in roofs. The black rat was originally thought to have spread the Black Plague in Europe in the 14th century. However, the plague spread to areas where there were no black rats, blowing that theory. It is now thought that gerbils from Asia were the culprits.
- Brown Rat or Sewer Rat (*Rattus Rattus*): Common in cities, usually found in sewers or urban areas.
- Southern Vlei Rat (*Otomys irroratus*): A locally indigenous species that lives in reed beds and fynbos areas. They're herbivores, eating plants and spreading seeds, and playing a key role in the ecosystem.

Over the past 12-13 years, sightings on iNaturalist show:

- In Sedgefield, we're 8 times more likely to see Southern Vlei Rats than Black or Brown Rats.
- Black and Brown Rats are mostly found in the village centre, not the suburbs or wild areas.

The Dangers of Rat Poison (Rodenticides)

An adult owl can eat hundreds of rodents in a year. A single poisoned rat can kill the owl. Using poisons that kill the predators makes no sense.

Rodenticides often contain anti-coagulants, which prevent blood clotting and cause internal bleeding in animals that ingest them. However, their impact extends far beyond their intended targets.

Rodenticides pose a serious risk to predators and scavengers that feed on rodents. For example, birds of prey like owls and hawks, as well as mammals like domestic cats, mongooses and genets, can suffer secondary poisoning when they eat poisoned rodents. This can lead to population declines in predator species *and, by implication, an increase in rats*!

Even species such as thick-knees or guinea fowl, can suffer indirectly, e.g. owls dying leads to more rats than before, and rats are known to eat birds' eggs, thus reducing the bird population.

Rodent bait boxes stop other species from directly accessing rat poison, but they do nothing to protect against secondary poisoning.

How to Manage Rats Without Harming Other Species

Southern Vlei Rats tend to stay in wild areas but may visit gardens, especially around compost heaps or piles of vegetation.

Black and Brown Rats are less common on The Island and mostly found in the Village.

The Conservancy recommends that you have a wild area in your garden to provide a habitat for small wildlife and natural food for tortoises. Such an area may indeed attract rodents—I know we have mice in our wild area, but we have never had any in the house.

Keep your garden tidy. Remove piles of old vegetation to discourage them from coming in. If you have a compost heap, turn it frequently to disturb squatters.

Focus on managing waste and sealing entry points in buildings where they might enter. Do not leave food waste or leftovers in the open – this will attract pests, including rats.

By keeping gardens tidy and managing waste in urban areas, we can protect the valuable Southern Vlei Rat while controlling Black and Brown Rat populations.

Catch and Release

Poisoned rats die a horrible death, but rats and mice caught in traditional traps don't do much better. These traps seldom kill instantly, leaving the animal to die a slow and horrible death.

A better and more ethical option is to catch rodents in a humane trap, a cage with food bait that makes it impossible for the rats to escape. The Conservancy has humane traps that residents can use—we will release the rats into the wild where they belong.

Looking after our Predators

Another way of keeping rodent populations in check is to encourage a healthy predator population. Owls, snakes and indigenous cats, such as genets and wild cats, should be encouraged. Domestic cats, on the other hand, are not a solution because of the damage these well-fed felines do to other pray species such as birds and reptiles.

Pest Control – Insects, especially Ants

The valuable role of Ants

First, insects in general play a crucial role in Earth's natural systems. There are many more beneficial or 'neutral' insect species than problem insects. Without beneficial insects, such as ants or bees, we would likely face our own extinction.

Ants have significant ecological value and play a crucial role in maintaining healthy ecosystems. Ants aerate soil, disperse seeds, control pest insect populations, and break down organic matter, essentially acting as nature's "clean-up crew".

Key points about the value of ants:

- Pest control: Ants are natural predators of other insects.
- Soil aeration: Ants' tunnels improve soil structure, allowing better water penetration and oxygen access for plant roots.
- Seed dispersal: Some ants collect seeds to store as food, thus dispersing them to new areas where they can germinate and grow new plants.

- Nutrient cycling: Ants consume and break down organic matter, returning nutrients back into the soil.
- Food source: Ants serve as a food source for various animals, including birds, reptiles, and other insects.

The Dangers of Insecticides

Spraying against caterpillars will also kill the butterflies, bees and other pollinators that keep your trees bearing fruit. Using poisons that kill the beneficial insects makes no sense.

Some granular ant poisons kill ant colonies from within the burrow, thereby reducing the exposure of the poison. However, there is inevitably still exposure and insecticide granules are now underground where other creatures will encounter them. Vegetable roots could absorb this poison.

Poisoned insects (e.g. ants) on the surface may be scavenged by predators such as geckos, which are, in turn, preyed upon by birds and your dog. And so, toxins move higher and higher in the food chain, accumulating in predators' organs.

