

Trad Biocontrol

Trad, formerly Wandering Jew, is a nightmare weed of bush-land and gardens. But maybe help is coming.

A biocontrol agent *Kordyana brasiliensis* for Trad *Tradescantia fluminensis* has been tested by CSIRO and an application for re-release has been submitted to the Australian Government .

Trad is native to Brazil. The biocontrol agent is a leaf smut fungus also native to Brazil. Host specificity testing of the fungus is on-going in the CSIRO Canberra quarantine facility. This is to ensure that Trad is the only plant the fungus will survive on, therefore safe to release.

Initial results are highly promising and it is hoped this fungus will eventually get permission to be released in Australia. If successful it may be available for release in about a year.

Requirements for release sites are likely to include

- Stopping other forms of Trad control (i.e. weeding)
- Monitoring Support of land manager (possibly small financial contribution to help fund supply of the fungus).

References: Louise Moran, Using pathogens to biologically control environmental weeds – updates. Plant Protection Quarterly. 2015;30(3):82-85

More information : <https://publications.csiro.au/rpr/pub?pid=csiro:EP155015>

Information about Trad: <http://weeds.dpi.nsw.gov.au/Weeds/Details/141>



Inside: Insects, bees, caterpillars; PNHA Update; Upper Mullet Creek; European Red Fox

Pigeons and Doves

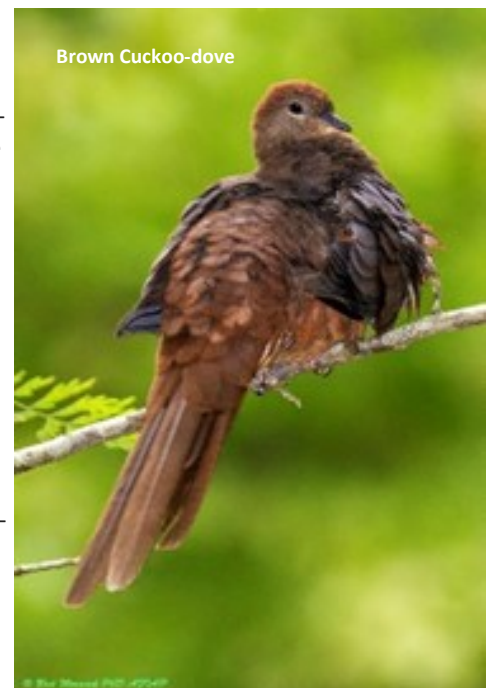
What's the difference? Nothing really, as the two terms are often used interchangeably. A subspecies of the Rock Dove is the Feral or Domestic Pigeon. In general “dove” is used for smaller birds than “pigeon”. They belong to the bird family Columbidae.



To feed their nestlings both male and females produce “crop milk” to feed their young; only flamingos and some penguins also feed their young this way.

Pigeons and doves are stout-bodied birds with short necks, and short slender bills (and in some species, these bills feature fleshy ceres). They primarily feed on seeds, fruits and plants.

The native Pigeons and Doves of the Northern Beaches are mostly seed eaters and are dark colours, perhaps to camouflage them when feeding on the ground.



Bronzewing Pigeon



Crested Pigeon - has a distinctive crest but also a high pitched whirring from its wings on take-off. It feeds on the ground and roosts in small flocks.

Bar-shouldered Dove - has a distinctive call heard in bushland near Ingleside and Ku-ring-gai Chase NP. See and hear Bar-shouldered Dove on our favourite Chiltern Track in Ingleside at <https://www.youtube.com/watch?v=KWK83uultsw>

Brown Cuckoo-Dove - looks a bit like a cuckoo when perched, but is a true dove with a long tail, eating berries of native shrubs. Its loud repeated call can be heard in Ingleside Chase reserve.

Brush Bronzewing Pigeon – seen at Ingleside and near Deep Creek

Bar-shouldered Dove



Common Bronzewing – iridescent colours on its wings. – Ingleside.

Fruit-eating Pigeons:

White-headed Pigeon – sometimes in Ingleside Chase Reserve and Warriewood Wetlands, likes Camphor Laurel berries.

Topknot Pigeon – flies in flocks to fruiting trees such as Cabbage Palms and figs.

Emerald Dove – a rare vagrant seen recently in Irrawong Reserve. Its bright colour is typical of fruit-eating pigeons and doves.

