|  |  |
| --- | --- |
| Logo AGES | |
| Citrus long-horned beetle | |
|  |  |
| 07.05.2024 23:28 Uhr | |

**Citrus
long-horned
beetle**

**Anoplophora
chinensis**

Last
change:
25.05.2023

**Profile**

The
name
citrus
longhorned
beetle
is
misleading
because,
although
it
primarily
attacks
citrus
trees
in
its
native
Asia,
it
also
causes
considerable
damage
to
numerous
other
deciduous
trees.
In
the
European
Community,
the
citrus
longhorned
beetle
is
listed
as
a
quarantine
pest
and
is
therefore
notifiable.

**Appearance**



Erwachsener
Zitrusbockkäfer,
©
Matteo
Maspero

The
citrus
longhorn
beetle,
a
member
of
the
longhorn
beetle
family
(Cerambycidae),
is
very
conspicuous
and
hard
to
confuse
in
appearance
with
other
native
longhorn
beetle
species.
It
is
2-4
cm
long,
shiny
black
with
irregular
light
spots
on
the
elytra
and
has
long,
blue-white
ringed
antennae.
The
elytra
base
is
granular.
Males
are
usually
smaller
than
females
and
have
longer
antennae
that
extend
beyond
the
posterior
end
(elytra).

The
cream-colored
larvae
have
an
elongated,
cylindrical
body
and
are
legless.
After
hatching,
they
are
about
5
mm
long
and
grow
up
to
50-60
mm
in
size
as
they
develop.

The
eggs
are
about
5-6
mm
long
and
creamy
white,
yellow-brown
just
before
larval
hatching.



Ei
des
Zitrusbockkäfers,
©
Matteo
Maspero



Larve
des
Zitrusbockkäfers,
©
Matteo
Maspero



Puppe
des
Zitrusbockkäfers,
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Matteo
Maspero

**Biology**

In
Asia,
the
beetles
hatch
from
May
to
about
October
(with
a
focus
in
May
to
July),
in
Central
Europe
from
about
June
to
August.
The
females
begin
laying
eggs
ten
days
after
hatching.
To
do
this,
they
cut
T-shaped
slits
in
the
bark
of
above-ground
roots
or
the
base
of
the
trunk
with
their
mouthparts.
A
female
lays
an
average
of
up
to
70
eggs
individually
in
her
lifetime.
After
about
one
to
three
weeks,
the
larva
hatches
and
feeds
first
in
the
trunk
under
the
bark
(cambial
region).
Later,
the
larval
ducts
spread
into
the
woody
tissue
(sapwood
and
heartwood)
of
the
lowest
parts
of
the
trunk
and
roots.
The
larvae
then
already
reach
a
size
of
5
-
6
cm.
Hibernation
takes
place
in
the
larval
stage
and
pupation
then
in
spring.
The
pupal
stage
lasts
about
four
to
six
weeks,
after
which
the
beetle
hatches
through
circular
bores
(about
1
-
1.5
cm
in
diameter)
at
the
base
of
the
trunk
and
on
above-ground
roots.
Maturing
adult
feeding
occurs
on
leaves,
petioles,
and
the
bark
of
young
twigs.

The
development
cycle
of
the
citrus
longhorned
beetle
usually
lasts
one
year.
However,
depending
on
climatic
conditions,
the
cycle
can
be
as
long
as
two
years,
such
as
in
Central
Europe.

**Damage
symptoms**

Infested
trees
are
very
difficult
to
detect
due
to
the
hidden
lifestyle
of
the
larvae.
The
first
signs
of
infestation
are
often
drilling
chips
at
the
base
of
the
trunk
and
in
the
root
area,
which
are
caused
by
the
feeding
activity
of
the
larvae.
The
circular,
approx.
1
cm
large
boring
holes
of
the
hatched
beetles
are
also
signs
of
an
infestation
with
the
citrus
longhorned
beetle.
Other
indications
of
an
occurrence
are
finding
the
conspicuous
beetles
themselves
and
the
feeding
marks
of
the
citrus
longhorned
beetles
on
leaves
and
twigs
(maturity
feeding).
The
ripening
feeding
of
the
beetles
additionally
leads
to
wilting
symptoms.



