Integrated Pest Management

Early detection of pests means healthy environment

Black Stink Bug

(Coptosoma xanthogramma)

-Can produce large number of offspring.
-Feeds on plant juices, affecting plant health.
http://en.wikipedia.org/wiki/Stink_bug

Cottony Cushion Scale

(Icerya purchasi)

-Commonly found on woody ornamentals, feeds on sap affecting plant health, also excretes honeydew attracting ants and causing black sooty mold growth.
-Adults usually found on twigs/branches.
-Females: orange, yellow, or brown with white cottony egg sac attached to body
-Males: small, red, winged, rarely seen.
http://www.ipm.ucdavis.edu/PMG/PESTNOTES/pn7410.html

Good planning can put you a step ahead of unwanted insects, weeds, and diseases. Healthy, vigorous plants minimize pest damage. Regular monitoring of your lawn or garden is the best way to stay on top of potential plant health and pest problems. If you see minimal damage, it is often easiest to just tolerate it and continue monitoring. If pests begin to cause serious damage, there are a number of management methods.

Preventing pests

- Plant disease and pest-resistant or tolerant species.
- Clean up litter and remove weeds before they go to seed.
- Don't over water or over fertilize your plants. It can make them vulnerable to insects and disease.

Physical pest control

- Remove insects by hand.
- Wash pests away using a water spray nozzle.
- Set traps where possible.
- Make physical barriers around plants, such as a wire mesh fence partially sunk into the ground for rabbits, aluminum foil wrapped around vegetable plants for cutworms, and solid barriers to prevent weeds from invading flower beds or vegetable gardens.

Chemical controls

If the methods listed above fail to solve your pest problem, use chemicals of low toxicity and rapid decomposition. Always read the label, follow directions, wear protective clothing, and spot-spray. Some of these chemicals are:

- Pesticidal soaps for aphids, scale crawlers, whiteflies, and thrips.
- Insecticidal dusts for aphids, beetles, fleas, ticks, ants, and crickets.
- Horticultural oils for aphids, mites, leafhoppers, mealybugs, scales, plant lice, and mosquito larvae.
- Biologically based pesticides such as Bacillus thuringiensis (B+) or spinosad for control of caterpillars
- Botanicals for leafminers, fleas, and ticks.
- Liquid formulations and products for control of insects, mites, diseases, nematodes, and weeds.
- Before you apply pesticides, make sure that they will not harm beneficial insects or be hazardous to humans, pets, or wildlife.

Additional Resources:
Master Gardener (808) 453-6050
www2.ctahr.hawaii.edu/extout/extout.asp
www.hawaii.gov/health/environmental/vector/index.html