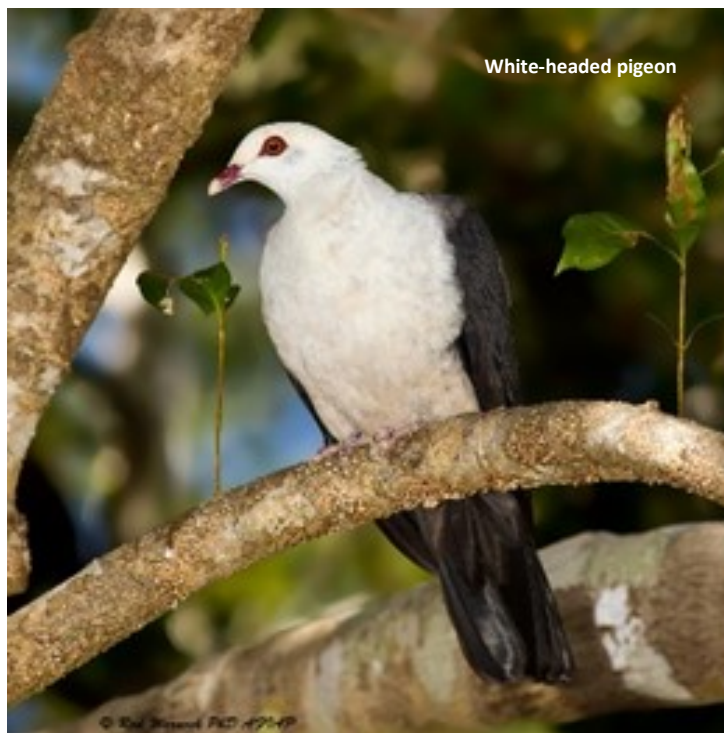
Only two introduced species occur here. Domestic or Feral Pigeons can be seen around shopping centres, at Dee Why and more recently in Avalon. Spotted Turtle Doves from India and Asia are common in some areas.

References:

Wikipedia: <https://en.wikipedia.org/wiki/Columbidae>

<http://www.birdsinbackyards.net/> and look for above species. YouTube has some videos with calls. All images by Rod Warnock except for Crested Pigeon, from Wikipedia.

White-headed pigeon



Swamp Mahogany

Eucalyptus robusta

In flower from early April for several months, this tree attracts many honeyeater and various lorikeets to the Warriewood Wetlands and swamp forest around Dee Why Lagoon. Not just pollen and nectar but insects visiting the flowers are food for wildlife. It is one of



few Eucalypts than will flourish in swamps, but you'll also find it on dry land with deep soil.

Where? Beside Barrenjoey Rd at Mona Vale Road on the east side near the bus stops. Toongari Reserve Avalon, along Mullet Creek in Ingleside Chase Reserve, Dee Why Lagoon.

Image: PNHA

Insects – Bees, Caterpillars



We love insects, particularly those that eat weeds. An example is this Magpie Moth caterpillar *Nyctemera sp* (left) on Thickhead *Crassicephalum* at Careel Creek Avalon. The adult is a



moth like this one (right), image from <http://www.brisbaneinsects.com>.

28 Spot Ladybird. It is an introduced pest on Potatoes, Eggplants and other crops in the Solanum family but welcome on the weed Blackberry Nightshade, *Solanum nigrum*. Image: <http://www.saveourwaterwaysnow.com.au> (and lots more Ladybirds at this site).

Most Ladybirds are beneficial in the garden; many eat aphids.



Some native plants can be weedy. Native Grape *Cayratia clematidea* can smother small shrubs and trees, but it's food for several spectacular caterpillars such as the Pale Brown Hawkmoth *Theretra latrillei*, and *Agarista agricola*, a day-flying moth, also

called Joseph's Coat Moth.

Grape Vine Moth *Phalaenoides glycinae* also feeds on *Cayratia* but is a pest in vineyards.

Though all these caterpillars have spines and hairs, as far as we know they don't sting or cause allergies.



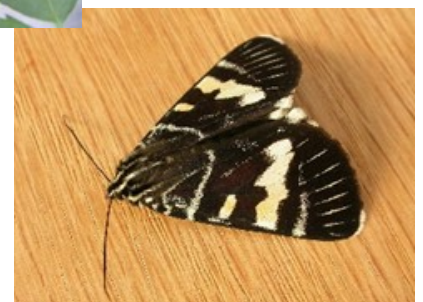
Joseph's Coat Moth Caterpillar and adult moth on *Cayratia* in Avalon. Image: PNHA



Pale Brown Hawkmoth
Image: Adult Moth, Wiki Commons
Caterpillars can vary in colour and grow to about 9cm. Image: PNHA



Grapevine Moth also flies during the day, and caterpillars can appear in great numbers. Images: Caterpillar, PNHA
Adult: D. Hobern, Wiki Commons



PNHA Grant-funded Projects:

Careel Creek Vine Weed Control

The vines in question include introduced climbers as well as some native ones. All can overwhelm native trees and shrubs, so introduced climbers such as Morning Glory, Balloon Vine and Madeira Vine will be killed and natives such as Stephanian and Wonga Vine cut back. As well, planting of tubestock continues, most visible along Barrenjoey Rd near the Etival St dog park, to restore a remnant freshwater wetland. A grant to PNHA of nearly \$24 000 from Greater Sydney Local Land Service is funding this, in partnership with Northern Beaches Council.



