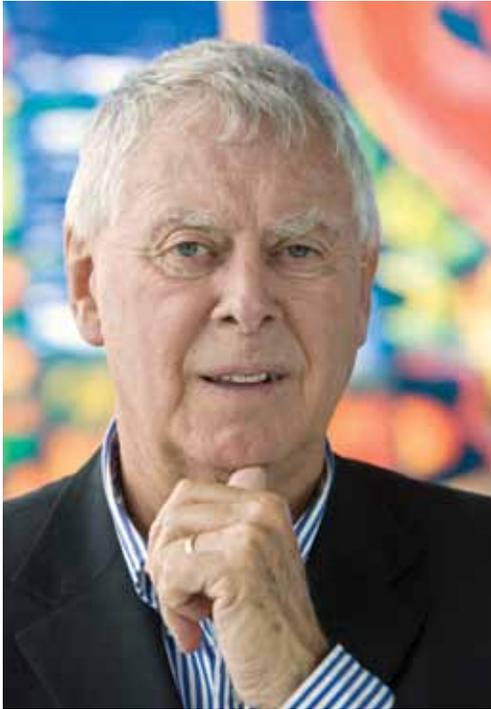




New Zealand butterflies and moths
ENSURING THEIR FUTURE

A letter from our Patron **BOB HARVEY**



I was delighted earlier this year that I was honoured to accept the role as patron of the Moths and Butterflies of New Zealand Trust and I embrace with enthusiasm the organisation and all it stands for. The concept of saving New Zealand's butterflies and moths seems to me to be a noble and hugely worthy role in a difficult and complex environment.

Monarchs have been in my life since I was

a young boy in the very heart of Auckland. I haven't forgotten those special times and with my own children we shared the pleasure of rearing monarchs. I still do. Now with grandchildren I am teaching them the awe and wonder of the transformation from caterpillar to butterfly. They learn kindness and empathy. They develop a sense of wonder and learn management skills. Monarchs also open doors into maths and science and IT – history and geography too.

The monarch has been badly affected by introduced predators and parasites. If these have affected a butterfly that is well known, what have they done to our native butterflies, not very well known? How can we know that something has been lost, forever, if we didn't know it existed to begin with?

The Moths and Butterflies of New Zealand Trust is continuing the guardianship of the wide range of butterflies and moths in this country. They do great work in the field of education of communities, children and adults alike. Thanks to their efforts there has been a huge groundswell and renewed interest in butterflies and moths, insects and biodiversity in people's gardens.

I am deeply privileged to endorse this organisation's success. I do hope you can join us in our fundraising and supportive activities to ensure that our New Zealand skies will forever see the wings of the monarch and our other glorious butterflies and moths.

Sir Bob Harvey KNZM QSO



OUR MISSION

To conserve New Zealand's biodiversity so that our butterflies and moths, and their habitat, are enhanced and protected to benefit present and future New Zealanders



Cover photo: Monarch on bottlebrush by Cathy Casey. Above: Photo of monarch by Angela Moon-Jones



From this **TINY EGG**

A monarch butterfly begins life as a tiny egg, no bigger than the head of a pin. After about five days a tiny caterpillar emerges: black, yellow and very hungry.

The caterpillar is an eating machine. It will increase in size 3,000 times over the next two weeks, moulting five times as it outgrows its skin.

Finally, when it can eat no more, it transforms into a chrysalis which sits, waiting. Over the next few weeks the caterpillar's body parts totally rearrange themselves. The chrysalis cracks open with a stunning orange and black butterfly emerging, wings delicately edged in black and white polka dots.



Above: Photos from Jacqui Knight



The importance of NZ's BUTTERFLIES AND MOTHS

Not enough is known about our New Zealand butterflies and moths. Most conservation efforts have focused on our larger birds, reptiles and trees. Insects are the poorer cousins. And yet of all the insects, butterflies, with their colourful wings, inspire interest and respect. An understanding of and love for butterflies and moths can lead to reverence for all nature because butterflies rely so much on other aspects of the environment such as plants and flowers.

