

ISSUE 18 | SPRING 2016



BUTTERFLIES

AND MOTHS OF NEW ZEALAND



Scintillating

CINNABAR MOTH

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ALSO IN THIS ISSUE:

SAVE THE FOREST RINGLET | BUTTERFLY GARDENING AOTEAROA | PESTS & PREDATORS

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From the EDITOR

Everyone is talking about the 'warm winter'. I

translate that to mean more wasps eating our caterpillars this season. It's going to be a hard job for the butterflies to sustain their numbers. Already I have monarchs laying on my milkweed so hopefully I can get these early ones through to a good head start.

If wasps and aphids are a problem there are some practical tips for you in this magazine.

We are making way with our Forest Ringlet Project. You can read more about this endangered butterfly and what we plan to do and achieve in this issue. We are so grateful to our PR team, a group of Communications students from AUT who are helping us get this off the ground. Your support would be invaluable. Read more what you can do inside.



We are delighted to reveal our Platinum sponsor: Yealands Family Wines. What an amazing vineyard and winery this is. I was astounded when I visited there and you will be too when you hear about their sustainability initiatives.

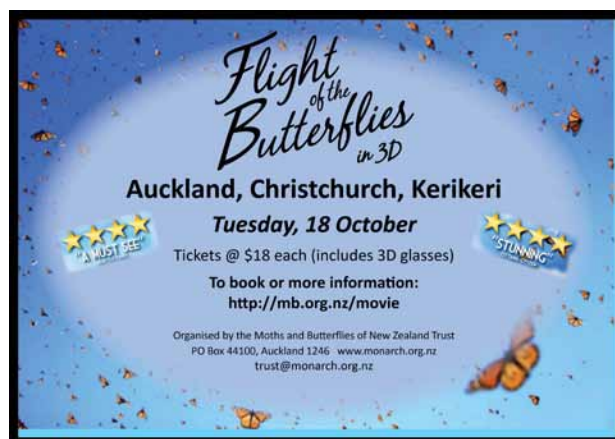
The gorgeous cinnabar moth is described inside. Have you seen it? What a shock it was when I saw my first. A beautiful creature, reminds me of a flamenco dancer.

We have started a new slant on the gardening column: readers throughout the country are invited to contribute their ideas to help the butterflies. If you'd like to contribute to the Summer issue of BUTTERFLIES, please email me editor@nzbutterflies.org.nz. We would also like to have more reviews of schools and what they are doing for butterflies, both outdoors and within the classroom.

And our exciting fundraiser, more screenings of **FLIGHT OF**

THE BUTTERFLIES in 3D are coming closer to where you live. At this time we have screenings set up for Auckland, Christchurch and Kerikeri. Will it come to your 3D cinema next?

Of course, there's more inside. Boil the kettle and sit down with a cuppa and enjoy your Spring magazine.



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PLATINUM SPONSOR *announced*

We are delighted to announce that Yealands Family Wines has become Platinum Sponsor of the Moths and Butterflies of New Zealand Trust, with a substantial annual donation.

As well, Yealands is joining our magazine sponsors which enable us to produce four editions of this magazine every year, and our annual calendar.

And the winery is well along the track to becoming the Trust's first Certified Butterfly Friendly Habitat in the

Organisation category.

Yealands is the largest single-site vineyard and winery in NZ: 1,000 hectares near Seddon, Marlborough.

Of course we could rave on about the wine – but what thrills us even more is Yealands' emphasis on sustainability and biodiversity – and love of butterflies. A few years back they planted 'Butterfly Gully' in swan plants to host monarchs and wild flowers between the rows of vines. Monarchs galore last summer. But wait – there's more.

The enthusiasm of the Yealands' team led by head groundsman James Morison means that we are working together to identify other suitable Lepidoptera species and hope to gradually establish habitats for them. They have already planted a number of stinging nettles in Butterfly Gully as admiral habitat.

The White Road which winds through the vineyards has been developed to allow visitors to enjoy the biodiversity as well as learn about sustainable wine production. Vines, wetlands, the winery, sheep, compost, hens, more vines – and Butterfly Gully! There's a mobile phone app to guide you.

Definitely worth a visit if you're in Marlborough.

www.yealands.co.nz

Christchurch Butterfly Day

Butterfly Day
Saturday 18 February 2017
1-4pm
Bromley Community Centre
49 Bromley Road

Do you have a display or activity?
Would you like to help out on the day?

Please contact
richardrowe@xtra.co.nz

Real-life EXPERIENCE

It's a win-win for the Moths and Butterflies of NZ Trust and five young women completing their communication degrees.

The Auckland University of Technology students have taken the trust under their wing with a special public relations project: to increase the awareness of the forest ringlet, which is now facing extinction. Through their communication strategy, including radio interviews, a Givealittle site and social media campaign, they aim to raise the profile of the rare species and funds for research to ensure its survival.

So far, the students are surprised by how much they have learned. Kirsty Pickett, the 'account manager', said the group was initially concerned because she and her classmates didn't know much about butterflies and conservation. "But the more we do for the trust, the more we learn about these fascinating creatures."

The multi-pronged project is part of their third-year paper entitled PR Strategy and Practice. It provides a real-life experience where the young women work in a student PR agency called Outside the Square. Students work on projects with not-for-profit clients, so the trust was a perfect match.

Check out our Givealittle page

<https://givealittle.co.nz/cause/forestringletbutterfly>

Photo, from left: Kirsty Pickett, Serena Low, Jacqui Knight, Jaime-Lee Wright, Micaela Ikinofu and Bella Ireland.



Scintillating CINNABAR MOTH

Story by Brian Patrick
Photos by Nick Broomer



The cinnabar moth (*Tyria jacobaeae*) was introduced from Europe for the biological control of ragwort in the 1940s. Its introduction wasn't an immediate success but since the 1980s it has been increasing its range further south on the West Coast of the South Island, in North Canterbury and Marlborough, and in the Wellington to Wairarapa region.

