

Table S1. List of ant species recorded during the preliminary assessment of the ant fauna of the study area. Species marked with an asterisk were not recorded within the orchard, but exclusively at its external margins.

<i>Aphaenogaster subterranea</i> (Latreille, 1798) *
<i>Camponotus lateralis</i> (Olivier, 1792)
<i>Camponotus piceus</i> (Leach, 1825)
<i>Camponotus vagus</i> (Scopoli, 1763)
<i>Colobopsis truncata</i> (Spinola, 1808)
<i>Crematogaster scutellaris</i> (Olivier, 1792)
<i>Dolichoderus quadripunctatus</i> (Linnaeus, 1771)
<i>Formica cunicularia</i> Latreille, 1798
<i>Lasius emarginatus</i> (Olivier, 1792) *
<i>Lasius fuliginosus</i> (Latreille, 1798) *
<i>Lasius niger</i> (Linnaeus, 1758)
<i>Lasius paralienus</i> Seifert, 1992
<i>Messor ibericus</i> Santschi, 1931
<i>Myrmica sabuleti</i> Meinert, 1861
<i>Polyergus rufescens</i> (Latreille, 1798)
<i>Solenopsis fugax</i> (Latreille, 1798)
<i>Tapinoma subboreale</i> Seifert, 1992
<i>Temnothorax italicus</i> (Consani, 1952)
<i>Tetramorium</i> sp. (<i>caespitum</i> -complex)

Table S2. List of arthropods (ants excluded) observed on the trees during the experiment. Species not observed during weekly investigation of the focal branches but instead during other activities are marked with an asterisk.

Taxon	Order, Family
(unidentified) *	Acarina
<i>Araneus diadematus</i> Clerck, 1757 *	Araneae, Araneidae
<i>Cyclosa</i> sp. *	Araneae, Araneidae
Others (unidentified)	Araneae, Araneidae
<i>Clubiona</i> sp. *	Araneae, Clubionidae
<i>Cheiracanthium</i> sp.	Araneae, Eutichuridae
(unidentified) *	Araneae, Gnaphosidae
<i>Oxyopes</i> sp.	Araneae, Oxyopidae
<i>Palpimanus gibbulus</i> Dufour, 1820 *	Araneae, Palpimanidae
<i>Heliophanus</i> sp. *	Araneae, Salticidae
Others (unidentified)	Araneae, Salticidae
<i>Micrommata ligurina</i> (C.L. Koch, 1845) *	Araneae, Sparassidae
<i>Thomisus onustus</i> Walckenaer, 1805 *	Araneae, Thomisidae
<i>Xysticus</i> sp. *	Araneae, Thomisidae
Others (unidentified)	Araneae, Thomisidae
<i>Zoropsis</i> sp. *	Araneae, Zoropsidae
Others (unidentified)	Araneae
<i>Argiolus</i> sp.	Coleoptera, Buprestidae
Alticinae *	Coleoptera, Chrysomelidae
<i>Chilocorus bipustulatus</i> (Linnaeus, 1758)	Coleoptera, Coccinellidae
<i>Harmonia axyridis</i> (Pallas, 1773)	Coleoptera, Coccinellidae
<i>Hippodamia variegata</i> (Goeze, 1777)	Coleoptera, Coccinellidae
<i>Propylea quatuordecimpunctata</i> (Linnaeus, 1758)	Coleoptera, Coccinellidae
(unidentified) *	Coleoptera, Curculionidae
(unidentified) *	Coleoptera, Elateridae
<i>Lucanus cervus</i> (Linnaeus, 1758) *	Coleoptera, Lucanidae
<i>Protaetia</i> sp.	Coleoptera, Scarabeidae
Others (unidentified Cetoniinae)	Coleoptera, Scarabeidae
Others (unidentified)	Coleoptera
(unidentified) *	Collembola
<i>Forficula</i> sp.	Dermaptera, Forficulidae
(unidentified)	Diptera, Asilidae

