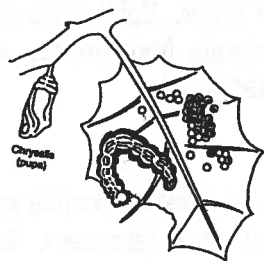


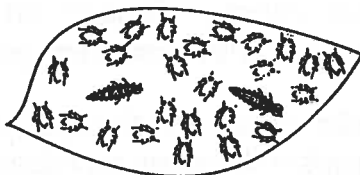
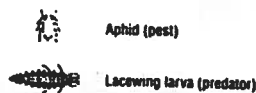
SUSTAINABLE PEST MANAGEMENT FOR HOME GARDENS

PROBLEM

1. Caterpillars



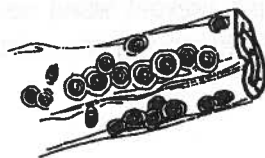
2. Aphids



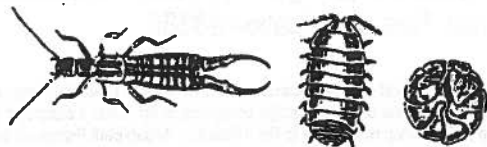
3. Stink Bugs, Plant Bugs



4. Scale Insects



5. Earwigs and Sowbugs



SUSTAINABLE OPTIONS

Use row covers, hand pick, spray with insecticidal soap or with the microbial insecticide, *Bacillus thuringiensis*. Some parasites for certain species of caterpillars are commercially available. Cultivation kills cutworm larvae hiding in the soil near seedlings.

Use floating row covers to protect young seedlings. Ignore low populations of aphids. Wash aphids off plants with a blast of plain water. Spray dense populations with insecticidal soap spray or rub between fingers. Be patient and let natural predators control them. Local natural enemies include lacewings, soldier beetles, lady beetles, earwigs and small parasitic wasps.

Check plants weekly and remove bugs by hand. Clean up old debris where bugs hide in winter. Use horticultural oil sprays on trees. Insecticidal soap sprays will control juvenile bugs.

Ignore light infestations. Prune plants to thin out foliage. Local natural enemies attacking scale insects include lacewings, predatory lady beetles, minute pirate bugs, predatory mites, and parasitic wasps. For heavy infestations, use horticultural oil sprays, repeat applications of insecticidal soap spray, or hand rub branches. Time sprays to control tiny 'crawler' stage.

May feed on seedlings, blossoms, shoots and soft fruits. But, they also help recycle organic matter by feeding on dead plant material and other insects such as aphids. Earwigs avoid sunlight, so keep mulch away from tender plants. Trap in dampened rolled up newspaper. For severe infestations, spray pesticide under hiding places.

6. Snails and Slugs



Favored by wet soil surface conditions. Dry garden surfaces – water less frequently and only in the morning. Bright copper flashing or copper screen can be wrapped around tree trunks or planting boxes to repel snails. Control using traps and hand picking.

7. Spittlebugs



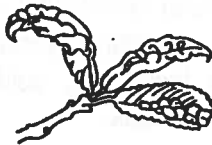
Froth produced by spittlebugs is unsightly, but these insects seldom harm plants. Ignore spittlebugs on woody plants or wash off of plants with a forceful stream of water. Spittlebugs are more likely to become abundant when they migrate from nearby weeds. Mow or remove nearby weeds by mid March.

8. Rust and Mildew



These fungus diseases are specific to plant species. Rusts are spread by wind, rain and splash from sprinklers. Select rust resistant plant varieties. Discourage leaf diseases by keeping plant leaves dry – avoid overhead watering. Remove and compost infected leaves. Preventive fungicide sprays protect new growth only.

9. Peach Leaf Curl



Fungus infection of new growth occurs in the winter. Use copper preventive sprays in November and February. Pull distorted leaves in spring. Disease is halted by dry, warm weather.

10. Leaf Curl on Apple and Plum

Aphid infestations cause apple and plum leaf curl. Control ants by using sticky band around tree trunk. Aphids will be controlled naturally by local predators. See also 'aphids' listing, above.

11. Annual Weeds



Use frequent cultivation or hand pull. Use mulches or landscape fabrics to shade clean soil and prevent weed seed growth. New seeds may blow-in. Mow or dig to prevent new seed production.

March 1999

ADDITIONAL READING:

Pests of Landscape Trees & Shrubs, IPM Guide, 1994, Univ. of Calif. Div. of Ag & Nat. Res., Publication #3359.

Pests of Garden & Small Farm, Grower's Guide to Using Less Pesticide, 2nd. Edition, 1998, Univ. of Calif. Div. of Ag & Nat. Res., Publication #3332.

Natural Enemies Handbook, Illustrated Guide to Bio Pest Control, 1998, Univ. of Calif. Div. of Ag & Nat. Res., Publication #3386.