Typically for its family of moths, the *Erebidae* which includes the familiar magpie and tiger moths, it is day-flying and colourful. With its bright red colouration and contrasting black markings, and generally weak flight it is conspicuous on sunny days from the north of the North Island south to the Reefton area on the South Island's West Coast region. Its wingspan varies from 3 to 3.5cm.

Similarly, its banded black and

orange-brown larvae are conspicuous on ragwort, where they can build up quite large numbers Demolishing the tall herb, as was intended with their introduction.

The moth family *Erebidae* is among the most speciose of all moth families worldwide but is poorly represented in New Zealand with just four endemic species. It also includes some of the largest moths known and is generally found around the world particularly in tropical places.

The species is an excellent candidate for the study of insect metamorphosis as rearing of it is straightforward and satisfying. And its larval foodplant ragwort is so widespread and common. As you can see its introduction to control ragwort has not been a success despite the fact that the moth is fairly widespread and can be locally common in the northern two-thirds of the country.



The caterpillars are easy to see with their bold yellow and black stripes. They are commonly found on ragwort between December and February.



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The Forest Ringlet PROJECT



The MBNZT is investing in a long-term project to turn around the fortunes of the forest ringlet, (*Dodonidia helmsii*).

This endemic butterfly is the sole member of its genus worldwide. At one time it was found in many areas of native forest from Northland down to northern Westland.

Robert Hoare, a Lepidoptera systematist, commented that the butterfly remains a very poorly understood species and the causes of its decline are still a matter of debate and speculation.

A shortage of entomologists and funding for invertebrate conservation in NZ has led to our poor grasp of the forest ringlet's biology and though it is very frequently talked about as a species of interest for conservation and restoration projects, no serious attempt has been made to get to grips with the necessary background research to underpin such projects.

Robert believes there is hope for turning its fortunes around, citing the large blue butterfly which was extinct in England in the 1970's.

"The large blue butterfly has been successfully reintroduced and is thriving thanks to detailed studies of its unusual life history and ecological requirements," he said.

George Gibbs has been interested in the species over the past 63 years.

"As a schoolboy, I remember collecting these butterflies and their larvae in 1953. In the 1970's I was investigating its life cycle biology – which still occurred

commonly around the district where I lived," he said. "The larval foodplant was *Gahnia pauciflora*, a common sedge growing under the dominant Southern beech forest. In 1970 the population was dense enough to enable me to easily observe eggs, larvae and adults along the Muritai Park track margins, forming the basis of the account in my book *New Zealand Butterflies; Identification and Natural History* (1980).

To his knowledge no direct evidence of a causal agent has been obtained.

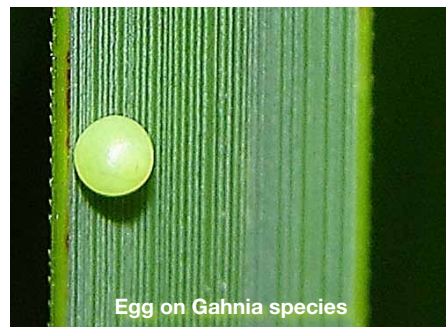
Since 2000, George has been monitoring the local population by means of a standard survey of mature larvae. The number of larvae counted each year has fallen from an average of 19.2 over the years 2000-2005; to 5.6 over the years 2006-2010; to 0.4 between 2011 and 2015. There have been no significant changes to the forest ecology during that time, apart from more intensive pest control and a reduction of possums and rats. Clearly the species is now truly rare and difficult to find, where it was reliably present just 15 years ago.

The project will be led by Peter Maddison, entomologist with the support of Steve Wheatley who is devoting three months voluntary labour to the MBNZT focussing on the project. Much of the work undertaken will be at Te Puna Quarry Park and we are grateful, too, for their support.

Your donations will help us save the forest ringlet. We will keep you updated via our website, magazine, Facebook page and e-news.

THE FOREST RINGLET NEEDS YOUR HELP

www.givealittle.co.nz/cause/forestringletbutterfly
or
MBNZT with Kiwibank,
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Egg on *Gahnia* species



larvae on *Gahnia*



pupating



typical chrysalis.
Photos thanks to Michael Reid

ESTABLISHING BALMORAL COPPERS

Story and photos by Angela Moon-Jones

It's easy enough to establish a butterfly garden if you have the right host plants for caterpillars to feed on and flowers for the butterflies to nectar on. But how do butterflies find your garden?

Some butterflies such as monarchs and admirals that roam around will find a butterfly garden just from the scent given off by plants such as stinging nettles and swan plants. However, others like copper butterflies do not roam far from their host plant *Muehlenbeckia*. They tend to nectar on the *Muehlenbeckia* flowers and stray only a few metres to daisies. Therefore they need to be introduced.

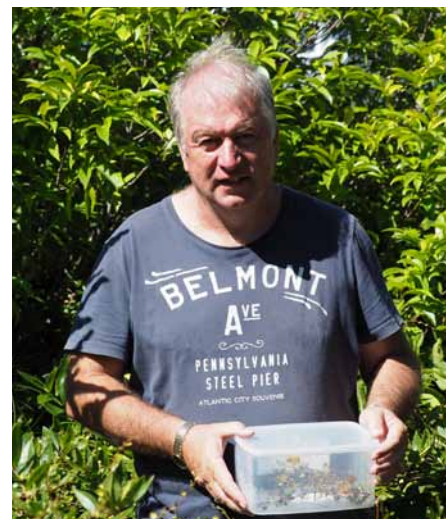
For some time Rob Jones (pictured) has been the 'guardian' of Balmoral Heights Park in Mt Eden and while working with Auckland Council and many volunteers a wonderful butterfly habitat has been established. The monarchs have arrived in droves, the odd red admiral has popped in for a look along with a few sightings of yellow admirals. In late summer the common blue and long-tailed blue paid a visit too. Rob decided to attempt to introduce the common copper butterfly now that the *Muehlenbeckia* plants are well established and enough of this food was available to support a colony.

