

# THE GREEN SCENE

A PROGRAM OF THE NATIONAL PARK SERVICE

# INDOOR PLANT PESTS



# notes...



Written and illustrated by Franziska R. Hecht and Mary L. Anderson

National Capital Parks, National Park Service

U.S. Department of Interior, Washington, D.C. 1974

## PREVENTIVE MEASURES

When you shop for plants look them over carefully to check them for signs of bugs. Be sure to look at the backs of the leaves, and in the joints of leaf stems and branches. Once you have your plant at home keep it in "quarantine" for a couple of weeks to make sure that no insects or diseases develop.

The secret to bug free indoor gardening is good grooming on a regular routine once a week at best, once a month at least. The first step is to remove leaves and flowers that have faded. Foliage that has yellowed, browned or spotted will not turn green again. It is best if they are removed in order to eliminate a comfortable environment for bugs. Check for the tell tale signs of bugs, shiny, sticky droplets of honeydew, cobwebs, yellowed or speckled leaves.

The leaves of plants accumulate dust and dirt and need to be cleaned regularly. To prevent the soil from washing out of the pot place it in a plastic bag and tie it lightly about the stem or cover the soil with a piece of aluminum foil. Then choose one of the following methods for washing:

- (1) Use a spray bottle filled with lukewarm water and a few drops of liquid soap. Give the plant a thorough spraying on both sides of the leaves and stems.
- (2) A quicker method is dipping plants in a sink or tub of warm soapy water. Rinse the soap suds off the plants with clear lukewarm water.
- (3) Adjust the nozzle of your shower to a fine spray and wash off dust and dirt.

This regular washing is a good preventive measure. It helps to catch the bug invasions when they are controllable.

Sterilized potting soil will prevent the invasion of soil born insects. Sterilized soil is readily available at plant or variety stores or you can sterilize your own by baking it for 45 minutes at 180°. Place the soil in a shallow pan and add one cup of water for every four quarts of soil.

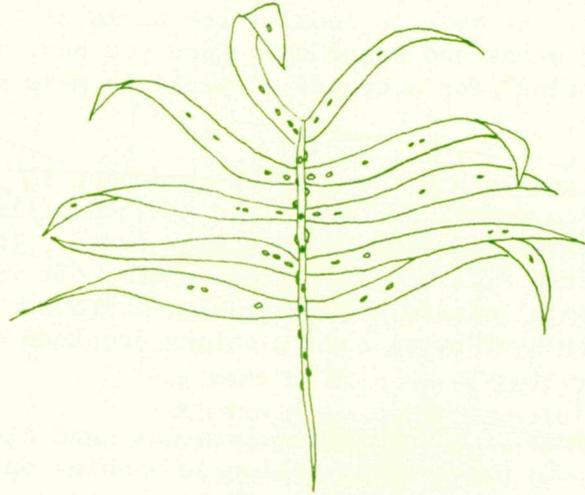
## TREATMENT METHODS

Should you be invaded, isolate the plant or plants and remove badly infested leaves. Sometimes a drastic pruning is in order; this will make dealing with the bugs more manageable. For infestations of scale or mealy bugs use a cotton swab dipped in rubbing alcohol to remove the insects from leaves and stems. This is a tedious job but necessary for effective control. Spider mites, aphids, and to a limited extent white fly can be dislodged from their homes by a forceful stream of water from your spray bottle. As a follow-up measure wash the plants carefully with lukewarm sudsy water then rinse with clear-water. This will need to be repeated every three or four days for several weeks to rid the plant of successive generations of bugs. A persistent washing method will make insecticides unnecessary.

# SCALE

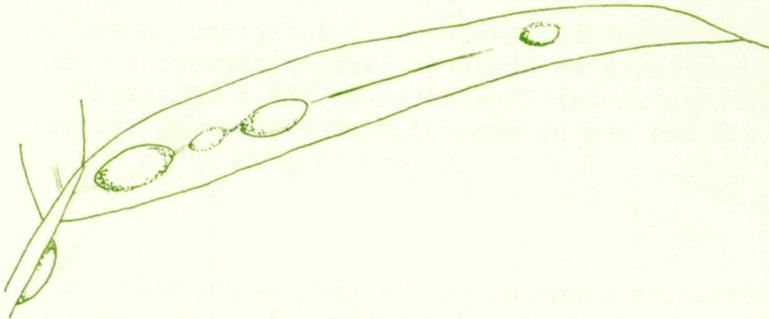
## What and where to look for damage:

Scale is a sucking insect that attaches itself to the leaves and stems of smooth leaved plants. The scale build little turtle-like shells that are the tell tale sign of an invasion. The leaves of the plant become faded, lifeless, and sticky.



