

Previously I discussed key pests that damage orchids. I should have said that they were pests that I find most annoying. The following are some other pests that I rarely encounter but others will have experienced their visitations to their shade houses.

GNATS/MIDGES - some are tiny white fly-like bugs that attack orchid buds and flowers causing bud blast, as well as damage and deformity to developing tissues. Others such as Midge larvae flourish in high humidity and require a damp medium in which to pupate so they may thrive in some orchid growing conditions. Top your mix with Diazinon (biodegradable) to eradicate burrowing larvae. More enviro-friendly treatments are - Pyrethrum Spray, Natrasoap, Nature's Way Vegie and Herb Spray or Eco-Oil on foliage to control egg-laying adults and larvae. Repeat spraying for 3 - 4 weeks .

Fungus gnats are small flies that lay eggs in damp potting mixes. The larvae feed on fungi, other organic matter and roots. Best solution is to have a good open mix and don't over water, especially during winter when plants need less water. Also, avoid water-holding, organic material such as peat moss that may encourage egg laying. If these gnats are present, allow the soil to dry to a depth of 25-50 mm between waterings. This kills larvae, inhibits egg development and makes the mix less attractive to egg-laying females. An enviro-friendly spray and the Sticky Yellow Fly paper will help discourage them.

SNAILS & SLUGS - these may be regular visitors for some people, when flowers occur. They chew flowers, buds and root tips. Look for slime-trails across the flowers. To limit numbers, keep the orchid area clear of rubbish and weeds. Use Snail & Slug pellets: predatory wasps may be effective. If an infestation, try Mesurol.

There is also a small BUSH SNAIL (GARLIC SNAIL) that is harder to eradicate. They inhabit potting mix and will trim off new root tips as they appear. Squash them between your fingers and you will know why they are called Garlic Snails! They do not normally eat snail baits. If a minor problem, repotting with a fresh clean mix is effective. For larger problems, the best way to eliminate them is to dose all pots with Mesurol. This is quite expensive and not readily available but try Ace Ohlson or other horticultural suppliers or Norco.

APHIDS - in colour they may be green, brown or black. They suck out plant tissue, particularly flower buds damaging the flowers which become blotched purple, pimples or otherwise deformed. Malathion/Maldison are effective but other useful remedies are Pyrethrum Spray OR add 2 tablespoons of soap flakes to 1 litre of water, stir until completely dissolved and spray on as is.

THRIPS - these tiny insects attack and ruin flowers quickly though they do not attack orchids as much as other flower crops. Spray with Malathion, Maldison or Pyrethrum Spray to eradicate them OR for an enviro-friendly treatment you can mix four tablespoons of dishwashing liquid with 1 cup of vegetable oil. Then mix 1 part of that with 20 parts of water and spray the affected plants.

ANTS - These may be a problem for 2 reasons. One is that they bring in pests such as aphids,

brown scale and mealy bug and transfer them from plant to plant. Ants farm these insects to feed on honeydew. Ants can also nest in pots. Control using Ant, Cockroach and Spider Spray or with Antkill Crystals.

Here are some useful insecticides, the first 2 are home remedies:

1. Chop four large onions, two cloves of garlic, and four hot chillies. Mix them together and cover with warm, soapy water and leave it to stand overnight. Strain to recover the liquid and add it to five litres of water to create an all- round insecticide.
2. Crush a whole garlic, cover with vegetable oil and leave stand for two days. Then strain the liquid, add a couple of drops of dishwashing liquid and use 1 ml to 1 litre of water.
3. Pyrethrum Spray and Neem Oil are commonly used and commercially produced pesticides that are extracted from plants and are considered reasonable safe.

Acknowledgements: I thank Peter Hegarty, Manager, Ace Ohllson Horticultural Supplies, Woolgoolga for helpful advice regarding chemicals. I have endeavoured to refer only to least cost products that are reported to be effective for these orchid pests; other products may provide similar results.

