ATTRACTION INSECTS and BIRDS TO GARDENS and CONSEQUENTIAL ISSUES - Murdoch De Baar

My presentation is on attracting insects, birds, lizards and other fauna to the garden, for the southeast Queensland area, with a view towards a few other consequential issues also. It is a modified presentation originally given 25 May 2001, to the Wildlife Preservation Society of Queensland.

Choice of plants

Plants can be examined by their capacity to provide * a nectar source, * foliage for food, * and / or a fruit source, apart from other issues such as flower beauty, windbreaks etc. Trees are also nesting / resting / hiding places.

Examine if your garden is providing fruit and flowers over much of the year. Perhaps your plants cover periods where there is a shortfall in your surrounding area. This will help to keep wildlife about for longer periods. Some trees stand out for features such as extensive flowering periods, as in Callistemon polandii. Nobody wants a tree that flowers while you’re at the supermarket.

Your locality may provide restrictions also, such as clay soil structures, tea tree swamps or stony land. You might have a large stone for a backyard as do some residents of Stanthorpe?

Safety should also be a consideration, so choosing giant strangling figs or large gum trees to be placed beside your house, can be a bad decision. Plants that leave prickles to stand on, or grow uncontrollably over your garden, may not be what you want.

Many a gardener has regretted planting mango trees leaning over the roof, resulting in the bombing of the roof, fermenting clogged gutters, squealing flying foxes, and those unmentionable dark splats on the walls.

Some plants to consider (and some attracted fauna)

- **Acacia** (Wattles can be shorter-lived trees) (Tailed Emperor (Polyura sempronius)/ leaf-eating; Large Grass-yellow (Eurema hecabe) / leaves; Blue Jewel (Hypochrysops delicia) / leaves, in company with ants Crematogaster spp.; Fiery Jewel (H. ignita) in company with Coconut Ants (Papyrius sp.). See also comments under ‘Some dubious natives’.
- **Alphitonia** Pink Ash (Small Green-banded Blue (Psychonotis caelius) / leaves).
- **Brachychiton** (Pencilled-blue (Candalides absimilis); Common Aeroplane (Phaedyma shepherdii); Tailed Emperor (Polyura sempronius) / on leaves; perhaps the Bronze Flat (Nectocoryne repanda) on B. populneus in some localities).
- **Buckinghamia** Ivory Curl (flowers Dec. to Feb. and attracts a large array of fauna). This tree is originally from north Queensland rainforests.
- **Callicoma** “Black Wattle” (Yellow Emperor Moth (Opodiphthera astrophela) / leaves; Ghost Moths (Aenetus spp.) / trunk borers -see comments in ‘Other considerations’).
- **Callistemon** (birds, butterflies, possums / flowers; ringtail possums / leaves) The Scarlet Honeyeater seems very partial to Callistemon flowers.
- **Capparis** (Pearl-whites (Elodina spp.), Caper Gull (Cepora perimale); the migratory Caper White (Belenois java- all pierid butterflies / leaf eating).
- **Ficus coronata** and **F. opposita** sandpaper figs (Moonbeam butterflies (Philiris spp.) / leaves; figbirds / fruit).
- **Grevillea** (many insects and birds including friar birds, parrots and honeyeaters / flowers).
- **Harpullia** (Bright Cornelian (Deudorix diovis)/ seed borer).
- **Hibiscus tilicaceus** (Harlequin Bug/ seed feeder).
- **Lomandra** (Matrush) clumps are very popular in landscaping, and support skipper butterflies such as the chunky Splendid Ochre (Trapezites symmomus) which is making a come-back into Brisbane.
- **Melaleuca** (many birds, animals and insects including parrots, butterflies, moths, jewel beetles, bees, are attracted to the bottle-brush like flowers, often wet in nectar).
An Elephant Beetle (*Xylotrupes ulysses australicus*) imbibes from a scrape on a Poinciana branch. I always enjoy watching their battles for supremacy.

**Macaranga** (birds / seed; ringtail possums / foliage and leaf stalks). Silvereyes and figbirds are frequent visitors during seeding.

**Pipturus argenteus** Native Mulberry (attracts an assortment of birds and insects including the Jezebel Nymph (*Myces geofroyi*), Speckled Line-blue (*Catopyrops florinda*) and hawk moth larvae (*Theretra* spp.).

**Pseuderanthemum** Love Flower - patches in damp shady spots (Australian Leafwing (*Doleschallia bisaltide*) / leaf-eating).

**Trema** Poison Peach bush (Speckled Line-blue / leaves; figbirds / fruit; Spiny Phasmid (*Extatosoma tiaratum*) / leaves). Orioles, figbirds and silvereyes are often present in amongst the foliage.

