## Houseplant Insect Management 3/30/2019

INSECT	CHARACTERISTICS	MANAGEMENT OPTIONS
Aphids	- Aphids common on houseplants are: green peach	- Wash with water
	aphid, potato aphid, cotton/melon aphid,	<ul> <li>Most are highly resistant to insecticides</li> </ul>
	chrysanthemum aphid	- Imidacloprid very effective
	- Reproduce rapidly (generation completes in 2 to 3	Insecticidal soaps and pyrethroid insecticides may be effective
	weeks)	
Fungus Gnats	- Like fruit fly on house plants; adults lay eggs in soil;	Most Effective
	hatch into white worms that live in soil for several	<ul> <li>Use yellow sticky traps to catch adults</li> </ul>
	weeks eating plant roots; emerge as gnats that only	- Bti (Bacillus thuringiensis israelensis) soil drench or beneficial
	live for a few days to find a mate & lay more eggs; 21	nematodes (soil drench) to kill larvae
	day life cycle	- Avoid use of highly organic soil and fish emulsion which can favor
	<ul> <li>Eggs hatch in soil cracks and at base of plant</li> </ul>	development of fungi eaten by fungus gnats
		- Allow soil to dry out between waterings
Mealybugs	<ul> <li>White cottony or waxy insects on underside of</li> </ul>	- Separate houseplants
	leaves/stems, crotches where leaves attach; looks like	- Wipe off with alcohol
	cottony masses	- Spray with a pyrethroid insecticide, insecticidal soap, oils or Neem
	<ul> <li>Most species also infest roots</li> </ul>	(won't impact root feeding stages)
	<ul> <li>Sooty mold can result from the honeydew</li> </ul>	- Apply systemic
		- Discard plant
Spider Mites	<ul> <li>Two-spotted spider mite is most common</li> </ul>	<ul> <li>Wash plant and provide more humidity</li> </ul>
(two-spotted)	- Often brought indoors when plant has been outside	<ul> <li>Repeated spraying with jet of water (over several weeks) may</li> </ul>
	- Feed on plant sap	reduce populations to low level
	- Look for webbing, leaves appear bronze or gray color	- Discard heavily infested plant
Spider Mites	<ul> <li>Very tiny; no webbing produced</li> </ul>	- Discard plants
(cyclamen	- Cyclamen mite (cyclamens and African violets) often	
mite & broad	causes new growth to be stunted, twisted &	
mite)	sometimes killed back; leaves may appear small, thick	
	& textured,	
	- Broad mite produces bronzing of leaf underside on	
	citrus and begonias	

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Scale (Soft)	<ul> <li>Soft scales (most common on house plants)</li> <li>Tan or brown shell, sap-eating insects live on the stems or leaves; vary in shape form flat to almost spherical</li> <li>Secrete a waxy film (up to ½ inch long) that is part of the body. They may move short distances (but rarely do)</li> <li>Produce copious amounts of honeydew, which can also lead to the growth of sooty mold</li> </ul>	<ul> <li>Soft scales (will most likely need repeated treatments over 2 to 4 months) <ul> <li>Isolate plant</li> <li>Light infestation - hand remove scale with tweezers or lightly scrape off</li> <li>Rub scale with cotton-ball, swab, or soft sponge</li> <li>Spray w/ insecticidal soap or neem oil (test first to ensure it won't damage leaves)</li> <li>Apply systemic w/ imidacloprid</li> <li>Remove infested leaves</li> <li>May need to discard plant</li> </ul> </li> </ul>
Scale (Armored)	<ul> <li>Less common than soft scales</li> <li>Generally round in shape often with a distinctive central spot</li> <li>Many cause spots around feeding site or cause dieback</li> <li>Do not produce honeydew except for very brief period after egg hatch (in crawler stage)</li> </ul>	<ul> <li>Horticultural oils most effective</li> <li>Systemics ineffective</li> </ul>
Thrips	<ul> <li>Extremely small; can penetrate most screens</li> <li>Look for: silvery areas on leaf surface, tiny dark spots of excrement, distorted and scarred petals of buds and developing flowers</li> </ul>	<ul> <li>Yellow or pale blue sticky traps attract adults</li> <li>Soaps or oils</li> </ul>
Whiteflies (Greenhouse)	<ul> <li>Whiteflies are only an indoor problem in Yavapai</li> <li>County (too cold for survival outdoors).</li> <li>Most likely brought indoors on newly purchased plant.</li> <li>Life cycle: 4-6 weeks. Main stages: eggs, nymphs and adults.</li> <li>Eggs laid on underside of leaves. nymphs cause the most damage. Nymphs and adults suck juices from leaves, causing them to turn yellow and drop.</li> </ul>	<ul> <li>Spray undersides of leaves with insecticidal soap, neem, or horticultural oil</li> <li>Use yellow sticky traps to catch adults</li> <li>Vacuum from small plants</li> <li>Insecticide with a pyrethrin or systemic w/ imidacloprid is highly effective</li> </ul>

Note: Imidacloprid negatively affects bees and should be used with caution.