The red admiral, (*Vanessa gonerilla*) was once found in most parts of New Zealand but has now retreated from many urban areas with gardens being 'tidied' and nectar-filled flowers disappearing with a change in lifestyle trends and gardening fashions. This butterfly, known to Maori as kahukura (red cloak) is only found in New Zealand – and according to one international lepidopterist, is the finest red admiral of them all.

What a travesty it would be if we were to lose it altogether! Over the ten years since its inception the Trust has worked hard to ensure people know of the admiral's

existence and have planted host plants to help its survival.

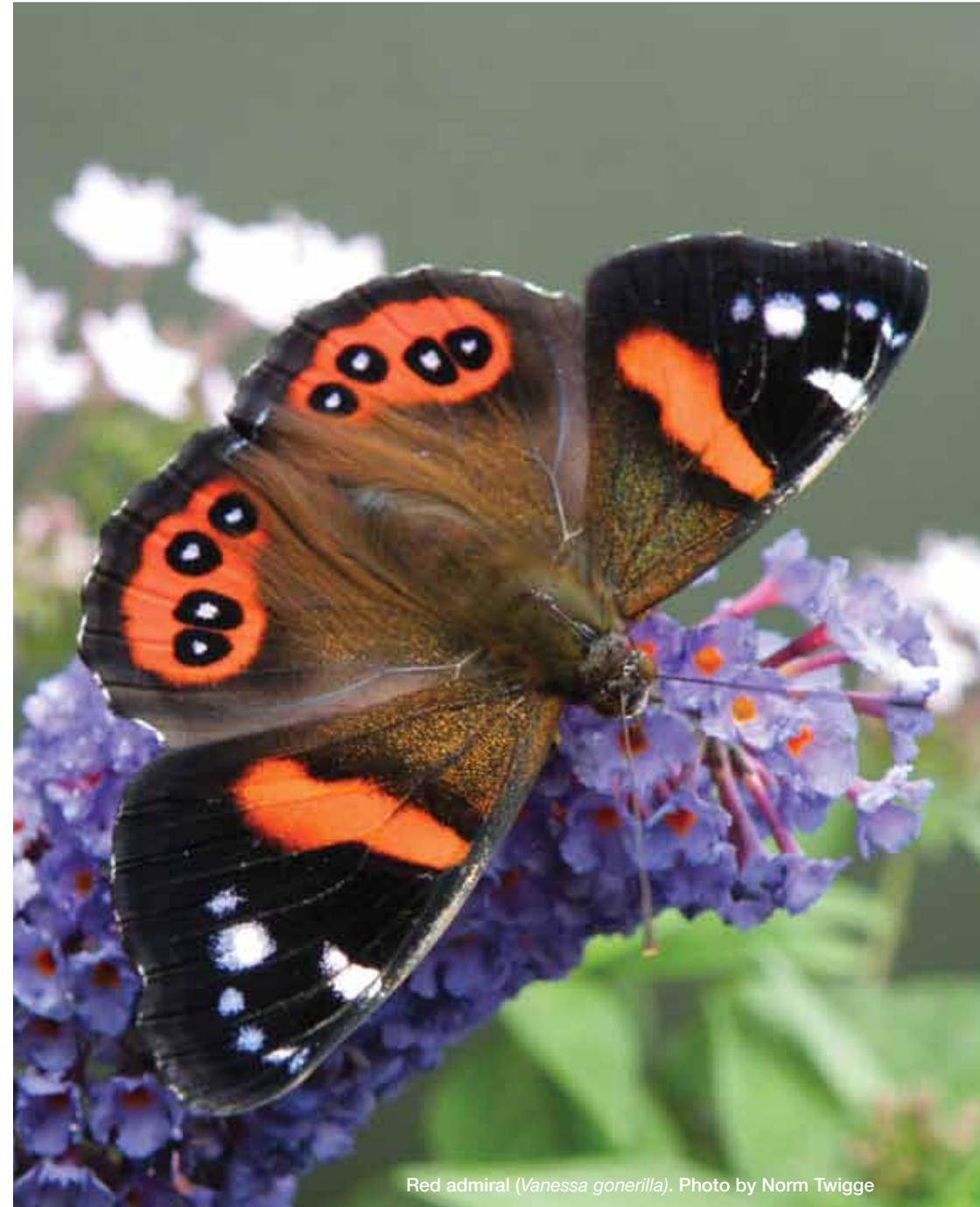
The forest ringlet is another classic example of something unique to this country and very special. *Dodonidia helmsi* is only found in New Zealand and indeed is the only butterfly in its genus worldwide. Once it was common in backyards and forested parks in the Auckland and Wellington regions but now it is disappearing from urban areas. And no-one knows why. The Trust would like to see action taken to ensure this species is not lost altogether.

