

Madeira larvae in slime

 gympielandcare.org.au/madeira-larvae-in-slime

August 1, 2018

The Madeira beetle is used as an alternative to the harmful chemicals needed to control the Madeira vine which is a serious invasive environmental weed and one of national significance.

The adult Madeira beetle is tiny, about 5mm long and 2 mm wide. Eggs are laid in groups of 8 – 15 on the underside of leaves.

Hiding under this slime is the Madeira beetle larvae. The larvae cover themselves in faecal matter which protects them against predators whilst they feed on the Madeira vine host plant. After approximately 30 days the larvae shed their glutinous slime and head to the soil to pupate, emerging about 20 days later as adults and so the cycle continues.

If you have Madeira vine on your property and are looking for a chemical-free alternative to control it we can provide you with Madeira beetle [contact us here](#).



Messmate Park Hidden Gem

 gympielandcare.org.au/messmate-park-hidden-gem

August 1, 2018

Thanks to a Queensland Government Community Sustainability Action Grant Gympie Landcare and the Friends of Messmate Park have been able to resurface and strengthen access paths at Messmate Park, Kia Ora. Last century, this area was a small State Forest. Forestry considered it not to be core business and gifted it to the then local council. Unfortunately a working bee was organised that resulted in the destruction of the integrity of the original ecosystem probably due to the mistaken belief that such a stand should contain only Gympie Messmate but fortunately, this part is recovering. The main driver for the maintenance work was a member, a local “hero”, Sandra Lalor, and she and our own Jenny Whyte have religiously attended to this every month for some time.



This Park is a stunning example of remnant vegetation. It includes one very impressive big tree (Eucalyptus Cloeziana, Gympie Messmate) next to the walking track. Plus two more impressive centuries-old big trees down on the banks of Tinana Creek (these are not on the current path). On Thursday 28 June 2018, Rick and Glen from Gympie Contract Land Care Services (CLS) with help from Porters Earthworx and materials from Four Mile Quarry carried out the path restoration. The paths are now in fantastic condition and are quite impressive.



Messmate Park is an absolute hidden gem. It has come so far since the days it was full of Lantana, Ochna, Hammil Grass, and Cat’s Claw. Why not stop for a visit? If you would like to volunteer for future weeding or other activities at Priddy Road Kia Ora please contact Sandra Lalor 07 5486 5431 or Jenny Whyte at Gympie and District Landcare 07 5483 8866.

Nursery Manager's Plant of the month – *Petalostigma trioculare*

 gympielandcare.org.au/nursery-managers-plant-of-the-month-petalostigma-trioculare

August 1, 2018

The August plant of the month is *Petalostigma Trioculare*, or Coastal Quinine bush. This medium sized tree is an excellent screening plant which also attracts birds and butterflies.

Petalostigma Trioculare occurs in drier rainforest areas of South East Queensland and North East NSW, often on sandy soil. It has a stem diameter up to 25cm with a trunk that is swollen at the base and covered with dark grey bark with some vertical fissures and cracks.


New leaf buds are furry and narrow elliptical shape are green above and a felty dull grey underneath. Small yellow male and female flowers are borne on separate trees from summer to autumn. The male flowers are in clusters with a strong lemony scent while the female flowers are solitary.

The orange/reddish brown fruit are produced by the female plant. They ripen explosively throwing out parts of the fruit as far as 4 metres away.

It is thought by some that pregnancy can be avoided by eating the fruit ... although it is not recommended and there are other more reliable methods of birth control.



Success for Friends of 3 Mile Creek

 gympielandcare.org.au/success-for-friends-of-3-mile-creek

August 1, 2018

Landcare members Bruce McCulloch, Annette Bourke and Wendy MacPherson are also part of a neighbourhood group known as Friends of 3 Mile Creek. Recently they built on earlier habitat restoration work to successfully complete a Queensland Government Community Sustainability Action Grant project under the auspices of the Gympie Landcare

Their project involved a commitment to improve the environmental health and resilience of the Creek and over the past year, the Friends have used their \$4500 grant to support ongoing control work on Cats Claw Creeper and to plant 150 trees to rehabilitate a 1.2km stretch of the Creek bank.