<i>Drosophila</i> sp.	Diptera, Drosophilidae
(unidentified)	Diptera, Muscidae
<i>Sarcophaga</i> sp.	Diptera, Sarcophagidae
<i>Myathropa flarea</i> (Linnaeus, 1758)	Diptera, Syrphidae
(unidentified)	Diptera, Tachinidae
Others (unidentified Brachycera)	Diptera
Others (unidentified Nematocera)	Diptera
(unidentified) *	Hemiptera, Aphididae
(unidentified) *	Hemiptera, Coreidae
<i>Pilophorus</i> sp.	Hemiptera, Myridae
Others (unidentified)	Hemiptera, Myridae
<i>Halyomorpha halys</i> Stål, 1855 *	Hemiptera, Pentatomidae
<i>Nezara viridula</i> (Linnaeus, 1758)	Hemiptera, Pentatomidae
<i>Raphigaster nebulosa</i> (Poda, 1761) *	Hemiptera, Pentatomidae
(unidentified) *	Hemiptera, Reduviidae
<i>Stephanitis pyri</i> (Fabricius, 1775)	Hemiptera, Tingidae
Others (unidentified Heteroptera)	Hemiptera
Cercopidea	Hemiptera,
<i>Metcalfa pruinosa</i> (Say, 1830)	Hemiptera, , Flatidae
<i>Cacopsylla</i> sp.	Hemiptera, , Psyllidae
parasitoids (unidentified)	Hymenoptera
<i>Vespa crabro</i> Linnaeus, 1758	Hymenoptera, Vespidae
<i>Vespula</i> sp.	Hymenoptera, Vespidae
<i>Caliroa cerasi</i> (Linnaeus, 1758)	Hymenoptera, Tenthredinidae
<i>Cossus cossus</i> (Linnaeus, 1758)	Lepidoptera, Cossidae
<i>Hyphantria cunea</i> (Drury, 1773)	Lepidoptera, Erebidae
<i>Brintesia circe</i> (Fabricius, 1775) *	Lepidoptera, Nymphalidae
<i>Melitaea</i> sp.	Lepidoptera, Nymphalidae
<i>Iphiclides podalirius</i> (Linnaeus, 1758) *	Lepidoptera, Papilionidae
<i>Cydia</i> cf. <i>pomonella</i> (Linnaeus, 1758) *	Lepidoptera, Tortricidae
(unidentified) *	Lepidoptera, Geometridae
Others (unidentified)	Lepidoptera
(unidentified)	Neuroptera, Chrysopidae
(unidentified) *	Neuroptera, Mantispidae
<i>Phaneroptera nana</i> Fieber, 1853 *	Orthoptera, Tettigoniidae
Others (unidentified) *	Orthoptera

Tab. S3. Fruit production of the experimental trees and damage inflicted by the codling moth caterpillar (*Cydia pomonella*). Results are shown according to Damaged Fruits percentages (increasing gradient). In *Treatment* column, the ANs+/Ants+ treatment (high ant activity) is highlighted in bold.

Tree	Pear Variety	Treatment	Date of harvesting	Harvested fruits (N°)	Damaged Fruits (%)
1	Giallo	ANs+/Ants+	17/07/2018	271	0,37
2	Ducal	ANs+/Ants+	02/10/2018	95	3,16
5	Spadon	ANs+/Ants+	02/10/2018	177	3,39
3	Russet	ANs+/Ants+	02/10/2018	1735	3,92
4	Estif	ANs+/Ants+	03/08/2018	465	4,52
15	Nobile	ANs+/Ants-	02/10/2018	676	5,62
7	Nobile	ANs-/Ants+	02/10/2018	463	6,05
12	Giallo	ANs+/Ants-	17/07/2018	557	8,08
9	Ingurien	ANs-/Ants+	06/08/2018	529	9,07
11	Ragul	ANs+/Ants-	02/10/2018	506	9,68
14	Ducal	ANs+/Ants-	02/10/2018	65	10,77
16	Ingurien	ANs-/Ants-	06/08/2018	482	11,41
17	Nobile	ANs-/Ants-	16/09/2018	479	11,48
18	Cavicchione	ANs-/Ants-	02/10/2018	421	12,83
10	Delacuatorta	ANs-/Ants+	02/10/2018	264	15,53
8	Ducal	ANs-/Ants+	02/10/2018	114	18,42
13	Ingurien	ANs+/Ants-	06/08/2018	390	23,33
20	Ducal	ANs-/Ants-	02/10/2018	98	38,78
6	Decorè	ANs-/Ants+	02/10/2018	86	67,44
19	Decorè	ANs-/Ants-	02/10/2018	97	68,04