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| Logo AGES |
| Greenhouse whitefly |
|  |  |
| 09.05.2025 19:37 Uhr |

**Greenhouse
whitefly**

**Trialeurodes
vaporariorum**

Last
change:
18.01.2022

**Profile**

The
greenhouse
moth
scale
insect,
also
called
whitefly,
originates
from
East
Africa
and
is
found
in
Austria
on
numerous
greenhouse
crops.
Its
name
comes
from
the
fact
that
the
larvae
are
stuck
similar
to
scale
insects,
while
the
adult
insects
are
able
to
fly
like
small
white
moths.
In
addition
to
sucking
damage,
visual
impairment
of
the
plants
occurs
due
to
honeydew
excretion.

**Appearance**



Adulte
Weiße
Fliege

The
adults,
about
2
mm
in
size,
have
two
pairs
of
wings
and
are
covered
with
fine
white
wax
dust.
They
usually
sit
well
protected
on
leaf
undersides
and
jump
away
by
means
of
their
hind
legs
when
disturbed,
after
which
a
flight
begins.

The
larvae
develop
through
four
scale-like
stages,
growing
to
about
0.8
mm
in
length.
The
first
larval
stage
is
still
freely
mobile
with
functional
extremities,
but
these
later
atrophy.
All
stages
are
predominantly
transparent
and
show
paired
yellow
spots
inside
the
body.
The
last
developmental
stage
(pseudopuparium)
looks
like
a
tiny
oval-shaped
box
with
vertical
walls
and
is
white
to
yellowish
in
color.

The
0.25
mm
long
spindle-shaped
eggs
are
anchored
to
the
undersides
of
younger
leaves
with
a
small
stalk
in
the
leaf,
through
which
they
are
supplied
with
moisture.
Freshly
laid,
they
are
white,
but
become
progressively
darker
during
their
development,
which
lasts
about
six
to
eight
days
(at
20
°C).



Eier
der
weißen
Fliege



Weiße
Fliege
im
Larvenstadium



Pseudopuparium
der
Weißen
Fliege



Häutungsreste
(Exuvien)
der
Weißen
Fliege

**Biology**

The
greenhouse
moth
scale
insect
belongs
to
the
moth
scale
insects
(Aleurodina)
a
subgroup
of
plant
suckers.

The
greenhouse
moth
scale
insect
goes
through
several
stages
of
development
until
it
becomes
an
imago.

The
larvae
in
the
first
stage
look
for
a
place
on
the
natal
leaf
to
suck
plant
sap,
which
they
later
do
not
leave.
From
the
second
larval
stage
on,
the
animals
are
attached
to
the
plants.
Using
a
sucking
proboscis
(similar
to
aphids),
they
extract
sugar
sap
from
the
vascular
bundles
of
their
host
plant.
In
many
host
plants
with
tiers
of
leaves,
such
as
cucumbers
or
tomatoes,
the
egg-laying
females
are
found
on
the
upper,
younger
leaves;
the
larvae
are
found
on
the
middle
leaves,
while
the
hatching
whiteflies
are
found
on
the
lower,
older
leaves.

Eggs,
as
well
as
larvae
and
adults,
constantly
require
fresh
plants
for
survival
and
perish
on
wilted
leaves
after
a
short
time.
Symbiotic
microorganisms
(bacteria)
that
produce
vitamins
important
to
the
moth
scale
insect
live
in
the
yellow
spots
inside
the
body.
During
egg
development,
the
bacteria
migrate
from
the
mother
animal
into
the
still
unfinished
eggs
and
are
transferred
in
this
way
to
the
animals
of
the
next
generation.

At
21
°C,
development
from
egg
to
finished
insect
takes
25
to
30
days.
Thus,
numerous,
overlapping
generations
can
develop
in
any
given
year.

In
our
country,
the
whitefly
can
only
overwinter
on
green
plants
in
glass
houses
or
living
rooms,
as
it
has
no
dormant
stage
and
is
also
sensitive
to
cold.