Sägemehl
aus
dem
Bohrloch,
©
Matteo
Maspero



Fraßgänge
der
Larve
mit
Sekundärinfektionen
im
Holz,
©
Matteo
Maspero

**Host
plants**

The
citrus
longhorned
beetle
can
use
plants
of
more
than
20
families
as
host
plants;
in
its
native
Asia,
citrus
plants*(Citrus*
spp.)
are
preferred.
However,
the
possible
host
plant
range
includes
numerous
deciduous
woody
plants,
including
fruit
and
ornamental
woody
plants.
In
Asia,
the
host
plant
range
is
wider;
here,
conifers
of
the
genera
*Cryptomeria*
spp.
and
*Pinus*
spp.
are
also
included.

Common
host
plants
are:
Maple*(Acer*
spp.),
Apple
(*Malus*
spp.),
Pear
(*Pyrus*
spp.),
Birch
(*Betula*
spp.),
Beech
(*Fagus*
spp.),
Alder*(Alnus*
spp.),
Hornbeam
(*Carpinus*),
Dogwood
(*Cornus*
spp.),
Hazelnut*(Corylus*
spp.),
Curly
Myrtle
(*Lagerstroemia*
spp.),
Poplar
(*Populus*
spp.),
sycamore*(Platanus*
spp.),
rose
(*Rosa*
spp.),
elm
(*Ulmus*
spp.),
willow*(Salix*
spp.),
white-flowered
horse
chestnut*(Aesculus
hippocastanum*),
hawthorn
(*Crataegus*
spp.),
citrus
(*Citrus*
spp.),
dwarf
loquat
(*Cotoneaster*
spp.),
plum
and
cherry*(Prunus*
spp.).

**Distribution**

Originally,
the
citrus
longhorn
beetle
originates
from
East
Asia
(China,
Japan,
Korea)
occasionally
it
also
occurs
in
Malaysia,
Myanmar,
Philippines,
Sumatra,
Taiwan
and
Vietnam.

About
20
years
ago,
there
were
the
first
introductions
to
North
America
and
Europe
(in
2000
for
the
1st
time
in
Italy),
of
which
some
outbreaks
were
eradicated.
Detailed
information
can
be
found
in
the
[EPPO](https://gd.eppo.int/taxon/ANOLCN/distribution)
Global
Database.

**Propagation
and
transmission**

The
greatest
risk
of
spread
or
introduction
of
the
citrus
longhorned
beetle
is
the
trade
of
plants
for
planting.
Especially
in
imported
maple
trees
and
bonsais,
e.g.
fan
maple*(Acer
palmatum*),
beetle
larvae,
eggs
and
pupae
may
already
be
present
unnoticed.
However,
citrus
longhorned
beetles
can
also
be
unintentionally
introduced
with
wooden
shipping
crates
and
containers
and
wooden
pallets.

The
natural
distribution
of
the
beetles
seems
to
be
rather
very
localized
to
short
distances
(less
than
400
m,
usually
to
the
neighboring
tree)
and
is
rarely
further
than
about
2.5
km.
Environmental
factors,
such
as
climatic
conditions,
host
plant
availability,
and
beetle
population
density,
are
the
most
important
factors
influencing
dispersal
behavior.

**Economic
importance**

The
massive
damage
is
caused
by
the
feeding
tunnels
of
the
larvae
in
the
trees.
They
go
deep
into
the
wood
and
on
the
one
hand
reduce
the
stability
of
the
trees
(hollowing
of
the
base
of
the
trunk),
on
the
other
hand
they
interrupt
the
sap
and
nutrient
transport,
and
the
tree
dies
as
a
result.
The
holes
drilled
by
the
pest
are
also
ideal
entry
points
for
wood-decomposing
fungi.