**Some vines to consider:**

- **Cassityha** (dodder vines for wallum and open forest areas) (*Candalides* spp. butterflies; the Whistling Moth (*Hecatesia fenestrata*)).
- **Cissus** and other vitaceae (the beautiful day-flying moth *Agarista agricola*, and various hawk moths / leaves). At least 7 species of hawk moths feed on *Cissus*.
- **Melodorum leichhardtii** (previously *Rauwenhoffia*), Fourbar Swordtail (*Protographium leosthenes*).
- **Trophis scandens** (prev. *Malaisia*) (Eastern Brown or Purple Crow (*Euploea tulliolus*)).
- **Pararistolochia praevenosa** (Richmond Birdwing (*Ornithoptera richmondia*).

**Some dubious natives**

White Cedar (*Melia azedarach*) is pretty, but can be heavily attacked by White Cedar Moth (*Leptocneria reducta*). The larvae are covered with irritating hairs that cause itchy rashes.

Bunya Pine (*Araucaria bidwillii*) looks good, attracts cockatoos, but has foliage that is unkind to bare feet, and drops heavy seed pods from unbelievable heights to the delight of your panel beater!

Processionary or tent caterpillars (*Ochrogaster lunifer*) are one of the worst for severe rash-causing hairs, and rest in basal tents on acacia trunks around the Brisbane area, but are found in branch tents on eucalypts around the Toowoomba region. One way to help eliminate the problem is by crushing their white fluffy egg masses on trunk bases during Nov. to Jan. Larval hairs can be stirred up during whipper snipping or lawn mowing. The irritating properties of hairs can last well after larval death.

Paper nest wasps never engender a warm feeling of joy, as their stings are painful, but they restore a balance in caterpillar numbers, and they keep you fit!

**Other fauna-attracting features**

Humus heaps and branch heaps are good for attracting the Elephant Beetle (*Xylotrupes ulysses australicus*) and flower chafer beetles (for larval development), Bearded Dragons (egg-laying sites) and Blue Tongue lizards (snail-feeding sites). **Note:** snail bait can be bad for Blue Tongue lizards. The above heaps can also attract termites. The large Rhinoceros Beetle (*Haploscapanes australicus*), with an unforked horn on its head, is seldom seen in Brisbane, and breeds in the mulch cores of older trees (see “Conservation aspects”).

Besser blocks / bricks laid first before branches are stacked, can provide a refuge for pet-hassled dragons and skinks, and provide egg-laying sites.

Leaf and branch stacks can help legless lizards, geckos and snakes. It has been said that ‘bushey environments are snake havens’, but then are you ‘safe’ on a manicured
The beauty of butterflies in your yard is worth the chewed leaves. Some branch stacking can provide larval sites for the brilliant green Stag Beetle (*Lamprima latreillei*). Rock stacks are good places for orchids, and also refuges for skinks, geckos etc. Bird baths hung in lower branches are a must, particularly in dry weather. Placing a small container of water under hedges for wandering birds etc. and placement of nesting boxes are good ideas.

**Learning to live with chewed leaves etc**

Many people have trouble living with chewed leaves and ragged-looking trees. Caterpillars turn to moths and butterflies, and these bring birds and lizards etc. Even stick insects (leaf eaters) are amazing creatures. *Pittosporum* etc. can have branches pruned by longicorn beetle larvae, but this can attract black cockatoos. Mistletoes are often shunned even by conservationists. There are 88 species of native mistletoe in Australia, and many totally dependent insects which feed on them. Some people would argue that mistletoes stress trees, and therefore they should be controlled, but then should we control koalas also?

A small patch of unattended grass (including tall grass) does look untidy but will support various skipper butterflies and Evening Brown butterflies. Together with the branch heaps and shaggy trees you’ll be the talk of the neighbourhood!

**Biodiversity issues**

Biodiversity is the species-richness factor. The price you pay for a species–rich area is chewed leaves, pock-marked stems, rank grasses etc. giving you an untidy looking yard perhaps.

Brisbane has a rich skink fauna and an impressive array of insects. In my Corinda suburban garden, 93 species of butterflies, well over 250 species in the order Hymenoptera (includes wasps, parasitic wasps, bees, ants) and this includes nearly 40 species of ants and 50 species of native bees (such as the large black and yellow carpenter bee) and over 80 species of birds have been recorded. It must be noted here that some 160 butterflies and 370 birds have been recorded for Brisbane and its environs and a total of over 200 butterfly species occur in the southeast area of Queensland.