Plantings were also undertaken to strengthen the habitat of existing local fauna including the Powerful Owl, the Greater and Yellow-bellied Gliders and Koalas. It is also hoped that re-colonisation by the Richmond Birdwing Butterfly and Glossy Black Cockatoo will be encouraged by the species planted.

Due to their success and commitment, the Friends have already received another grant to continue their work.



Spraying emergent Cats Claw Creeper, part of on-going work to manage the weeds once rampant in this area



Bruce and Wendy regularly monitor water quality in the creek to help understand its environmental health.

Using the Queensland Globe to manage your property Thursday 23 August 2018 5 pm – 8 pm

 gympielandcare.org.au/qld-globe-workshop

August 1, 2018

Gympie Landcare will be hosting a workshop for landowners to learn to use the Queensland Globe more effectively to manage their properties. The workshop will be presented by Jeff Pickering of the Department of Natural Resources, Mines and Energy.



The Globe turns physical, geographical and spatial data about a particular location into a map format. For landholders, it provides access to a wealth of information on soils, landform, and vegetation as well as a wide range of economic infrastructure that can help with property management and property planning.

Some of the Globes features are:

- Access to real-time spatial data – anywhere, anytime – through your computer, tablet or smartphone web browser.
- New measuring tools and the ability to save, share and download maps and searches.
- Pinpoint your location and access data when in the field.
- Browse information about single parcels of land, including a property's official annual valuation, closest public transport routes and more.
- Explore pre-set topics of interest for faster search results.
- Create multiple places of interest to explore a range of locations or different data layers.
- Add your own data, or share what you have discovered with others.
- Login to save your work for ongoing use.

What to bring

Your own laptop computer

What will be provided

Wifi to connect your laptop

Tea, coffee, and light refreshments

Price

Member – \$10

Non-Members – \$20


Address

St Patrick College, 2-12 Church St, Gympie QLD 4570

It will be in Room CM15. Entry at the gate by the mailbox on Church Street. Follow the signs along a path and up the stairwell to the left. Room CM15 opens off a covered area at the top of the stairs.

Places are limited, bookings are essential. To book, please [click here](#)

Visit by Kingaroy Society for Growing Australian Native Plants

 gympielandcare.org.au/visit-by-kingaroy-society-for-growing-australian-native-plants

August 1, 2018

In June 2018 Gympie Landcare had a visit from members of the Kingaroy branch of the Society for Growing Australian Plants.

The visit was organised by Bev Kapernick. Treasurer David Rowlands looked after our visitors with a tour of the nursery and the insect rearing facility. What a great way to share ideas and knowledge with like minded people.



Winter Trees on Mary

 gympielandcare.org.au/winter-trees-on-mary

August 1, 2018

On 18 July 2018 Gympie Landcare's new Promotions and Marketing subcommittee participated in the first of many events planned for our 30th birthday year.

Winter Trees on Mary is an annual event held in the Gympie Town centre where trees in Mary Street are decorated by local community groups. Live music, market stalls, horse and cart rides and other entertainment and fabulous food combined with perfect weather on the night to create a wonderful family friendly party atmosphere.

Our tree was arguably the worst in Mary Street until we unleashed our creativity to dress it up with branches and flowers from local flowering native plants including wattles, grevilleas, banksias and crucifix orchids and amongst the foliage we hung pictures of a range of native fauna.

Gympie Council donated \$100 towards our effort and this was used to give away 50 native tube stock plants. During the evening we chatted to people about all things Landcare.

Many people gave us positive feedback about our tree and the judging panel agreed, awarding us equal third place. Congratulations to Gympie South State School (first place) and St Pats Primary (second place) and Centacare (equal 3rd place).





