

Table of contents

Resumen	i
Resum	v
Summary	ix
Chapter 1. Introduction	1
1.1. Systematic classification of <i>Aonidiella aurantii</i>	3
1.2. Origin and distribution	3
1.3 Host plants	4
1.4. Damage and economic importance of <i>Aonidiella aurantii</i>	4
1.5. Biology of <i>Aonidiella aurantii</i>	6
1.5.1. Morphology and life cycle.....	6
1.6. Ecology of <i>Aonidiella aurantii</i>	14
1.6.1. Influence of abiotic factors	14
1.6.2. Influence of biotic factors	15
1.6.3. Seasonal history	16
1.7. Biological control of <i>Aonidiella aurantii</i>	17
1.7.1. Ectoparasitoids	17
1.7.1.1. Morphology and development	18
1.7.1.2. Biology and ecology of <i>Aphytis</i>	21
1.7.1.3. Factors affecting <i>Aphytis</i> efficiency	24
1.7.2. Endoparasitoids	34
1.7.3. Predators	36
1.7.4. Entomopathogenic Fungi.....	38
Chapter 2. Rationale and Objectives	55
Chapter 3. Factors affecting the size of California red scale <i>Aonidiella aurantii</i> (Hemiptera: Diaspididae) under field conditions	59
3.1. Introduction.....	62
3.2. Materials and methods	63
3.3. Results.....	67
3.4. Discussion.....	74

Chapter 4. Influence of host size on parasitism by <i>Aphytis chrysomphali</i> and <i>A. melinus</i> (Hymenoptera: Aphelinidae) in Mediterranean populations of California red scale <i>Aonidiella aurantii</i> (Hemiptera: Diaspididae)	81
4.1. Introduction.....	84
4.2. Material and methods	86
4.3. Results.....	89
4.4. Discussion.....	97
Chapter 5. Spatio-temporal patterns and interactions with honeydew-producing hemiptera of ants in a Mediterranean citrus orchard	107
5.1. Introduction.....	110
5.2. Materials and methods	111
5.3. Results.....	114
5.4. Discussion.....	122
Chapter 6. Effect of Mediterranean ants (Hymenoptera: Formicidae) on California red scale <i>Aonidiella aurantii</i> (Hemiptera: Diaspididae) populations in citrus orchards	133
6.1. Introduction.....	136
6.2. Material and methods	137
6.3. Results.....	140
6.4. Discussion.....	144
Chapter 7. Nutritional state and food sources used by adult <i>Aphytis melinus</i> parasitoids in the field	153
7.1. Introduction.....	156
7.2. Material and methods	157
7.3. Results and discussion.....	158
Chapter 8. Conclusions	163