## The life cycle of the rose chafer *Cetonia aurata* takes 2 years



size: 15-20 mm not sexually dimorphic Superfamily:ScarabeoideaeFamily:ScarabaeidaeSubfamily:CetoniinaeGenus:CetoniaSpecies:C. aurata

Rose chafers are active from late spring throughout the summer when they can be seen on flowers foraging on nectar and pollen. They are particularly attracted to some roses and sometimes they 'chafe' their petals in the search for the pollen, hence their name. They fly very fast with their elytra (hard wing cases) down.

Their larvae can develop in a wide range of decomposing organic matter: dead wood; compost and leaf-mould; cow and horse manure. Their life cycle is 2 years; occasionally it may be longer if their larvae develop in nutrient poor organic matter or in a very dry place.

year 0					egg							
						la	rva				winter	
year 1	diapaus											
						р	<mark>e-</mark> pupa pupa					
							pupa	a				
										imago		
year 2	breeding season											
month	J	F	М	A	M	J	J	A	S	0	N	D

egg - laid in decomposing organic matter. It is not known how many eggs a female may lay, but their larvae are often found in large clusters.

larva - grows fairly fast and by the autumn, in general, has reached the last instar, L3.

winter diapause - the larva is very sensitive to the cold and from mid September onwards it starts losing weight. By December it has replaced the midgut contents with an anti-freeze fluid; remarkably, the hindgut remains full. It resumes feeding when the soil temperature goes above 10-12 °C.

**pre-pupa** - by the beginning of the summer, the mature L3 larva stops feeding and makes a hard-shelled cocoon with the surrounding materials and lines it with the contents of its gut. It takes about two weeks from the time that the larva starts making the cocoon to moult into a pupa.

pupa - it takes about 30 days for the pupa to moult into an imago.

**imago** - the teneral imago stays inside the cocoon for a while but might venture outside in warm late summer days. It is easily distinguished from an old adult because its body is covered with setae (hairs), whereas the old adult looks scruffy and sometimes even covered with mites. The imago overwinters in the soil in a quiescent state. It will be able to reproduce the next summer and it will die after that.

Maria Fremlin, 2024