Get aPHOTO

Mona Vale Basin Bushcare Group Support

What's happening at Mona Vale Basin?

A major open day is planned for September 17th and everyone is invited to join in!

Come along to Mona Vale Basin Beach Reserve at the end of Bassett Street Mona Vale between 8:30am and 12:00 noon.

Mona Vale Basin Bushcare and Pittwater Natural Heritage Association have been awarded a Stronger Communities Grant to continue the restoration of the coastal dune and littoral rainforest at the end of Bassett Street. The Bushcare group will continue to remove weeds, replant native species and encourage natural regeneration. The \$12,000 received will be used to support the group through contract bush regeneration and the purchase of native plants. Northern Beaches Council Reserves and Recreation are also supporting the works of the volunteers by removing some large Coral trees and Norfolk Island Hibiscus.

Activities on the day will include:

- Planting of native tubestock
- Bushcare information and a tour of the site by the volunteers to highlight the

ongoing work and opportunities for new volunteers to join the group;

- A free native plant giveaway to local residents participating in the day; and
- A great morning tea!!

This site has been chosen for bushcare volunteers to come together and join in the nationwide "Bushcare's Major Day Out" event to support all our local volunteers working to conserve and restore our unique natural environment.



Northern Beaches Indian Myna Action Group

NBIMAG has had a tremendous response from the recent Peninsula Living article which has resulted in 18 traps being distributed. By late June 2017, total birds caught and euthanised is approaching 900 and we are hoping to hit the 1000 mark by the end of July.

Total number of trappers has only increased by about half a dozen as we have had quite a few traps returned from people who have had little or no success in trapping.

It's not an exact science and the success rates are influenced by a number of factors including the number of birds that are actually around, whether there are pets in the garden, trappers approaching the trap during the day (not recommended) and even the bait used. Some birds are attracted to the standard dried dog biscuits and others aren't, so we are finding it's trial and error in some ways.

We have been supplying "live" birds to Dr Andrea Griffin from Newcastle University to help her continue her 10 year study into their behaviour and effects

this pest bird has on the native bird communities. As part of her studies she is now comparing the Indian Mynas from the Northern Beaches to those from the Newcastle area. Our trappers have been helpful in providing birds and one of them even collected birds from trappers in Warriewood and took them up to Newcastle!

And finally, the Program will be going into hibernation over the winter period from 20 June – 17 August and no traps will be available for hire. However, we will continue to canvas trapping results from our trappers during the winter break.

Keep an eye on our Facebook page: <https://www.facebook.com/MynaProblems/>

PNHA Bird Walks

Our walk on 26 March started at Irrawong Reserve and finished at the Wetlands so we could see the Freckled Ducks, which had been recorded there for the first time a few weeks previously. We were delighted to find one of the birds, a new species for many of us. Other highlights for that day were a grey goshawk and a brown cuckoo-dove (see Pigeons and Doves article in this issue).

Our most recent walk was on 28 May at Warriewood Wetlands, and was a perfect, sunny autumn day. The swamp mahoganies were still flowering and there were large numbers of honeyeaters, especially yellow-faced honeyeaters and the brilliantly coloured scarlet honeyeaters. We also had good sightings of yellow thorn-



Scarlet Honeyeater male on Grass Tree flower spike.
Image: Rod Warnock

bills, golden whistlers, eastern spinebills, and lots of ducks and water hens. Warriewood Wetlands is a haven for wildlife.

Walks coming up:

Sunday August 27, 8-10.30am.

Chiltern Track, Ku-ring-gai Chase National Park. Birds and Wildflowers. Meet at the Chiltern Road entrance, just north of the Cicada Glen Road/Chiltern Road intersection Ingleside.

Sunday November 26,

Warriewood Wetlands 8-10.30am.

Meet in Katoa Close off Garden Street Warriewood. To get the best out of our bird walks, bring binoculars if possible, camera, drink and a snack.

Membership – can you sign up a member?

PNHA has 110 paid up members. The newsletter is sent by email to Council staff and other interested people.

But we should have a lot more members, given that the former Pittwater's population is about 56 000. We need more people to share PNHA's important work. Succession planning is necessary if PNHA is to continue with this.