During December 2015 and the first three months of 2016 Rob collected some male and female coppers carefully in a net from a number of different sites, transferred them into an aerated container, and immediately brought them to Balmoral Heights to release them. It was important to collect them from different colonies to reduce any inbreeding. The hope was that these butterflies would mate and lay eggs so and establish a new colony.

In June this year while he and some Forest and Bird volunteers were working in the sunshine there, three copper butterflies were sighted sunning themselves on the trees and flying around the volunteers. Much to Rob's delight, this proved that they had indeed been breeding here.

It does take some time and much patience to establish butterflies in a new territory and Rob hopes that this is the beginning of a new colony, breeding freely in a central Auckland park for everyone to enjoy.

Footnote: Balmoral Heights Park is located on Balmoral Rd, Auckland between Bank St and Mt Eden Rd. A butterfly information sign has been erected in the park at the Mt Eden Road end. Best parking is in Bank St.



The volunteers



STEVE WHEATLEY

Steve Wheatley is coming to help the MBNZT as a volunteer working on the Forest Ringlet Project this summer. He currently works for Butterfly Conservation as a Senior Regional Officer based in East Sussex.

"I'm interested in all kinds of wildlife," he told BUTTERFLIES. "I studied Countryside Management at the University of London, graduating in 2004."

Steve has worked on the chalk hills of southern England and the granite

highlands of northern Scotland.

He has also acted as Conservation Projects Manager with Trees for Life and as Reserves Manager and Area Manager with the Royal Society for the Protection of Birds.

"I'm by no means an expert but I'm learning all the time and never happier than when I'm out in remote places."

Steve started his wildlife conservation life as a volunteer for the National Trust and the British Trust for Conservation Volunteers.



PAEROA CENTRAL SCHOOL



Are you a school/ECE doing wonderful work with butterflies? Share your pride- email editor@mb.org.nz

Paeroa Central School caters for students in Years 1 to 8. The roll is currently 84, and of these, 76 are Māori. The school is 138 years old and maintains a number of historic buildings. Many local families have links to the school spanning several generations.

In Jill Hack's classroom the children have been enjoying studying monarch butterflies. But it's not only the chrysalises all over the classroom that gives the show away – it's the beautiful artwork and poetry on the walls too.

Jill and her class tag monarch butterflies each autumn too. They get such a thrill out of letting the tagged butterflies go and hope that some will be reported in.

The children used a program on their computers to create their caterpillars.



Kate Millington puts the finishing touches to the puriri moth she has painted in Evelyn St, Eden Terrace.

EDEN TERRACE *Butterflies*

Butterflies and moths are appearing all over Eden Terrace, one of Auckland's oldest suburbs. Most recently, a large puriri appeared in Evelyn St.

Artist Kate Millington now hopes to paint two more Chorus exchange boxes, which are constant targets for graffiti. If these small projects are as effective at

detering tagging as the enormous wall on Bright St, both Chorus, and Dulux, who donated the paint, will be happy.

The 'kowhai butterfly wall' has survived more than 18 months without any damage and continues to attract 'tourists' to the central city suburb. It was at the public opening of the wall last year that an Evelyn St resident approached Kate and asked her to paint the exchange box to 'brighten a dark corner'.

If all goes to plan, a kowhai butterfly will soon appear in Aitken Terrace, leading down the street to the wall.

"Another is planned for Mostyn St as a welcome to Eden Terrace," says the artist, who lives on Bright St.

Both the 'mystical puriri' and the 'kowhai butterfly' originated some years ago when Kate, who has a Masters in Fine Arts from Elam, produced a series of moths and butterflies as screenprints.

Lucky winners

For those who paid their subscription in (or before) July 2016, there was a lucky draw of five \$50 Body Shop vouchers. These went to Stu and Clare Campbell, the Cole Family, Evelyn Hopkins, Brian Lyford and Trent Mabbett. Congratulations folks! Thanks for your support.



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James has planted out almost 100 square metres with stinging nettle to host admirals. He was delighted when he saw his first yellow admiral during the winter

YEALANDS:

sustainability personified

It's fitting that the MBNZ's first Certified Butterfly Friendly Organisation is at Yealands' Seaview Vineyard. There's probably no winemaker in the world with a stronger claim to being as environmentally sustainable in everything they do.

When veteran Marlborough grape grower Peter Yealands decided to start his own wine company in 2008, he wanted it to be sustainable from the outset. The success of these efforts led to Yealands gaining carbon neutral accreditation.

They craft award-winning wines in harmony with nature. As Peter says: "Good wine doesn't have to cost the earth."

Leaders in ecological mindfulness, Yealands has recently installed the largest solar power array in New Zealand. The panels on the winery roof cover an area as large as three and a half rugby fields!

They invested in special burners that burn up the vine cuttings from the vineyard, and are trialling wind turbines for power generation too.

They make their own eco-friendly fertilizer using vine cuttings and shells from Marlborough's busy mussel industry.

Almost all wineries use mowers to keep the grass between the vines short. True to form, Yealands opted to use sheep. But then how do you prevent the

sheep from eating the vine leaves? The answer is simple: You find some very short sheep!

So now you'll find tiny Babydoll sheep in the vineyards, along with miniature Kunekune pigs. They're being kept company by a hundred chickens which roam around, providing natural pest control.

At the wetlands Yealands has created at Seaview, they use solar-powered lighting to attract grass grub beetles. This keeps the bugs away from the vines, and also feeds the fish.

In this welcoming environment, the butterflies are sure to feel at home.



Joan Fairhall and Jacqui Knight with James Morison about to burn vine cuttings to create energy for the winery.

Left: Solar panels on the winery roof - the large array in the country - also create more than enough energy to power the winery.