Dealing With Frost On Your Property

 gympielandcare.org.au/dealing-with-frost-on-your-property

August 1, 2018

Many native plants tolerate temperatures down to -15°C if the weather gradually becomes colder and colder into winter. However the same species may die at -1 to -2°C when a frost comes after a warm period. We often can't see the frost coming or have no time to prepare when we do. There are a few proven techniques that may be employed, depending on your circumstances and the scale of the problem, to shield your young plants from frost damage. Fortunately, most of our frosts are radiation frosts and we seldom see a black frost (as in 2007) when the air temperature drops well below zero killing or injuring even mature trees in areas well above normal frost pockets and ice forms on the walls and roofs of buildings.



Species Selection and Planting Time

The best defense is to use frost-resistant plants in the first place. Many species in the landscape are frost sensitive and yet become established in nature and many tough species have transient juvenile frost susceptibility. Such species can be planted in spring but may need to be watered or they may be planted in early autumn when the ground is moist and temperatures are dropping. Even if they frost off in winter they can re sprout from below ground in spring and by the following winter they have their much more resistant adult leaves e.g. spotted gum.

Bare-Earthing

As borne out by forestry practice later supported by the results of CSIRO research, the best form of frost protection on a large scale is bare, moist earth. Remember mulch does not generate useful warmth and anything that comes between the earth and the plant merely insulates and prevents warmth rising e.g. how many times have you seen frost on top of a dried pad of cow manure with none on the ground around it? Unless in an erosion-prone situation, at least 85% of the ground should be cleared of all grass and weeds (living or dead) and other debris (including any mulching) should be raked away from individual, susceptible young plants in late autumn to about a 2m radius – and of course, raked back in spring. Grass may have to be poisoned in wide strips and/or scraped off. When very dry it also pays to water the bare soil to increase its heat-holding capacity.



Cover-Cropping (Sacrificial Overwood)

Here a frost-hardy species is planted to protect one that is sensitive. I've used the "natural" approach i.e. with wattle covering rainforest species but, the wattles must be managed or they will take over. The ultimate trick here would be to use short-lived cover-crop species.

Chemical Sprays

Sprays such as Envy® do work at least for light frosts but only on the foliage sprayed.

Fogging Devices

This involves the deliberate creation on a smoke haze to prevent cooling of the ground by radiation. The disadvantage is it can't work when there are intermittent breezes and it requires someone to stay up all night and function at the bottom of a rum bottle.

Water Sprays/Misting

This can be effective for lighter frosts at least but requires a large amount of water and a costly reticulation/spray system.

Fans

This is forced convection of cold air from near the ground and keeps the air moving so that frosts can't form. It has been used in fruit orchards. Again the equipment and running costs are quite expensive but one could imagine a household fan blowing around a prized specimen plant in the garden.



Heaters

These can be as primitive as bonfires or oil pots lit and kept stoked through a plantation and, if they smoke – all the better. Drawbacks are the provision of fuel and the risk of wildfire under dry conditions (when frosts often form). On a small scale, a hurricane lantern can be placed under individual trees to provide warmth.

Some people have attempted to make a rudimentary assessment of species frost-hardiness. [Click here for the list](#)

Family Fun Day At Gympie Landcare Sunday 2 September 2018

 gympielandcare.org.au/family-fun-day-at-gympie-landcare

August 1, 2018

As part of Gympie Landcare's 30th birthday celebrations, we are hosting a family fun day at our site on Old Maryborough Rd, Gympie. There will be food, lots of kids activities, talks on various land care topics and many displays. Bring the whole family and enjoy lunch from one of our food vendors: CCs Kitchen, Lucious Licks, Sausage Sizzle and of course All About The Cup coffee

Entry Fee – Gold coin donation

The program is as follows:

12 pm – Gate Opens

Mainstage

12:30 – Maya the Koala scat (droppings) dog demonstration

13:30 – Growing your own native food forest

14:30 – 5 easy ways to improve your soil

15:15 – What to do with native animals in distress

Kids Zone from 1 pm

Big Canvas colouring in

Making instruments from recycled material

Rainbow parachute & blue planet ball game

Learning to juggle

Face painting



Tours

13:15 – Bio-control facility tour (meet at the mainstage)