Some plant combinations provide their own rich biodiversity such as *Callistemon* supporting *Amyema, Dendrophthoe, Notothixos and Viscum* mistletoes which attract birds such as honeyeaters, jackies (or Noisy Miners), silvereyes, parrots, mistletoebirds, possums, jezebel butterflies (*Delias* spp.), azure butterflies (*Ogyris* spp.), the Mistletoe Day-flying Moth (*Comocrus behri*), the large Mistletoe Emperor Moth (*Opodiphthera loranthi*) and so on. *Acacia* can attract a diverse fauna and, apart from previous listings, includes a number of lycaenid butterflies which eat the flower buds, three hairstreaks (*Jalmenus* spp.) that eat leaves, the large stick insect, *Eurycnema goliath*, a number of leaf beetles (Chrysomelidae) and some stem-boring wood moths (*Endoxyla* spp.) and so on. The eucalypts also attract a large range of fauna including flying foxes, gliders, koalas, birds, reptiles, and many insects. Jewel beetles, flower chafers, butterflies and moths readily come to the flowers and an array of leaf eaters like the huge stick insect, *Acrophylla titan*. The shiny gold Christmas beetle, *Anoplognathus viridiaeneus*, is one of our gems. The world’s bulkiest moth, with a wingspan of up to 260 mm, the Giant Wood Moth (*Endoxyla cinereus*) has larvae which bore into the trunks of some eucalypts. Tunnels are generally shorter than might be expected, and a couple of attacks can usually be tolerated by a tree.

**Conservation aspects**

Exotic plants are a serious burden on our environment. Also nursery–distributed plants should be more stringently controlled.
Priority should be given to native species, but there are some very good exotic plants which don’t invade, and do provide nectar and leaves to our wildlife as a supplement, such as *Cassia fistula*.

To assist local native plants and their survival, it is useful to target and cultivate these local species. Your garden and your neighbours’ gardens can assist in strengthening corridors.

*Pararistolochia praevenerosa* plantings may help support our local birdwing butterflies.

*Planchonia careya* is an important plant for the Rare Red-eye skipper / Ornate Dusk-flat (*Chaetocneme deniza*).

*Wilkiea huegeliana* and *W. macrophylla* are foodplants for the rainforest Regent Skipper (*Euschemon rafflesia*).

Perhaps there is a localised threatened species of insect or lizard which could benefit by the addition of a plant, or the non-modification of acreage. The Australian Fritillary (*Argyreus hyperbius*) is very dependent on permanent patches of native violets, *Viola betonicifolia*. Perhaps your property is suitable for *Bursaria* trees and the copper butterflies (*Paralucia spp.*) which are dependant on them.

Two other nymphalid butterflies which may need a little help around Brisbane are the Chocolate Argus (*Junonia hedonia*), which feeds on *Hygrophila* and the introduced *Hemigraphus* and the Bordered Rustic (*Cupha prosope*), which feeds on *Flacourtia* and *Scolopia*.

Brisbane has some rarities such as the Christmas beetles *Mesystoechus ciliatus* and *Schizognathus apricagger* and are dependant on their environments remaining intact. Saw-sedges (*Gahnia* spp.) have been badly treated in Brisbane and the southeast corner, and as a consequence the Swordgrass Brown (*Tisiphone abeona morrisi*) have suffered also.

Water features are worth protecting and looking after. The Eastern Water Dragon is making a resurgence in the Brisbane area, but they do need constant water features, as do frogs. Some Brisbane nursery sprinkler systems have been sufficient to keep water dragons happy, but the drought has been a negative for the dragons.

On acreage a gnarled tree with a mulch core can be a safety hazard, but is also important for tree core-dwelling fauna including the huge carab beetle *Hyperion Schroetteri* (the predator of the Rhinoceros beetle (*Haploscapanes* mentioned earlier) and flower chafer beetles such as the large *Trichaulax marginipennis*. These trees also provide nesting sites for gliders, possums, parrots and other fauna, but land development has severely reduced their number in Brisbane.

Property owners should protect scrub pockets on their lot, particularly along creeks, or consider areas with struggling native remnants. It has been shown that fenced / weed-managed plots have produced a rich assortment of natives, particularly where grazing animals are present. These areas are also protected from constant mowing / slashing and other activities.

The modification of environments can sometimes be non-negotiable for some species (e.g. a lizard dwelling in rocky outcrops) so that reassembling this disturbed environment may not be a solution. As an example some flightless carab beetles are not always able to reestablish. The balance of ant species may be changed, and we know that ants can play a major role in environments.