Can you please ask a friend to join PNHA? You can find a membership form on the pack of each newsletter. You can also find one on our website by clicking this link: <http://pnha.org.au/join/>

Upper Mullet Creek Biodiversity Restoration

This project now enters its sixth and final year. Funded by a \$250,000 grant from the NSW Environmental Trusts, huge progress has been made on controlling weeds along Mullet Creek from its headwaters in Ingleside down to the flood plain below the Irrawong waterfall. Tubestock plantings near Wesley Street on the south arm and below the waterfall are now thriving, protected from browsing Swamp Wallabies. Some of the planted Eucalypts are several metres tall.

The grant, awarded to Pittwater Environmental Foundation is managed in partnership with Northern Beaches Council.

A brochure describing the project and lovely area of Mullet Creek is available at both ends of the track between Irrawong Rd and Ingleside Road. A copy is available from the PEF website: [http://](http://www.pittwaterenvironmentalfoundation.org.au/wp-content/uploads/2017/04/Upper-Mullet-Creek-Brochure-for-print.pdf)

www.pittwaterenvironmentalfoundation.org.au/wp-content/uploads/2017/04/Upper-Mullet-Creek-Brochure-for-print.pdf



Irrawong Bushcare group work near the lovely waterfall on the third Saturday afternoon of each month, helping with this project.

Contact Helena Dewis at Northern Beaches Council on 0408 164 235 to join the group.



The European Red Fox

Along with feral cats, foxes have had a terrible impact on Australia's smaller native animals and birds.

The Fox adapts to urban life with ease. Its intelligence, skill in hunting and ability to consume a wide variety of types of food is a reason for its success. Many backyard chickens fall prey.

What can be done to humanely control

Foxes in the Sydney Suburbs

Northern Beaches Council showed us some images showing GPS data on the travels of some tagged foxes. One fox was recorded as travelling 6.4 km one night and about 292km over six weeks.

Many local councils engage contract pest controllers to do what they can to reduce fox numbers.

environmentalist and animal lover, and I spend more time than most observing both our native fauna and pest species. My opinions are formed from my experience and observations first and foremost, then by the findings of research done by others in the field.

Q: Do you find people get emotional about the idea of shooting foxes?

A: Yes. I'm very cautious about what information I reveal. So I can paint you a good but only black and white picture of the Sydney fox epidemic, from my perspective.

Q: What can you tell us about the lives of urban foxes?

A: I would like to highlight the adaptability and differences that the "feral red fox" has made to become what I call the "urban red fox".

Depending on what you read, foxes become sexually mature at 12 months old. Once a year they can have a litter of up to 10 kits in a European environment, (and possibly in the cooler parts of our country), kits leaving the den in spring. The most kits I have witnessed out of one den was seven on a golf course 15km from the CBD.

But I am removing kits all year round. I am assuming this is because of our mild winters and abundance of easy food. I am unsure if a vixen can have more than one litter in 12 months but I suspect this is the case. Foxes are very social creatures and other vixens will help to protect and pro-



them and save our wildlife?

First, know your enemy. Are urban foxes different from foxes in rural and wilderness areas?

A project in progress at the Royal Botanical Gardens researching the ecology of the Fox is in progress, to end December 2019.

The research project covers the Greater Sydney region and is being led by Western Sydney University, in collaboration with RBG & University of Sydney. The project aims to assess foxes' movement behaviour, habitat use and diet across an urban to natural land use gradient.

The project will be continuing over the next 12-18 months, the main focus being to GPS track additional foxes. More information at <https://www.rbgsyd.nsw.gov.au/Science-Conservation/Our-Work-Discoveries/Wildlife-Ecology/Ecology-of-European-Red-Fox>.

Fox Control - the Invasive Species CRC

This Cooperative Research Centre website is a go-to site for information on this pest.

<http://www.pestsmart.org.au/pest-animal-species/european-fox/> This image (at right) is from that site.

To get information from someone experienced in urban foxes, we put some questions to a pest controller.

Q: How do you find and remove foxes from urban and residential areas?

A: I do most of this work by means of a firearm. Instantly you have formed a picture in your mind of what you imagine goes on and picture the worst case scenarios. Please understand that I am an



vide for the young in the den. This is why there is a very low mortality rate amongst the litter.

Again through my experience the local fox litters are rarely smaller than four. So you can do the maths on how quickly the fox population can grow.

The introduced fox has no real predators in Australia – another reason for the success of foxes. In Sydney the main threat to foxes are cars, ticks and me.

Q: Why do foxes kill more than they need to eat?

A: Foxes are more like cats than dogs. They kill for fun! Vixens will bring live young back to a den for the kits to play with to learn the skills they will need later in life to hunt. I have seen this in action and I have euthanased foxes carrying live bandicoots on two occasions. Anyone who has their pet chickens killed by foxes will confirm that foxes don't just take what they need. Generally they will kill all the chickens in the coop, taking only one or just eat the best bits in the coop. I have read that the average kill per fox is 7 animals per night. This would be a very conservative number. At least a cat will play with its kill for some time after it's dead before they generally disregard it. Foxes just move on the next target.