14:15 – Nursery Tour (meet at the mainstage)

Displays

Vanderfields (John Deere)

Koala Action Group

Solar Solutions

MRCCC

Widgee Rural Fire Brigade

Field Naturalists

Gympie Regional Council (Invasive Plants & Animals)

Food

CCs Kitchen

Sausage Sizzle

Luscious Licks

All About Coffee



Future Of Farming – Bioponics Vertical Farming

 gympielandcare.org.au/future-of-farming-bioponics-vertical-farming

August 1, 2018

In agribusiness, the commercial production of leafy greens, herbs or plant seedlings using multi-level growing systems is rapidly expanding around the world. The challenge all these new businesses face is to be commercially viable against the low costs of traditional open-field farming.

Vertical Farming is a revolutionary approach to producing high quantities of nutritious and quality fresh food all year round, without relying on skilled labour, favourable weather, high soil fertility or high water use.

The Advantages Of This System

Reliable Harvest

In a well-managed Vertical Farm System, there are no 'seasonal crops' and there are no crop losses. Harvest times and product quality are consistent and reliable, allowing a commercial grower to confidently commit to delivery schedules

and offtake agreements. Vertical Farm Systems growing areas are fully enclosed and climate controlled – removing external pressures such as disease, pest or predator attacks. It also means they do not rely on fertile arable land and can be established in any climatic region globally – irrespective of seasonal daylight hours or extremes in temperature.



Minimum Overheads

Production overheads are commercially competitive and predictable. In some locations with good selling prices and reasonable power and building rental costs a 30%+ Return on Investment can be achieved.

Optimised Energy Use

High thermal efficiency climate cells greatly reduce energy use for climate control. There is ~80% less air volume in a climate cell compared to the same size open-rack system in a warehouse.

Of course, using high-efficiency LED lighting does help reduce power usage for maximum plant growth. But in addition, lights are run in stages so that a flat total power demand over a 24 hour period is achieved. This is important as more power companies start to apply surcharges based on measured peak power demand.

Through the use of green energy and the elimination of fossil fuel tractors, irrigation pumps and other horticultural equipment the vertical system can be structured as carbon emission competitive.

Low Labour Costs

Vertical systems are fully automated growing systems with descriptive SMS text messaging for any faults. This means that only low skill levels are required to operate the system and typically the only manual labour required is for sorting and packaging harvests. On larger systems even the processing can be highly automated

Low Water Use

Plants take up water to move minerals and fuel photosynthesis. Around 95% of all water a plant takes up is returned to the atmosphere through transpiration.

The climate cells make the growing system a totally closed environment. This means that 100% of plant transpiration can be recovered and reused inside the system. Including the water used for grow medium recovery and bench washing the system uses ~95% less water than typical open-field growing and around 20% less than a normal enclosed hydroponic growing system.

Reduced Post Harvest Processing

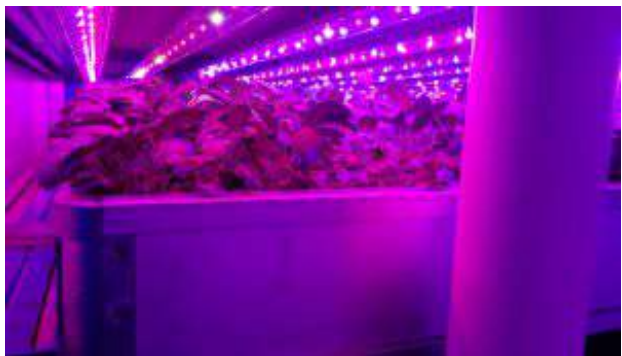
The Systems climate cells have strong natural biosecurity features to eliminate all insects, pest and disease pressure. Human contact with growing plants is eliminated until sorting & packing. Flood and Drain watering means dry leaves throughout the growing cycle – eliminating mildew and mould pressures. No sprays, pesticides or herbicides and no animal or human contact during growing means harvests do not require holding times or expensive and produce damaging cold-chlorine washing before shipping.