**Some useful exotic plants**

This is a highly contentious area where care is needed to ensure that exotic escapees do not further stress our environments. There are a number of non-invasive species which are very attractive to wildlife.

- Golden Shower (*Cassia fistula*) attracts a range of butterflies. Some ‘yellows’ (pieridae), Tailed Emperor (nymphalidae) and ‘blues’ (lycaenidae) eat leaves and flower petals.
- Citrus trees support the Orchard, Dainty and Fuscous Swallowtail larvae (*Papilio* spp.).
- Crepe myrtle (*Lagerstroemia indica*) can be a good place to park your mistletoes such as *Amyema conspicuum*. Red and black flashes of the Mistletoebird is a delight.
- Oleander (*Nerium*) will attract Common Crow butterflies (with their silver pupae), and by supporting the mistletoes *Amyema conspicuum* and *Dendrophthoe vitellina* will also attract Jezebel butterflies.
• The blue flowering *Plumbago* will provide the Zebra Blue (*Leptotes plinius*) most of the year. These are very under-rated but very attractive little butterflies.

• *Poinciana (Delonix regia)* is excellent for attracting elephant beetles which scrape patches of bark in order to suck sap.

• *Gardenias (Gardenia spp.)* provide leaves for the larvae of clear-winged hawkmoths (*Cephonodes spp.*)

• Bookleaf pines (*Thuja spp.*) attract pale-headed rosellas, rainbow lorikeets, king parrots, white cockatoos and corellas to the small conelets; stick insects (*Acrophylla spp.*) will eat the foliage.

• Custard apples (*Annona spp.*) attract some of the *Graphium* spp. butterflies and the Eastern Dusk-flat (Common Red-eye) skipper (*Chaetocneme beata*).

**Some obnoxious exceptions**

Dutchman’s Pipe Vine (*Aristolochia elegans*) not only poisons larvae of birdwing butterflies, but also competes by scrambling over our native plants. Large areas of our rainforest / wet sclerophyll forest around Oakview, Kandanga and Amamoor southwards are suppressed by this vine.

Cat’s Claw Creeper (*Macfadyena unguis-cati*) also grows in the above areas and on very steep slopes, where mechanical removal is difficult. It is a serious problem in our region. Attempted removal of these vines will be an expensive environmental issue.

Lamb’s Tail or Madeira Vine (*Anredera cordifolia*). This vines and many other weeds seem to serve no useful purpose. It is difficult to eradicate as each stem nodule that gets brushed off will grow into a new vine.

The peppercorn tree from South America, *Schinus terebinthifolia*, growing to 5 or 6 m in height, attracts birds but unfortunately seriously displaces our flora by growing in thickets. Some of our creek edges in Brisbane have been heavily stressed by it.

We have an endless array of escaped weeds in our environments and an exercise to do next time you go ‘bush’ is to check how many are actual weeds.

**Other considerations**

A number of insects require a combination of foodplants or factors in order to survive. As mentioned above, the Elephant Beetle requires humus / branch heaps for the larval development and tree sap for the adults to imbibe.

Many ‘blues’, ‘jewels’, ‘azures’, etc. require the presence of a certain ant species, as well as a suitable foodplant (larval host plant), to exist. An example of this is the Purple Azure (*Ogyris zosine*) which requires a suitable mistletoe, sugar ants (e.g.*Camponotus claripes*) and nesting and hiding sites.

The Blue Jewel (*Hypochrysops delicia*) larva and its *Creumatogaster* ants need acacia branches with borer holes, to hide in during the day.

Ghost moths (*Aenetus spp.*) are spectacular, seldom seen, blue, green and red coloured moths. Otherwise known as rifleborers, owing to the larval stem tunnel, and circular webbed pad, these moths use *Callicoma, Syzygium, Dodonaea, Casuarina* and others. The damage these moths do is not necessarily serious in amongst tree clumps, and exit holes can be calloused over by the tree.

Remember that Australian plant species may still be exotic to your locality.
If you plant palms, be prepared for defoliation and ragged fronds caused by Orange Palmdarts and Yellow Palmdarts (skipper butterflies).

**Neighbourly love bushes**

*Dendrocnide* spp. include a number of stinger trees which if grown along fence lines, will ensure a lasting relationship with your neighbour and his dog “Odd Job” and provide an alternative foodplant for Jezebel Nymphs! I don’t know if anyone is willing to supply potted stock.

Prickly *Capparis* spp. along the fence line will also retain a loving relationship with your neighbour, his roving donkeys, straying parked cars, and so on and will also increase the pierids in your area.

Photos by Murdoch De Baar

This article appeared in Issue #50 of “Metamorphosis Australia” in September 2008.