Q: Foxes have a reputation for being very clever. What do you think?

A: Yes. Here's the smartest fox I came across. I had the owner of a free-range chicken farm near Pitt Town call me to come and remove a problem fox. The farm had 32 Italian sheep dogs (Maremmas) famous for protecting their flock and an intricate well maintained electric fence system and motion detection cameras. A fox getting in and removing a chicken would be like stealing the Mona Lisa from the Louvre.

And yet a fox was getting in and killing dozens of chooks and disappearing without a trace. After we did a thorough inspection of the property I was stumped. After two nights of surveillance using military grade thermal imaging equipment I finally found the "chook burglar". He was tippy toeing up a strainer post on the corner of the fence somehow stepping around the eight live electric wires with two offset base wires, coming in, killing as many birds as he could like a silent assassin and even more impressively pushing the chosen chook through the electric

fence without getting zapped. Then he exited up another strainer on the opposite corner of the property, returned to his prize then disappeared into a small blackberry covered creek.

How long did it take for him to work that routine out? How many times did he get zapped in the past? It is horrible to have to kill such a clever creature. He truly was brilliant and smarter than a lot of people I have crossed paths with over the years.

Q: Do foxes have a hunting strategy?

A: Embarrassing as it is for me to reveal, I have had my pet chickens killed by foxes three times in the last six years. (you know what they say about mechanics' cars). I live in suburbia on the northern beaches and I subsequently caught the offending foxes. In all three cases it was a juvenile fox. I am confident that urban foxes develop a route that they check every night from one potential food source to another. In my case and in about 80% of the fox kills I'm told about, it was the one night I forgot to close the door to the coop after letting my girls roam. That is the night the fox got in. And on all of my occasions all the chickens were killed and none taken or eaten.

Q: Why wouldn't the fox have taken a chook to eat?

A: This tells me that this particular fox was visiting my girls' coop every night and I think it must have been at the end of his route and he just wasn't hungry. I also believe they follow hunting patterns because if I see a fox on a job and don't get to have a safe shot at it I can almost guarantee it will be in the same spot at the same time the following night. This habitual behaviour has been the undoing of many an urban fox. In my experience urban foxes have their regular routes they follow, then squeeze in an opportunistic hunt between stops.

Q: How do they get around?

A: They will often use water courses as highways to connect their destinations. This is how they are so effective at getting into heavily populated urban areas. Foxes follow creeks, drains, stormwater pipes and sewer lines from heavily vegetated areas where they live to where ever they want to go. I have seen foxes come in and out of stormwater drains and sewer vents, I have seen them pop out of large drains in shopping centres and industrial areas. These water

courses offer them water, obviously, but also cover, an abundance of food and a direct safe passage way to most places they want to check out. They truly are incredible at what they do.

Q: Where have you seen them?

A: In children's play grounds, schools, in people's yards under parked cars, in shopping centre car parks, playing on the beach, eating the rats at a fish cleaning table next to a boat ramp. I removed two that were licking salt off a public BBQ table, and I've seen one walking on a 6ft high timber fence.

Q: Where do you find most?

A: I see and remove many from golf courses. I would say that in Sydney golf courses are responsible for financing the destruction of more foxes than any other client. About 70% of my clients are golf courses and I remove the majority of the foxes I encounter from the courses. If this work wasn't funded by them the fox population in Sydney would be far greater than it is, as the courses I shoot for take feral animal control very seriously. But none of these foxes actually live on site, generally coming in from nearby Crown land, national parks or water catchment areas.

The courses are the playground for these urban terrorists. When dismembered fauna are found strewn around the beautifully maintained lawns, people point the finger at the poor superintendent of the grounds and expect answers. Foxes do a lot of damage to a golf course. They love to dig between the grass and the sand on the steep face of the bunkers.

They love to cache excess food in the bunkers and sand boxes. A green keeper sent me a photo of a sand box covered in fox prints. Upon further investigation a dead kookaburra was found buried in the box. How does a fox catch a kookaburra? We have all seen how kookaburras sit on a branch and stare at the ground looking for movement. As the bird drops to the ground to dig for grubs, lizards and beetles, the bird is focused on its prey. As it has its head down, smashing its beak into the turf, the fox strikes. I witnessed this in the middle of the day at the golf course where that stashed kookaburra had been found. This particular fox had learned and mastered this style of hunting. Green keepers have told me that they often see foxes running off with the flags and rakes out of the bunkers. Foxes will follow the mowers in the early hours of the morning

collecting any bugs and lizards that surface after the mower has passed. My record is removing seven foxes in two hours, from one golf course, again 15 minutes from the CBD.