Another example is a tiny purple butterfly, part of the *Lycaena* family, which has been found only in one coastal carpark in the South Island. This butterfly is teetering on the brink of extinction and research needs to be undertaken to ensure its survival. Our butterflies are now heavily dependent on human respect and action to survive and thrive. And we know so little about them...

Why we need butterflies

- Pollinators
- Indicator species (canary in the coalmine)
- Food for other animals
- Model organisms for biological research
- Decomposers

Left: The rare Rauparaha's copper (*Lycaena rauparaha*) from near Leeston, Mid Canterbury in December 2014. Photo by Angela Moon-Jones.



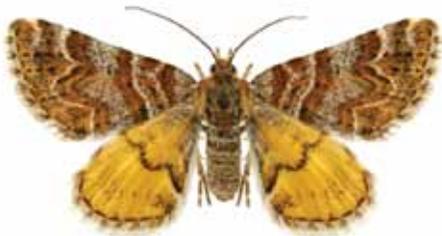
Red admiral (*Vanessa gonerilla*). Photo by Norm Twigge



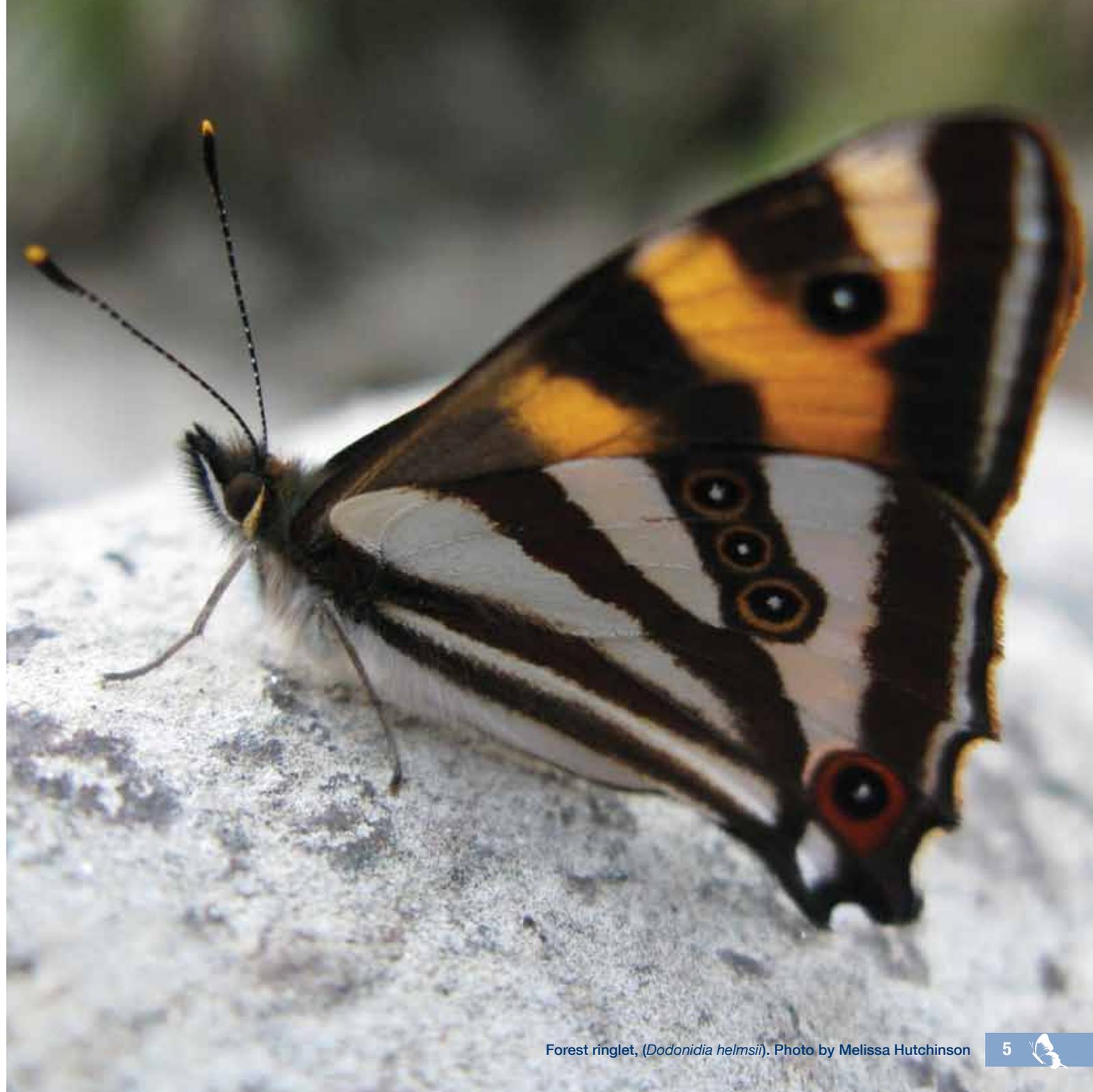


“... look at the amazing range of colour and variety that is in moths – often they are just as colourful as or more colourful than butterflies.”

– Dr Robert Hoare,
Landcare Research



Top: Female *Aponotoreas synclinalis*
Middle: Male *Aenetus virescens*
Above: Female *Arctesthes catapyrrha*
Photos by: Birgit Rhode, Landcare Research's larger moths image gallery.



WHO ARE WE?

The Moths and Butterflies New Zealand Trust (MBNZT) was formed in 2005 and is a charitable trust incorporated under the Charitable Trusts Act 1957. The organisation was founded in response to a proposed development in Butterfly Bay in the Far North which would have meant destruction of the very trees which monarchs use to overwinter (wait out the winter).

The Trust has approximately 500 financial members and 8,000 non-financial members. We are a completely volunteer-based charitable organisation. All our members are interested in, or are dedicated to, the protection and conservation of New Zealand's fauna and flora. None of our members get paid and/or receive any monies or payment for work that we do for the Trust.



WHAT WE DO?

The MBNZT focuses on the protection and conservation of butterflies and moths that are found in New Zealand. Activities include education, research, events, exhibitions and advocacy. Some of what we do is:

- Speaking events
- Butterfly releases
- Monarch butterfly tagging research programme
- Host and organise conferences
- Produce and provide educational material for schools
- Exhibits and displays (garden shows, museums)

- Run on-line courses on butterfly environment/ecology and gardening for butterflies
- Make submissions on matters that affect NZ's biodiversity especially when they relate to butterflies and moths

The Trust has been active in education about NZ's moths and butterflies for the past ten years. We publish a quarterly magazine which is distributed to all our members. We also make television and radio appearances, visit schools and gardening clubs and host exhibitions and displays throughout the country. Our diverse range of educational resources complement the NZ Curriculum.