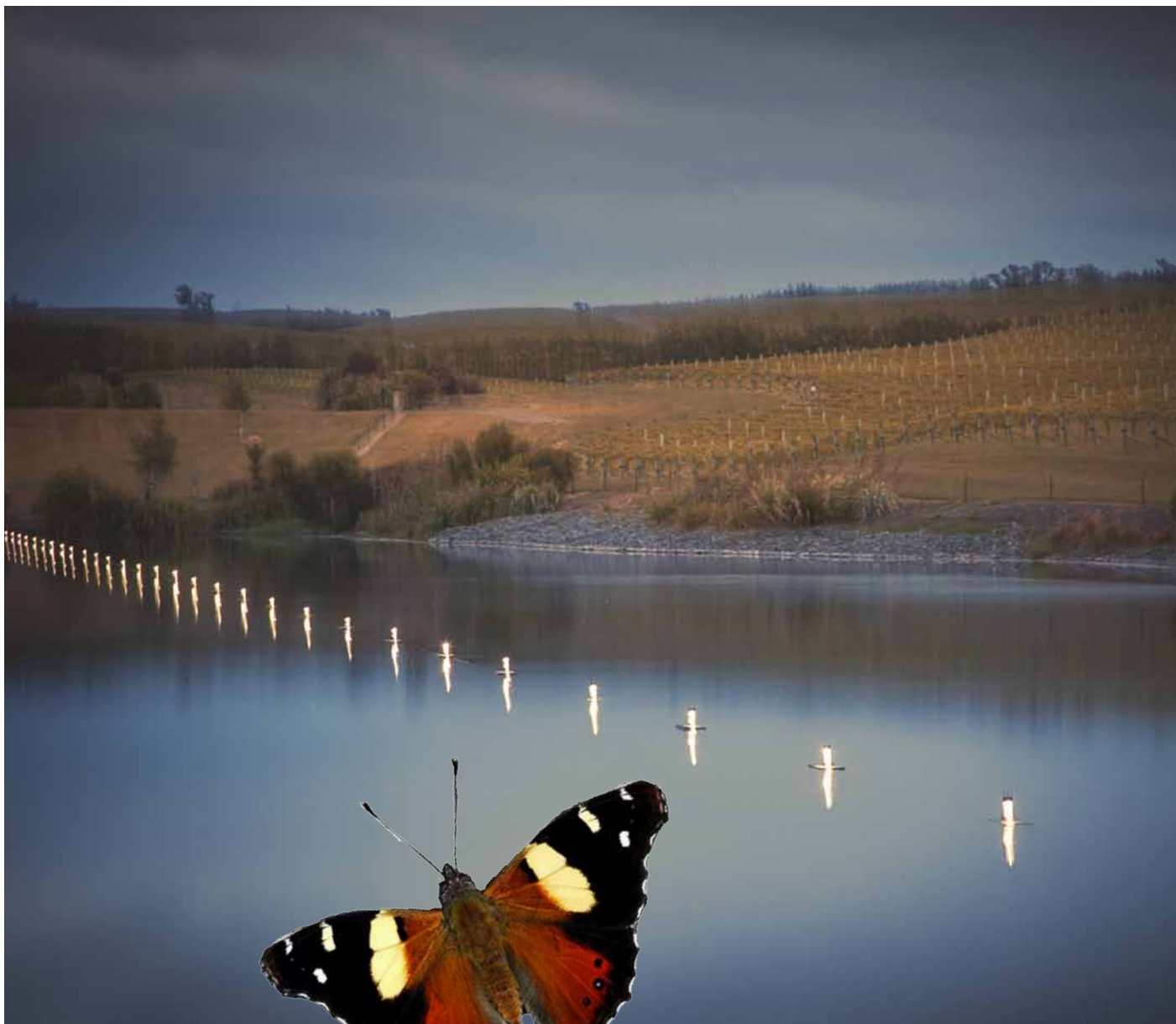
Right: In the wetlands solar powered lighting attracts grass grub beetles away from the vines and provides food for the fish.

THE BUTTERFLIES
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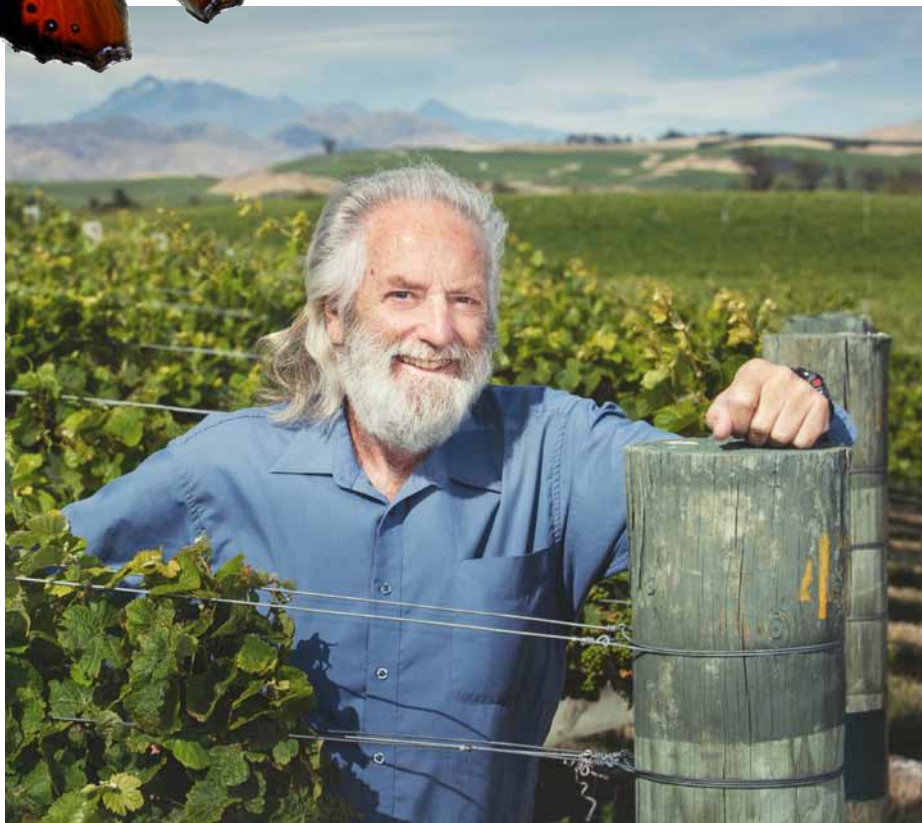




Peter Yealands' mantra 'Think boldly, tread lightly, and never say it can't be done,' fits perfectly with the motivation and goals of the MBNZT. As does his respect for Nature and his affection for butterflies.