Q: Are you winning against the foxes?

A: If control is not consistent and carried out by all parties in the problem area it is like trying to put out a bush fire with a water pistol.

For example, three of my clients share boundary fences with the same wetland - a water catchment area in the Botany area. In the past 18 months I have dispatched between 50-60 foxes from these properties. Not one of the foxes actually lived on the site where they were found. They all came out of the neighbouring wetlands. A lot of money has been spent on bush regeneration in this area, which is great, but the wetlands is a veritable fox farm. My clients and I have been pleading with the government department that manages this land to take some control of the situation, but our call has fallen on deaf ears.

Q: What other ways could foxes be controlled, besides shooting?

A: In NSW the legal methods of control are extremely limited. I will keep my opinions to myself about the reasons why. But this makes reducing the fox population a real challenge. We are bringing a toothpick to a gun fight, which is sad when a whole arsenal is available.

Q: What about poisons?

A: As far as I know 1080 based poisons are the most used ones in NSW. This is a very cruel slow death. No living creature deserves to die this way. For this reason I refuse to use them.

The by-catch and residual effects from the resulting toxic carcasses is a major concern. 1080 based poisons are a prehistoric, out-dated form of poison. 1080 is usually delivered in a meaty bait, or slightly better with the use of an injector.

There are so many better safer alternatives. Cyanide if used correctly is extremely humane as it works instantly! I have worked in New Zealand trapping, shooting and poisoning where we only used cyanide. I can tell you that every animal that we targeted fell on the spot where it ate the "pill" with zero by-catch and the remaining carcass was 100% non-toxic. But even better, we were able to collect every

animal that took a bait - no guesses about the result.

Another poison is called PAPP, (Para-aminopropiophenone) and has just been approved for use in NSW. It's being used with great success in other states and as far as I know can be accurately dosed for a fox. Unlike 1080, it has an antidote in the case of a domestic dog of the same weight partaking of the bait. It works by stopping the blood from delivering oxygen to the body. So the fox falls asleep and dies painlessly. The down side to PAPP is that goannas and other native fauna are partial to the bait, but by-catch can be minimised by skillful bait presentation and placement. (1)

Q: Wouldn't trapping be better?

A: Trapping an urban fox is easier than a rural fox. The urban fox is more accustomed to the smell of humans and contact with materials like metal. But don't be mistaken: this is an extremely difficult task and requires a lot of time and patience. The only style of trap I would recommend is the cage type. Jaw traps are effective but brutal and again are indiscriminate in what they close on.

Some traps are designed to capture animals with the intent of re-release. I have had to build job-specific traps because of the high number of unleashed domestic dogs in an area. This trap had to allow the dog walker a safe entry to the trap to remove their pet, but still contain a trapped fox.

If you decide to try to trap your chicken-killing fox you need to dedicate a lot of effort, thought and time to get it right. The problem is, you very rarely get two goes at the same fox. If your fox escapes from your trap it will be almost impossible to entice it back in.

The second problem is, you need to know what to do if you're successful. What will you do with your trapped fox?

It is illegal to have in your possession a live fox. It is illegal to transport a live fox without a licence to do so. It is illegal to discharge a firearm on private property in a residential area (I have the highest level of licensing and permits and more insurance than you would believe but each site I visit has to be assessed for the suitability of the use of a firearm).

I don't know any veterinarians that will house-call to put down a fox.

It is illegal to mistreat any animal. This means your fox needs to be comfortable, hydrated, fed, not too hot, not too cold, not stressed or anxious. It seems your trapped fox has more rights than all the homeless people out there.

Again I want to stress that I am an animal lover and will not tolerate the thought of animal cruelty so I believe you need to respect these wonderful creatures. I am just informing you that if you intend to try to trap a fox you need to consider the end game, so to speak. Breaking any of the above-mentioned laws carries extremely large fines.

I have been to residents that have complained to their council about foxes eating their chickens only to find out they were successful in trapping the fox but didn't know what to do with it, so they let it go hoping it had learnt a lesson and wouldn't return. They do learn a lesson, the wrong one though! This is the worst outcome possible as that fox is now trap shy and is almost certainly never going to be trapped again.

Q: What's the best sort of trap?