## What the bugs look like:

The young scale are difficult to see before they build shells. They are pale yellow or white and move very slowly along stems of leaf veins. This mobile stage lasts for the short time that it takes the scale to emerge from under the parent shell and builds it's own. The shell colorings range from white, grey and tan to brown. In general those that attack house plants are oval.



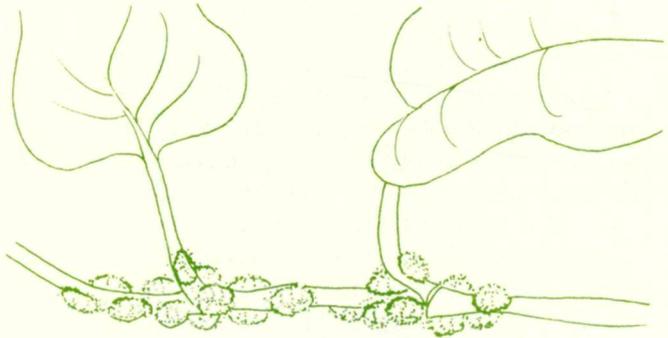
## How to stop the invasion:

Persistence and stamina are required to rid yourself of this pest. Use a cotton swab dipped in warm soapy water or rubbing alcohol to remove the little shells as they often contain large numbers of eggs or young. Once the visable scale are gone begin at the bottom of the plant and carefully wash all the leaves and stems with warm soapy water. Repeat this process at three day intervals for three weeks. Good luck!

# MEALY BUGS

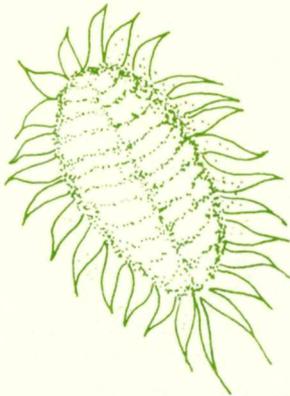
## What and where to look for damage:

Mealy bugs group together in the crotches of branches and at the base of leaf stems, where they suck plant juices. The leaves attacked become stunted, wilted, and drop off. Mealy bugs also secrete sticky honeydew on which black mold grows.



## What the bug looks like:

Mealy bugs are sucking insects with soft bodies that look as if they have been dusted with white powder. The powder itself has a waxy feel. Clustered about a stem a colony of mealy bugs looks like a bit of lint or cotton fluff. Do not be deceived; these beasts multiply like crazy! Each female usually lays about 600 eggs. There are several varieties of mealy bugs with slight variations in shape.



## How to stop the invasion:

Mealy bugs are one of the most persistent and most damaging of the indoor pests. To get rid of them you will have to be equally as persistent about removing the insects. A cotton swab dipped in lukewarm sudsy water or rubbing alcohol will however, usually do them in. Alcohol has a tendency to burn tender foliage, therefore, it is essential, however, to rinse the plant with warm soapy water and then with clear warm water. Repeat this washing every three or four days until the bugs are gone. Be patient as this may take several weeks of constant attention.

# SPIDER MITES

## What and where to look for damage:

Spider mites are sucking insects that attach themselves to the backs of leaves and drain out the chlorophyll leaving tiny pale colorless spots on the foliage. Leaves turn yellowish or grayish brown, die and drop off. Infected plants are lifeless, growth is stunted and they eventually die. Look at the backs of the leaves for tiny black droppings and white castings that are the shed skins. They sometimes spin tiny webs in the leaf axils and on the backs of the leaves. Hot dry air that doesn't circulate provides the ideal environment for mites; so keeping the humidity level high and avoiding corners discourages invasion.



## What the bug looks like:

As the name implies these tiny spiders have eight legs. Spider mites are also called red spider mites and spotted mites; but are so infestestimal they are very hard to see with the naked eye. Therefore, mites are detected by the damage they do and their webs rather than by sight.

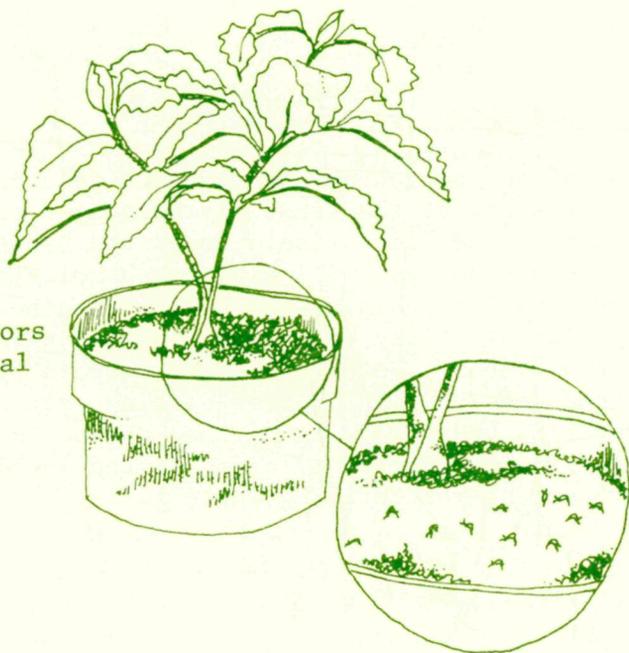
## How to stop the invasion:

Plants that have spider mites should be pruned back vigorously removing leaves that are badly infested. This sounds drastic but it will make getting rid of bugs more possible. Wash the leaves with warm soapy water, making sure to wash the backs of the leaves as well. Repeat the washing at two or three day intervals for three weeks. You will have to be more persistent than the invaders.

# SPRINGTAILS

## What and where to look for damage:

Springtails are soil dwellers and come to the surface when the pot is flooded during watering. They seem to thrive in soil that is consistently over-watered. It is difficult to determine what damage, if any, springtails do to plants. Their function in soil out-of-doors is to aid the breakdown of organic material into humus.



## What the bug looks like:

Springtails look rather like tiny shrimp. They are light in color, usually greyish or silvery and easily detected on the soil surface.



## How to stop the invasion:

Immerse the pots in water forcing the springtails out of the soil into the water. Also, change your watering schedule to allow the soil to dry out more thoroughly between waterings. Do not allow old foliage to accumulate on the soil surface.

# WHITE FLY

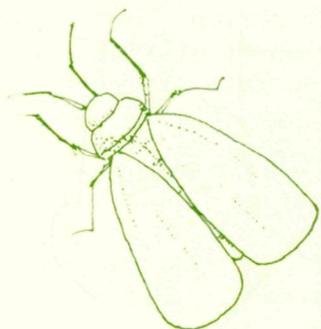
## What and where to look for damage:

The foliage of your plants becomes pale and lifeless and at the least disturbance a cloud of tiny white flies rise. Check the backs of the leaves and you will find nymphs clustered about the leaf veins. There will also be deposits of sticky honey dew and shed skins of the nymphs. Both the flying insects and nymphs feed on plant juices causing pale freckling and yellowing of the leaves. Hot dry air with poor ventilation is the ideal environment for thriving white flies.



## What the bug looks like:

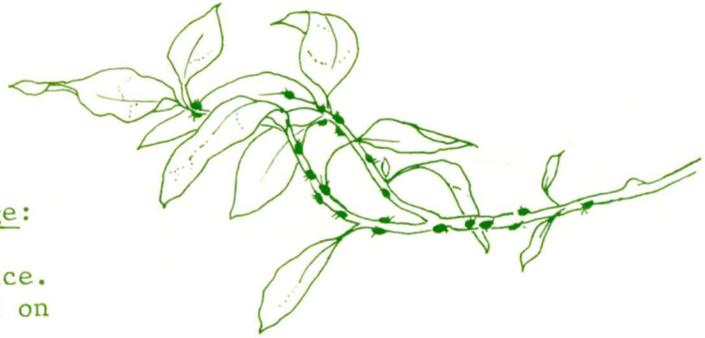
White flies are, as the name implies, tiny powdery white flies. The nymphs are equally tiny and creamy white or pale green and are stationary.



## How to stop the invasion:

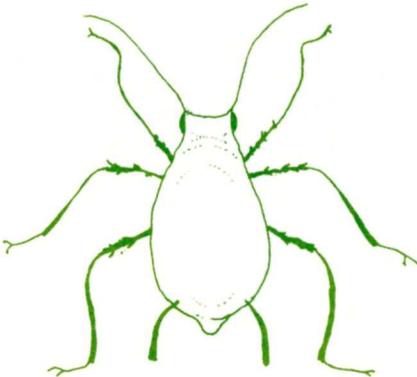
Avoid those corners and windows that get very hot during sunny days and provide plants with plenty of humidity. It is best to remove all badly infested leaves and prune back the foliage. Wash the leaves of the plant careful with warm soapy water at three to four day intervals for three weeks. White flies spread very rapidly from plant to plant and unless the specimen is very special to you consider throwing it away and starting over.

# APHIDS



## What and where to look for damage:

Aphids are often called plant lice. Aphids are to be found clustered on new growth and buds. They suck plant juices causing poor growth or curled leaves. They secrete a sticky liquid called honeydew that provides a base for the growth of sooty black mold. Some species of aphid cause bumps known as galls to form on branches; inside is a whole colony that eats its way out. African violets, begonias, and fuchsia get infested by the gall forming ones. Aphids seem happier in cool temperatures and delight in the juicy foliage of plants that have been over fertilized.



## What the bugs look like:

Aphids are sucking insects with soft round or pear-shaped bodies, some have wings, some do not. The bugs color range is varied pale yellow, greens, brown, grey or red. Aphids are rather sedantary lot and stay put once they settle down.