"There is something joyous about butterflies that makes our vineyard team smile. And when you learn more about them; their diversity, their life cycle, their vulnerability, you can get pretty passionate about helping them survive and flourish."

Through his environment-focussed thinking and sheer hard work, Peter Yealands (right) has won numerous national and international awards, including the international Green Company GC-Mark, the NZI National Sustainable Business Network Award, overall world champion at the International Green Apple Environment Award, Most Socially or Environmentally Responsible Company of the Year in the 2014 Best Biz Awards International – and Peter was Lincoln University Foundation South Island Farmer of the Year in 2013.



CREATING MORE HABITAT

For several years now we've been encouraging people to make their home gardens butterfly friendly. Now we're putting out a challenge to businesses and organisations to encourage butterflies to their premises, and qualify for MBNZT Certification.

Why?

- To encourage individuals, businesses and organisations to create and sustain habitats for NZ Lepidoptera species.
- To create attractive spaces and/or interesting small habitat areas.
- To facilitate awareness, knowledge and respect for nature.
- To delight. It's what butterflies do!

Categories:

- Butterfly Friendly Garden – private gardens
- Butterfly Friendly Business – SMEs
- Butterfly Friendly Organisation – companies, corporates and organisations

As the size and scope of these categories varies widely the MBNZT will allow some flexibility in the certification requirements. Whether it be a landscaped private or public garden, or a business that has landscaped grounds – or unused 'wild' corners, banks and ditches around its premises, habitats can be created and nurtured.

Applicants will be judged on what they are doing with what they have to do it with.

Planting for butterflies and/or moths needs research, ongoing commitment and perseverance. We encourage people to find what species are suitable for the climate and conditions of their site. High-country tussock dwellers won't do well in a sunny coastal site.

The aim is to boost habitats for our endemic and native species.

What's required?

- Outdoor landscape
- Host plants for at least three Lepidoptera species, suitable for the climate and conditions
- Nectar plants for all seasons
- Provides appropriate shelter
- Water (shallow/puddling)
- Natural means to discourage predators and parasites
- Established for at least three years (evidence needed: e.g. references, photos)
- Optional – to encourage interest and participation by visitors, signage (noticeboard, pamphlets, website or whatever) describing what species, and what host and nectar species were planted.

CATEGORY ONE: Butterfly Friendly Garden (private)

- Privately owned space

CATEGORY TWO: Butterfly Friendly Business

This category encompasses a wide range of businesses, such as a café with outdoor area, camp ground, motel or medical centre, pub, car yard, quarry, factory or retail outlet, small/medium farms, vineyards, organic growers

CATEGORY THREE: Butterfly Friendly Organisation

This category encompasses a wide range of larger companies such as schools, tertiary institutions, councils, government agencies, hospitals, larger agricultural and horticultural companies, airports, ports, transport corridors, hotels, retirement villages

Required for both Business and Organisation categories:

- Business owned space. If rented, landlord permission. MBNZT will be happy to provide an explanatory letter to accompany the request.
- To encourage interest and participation by staff as well as visitors, signage (noticeboard, pamphlets, website or whatever) describing what species, and what host and nectar species were planted.

GOLD STANDARD

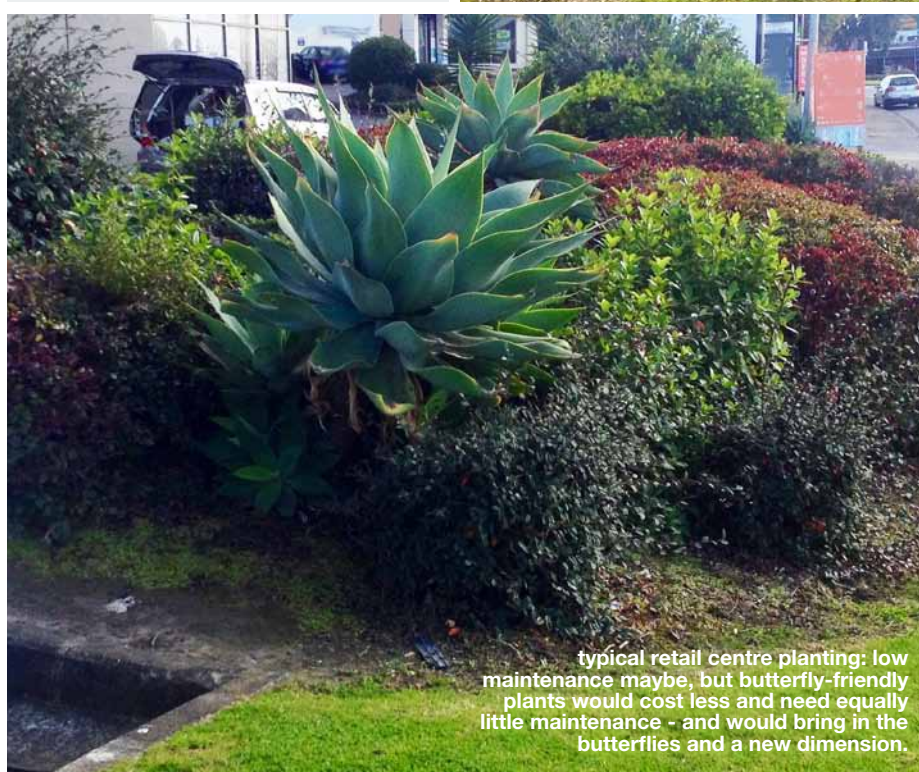
We will be very happy to award special certification for applicants across all three categories that also:

- Become financial members of the MBNZT (BFG as individual; BFB and BFO as corporate members).
- Have at least one person who completes the MBNZT course
- Report events (e.g. first eggs, caterpillars, pupae etc) on website, blogs, social media events and including links to www.nzbutterflies.org.nz
- Media story – local or national or trade publication (print / TV / radio / YouTube)

Applicants will be judged on what they are doing with what they have to do it with.