A: Make sure your trap will contain a fox! With the use of game cameras, you can see exactly how your trap performs and its flaws. Just recently I set up a large cage trap that I have used to great success on a new site, on the edge of a scrubby creek the foxes were using as a highway. I caught three foxes in two weeks. Pretty good going. One morning I saw the trap door had dropped but the cage was empty. After thorough inspection I noticed two of the 2.5mm welded bars had the welds broken and been bent out. Upon viewing the footage taken from the camera I had on the trap, I learned that it only took the fox three minutes to escape once the trap door shut. This is incredible considering how hard it was to bend the cage back into position and I have hands. This guy broke the welds with his mouth then pushed it open with his face. Most foxes will try to dig their way out of a trap once caught, but this one I suspect had encountered wire mesh before, most likely breaking into a chicken coop. I say this because of the speed in which he penetrated it, and he did it on the bottom run of the mesh - the weakest. In three minutes, that's incredible!

I have also set up traps with two meter high walls and no lid. The camera footage showed just how easily the foxes could

climb out. It was like a cat climbing a screen door, but much quicker and more graceful.

Q: I can use a gun. Can I shoot foxes?

A: This is not an option for anyone in an urban environment unless you carry the appropriate licenses and permits. As far as I know only myself and four others in NSW have the appropriate licence for this work. I also hold a tranquilizer permit and have a state-of-the-art tranquilizer to euthanase trapped foxes where the use of a firearm is not appropriate.

Again in my opinion, shooting where possible and done by a professional is by far the safest most humane form of pest control. There is no chance of by-catch and the information collected during the process is invaluable. And it is cost effective, having little impact on native fauna and flora.

A fair percentage of the foxes I shoot get donated to Dr John Martin in his ongoing fox research program.(2)

Q: OK, we'll leave shooting to you. Can you share how your target a fox?

A: I have been a professional shooter for over 20 years and have been focused on urban areas for the last 10 years. I have constantly had to adapt and adjust my methods as the urban fox is a totally different creature to the rural fox.

For example the rural fox is easily lured by the use of a fox whistle. I can't count how many I have whistled up and shot on large properties! I own every style of whistle available but only one in 20 urban foxes will pay any attention to the whistle. The only urban foxes I have lured with a whistle were juveniles. Most simply don't care about it.

The way the urban foxes react to a spotlight is totally different to the rural foxes. My hit rate with dispatching a fox once a safe shot is available has not changed. It's almost 100% once I am happy to take the shot. But every year the more I observe and learn just how different the urban fox is to its western cousins the better I am at finding them, and being able get into a position to take the shot, from the first sighting. Plus the improvements in technology and equipment is such a wonderful thing. I use infra red cameras, state of the art thermal imaging equipment and even the improved LED torches. Without giving away any of the techniques I have been developing for years, this has been the

biggest game changer for me. The use of specialised LED globes and different torches throughout the finding, stalking and finally dispatching process is increasing my success and the percentage of foxes shot after initially sighting them in an area. In a rural environment it easy to lure a fox to you once sighted in the distance. This is definitely not the case with urban foxes! After years of trying to figure out why, finally I have worked it out, but it's a trade secret.

Q: What about fox hunting with foxhounds? But this is now going out in England.

A: Well, yes. One method which historically has been proven to be extremely effective is hunting foxes with dogs. Again, you just formed a picture in your mind and it's not pretty! There are dog breeds that were developed (well before the first fox set a paw on Australian soil or put a marsupial in its mouth) specifically to do this job, such as Parson and Jack Russell terriers, fox terriers, American and English fox hounds, yes and even the Labrador retriever. The benefits of this style of hunting is that you find foxes in their dens. This is absolutely a massive game changer! This means you can thoroughly sweep an area and virtually 100% guarantee you will clear that site of all the resident foxes.

I have been with a volunteer group of Fox Doggers in lambing season in another state. All I can say is that I was blown away at how effective it was and I was disappointed that I know this method will never be accepted as a recommended control method.

Q: Maybe urban foxes are saving us from a real rabbit plague?

A: No. People are under the assumption that "foxes keep the rabbit numbers down"

THIS IS A MYTH!!! Remember we are talking about urban foxes around Sydney

I have opened up quite a few foxes and inspected their stomach contents to improve my trapping and hunting skills. Many of these foxes have come from areas thick with rabbits. The majority of the lovely gut content is - ringtailed possums, bandicoots, insects, birds - especially plovers, and frogs. I have not found any evidence of rabbit yet. This has been confirmed by the results of the fox research results that I have received so far.

The presence of foxes only makes rabbit control a lot harder. Ringtail possums, plovers, sugar gliders, bandicoots, basically any of our native fauna and chickens are the fast food of the urban fox. Why would you expend energy chasing an extremely fast and agile animal that is built to hear you coming and it is in its DNA to be constantly on guard of your presence. Rather, you can dawdle around eating nocturnal animals not armed with these defence mechanisms. I can't tell you how many nesting spurred winged plovers I find dismembered on golf courses. What does a plover do when threatened at night?