Overwintering monarchs at Butterfly Bay, 1970s



How you can **MAKE A** difference

Become a sponsorship partner with us and promote your brand by showing your customers how much you care for the flora and fauna unique to New Zealand.

As a charitable trust we need support from the community, including businesses interested in supporting important educational and environmental causes. Limited resources make covering a large number of issues and projects difficult. The moths and butterflies of New Zealand are highly visible and connect with a wide range of the public, particularly young children. Most people are introduced as children to one of the key processes in nature through learning about the butterfly's life cycle

You can make a difference by simply becoming a personal member of the Trust from only \$35 per year to receive a quarterly magazine, access to our on-line forums and e-newsletters. Or become a corporate member by making a donation of \$200 or more per annum. Your logo will be on our website, you will receive copies of our yearly calendar as well as our magazines. We can even give you free advice on creating a butterfly-friendly garden at your workplace.

Key project sponsors have their name attached to a programme throughout the year. Our long-term goal is to establish the National Butterfly Centre. Or ask about other major projects.

We can work with you to tailor a package that benefits you and ensures that your brand gains maximum exposure while furthering the education and advocacy of our moths and butterflies nationwide. We are happy to discuss these opportunities with you and our contact details are on page 10.



Male *Lycaena salustius* or common copper. Photo by Angela Moon-Jones. Depending on the outcome of a peer review this butterfly may well become known as Maui's copper.



OUR ACHIEVEMENTS

Eye on Nature

This annual event transforms the lives of South Auckland children. Some have never been in the bush – or even in a park or forested area. The thought of the forest scares them: it's dark, the trees are so tall and there are ominous shadows. These children experience 'Eye on Nature'. In groups of 20 they meet with different conservation groups, including the MBNZT, in 20 minute sessions, learning about mammals and insects, trees and flowers, following a theme such as 'Adaptation' or 'the Forest'. A wonderful reward is to hear them chatter excitedly about what they've learned.



'Butterflies' Magazine

Each issue of our quarterly magazine features a New Zealand school and how the students are benefiting from units on butterflies. These features are being collated into a 'model', a primer for other schools to follow.

We have also developed educational resources for use by schools, which focus on monarchs (as these are the easiest to study) and introduce New Zealand moths and other butterflies so that these are not overlooked.

Below: Muritai School, Eastbourne students watering their butterfly garden.



Spotswood Primary School students

Christchurch Earthquake Memorial

One of the most moving events the Trust has participated in was the release of 185 monarchs at the commemoration of the February 2011 Christchurch earthquake. One year later, friends and families gathered to remember the loss of those lives. Children from affected families slowly lifted the lids on the baskets of monarchs as the choir sang 'You Raise Me Up'. Some butterflies flew away immediately while others lingered – giving the survivors comfort that their own family members, forever lost, had not wanted to leave their lives and legacies.



Above: Izzy Kane learns about the life cycle of monarchs. **Below:** Trustee Xanthe Noble with St Kentigern Collage students.

School Talks

When trust members visit schools, we take live butterflies in all forms. It is clear that many children have not witnessed the spectacle of nature first-hand. When they hold a caterpillar the language we hear – from tots to teenagers – is amazing. Wiggly! Soft! Snaky! Cute! Butterflies don't fly... they soar, they explode, zoom and streak. The egg is not little: it's minuscule, wee and microscopic.



Canterbury Museum Exhibition

Soon after the Trust was conceived the Canterbury Museum invited us to put on a display inside the museum building, an exhibit that would last ten days and delight thousands of visitors. The public witnessed the caterpillars crawling over the swan plants, and the change from caterpillars to chrysalis to butterflies. They watched, eyes glued to the glass, as butterflies sucked nectar from the flowers and floated around the purpose-built gazebo.



