 **Landcare Broken Hill Inc**

***Greening the Hill Mk2***

ABC Radio interview No.53 – 27th May 2020

**Home Projects #5 – Insects, encouraging the good ones**

**During our many discussions of Landcare Broken Hill’s Greening the Hill Mk2 initiative we have often focussed on how people can make their own gardens more environmentally sustainable. One good method of looking after your gardens is to attract many little helpers – because none of us can do it alone. Today, the little helpers I’ll be talking about are not the kids or grand kids, although they’re going to have a role, rather I’m going to be discussing insects.**

It might seem odd for a person associated with Landcare to be talking about insects in favourable terms, as farmers are often depicted as using insecticides to control insects. That can be true, but when you hear of such activity it is often an indication that the natural order of things has got out of balance. Ofcourse there are occasional plagues, such as plagues of locusts, at which time we often have no choice but to fight ‘fire with fire’ resorting to large-scale control measures, however in normal circumstances there are natural approaches which are preferable. Being aware of the benefit of natural processes has given rise to the very popular **organic farming movement**. Organic farmers fetch a higher price for their produce because the customer is assured that chemicals, specifically insecticides, are not used in the course of their farming enterprise.

**Insects pollinate our food plants**

Every good fruit and vegetable grower knows that their crops will fail if their plants are not pollinated by insects. The role of the honey bee is well known, but less well known is the importance of moths in pollinating – even in the dead of night. This month’s issue to National Geographic makes disturbing reading: the lead article it titled “You’ll miss them when they’re gone”. It reminds us our critical is the role of insects in the survival of all life.

My **home project** for listeners today is to give serious thought to planting insect-attracting flowering plants in amongst your vegetables. My family’s winter vegetable garden beds all have allysium plants clustered in the centre. Allysium emits the most delicious vanilla honey perfume that attracts pollinator insects. Another traditional herb planted in vegetable gardens is borage – a pretty azure blue flowered herb which bees love. Other herbs that attract bees are basil, catnip, chamomile, coriander, fennel, lavender, rosemary, marjoram, mint and sage.

The next part of your home project is to build insect houses for bees and other pollinators. I know some local hardware shops and the local nursery have stocked them in the past. If you are handy, there are plenty of instructions online as to how to build them. The critical point is that insect and bee houses are good as they will encourage valuable, indeed essential, insects to stay in your garden. And don’t be concerned if you find wasps occupying an insect house you’ve provided – wasps are far more interested in eating other insects than they are in eating you. It is all part of balance or cycle of life. As a gardener, your role is to encourage and sustain it, not suppress it.

**Insects are essential food for birds – maintaining the natural cycle**

It is particularly good sense to attract birds into your garden and encourage them to stay around, as most birds happily devour insects. My family started to keep guinea fowl on our property decades ago after I read in a USA research article that 90% of their diet is insects.

Two important tips: first, if you have a cat, make sure you put a collar on it with a bell, so as to give birds fair warning that a cat is about.

Secondly, try and avoid using insecticide, because if you poison insects, birds can be concurrently poisoned which then results in a downward spiral – less birds , means less insects are eaten, which results in insect numbers increasing & then humankind responds with more insecticide and so it goes on … Avoid this vicious cycle.

**Home Project**: An alternative approach to deterring irritating insects is to place insect-repellent plants beside your doorways, your outdoor loo if you still have one, your compost heap, your dog kennel and other such places. A couple of pots of the herb tansy, basil and pyrethrum placed by your doors are excellent for deterring flies. The chrysanthemum is a member of the pyrethrum family so is clearly a winner in many respects: attractive and beneficial. Mosquitoes dislike lemon balm, catnip, marigolds, basil, lavender and peppermint. Most ants are deterred by the mint family, particularly the herb pennyroyal. There are many more herbs and spice plants that are excellent deterrents when used carefully in the right place. Listeners should do some on-line research.

**The future: Insects can be a rich source of protein for humans and human food animals**

For tens of thousands of years, the Australian Aborigines have been forerunners in eating highly nutritious insects. Far more than the witjuti grubs, bogong moths and green sugar ants, there are at least 60 known native edible species of insects available. Currently, a number of research organisations are working with Aboriginal communities seeking their assistance based on ancient traditional knowledge.

The aquaculture industry (fish farming) is highly dependent upon a constant supply of high protein meal. One of the best sources is insect protein meal, often made from meal worm and crickets. Likewise, processed insects can be a wonderful source of protein in the chicken industry.

Throughout Asia insects are farmed for human consumption for centuries, crickets in particular. This is strongly supported by the United Nations Food and Agriculture Organisation (FAO), which promotes the consumption of insects as a means of alleviating food insecurity. Within 9 years, the UN estimates the global edible insect market will be worth more than $8 billion pa.

In Australia there is now an industry group: Insect Protein Association of Australia – which promotes the rapidly expanding ‘new age’ farming (at least for Australia). Energy bars and protein powders for body builders are now regularly sold – often described as ‘superfood’ – mainly made from ground up crickets. Even some high-end restaurants in Australia are serving dishes with insects. As at October 2019, there were about 50 edible insect farmers in Australia, which represented a doubling of the number in just one year.

Our Australian research agencies are hard at work helping to kick start insect farming in Australia, with CSIRO working alongside the University of Adelaide, they are working with a start-up GoTerra investigating which native Australian insect species have the best potential for Australia’s future edible insect industry. To date, only insect species introduced to Australia are allowed to be commercially farmed.

Insect farming benefits include a characteristically small environmental footprint as they can be grown in insect factories (like modified shipping containers) thereby requiring less land (and so less land clearing of native vegetation) and less water than does the production of conventional protein, such as from beef cattle and sheep. Better still, the raw material for insect farming – the food the insects eat – can be sourced from waste human food (say, the kitchen waste from pubs and restaurants). A future industry for Broken Hill?

**Landcare Broken Hill’s public meetings have been cancelled for the foreseeable future due to COVID-19.**

**All Landcare Broken Hill’s on-the-ground projects have been deferred until further notice, although ‘backroom’ planning and preparation continues.**

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