This waste space, attracting weeds and rubbish, could be turned into an attraction and a point of difference for the business with sensitive planting. Butterflies would bring in the visitors!



typical retail centre planting: low maintenance maybe, but butterfly-friendly plants would cost less and need equally little maintenance - and would bring in the butterflies and a new dimension.



CABBAGE WHITES HELP

Some New Zealanders were involved with the international Pieris Project.

It is a citizen science initiative designed to study how organisms respond to changes in their environment, using the cabbage white butterfly

The team has now received over 1,600 butterflies, from 30 states within the US and 17 different countries!

So far they have been able to extract DNA from them.

We're still currently working through the data and will have a lot more results to share fairly soon, but what we can say

so far is that there appears to have been multiple introductions of *P. rapae* into the US. It also appears that the cabbage whites that invaded Australia and New Zealand came from Asia, whereas in the US, they came from Europe.

On another front the wings of the butterfly have been used to explore how agriculture is affecting the pigments in their wings. Previous studies have shown that if you give the plants they feed on (when they are caterpillars) more nitrogen, when they metamorphose into butterflies their wings tend to have more pterin which is the pigment that makes

their wings white.

Knowing that agricultural fields often have very high levels of nitrogen, the hypothesis that butterflies found near agricultural fields have more pterin than those found in more 'natural' areas is being tested.

There are other aspects of the Pieris Project which are covered in greater depth on the website.

The team said that many participants were contributing from New Zealand.

www.pierisproject.org

LARGE WHITES GONE

The team has been completing its final four weeks of field surveillance around the Nelson/Stoke/Richmond area of the Tasman district. Repeated surveillance across the eradication zone has revealed no detections since December 2014.

Many of the staff have been with the project over two years and have seen infestation, although some new staff have had to work without ever having seen *Pieris brassicae* in any of its life stages.

We responded to an 'unknown' detection in late March, in which very tiny caterpillars were found on broccoli in a rural area. Too small for definitive entomological identification, a portion of the sample was sent to AgResearch in Lincoln, where DNA analysis was performed. The results confirmed, with much relief that the caterpillars belonged to a moth species instead.

Mike Shepherd, Project Leader of the Eradication Project said that it will be the end of nearly three years' work to rid the area of an unwanted pest. "It has been a great work opportunity, with staff getting to know the region in detail, talking with the public, and contributing to quite a unique eradication."



PESTS AND PREDATORS

APHIDS

Seven suggestions to help save swan plants from aphids this spring

1. Don't have your swan plants too close together. Interplant with other similar-sized plants (like Buddleia) so that you're not building an 'Aphid Paradise'. When your swan plant is hiding in between other plants caterpillars are also able to hide from wasps.

2. Feed your plants! Healthy plants are more likely to repel pests.

3. Have you tried companion planting? Some say that dill, marigolds and onions planted close to your swan plants will keep the aphids down to low levels.

4. Digitally remove them. Yes, squash

them between your fingers. The yellow stain will wash off.

5. Blast them with a hose. Wash them off the plant onto the ground.

6. When you first see aphids, encourage ladybirds. While the ladybird does eat monarch eggs its favourite diet is aphids. They breed quickly too so should clean up the infestation very quickly.

7. If it comes to the point where aphids are winning, cut back the shoots that are covered with aphids. Those aphids go straight into a plastic bag and into the garbage.



WASPS

know that in the coming months we will have cries for help from people all over NZ as to how to deter wasps.

Monarch caterpillars (and other butterflies too) are sought out by both *Vespula* and wasps. *Vespula vulgaris*, known as the common wasp, is a wasp found in several regions of the world besides New Zealand. It is sometimes known as the European wasp. Another species quite common in NZ is *V. germanica*, which is also known as the German wasp.

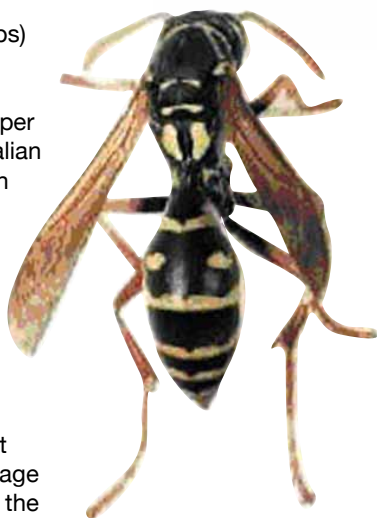
Vespula wasps can now be controlled with a protein bait called Vespex, which is available to approved applicators. You can find out more by emailing enquiries@merchento.com.

Polistes wasps (paper wasps) are another issue. They also prey on insects and chew weatherboards. The Asian paper wasp is larger than the Australian paper wasp. It arrived in NZ in the late 1970s and by 1995 was widespread throughout the Upper North Island. At present there are no known controls for them but some members are finding success by using wasp traps (see photo).

If you are having success at controlling wasps, we encourage you to share your methods in the forum on our website, so that others will benefit too.

Pests? Predators?

Look for information in the forum on our website. If you've found something that works, please share in the forum, please share editor@nzbutterflies.org.nz



Polistes chinensis



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Butterfly gardening AOTEAROA

Coopers Beach with June Harding

In the north we have a predominance of monarchs and in our 3½ acres we have counted up to 100 before we stopped. They float around banksias, bottlebrush, teatree and phacelia and just love the cosmos, love-in-a-mist, coreopsis and calendulas. Each year we buy a butterfly-friendly pack of seeds and chuck them all over the place. We are well rewarded by the amount of butterflies that appear when flowering starts.

