



# Stages of the Cottony Cushion Scale (*Icerya purchasi*) and its Natural Enemy, the Vedalia Beetle (*Rodolia cardinalis*)

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## Stages of the Cottony Cushion Scale (*Icerya purchasi*)

Cottony cushion scale life cycle is 3 months.

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**1**  
200 to 400 red eggs inside the egg sac of the female scale (7 days to hatch)



**2**  
First instar crawler; note the black legs and antennae (1 week)



**3**  
First instar nymphs settled down and producing a cottony substance (2 to 3 weeks)



**4**  
Second instar nymph emerging from the white molt shell



**5**  
Second instar nymph underside  
Note the thread-like feeding tube (stylet) attached to the leaf.



**6**  
Second instar nymph  
The amount of cottony substance increases with age. (2 to 3 weeks)



**7**  
Third instar nymph emerging from the white molt shell



**8**  
Third instar nymph  
Note the long hairs grouped in tufts. (2 to 3 weeks)



**9**  
Young female  
(4 weeks until egg production)



**10**  
Adult female  
The more cottony material she has, the more eggs inside her egg sac.

**Vedalia Beetle (*Rodolia cardinalis*)**

Natural enemy of the cottony cushion scale.

Vedalia beetle life cycle is 3 to 4 weeks from egg to adult.



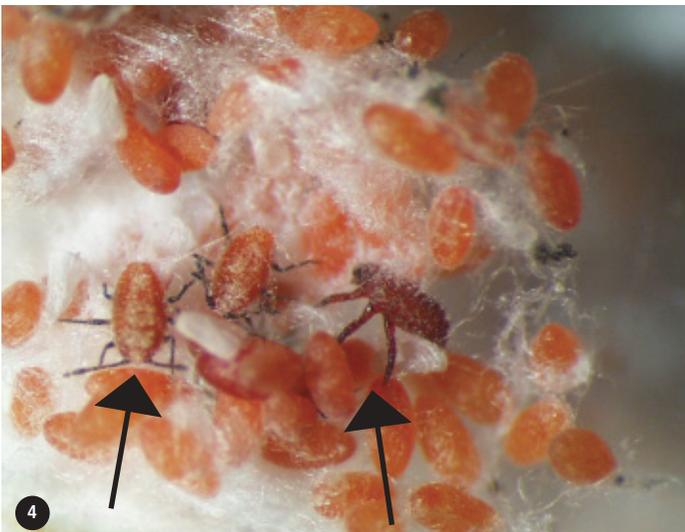
**1**  
Red vedalia eggs on the outside of an adult scale  
(4 to 7 days to vedalia hatch)



**2**  
First instar vedalia larva feeding on a scale egg



**3**  
Second instar vedalia larva burrowing into a cottony cushion scale egg sac



**4**  
**Scale crawler compared to a vedalia larva**  
Note the scale has black legs and black antennae, whereas the vedalia larva has red legs and no visible antennae.



**5**  
**Late instar vedalia larva**  
(10 to 20 days for all four larval stages to develop)



**6**  
**Fourth instar vedalia larva**  
Larvae attach themselves to a leaf and stop feeding just before pupation.



**7**  
**Vedalia pupa**  
A healthy pupa should move when touched.  
(1 week until adult emergence)



**8**  
**Adult vedalia beetle**  
(Lives 1 to 3 months and lays 100 to 200 eggs)

actual size

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