

## THE DIAGNOSIS AND CONTROL OF PESTS

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### KINDS OF POISON

A basic knowledge of poisons and their application can be helpful in the successful control of pests. It is important, for example, to know that insecticides can be divided into three classes, namely:

- a) Contact poisons, which only work effectively if the insect comes into direct contact with the poison.
- b) Stomach poisons, which are effective once absorbed by the insect through eating a sprayed plant.
- c) Systemic poisons, where the poison is taken up by the plant and is distributed through the sap so that when the insect eats of the plant or takes in sap, it is affected by the poison.

Many poisons work in more than one of these ways, for example: a contact and stomach poison.

Systemic poisons are the most effective for use against small, sucking insects such as aphids and red spider, while contact and stomach poisons are more effective against caterpillars. As a rule, spray with a systemic poison if signs of sucking are found on the plant. If parts have been nibbled away, a contact and stomach poison will normally give better results.

### PESTS AND THEIR CONTROL

Not all pests that attack wild olives in the bonsai garden have been identified yet. The following can be considered the most prevalent:

#### *Lace wings and leaf-bugs*

These are by far the number one plagues on wild olives. In bonsai circles these insects are often wrongly referred to as thrips (*Thrips tabaci*). Thrips are, however, far more active on the fruit of, amongst others, avocados, grapes, mangoes and vegetables such as toma-

atoes. They cause marks on the fruit and a silvering of or rust brown stains on the leaves. They are also responsible for tomato spotted wilt virus which causes leaf curl. In my opinion the yellow spots and yellowing of leaves in wild olives were previously wrongly ascribed to thrips.

Lace wings are however the main culprits for leaf yellowing in olives and wild olives. They are found almost exclusively on these hosts. Their sucking causes the yellow spots on the leaves which eventually become completely yellow and drop off. With heavy infestations the young shoots can also die. They are small, long, flat insects (3 to 4 mm). Lace wings are grey in colour and leaf-bugs straw coloured. They suck sap on the undersides of leaves and shoots and live in groups. The damage they cause is seen more often than the insects themselves.

The recommended control is spraying early in September with a follow-up in November.

#### *Aphids*

These are small, green to brown insects found in dense colonies on growth tips, particularly in Spring and early Summer. They can also often be seen in large numbers a few days after heavy rain. A striking diagnostic is the two short protruberances on the back of the body. They normally do not have wings, but these can develop in cases of overpopulation or if growth becomes woody. They are sap suckers and the damage is consequently in terms of loss of growth or leaves. In the process they can also carry other plant diseases. They are often controlled by ladybirds and white eyes - small yellow birds with beadlike eyes which are their natural predators.

#### *Psylla*

In wild olives infestations are easily noted because of the white, woolly, waxy threads that are seen everywhere on the plant. The waxy threads are secreted by immature insects while feeding on young shoots and leaves. The adults are small, active, winged insects which