It doesn't seem to matter that winter is here as they have a couple of favourite hanging places which is a port wine magnolia and the bottlebrush, and they winter over successfully every year.

We spend a lot of time rescuing monarch caterpillars from the mower as they wander their way to find somewhere to hang themselves on a distant tree or bush. They seem to like being away from their host swan plant when it comes time to form their chrysalis. During the summer they will crawl on to whatever is nearest so it makes for interesting walks around the garden to see what they have attached to. This year the snail creeper vine came in for much attention and happily hosted a half dozen who all hatched in due time.

Let a few parsley and parsnip plants go to seed: the butterflies love the flowers.

We love the fact that when we bought a bare paddock we were able to plant whatever we wanted and so the garden devoted to the birds, bees and butterflies was a labour of love and has turned out to be a great success. It's easily done on a small scale and once you find what these little beauties like, the possibilities are endless.

Chatham Islands with Lois Croon

Here on the Chatham Islands: we only have two butterflies the Chatham Island red admiral (*kahukura*) which you see all over the island, even at the beach, and the little blue which is elusive and only seen in February and March in the paddocks.

My garden is called Admiral Garden and I have a large perennial prairie garden for birds, bees and butterflies. My main focus is the admirals and at the moment when the sun comes out, the admirals are on the purple perennial wallflower. There were at least twenty admirals on the one plant: a few young butterflies but mainly older admirals with torn and battered wings.

I have always known that admirals love the perennial purple wallflower so the year before last I was in NZ I bought a



Chatham Is Forget Me Not and Red Admiral Lois Croon

variegated wallflower. (The purple was nowhere to be found). I did try to propagate the purple but failed. When the variegated ones flowered the admirals were not interested – only the purple wallflower works.

I have in a cooler part of the garden, very little sun, a viburnum which attracts admirals. Another plant is a very old-fashioned *Buddleja salviifolia*.

It is in full flower now with its strong citrus perfume. It looks amazing, but is in shade as the forest has grown over it and the sun is important for admirals to visit.

The Chathams has a native *Urtica* or stinging nettle (*Urtica australis*), only found here and deep in Fiordland. It is particularly nasty: it is in my garden everywhere. It is a plant I

Chatham Islands 

love to hate as it seeds down where you don't want it and when weeding you can be stung by the smallest of plants. I chop back old plants which invigorates it and away it goes again.

The nettle is all over the island, even around the coastal areas. Yesterday when the sun was out admirals were on the nettles, laying eggs I hope.

A big food source for the butterflies is the Chatham Island forget-me-not (*Myosotidium hortensia*). I have several hundred in the garden and when interplanted with nettles I have found admiral eggs on the underside of the forget-me-not leaves! This plant starts flowering in September and can flower for up to three months.

Being an isolated island, predators are few. So for admiral populations: nettle, nettle, nettle and more nettle. It pays to have some dock handy: rubbing it on the sting does work.



Buddleja salviifolia

Owaka with Janine Thompson

Butterflies are pretty thin on the ground in spring in the deep south as winter doesn't always like to give up its grip too easily. In early spring there will be a few rag-tag red admirals that have overwintered, with late spring bringing a few yellow admirals. There will be a huge range of moth species about though including the day-flying magpie moth.

Early in spring good hardy nectar sources are English wallflowers (*Erysimum spp.*), NZ daphne (*Pimelea prostrata*), catmint (*Nepeta spp.*), *Viburnum tinus*, alyssum, rosemary and antirrhinum. As spring progresses these are joined by ajuga, dianthus and many hebes and olearias.

Each year we sow hundreds of wildflower seeds including a special butterfly mix made up by Wildflower World which we sell here at Earthlore. We sow some in autumn and some in spring to provide a longer flowering period. Other nectar-rich annuals we sow are cornflowers, calendulas, French marigolds, zinnias, Californian poppies, Queen Anne's lace, and heaps of my personal favourite: cosmos. I plant this wherever I can find a gap as it has such a long flowering period and is such a happy flower.

We have a variety of butterfly host plants planted in various spots around the property. For the Admirals there is plenty of common nettle *U. urens*, a couple of patches of the ferocious *U. ferox*, and we are also establishing an area of *U. incisa*.

Monarchs have not established this far south but through the help and generosity of butterfly-loving friends in the trust who live in the warmer north we bring in eggs each season, mostly to help educate visitors to Earthlore, especially school groups. They are a lot easier to work with than the fast and flighty red admirals. Though it is a struggle to keep their swan plant host alive through the winter here a couple of years ago we sowed seed of *A. incarnata* as it has pink flowers and dies down in winter. It has no trouble surviving frosts, and sends up new shoots in the spring. With a winter-hardy host established maybe the monarchs eventually will too. We continue to keep our fingers crossed.

For the local common copper there are large areas of various *Muehlenbeckia* species planted including *M. complexa*, *M. astonii*, *M. axillaris* and also some *M. australis* in some of the more wild areas of the property.

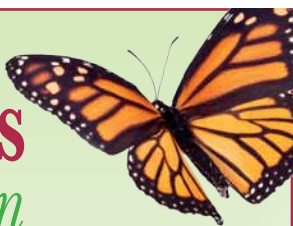
There are plenty of kowhais to keep the cute kowhai caterpillars fed without destroying the trees, and we also happily leave areas of fireweed and groundsel for magpie moth caterpillars which are wonderful little creatures for getting children interested in insects.

Caterpillar spotting in spring will usually turn up some red and yellow admirals, kowhai and magpie moths, and common coppers will be there too, but it takes more time than we have in the frantic pace of spring than we have available to find them as they are just so darned small.