**Prevention
and
control**

As
an
immigrant
in
Europe,
the
citrus
longhorned
beetle
has
practically
no
natural
enemies,
which
is
why
early
detection
through
targeted
controls
is
very
important
for
successful
control.
However,
due
to
their
predominantly
hidden
lifestyle,
both
detection
and
control
of
the
beetles
is
very
difficult.

**Preventive
measures**

* Targeted
  visual
  and
  mechanical
  (destructive)
  inspections
  for
  beetles,
  larvae,
  boring
  dust,
  boring
  holes
  and
  traces
  of
  maturing
  beetle
  feeding
* Use
  of
  [sniffer
  dogs](https://www.bfw.gv.at/pressemeldungen/spuerhunde-schaedlinge-waldschutz/)
  for
  a
  more
  effective
  and
  non-destructive
  measure
  to
  detect
  citrus
  longhorned
  beetles
  before
  they
  spread
  into
  the
  field.
  Sniffer
  dogs
  trained
  for
  this
  purpose
  can
  sniff
  out
  the
  developmental
  stages
  of
  longhorned
  beetles
  hidden
  in
  the
  wood
  and
  roots.
* Use
  of
  specific
  attractants
  (pheromones);
  but
  traps
  are
  not
  yet
  sufficiently
  efficient.

**Control
measures**

* Clearing
  of
  infested
  trees
  is
  currently
  the
  only
  effective
  measure
  to
  destroy
  larval
  and
  pupal
  stages
  of
  the
  beetles
  and
  to
  deprive
  the
  adult
  beetles
  of
  their
  food
  and
  development
  basis.
* Biological
  control
  methods
  using
  entomopathogenic
  fungi,
  nematodes
  or
  parasitic
  insects
  are
  still
  in
  the
  experimental
  stage.
* Chemical
  control:
  in
  Austria
  there
  is
  no
  possibility
  of
  control
  with
  chemical
  pesticides,
  as
  there
  are
  currently
  no
  approved
  preparations
  for
  the
  control
  of
  longhorned
  beetles.

Control
measures
are
ordered
by
the
responsible
[official
plant
protection
services](https://www.pflanzenschutzdienst.at/kontakte-bundeslaender/)
in
the
provinces.

**Phytosanitary
status**

The
citrus
longhorned
beetle
is
listed
as
a
quarantine
pest
under
EU
Directive
2000/29/EC
and
is
thus
subject
to
legal
regulations
to
prevent
its
introduction
and
spread
into
or
within
member
states.
An
occurrence
of
the
citrus
longhorned
beetle
is
therefore
notifiable.

**Specialized
information**

**Publikationen**

Lethmayer,
C.,
2013.
First
data
on
the
dispersal
and
potential
spread
of
Anoplophora
spp.
Journal
of
Entomological
and
Acaralogical
Research
45(s1).

**Projekte**

EU-ERANET
EUPHRESCO-I-Projekt
ANOPLORISK:
“Risk
Management
for
the
EC
listed
Anoplophora
species,
A.
chinensis
and
A.
glabripennis”,
15.12.2010
–
15.12.2012

**Links**

[Information
from
EPPO
on
the
citrus
longhorned
beetle](https://gd.eppo.int/taxon/ANOLCN)

[Information
from
CABI
on
the
citrus
longhorned
beetle](https://www.cabi.org/isc/datasheet/5556)

[Information
of
the
Federal
Forestry
Office
on
the
citrus
longhorned
beetle](https://www.bundesamt-wald.at/forstlicher-pflanzenschutz/schadorganismen/so_clb.html)

[Information
of
the
Official
Plant
Protection
Service
on
the
citrus
longhorned
beetle](https://www.pflanzenschutzdienst.at/geregelte-schaedlinge/prioritaere-uqs/anoplophora-chinensis/)

**Services**

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