I sourced some information and photographs from the following websites:

<https://cals.arizona.edu/crop/vegetables/advisories/more/insect206.html>

<https://dendrobiumorchidflowers.blogspot.com/2019/05/orchid-diseases.html>

<https://nzacfactsheets.landcareresearch.co.nz/factsheet/InterestingInsects/Long-tailed-mealybug---Pseudococcus-longispinus.html>

<https://staugorchidsociety.org/culturepests-diseases.htm>

<https://www.aos.org/orchids/orchid-pests-diseases.aspx>

Insecticides, Pesticides & Other Useful Products		
<u>Product</u>	<u>Packaging Size</u>	<u>Indicative \$</u>
Note: The smallest quantity is not necessarily the least cost product		
Insecticides:		
Eco-Neem	100 ml	\$ 29.99
Neem Oil	250 ml - 1 litre	\$ 9.99 - \$18.00
Eco-Oil	200 ml - 1 litre	\$ 12.50 - \$19.80
Pest Oil	500 ml - 750 ml	\$ 10.00 - \$ 13.80
White Oil	500 ml - 750 ml	\$ 9.90 - \$14.99
Pyrethum Spray	200 ml - 750 ml	\$ 6.32 - \$ 13.80
Ant, Spider & Cockroach Killer	750 gm	\$ 10.30
Ant & Roach Dust	500 gm	\$ 12.99
Cockroach Spider & Pest Killer	500 gm	\$ 9.99
Maldison	5 litre	\$ 77.00
Malathion	200 ml - 500 ml	\$ 19.80 - \$ 36.44
DC-Tron	20 litre	\$ 169.00
Kelthane	200 ml	\$ 10.00
Omite	1 kg	\$ 60.20
Mavrick	200 ml	\$ 13.75 - 19.99
Conguard	200 ml - 500 ml	\$ 14.50 - \$ 29.00
Dusting Sulpher	25 kg	\$ 38.50
Scale Spray R70	1 litre	\$ 36.30

Yates Scale Spray	750 ml	\$ 9.50
Natrasoap	200 ml	\$ 10.85
Confidor (Guard)	5 litre	\$ 208.45
Diazinon	5 litre	\$ 291.50
Snail & Slug Pellets	500 gm	\$ 4.50
Mesurool	10 kg	\$ 104.50
Malathion	250 ml	\$ 18.50
Cockroach Killer	1 litre	\$ 35.20
Ant Cockroach Spider Killer	200 ml - 3 litre	\$ 10.50 - \$ 27.50
Captan	10 kg	\$ 220.00
Fungicides:		
Copper Oxychloride	200 gm - 15 kg	\$ 12.99 - \$ 231.00
Mancozeb	100 gm	\$ 14.99
Mancozeb Plus (fungicide & insecticide)	150 gm	\$ 12.99
Yates Anti Rot	200 ml	\$24.99
Sharp Shooter Triforine (Rose fungicide)	500 ml	\$ 29.95
Phozguard 620	5 litre	\$ 60.50
Diothane Rain Shield	20 kg	\$ 242.00
Previcur	1 litre	\$ 192.50
Switch	1 kg	\$ 192.50
Bravo	10 litre	\$ 198.00
Banrot	907 gm	\$ 303.60
Cabrio	5 litre	\$ 415.80
Other:		
Sticky Trap Yellow (Fly paper)	5 sheets	\$ 6.50 - \$ 14.68
Auxinone	1 litre - 10 litre	\$ 30.00 - \$ 71.50
Striking Powder	250 gm	\$ 15.00
Condy's Crystals	5 kg	\$ 71.50
Hi-Chlor (Benzalkonium chloride)	2 litre	\$ 19.90
Hydrogren Peroxide	10 litre	\$ 110.00
Snail & Slug Pellets	500 gm - 1 kg	\$ 2.34 - \$ 6.48

Notes: * Pricing may vary depending on quantity and retail outlets. These Prices are based on outlets of Ace Ohllson (Woolgoolga), Mitre 10 (Woolgoolga) and Bunnings (Coffs Harbour) & some Online retailers. Other suppliers may vary. Ace Ohllson (Woolgoolga) may need to order in small quantities.

*** Always follow the Product label instructions and always observe safety precautions.**

*** ALL PRODUCTS MAY BE HAZARDOUS TO YOUR HEALTH No products are specifically recommended. Order at your own risk**