On-line Course

Gardeners have many questions as to how to adapt their garden or habitat to be butterfly-friendly. The Trust has devised a home-study course, completed over five weeks, which covers metamorphosis, the various species to be encouraged in a NZ garden, suitable plants and the problems such as diseases and predators. At the completion of the course the students receive a beautiful certificate for their walls.



Xanthe Noble (left) presents Susan Green with her certification. Rebecca Bibby looks on.
Photo by Greg Noble

Certification

People or groups that have a garden or habitat which is butterfly-friendly are encouraged to apply for MBNZT certification. If their space offers the right conditions for at least three different species then a colourful permanent plaque is presented to them for display.

Monarch Tagging Programme

The Trust operates a monarch butterfly tagging programme. This is in response to realising how little we know of our monarch in New Zealand.

Each autumn in North America millions of monarchs leave the United States and southern Canada and journey south for up to 5,000 kilometres to their overwintering roosts in the mountain fir forests of Mexico. In North America their numbers have been declining and scientists are worried.

Monarch butterflies are known as 'indicator species' as they are easy to see and also not afraid



Children from Matiere School tagging monarchs and getting them ready for release.

of humans. They are considered today's 'canaries of the coal mines'.

With information from our tagging project we can measure changes to our environment – not only for monarch butterflies but what affects other insects too. If insects are affected, our very survival is at risk. This is a great opportunity for citizen science participation.

The aim is to find out about the Monarch's behaviour over winter... where does it go... what does it do. We tag the overwintering generation late summer and autumn so we can provide answers to these questions.



Photo by Anna Barnett



Who we are **TRUSTEES**



Rebecca Bibby, Trustee and Chair
Senior Environmental Consultant
with Mott MacDonald,
Auckland



Jacqui Knight, Trustee and Secretary
Self-employed consultant,
Auckland



Hugh Smith, Trustee
Education advisor,
Omokoroa,
Bay of Plenty



Glenn Johnstone, Trustee
CEO at WorldxChange
Communications,
Auckland



Xanthe Noble, Trustee
English Department,
Saint Kentigern College,
Auckland



Carol Stensness, Treasurer
Office Manager,
Auckland



Yellow admiral *Vanessa itea* –
(Maori) Kahukowhai.
Photo by Kate Young

Partner **WITH US**

Now you have had an introduction to the purpose and flavour of our organisation, we would love to talk with you about how your business can support our environmental programmes and initiatives. You can get in touch with us in one of the following ways:

Email:
info@monarch.org.nz

Phone:
09 551 3383 or
027 481 4811

Website:
www.nzbutterflies.org.nz

Write:
PO Box 44100,
Pt Chevalier,
Auckland 1246





A small selection of New Zealand butterflies and moths



Yellow admiral *Vanessa itea* –
(Maori) Kahukowhai – Photo by Rob Jones



Common copper *Lycaena salustius* –
(Maori) Pepe Para Riki – Photo by Rob Herd



Black mountain ringlet *Percnodaimon merula* –
Photo by Brian Patrick



Maire *Macarostola miniella* –
Photo by Bryce McQuillan



Tussock ringlet *Argyrophenga* species – Photo
by Angela Moon-Jones



Magpie moth *Nyctemera annulata* – (Maori)
Mokarakara – Photo by Jackson Rogers



Painted lady *Vanessa kershawi* –
Photo by John Slaney



Boulder copper *Lycaena boldenarum* – Photo
by Angela Moon-Jones



Monarch *Danaus plexippus* (Maori) Pepepe or
Kahuku ariki – Photo by Sally Phillips



Cinnabar moth *Tyria jacobaeae* –
Photo by Frank Porch



Forest ringlet *Dodonidia helmsii* –
Photo by Owen Spearpoint



Red admiral *Vanessa gonerilla gonerilla* –
(Maori) Kahukura – Photo by Rob Jones