Lower Transport Costs

The systems can be installed in any geographic location that offers suitable power and water supplies. Strategic positioning close to the point of sale or in distribution hubs dramatically decreases the time from harvest to consumer and also reduces costs for refrigerated storage and transport.

Optimum Crop Yields

Irrespective of external climate conditions, the System can reliably provide more crop rotations per year than open-field agriculture and other farming practices. Based on typical open-field lettuce production of 1lb/ft²/year – just 5,400ft² (500m²) of building floor area fitted with the System technology and can produce the same harvest as ~8 acres of traditional farming. Crop cycles are also faster due to the systems' controlled temperature, humidity, and photoperiod optimisation – from seed to harvest in 28 days for most leafy greens. The optional use of Bioponic organic plant nutrients and live microbes further increases crop yields, nutritional density and flavour intensity.



Extensive Crop Suitability

The System is suited to a wide range of crops. Within each climate cell all crop growth is controlled by a full suite of adjustable parameters to maintain optimum growing conditions for each specific crop variety being grown.

Some suitable crops include: Baby Spinach, Baby Rocket (Arugula), Loose-leaf Lettuce, Endives, Tatsoi, Basil, Beet Leaf, Lambs' Ear (Mache), Mizuna, Cos Lettuce, Butter Lettuce, Raddichio, Pak Choy

Bioponics

This vertical farm system uses Bioponics so that crops can be produced with significantly increased levels of nutrients and minerals that are essential for optimum health and performance. The term Bioponics was first coined in 2005 by the American hydroponics veteran William Texier when he patented the process.

Bioponics provides an organic alternative to normal hydroponic growing that uses synthetic fertilizers, and it's been catching on as more and more growers enjoy the challenge of combining growing techniques in the search for healthier, tastier results.

Bioponics uses beneficial microbes, bacteria, and fungi normally only found in the very best farming land and combines these with pure sustainable organic nutrients. With Bioponics, an organic environment is created by adding beneficial microbes to the growing area, which then colonize plant roots and grow media to dramatically boost the bio-availability of organic nutrients.

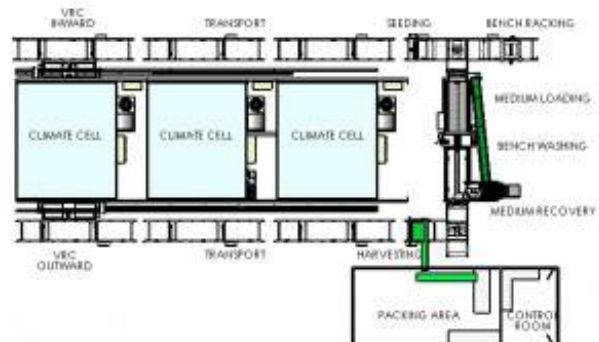
The primary benefits of this type of gardening include a reduction in water usage, improvement in crop growth and elimination of chemical fertilizers and pesticides. Edible plants grown with Bioponics taste better, keep longer and have significantly higher levels of essential nutrients and minerals when compared with hydroponic cultivation and some organic produce. Hydroponics is typically based on a mixture of 17 high purity chemicals while Bioponics uses sea kelp with 73 minerals.

How Does It Work

At the simplest horticultural level, the System is a multi-level growing system using rolling benches, flood & drain watering and low voltage LED Lighting – all managed and controlled through a Modbus distributed network

Climate Cell Modules

The climate cells are where the plants are grown. Each climate cell is an insulated, closed environment with 8 levels of growing benches. Each climate cell has an integrated vertical hoist at each end for the automatic loading and unloading of rolling benches that



hold the grow media and plants.

Every climate cell is automatically monitored and managed to maintain pre-set temperature, humidity, CO², watering and LED lighting levels to achieve optimum plant growth for the crop varieties planted. Any variation from presets or system function error is automatically identified, logged and reported by SMS text message or email.