**Damage
symptoms**

Infested
plants
are
usually
damaged
less
by
the
direct
sucking
activity
than
by
sugary
excretions
(honeydew)
of
the
larvae.
Since
the
animals
prefer
to
sit
on
the
undersides
of
leaves,
the
honeydew
drips
onto
the
leaves
and
fruit
below.
Black
fungi
can
then
colonize
this
shiny
coating.
This
so-called
"sooty
mold"
contaminates
the
fruit
on
the
one
hand,
and
on
the
other
hand,
affected
leaves
lose
assimilation
surface,
which
weakens
the
plants.

**Host
plants**

In
addition
to
cucumbers,
tomatoes
and
melanzani,
and
less
frequently
peppers
and
beans,
many
ornamental
plants
and
weeds
are
attacked.

**Distribution**

In
temperate
latitudes
worldwide,
whiteflies
are
restricted
to
greenhouses,
or
at
most
their
surroundings,
since
they
cannot
overwinter
outdoors.
In
warmer
areas,
however,
this
restriction
does
not
apply.

**Propagation
and
transmission**

Greenhouse
moth
scale
can
be
carried
with
a
wide
variety
of
plant
species
(usually
propagules)
in
all
stages
of
development
(eggs,
larvae,
pseudopuparia).

**Economic
importance**

The
greenhouse
moth
scale
has
become
an
economically
important
pest
of
greenhouse
vegetables
and
ornamentals
because,
in
addition
to
direct
sucking
damage,
it
damages
plants
indirectly
as
a
virus
vector
and
it
has
already
developed
resistance
to
insecticides,
making
it
difficult
to
control.

**Prevention
and
control**

* Prevention
of
overwintering:
particular
danger
comes
from
overwintering
ornamental
plants
(hanging
baskets
in
front
rooms
or
in
neighboring
homes).
Fuchsias,
gerberas,
etc.
are
often
particularly
heavily
infested.
* Avoidance
of
spreading:
never
go
from
a
heavily
infested
greenhouse
to
an
uninfested
one.
* Monitoring:
in
order
to
detect
the
initially
harmless
infestation
by
the
moth
scale
insect
in
time,
glued
yellow
boards
should
be
fixed
just
above
the
plant
tips.
The
yellow
color
attracts
numerous
pest
species,
such
as
whitefly,
fungus
gnat,
and
leaf
miner.
However,
yellow
panels
alone
are
not
suitable
for
effectively
controlling
whiteflies.
* Chemical
control:
Sprays
against
whitefly(s)
(moth
scale
insects)
or
sucking
insects
can
be
used
as
chemical
control.
At
least
two
treatments
are
necessary,
about
five
to
seven
days
apart.
The
whitefly
tends
to
develop
resistance
to
pesticide
active
ingredients
-
this
forces
frequent
changes
of
active
ingredient
groups
(see
[list
of
pesticides
approved
in
Austria](https://www.baes.gv.at/zulassung/pflanzenschutzmittel/pflanzenschutzmittelregister/)).
* Biological
control:
By
releasing
*Encarsia
wasps*:
this
small
wasp
injects
its
eggs
into
young
whitefly
larvae,
so
that
the
last
to
hatch
is
a
whitefly
instead
of
a
whitefly.
In
individual
cases,
additional
selective
plant
protection
products
that
are
gentle
on
beneficial
insects
may
have
to
be
applied.
If
beneficial
insects
are
used,
the
lower
leaves
should
not
be
removed
too
quickly,
as
this
often
results
in
the
removal
of
wasps
that
have
not
yet
hatched.
Furthermore,
yellow
panels
should
not
be
used,
as
the
wasps
are
also
caught
by
the
yellow
panels.
* Other
beneficial
insects
that
can
be
used
are
the
ichneumon
wasp
*Eretmocerus
eremicus*
and
the
predatory
bug
*Macrolophus
caliginosus*,
which
can
be
combined
well
with
*Encarsia*.
Predatory
mites
of
the
genus
*Amblyseius*
and
entomopathogenic
fungi*(Beauveria
bassiana*)
can
also
be
used
to
reduce
infestations
against
whiteflies.

**Links**

[Information
from
the

EPPO
on
*Trialeurodes
vaporariorum*](https://gd.eppo.int/taxon/TRIAVA)

**Services**

[Plant
Health
Services](en/plant/plant-health/plant-health-information)