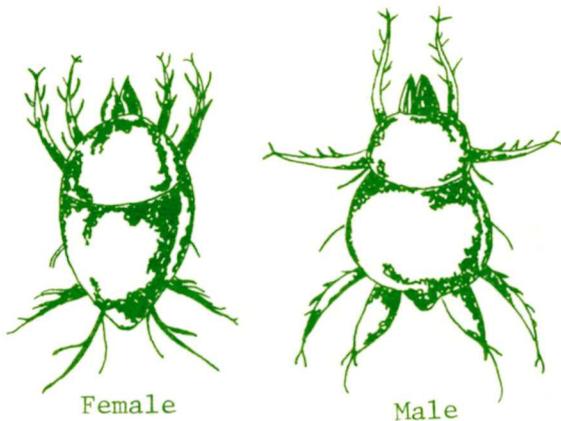
## How to stop the invasion:

Spray the plants particularly where the bugs have settled with a strong stream of luke warm water. A drop or two of soap in a spray bottle and a thorough washing of the leaves and stems will get rid of successive generations. Pruning back any new growth that has been damaged is advisable particularly with plants infested by the gall forming aphids.

# CYCLAMEN MITES

## What and where to look for damage:

Cyclamen mites infest the new growth and flower buds of plants (particularly cyclamens, African violets and Gloxinias), causing distorted and discolored growth and bud drop. The discoloring ranges from purples and browns, to grey and black. If the new growth of your African violet is very tiny and tightly curled and appears too furry, cyclamen mites have probably invaded. The high humidity level required by African violets coupled with cool temperatures (55°-60°) provide the right environmental conditions for cyclamen mites.



## What the bugs look like:

The cyclamen mite is impossible to see without the help of a magnifying lens. They are a sedentary group and move very slowly.

## How to stop the invasion:

Cyclamen mites are an import and are fast becoming one of the more prevalent indoor pests. To stop the invasion is rather a euphemism; if the plant is badly infested the trash is the best place for it. If you want to try and save the plant prune out the affected growth with a sharp knife. Washing the foliage is of no avail, so apply a miticide or a systemic poison. Isolate the infected plants and be extremely careful not to spread the bugs around with your hands. Good luck!

# THRIPS

## What and where to look for damage:

Thrips are flying insects that settle on your plants and scrape away patches on the undersides of smooth leaves. They leave transparent papery scars and brown or black specks of excrement on the backs of the foliage. Tips of the new growth and flower buds are tightly curled and deformed.



## What the bug looks like:

Thrips are almost invisible flying insects. Their thin bodies and wispy wings are colored tan, brown or black with lighter markings.

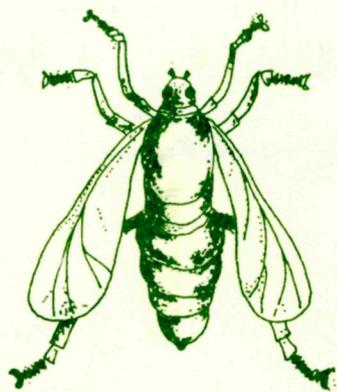
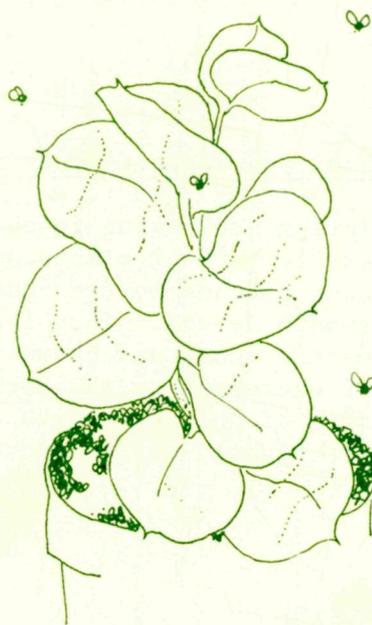
## How to stop the invasion:

Be thankful that this is not a terribly prevalent indoor pest. Remove infested leaves and wash down the plant with warm soapy water and rinse. Be sure that you get the undersides of all leaves.

# FUNGUS GNATS

## What and where to look for damage:

Over-watered plants invite these little flying insects. If your plant's leaves are weak and an unhealthy yellow, the roots are probably infested with the fungus gnat larva, however, the gnats themselves don't actually eat the foliage.



## What the bugs look like:

The tiny flying gnats are a dusty black and swarm around the foliage of the plant.

## How to stop the invasion:

Plants that have been over-watered should be repotted in a sterilized potting medium. Check the roots of the plant and remove any that show signs of damage. Be more careful about watering; too much water is the most destructive factor in indoor gardening.