How to Manage Ants

Environmentally friendly alternatives to insecticides for ant control in and around houses creating physical barriers—seal cracks and crevices and minimise food sources around the house.

Here are some effective DIY organic ant traps that work well:

1. Baking Soda and Powdered Sugar Trap – the baking soda kills ants

Instructions:

1. Mix equal parts of baking soda and powdered sugar.
2. Place the mixture in shallow containers or jar lids near ant trails.
3. The sugar attracts the ants, while the baking soda reacts with their digestive system.

2. Boric Acid and Sugar Bait – kills ants

Instructions:

1. Combine 3 parts of powdered sugar and 1 part of boric acid in a bowl.
2. Add enough water to create a syrupy consistency.
3. Place small amounts of the bait in shallow containers around areas where ants are seen.
4. Ensure that these traps are out of reach of children and pets.

3. Vinegar Spray - This solution disrupts ants' scent trails and repels them.

Instructions:

1. Mix equal parts of vinegar and water in a spray bottle.
2. Spray the mixture directly on ant trails and around entry points.

4. Essential Oil Spray – Repels ants

Instructions:

1. Combine 10-20 drops of peppermint or tea tree essential oil with 2 cups of water in a spray bottle.

2. Spray around windows, doors, and other entry points

6. Diatomaceous Earth Barrier – Abrasive to ants, helping to control populations

Instructions:

1. Sprinkle food grade diatomaceous earth around entry points and areas where ants are commonly seen.

7. Lemon Juice Spray – masks their scent trails

Instructions:

1. Mix fresh lemon juice with water in a spray bottle.
2. Spray around entry points and areas where ants are active to mask their scent trails.

These DIY ideas utilise natural ingredients that are safe for both humans and pets while effectively controlling ant populations around your home.

(Credit: Perplexity pplx.ai/share)

Pest Control – Weeds

The valuable role of Weeds

Yes, you did read this heading correctly—weeds have a valuable role to play. The heading should have been:

The valuable role of Plants

A 'weed' is a human term that means "I don't want this plant growing here!" The photo is of Capeweed (*Arctotheca calendula* or *Arctotheca prostrata*), an important food and nutritional source for tortoises on The Island. A pretty plant with scalloped leaves and yellow-daisy flowers, its crime is that it grows in *your lawn*!

We could probably write a similar paragraph about most 'weeds' that grow in our gardens. Very few self-sewn indigenous plants are invasive or poisonous.

The solution is to see naturally occurring plants as part of what you implicitly signed up for when you came to live in The Island Conservancy. Allowing natural flora to intermingle in your flowerbeds and lawns creates a richer and more interesting garden and shows your support for conserving our natural heritage.

The Dangers of Herbicides

Weed killers kill the food sources of tortoises and leave a toxic load in terrestrial insects, plants, the water and the soil. Using poisons that eradicate our tortoises and birds makes no sense.

Many herbicides contain glyphosate or other chemicals that are toxic to non-target plants and animals. When applied to lawns, gardens, or public spaces, these chemicals can leach into the soil and waterways, contaminating the environment and harming wildlife.

For species like the angulate tortoise, that rely on specific native plants for food, the use of herbicides can be particularly devastating. The destruction of these plants not only reduces the availability of food but also disrupts the tortoises' ability to obtain essential nutrients. Over time, this can lead to malnutrition, weakened immune systems, and population declines.

How to Manage Weeds

Reducing the use of herbicides requires a shift toward more sustainable landscaping practices. Some effective alternatives include:

- Manual Removal: Pulling weeds by hand or using tools to remove them without chemicals.
- Mulching: Applying mulch to suppress weed growth and retain soil moisture. Stop putting all the leaves in blue bags for removal, rather leaving them in the beds to protect the soil and create natural compost.
- Native Planting: Choosing native plants that are well-adapted to local conditions and require less maintenance.
- Organic Herbicides: Using plant-based or biodegradable herbicides that are less harmful to the environment is an option, but the product's accompanying literature should be checked carefully for impact on animals, fish, etc.

Conclusion

We have given a few answers to the pest problem—why we don't want to use poisons and what we can do as alternatives. We have seen that Rodenticides and herbicides may seem like quick fixes, but their impact on urban wildlife is profound and far-reaching. Differentiating good, professional pest control companies from the companies that are careless about the environment.

By embracing humane traps, eco-friendly alternatives, and a greater appreciation for the ecological roles of rodents, insects and weeds, we can create a future where pest control is both effective and sustainable. Together, we can protect the delicate balance of urban ecosystems and ensure that species like the angulate tortoise, spotted thick-knee, helmeted guinea fowl, and all the countless others forms of wildlife on The Island continue to thrive.