It walks around in circles making a racket. What does a bandicoot do? Makes sneezing and squeaking sounds and curls up in a little ball before making a slow clumsy dash at the last second. The fairy penguins at North Head? Our native animals are "fast food" for foxes.

Q: What sort of impact do foxes have on our native wildlife?

A: In Sydney we have a fantastic bunch of volunteers that nurse our injured and orphaned wildlife back to health. Sometimes this takes months of waking up through the night to offer care to nocturnal animals. There are vets that donate time and materials to this cause. These people are saints and deserve more recognition that they receive. I have a lot to do with many of these people and I can't thank them enough for what they do. But please consider this! Everyone agrees that "prevention is the best medicine". As mentioned one fox kills on average seven potentially native animals a night (probably a conservative figure). The majority of the foxes I destroy are juveniles, under one year. A fox can live for four years. So let's be really conservative and say the fox I shoot has three years of its life to go, killing seven native animals per night. So three years is 1095 nights, times seven native animals equals 7665 native animals. Ok let's be fair, minus a few rabbits and my poor chickens. Now let's say half the foxes I destroy are female and are capable of having 4-6 kits within months of when I shoot it. That's where I will leave the maths for the bright sparks. Don't forget those figures are for ONE fox.

In the last 12 months I am averaging two foxes a week (fox control only counts for a very small part of my pest control work unfortunately). So how many little critters were saved each time a fox was

"removed" from society? I don't know what the estimated fox population is in Sydney but whatever it is I guarantee "IT'S MORE"!

Q: Is the fox the worst threat to our native fauna?

A: I think the top four environmental threats to the local Sydney fauna would be foxes, domestic cats, sulfur crested cockatoos and black ravens. Yes, the last two are native to Australia but the cockie is not native to the Sydney basin, and ravens (crows) are another animal which is thriving in an urban environment, breeding out of control, becoming detrimental to other species.

Yes, my opinion differs from most, but is based on the long time I have spent ob-

serving pest animals introduced or otherwise.

Q: Any other words of advice?

A: I hope I have given you some insight into just how smart and adaptable the urban red fox is. They truly are an impressive, extremely intelligent creature deserving of respect. And if you plan to catch one, please please treat them humanely and have a plan to deal with it if you're successful. Don't purchase or borrow a trap unless you have a definite solution at the end.

There are great tutorials on Youtube from a fellow contractor based in Sydney on how to use cage traps to catch foxes.

Keep in mind this is extremely difficult and it is a skill that takes years to perfect.

Our fox control expert prefers to remain anonymous for professional reasons

Footnotes:

Information on PAPP: <http://www.pestsmart.org.au/wp-content/uploads/2016/03/ACTAFoxecuteBooklet2016.pdf>

Dr John Martin's Fox Research: <https://www.rbgsyd.nsw.gov.au/Science-Conservation/Our-Work-Discoveries/Wildlife-Ecology/Ecology-of-European-Red-Fox>



This website at <https://www.feralscan.org.au/foxscan/map.aspx> allows you to record where you have seen foxes, though we believe not all foxes reported have been added to the map.

Simple Tips To Reduce Fox Problems From FoxScan:

- Don't leave pet food outside overnight
- Use enclosed compost bins
- Keep domestic animals secure at night

- Remove fallen fruit around fruit trees
- Keep garbage bins covered
- Block entry points to drains
- Close off access to underneath buildings
- Use fox-proof enclosures for poultry
- Turn-off outside lights that might attract insects
- Reduce weeds that provide food and shelter, such as Blackberries
- Record sightings in FoxScan.

Want to Trap a Fox?

Here's a Youtube video of a fox controller setting a trap and advising on its use (not the author of our article) <https://www.youtube.com/watch?v=3xYXQ3IKMKk>

But remember, if you plan to set your own trap, first organise how you will euthanase the fox.

For more information of the European Red Fox go to this website:

<http://www.pestsmart.org.au/pest-animal-species/european-fox/>

Membership Application

I would like to join Pittwater Natural Heritage Association. I agree with the PNHA's aims: raising awareness of and preserving our unique Pittwater natural environment.

Name: Signed:

Address: P/Code

Email: Ph: Date:

I would like a **paper copy OR emailed** newsletter (circle your choice). Membership fee: \$20 or \$10 pensioner/student. To pay your membership, you can deposit electronically into our account at the Commonwealth Bank: BSB 062 208, account no.10168467. Type your surname in the reference box so we know who the membership is for. Alternatively make cheque payable to: **Pittwater Natural Heritage Association** or **PNHA**. Post cheque payable to **Pittwater Natural Heritage Association** to PNHA, PO Box 187, Avalon Beach NSW 2107.

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