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TOP SECRET

On the case with Inspector Insector



Calling all Insect Investigators, Inspector Insector needs your help to solve a puzzling insect mystery. Take the Insect Investigator's Oath and help The Inspector to solve

CASE FILE 4A THE CASE OF THE LOST BAGGAGE

BACKGROUND TO THE CASE:

Because she is a common bag moth, Liothula is supposed to stay safely tucked up inside her strong silk case all her life but on Friday evening she made a big mistake and unzipped her 'protector-bag' a little too wide. Before the hooks on her prolegs could get a grip, her bag slipped off her back and it fell to the ground. It took less than five minutes for Liothula to spin a strand of silk and abseil down to get her "protector-bag" back but when she got to the base of her tree, she couldn't find it anywhere. Liothula is now a bag moth without a bag, which is very scary indeed but what is even scarier for an unprotected bag moth is the fact that she can't remember how to make another one.



INSECT INVESTIGATOR'S OATH

I promise to serve and protect and treat as my equal every living thing on the planet – even the slimy slugs. I promise to put a stop to all the thoughtless squashing of insects and spiders and to be loyal to Her Royal Highness the Queen Bee as I help Inspector Insector keep the world safe. This I swear to every insect and human, snail, slug and worm.

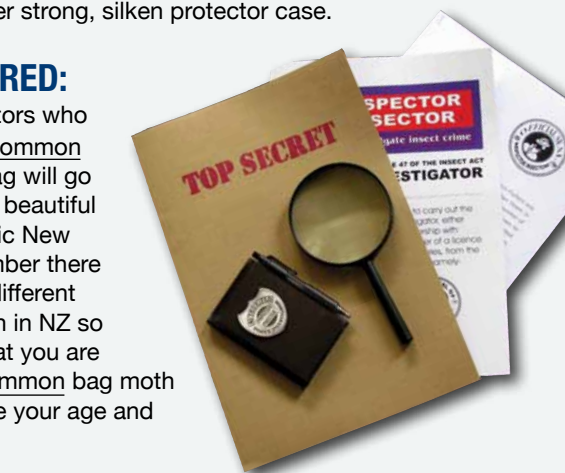
LIOTHULA NEEDS YOUR HELP:

All Insect Investigators are instructed to help Liothula by searching their gardens and taking a photo of a bag moth case and emailing it to Inspector Insector via his website www.earthlore.co.nz (web page size - 448 x 336 pixels) so he can show it to Liothula. She will then be able to see how to make herself another super strong, silken protector case.

REWARD OFFERED:

All Insect Investigators who email a photo of a common bag moth in their bag will go in the draw to win a beautiful book from Scholastic New Zealand. But remember there are more than fifty different species of bag Moth in NZ so be sure to check that you are photographing a common bag moth case. Please include your age and address.

Good luck team.
Buzzingly Yours,
Inspector Insector



 **SCHOLASTIC**

BELOW LEFT: Olivia van Asp and a trio of students won the Winter contest. Here Olivia and her sister Isobel are exploring the mini beasts in their garden. **RIGHT:** The Fergusson Intermediate students are Hannah Elzenaar, Marlena Koeninger and Jayden Millar, proud of the butterfly breeding boxes they've created.

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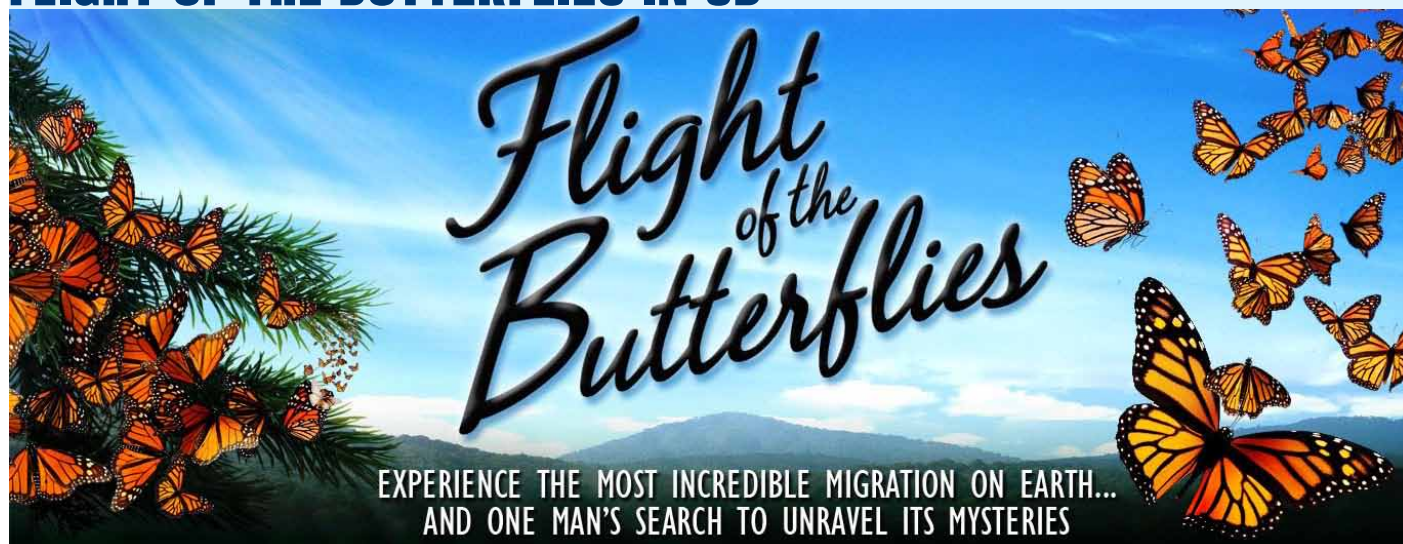
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TAURANGA: HOUSE OF SCIENCE



Schoolchildren recently enjoyed seeing the Flight of the Butterflies in 3D at a screening put on by the House of Science. They also visited the HoS rooms to participate in butterfly activities. A great day was had by all!

MORE SCREENINGS:

Tuesday, 18 September
Evening screenings 6pm/6.30pm
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