Transport Modules

To automatically transfer rolling benches between the various modules of the system there is a series of motorised transport rails controlled by the system network. This automated transport system efficiently and rapidly delivers benches to the various operations such as seeding, harvesting, grow media recovery, bench wash & sterilise or onto the climate cell vertical hoists – on command and when needed.



Seeding Module

The System incorporates a mechanical gravity seeder integrated into the transport system. Supplied templates can be easily changed for different seed counts or seeding patterns suited to a wide range of crop varieties.

As an option, the standard seeding system can be configured for either growing seedlings in cell trays or for transplanting young seedlings into the system for grow-out.



Harvest Module

The standard automated harvest configuration is optimised for the production of high-volume cut leaf crops. The harvest module uses a high-speed blade to cut the crop directly from the rolling bench and transfer it by conveyors to a designated sort & pack cold room area – typically located adjacent to the System installation, or into bulk bins for later processing.



Grow Medium Recovery Module

The Grow Medium Recovery module is an automated system that separates the clay

pebbles (grow medium) from the rolling benches, sieves them to remove plant roots and stems for composting, and then rinses the pebbles clean with fresh water to preserve the colonisation of beneficial microbes used in the Bioponics system. Simultaneous with the clay pebble cleaning, the rolling benches are inverted and high-pressure washed and sterilised with a solution of hydrogen peroxide. The rolling benches are then automatically refilled with the washed clay pebbles ready for re-seeding.

A Vertical Farming System has the opportunity to produce most of the food required by city dwellers in the many vacant warehouses not currently being utilised in the cities. This will cut down on transport costs and create improved food security in the city, cutting down on the carbon emissions to transport food to the city. This might very well be one of the solutions to feeding the ever-increasing population of urban dwellers.

Courtesy of Vertical Farming Systems. For more information go to their [website](#).

Gympie's River Trail Now A Reality

 gympielandcare.org.au/gympies-river-trail-now-a-reality

August 1, 2018

After three decades of patient commitment by Landcare and other groups, the long-held vision of Gympie's River Trail has become a reality. Since October 2017 Gympie's Riverbank has been a hive of activity. Gympie Landcare has undertaken large-scale revegetation works to enhance the re-constructed river trail.

Work started with a concerted effort to control vine weeds (Cats Claw Creeper, Madeira Vine, Siratro & Glycine), Canna

Lily and Leucaena and Chinese Elm over a 5-hectare area. Once the weed cover had been reduced planting started. To date over 6,000 native plants (trees, shrubs, and grasses) have been established, with drier revegetation species on the banks and rainforest species on the lower flat areas.

Landcare field crews have received wide support from the broader community. Years 5 and 6 from Cooloola Christian College, youth from Edmund Rice Flexible Learning Centre and most recently students from Gympie East State School have planted 500 tubestock. Seventy



Edmund Rice Flexible Learning Centre



Cooloola Christian College



Community Riverbank Planting in March

people, including students from James Hash State High School and St Patricks College, came to the community planting day in March which established 888 plants between Hyne Street and Excelsior Road. A huge thank you to the Landcare members and volunteers who have helped organise and supervise these events.

The small number of losses from vandalism and theft have been disappointing. But overall the response has been positive and it is fantastic to see the numbers of people enjoying the walk.

This is just the beginning. The coming month will see some 1,200 tubestock planted into the netball slope. Future work between Cavanaugh Park and Excelsior Road will be ongoing this includes weed control and tending of the young plants.

Council contractors are currently removing the Chinese Elm that dominates the banks between Excelsior Road and The Sands. Once this work is complete Landcare work crews will come in to begin revegetating these banks with natives, except for areas near The Sands where plantings appropriate for a more open park are being discussed.

Gympie Regional Council is now constructing the next stage of the trail between The Sands and Deep Creek and planning has started to raise appropriate native plants to revegetate this section. Special thanks to Carl, Don, Shane, Zac and Cole from Gympie Contract Land Care Services team for their commitment to this project. The steep riverbanks and bulk debris from historic dumping and in-filling have made this a challenging environment to work in.



Effective spraying of weeds



Pupils From Gympie East School



Community planting in March