

LIST OF PUBLICATIONS

Jordi Bosch

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Books

J. Bosch, W. P. Kemp. 2001. How to manage the blue orchard bee, *Osmia lignaria*, as an orchard pollinator. Sustainable Agriculture Network, Beltsville, MD. 96 pp.

Book chapters

J. Bosch, F. Sgolastra, W. P. Kemp. 2008. Life cycle ecophysiology of *Osmia* mason bees used as crop pollinators. In *Bee Pollination in Agricultural Ecosystems*. R. R. James, T.L. Pitts-Singer (editors). Oxford University Press. Oxford UK. pp 83-104.

SCI articles

90) S. Reverté, J. Retana, J. M. Gómez, **J. Bosch**. 2015. Pollinators show flower colour preferences but flowers with similar colours do not attract similar pollinators. *Annals of Botany* (accepted).

89) Sgolastra F, Arnan X, Pitts-Singer TL, Maini S, Kemp WP, **Bosch J**. 2015. Pre-wintering conditions and post-winter performance in a solitary bee: does diapause impose an energetic cost on reproductive success? *Ecological Entomology* DOI: 10.1111/een.12292

88) Torné-Noguera A, Rodrigo A, Osorio S, **Bosch J**. 2015. Collateral effects of beekeeping: impacts on floral resources and wild bee communities. *Basic and Applied Ecology*, <http://dx.doi.org/10.1016/j.baae.2015.11.004>

87) Kapheim K.M. et al. (52 authors) 2015. Genomic Signatures of Evolutionary Transition from Solitary to Group Living. *Science* 348, 1139; DOI: 10.1126/science.aaa4788

86) J.D. Fernández, J. Lorite, **J. Bosch**, J.M. Gómez. 2015. Variation in the reproductive success of a narrow endemic plant: effects of geographical distribution, abiotic conditions and pollinator community composition. *Basic and Applied Ecology* 16: 375–385.

- 85) S. Osorio, X. Arnan, E. Bassols, N. Vicens, **J. Bosch**. 2015. Local and landscape effects in a host–parasitoid interaction network along a forest–cropland gradient. *Ecological Applications* 25: 1869–1879.
- 84) G. D. Yocum, J. P. Rinehart, D. P. Horvath, W. P. Kemp, **J. Bosch**, R. Alroobi, S. Salem. 2015. Key molecular processes of the diapause to post-diapause quiescence transition in the alfalfa leafcutting bee, *Megachile rotundata*, identified by comparative transcriptome analysis. *Physiological Entomology* 40, 103–112.
- 83) Torné-Noguera A, Rodrigo A, Arnan X, Osorio S, Barril-Graells H, Correia L, **Bosch J**. 2014. Determinants of spatial distribution in a bee community: nesting resources, flower resources, and body size. *PLOS ONE* 9(5): e97255. doi:10.1371/journal.pone.0097255.
- 82) Arnan X, Escolà A, Rodrigo A, **Bosch J**. 2014. Female reproductive success in gynodioecious *Thymus vulgaris*: pollen versus nutrient limitation and pollinator foraging behaviour. *Botanical Journal of the Linnean Society*. Doi/10.1111/boj.12173/pdf.
- 81) I. Filella, C. Primante, J. Llusà, A. M. Martín González, R. Seco, G. Farré-Armengol, A. Rodrigo, **J. Bosch**, J. Peñuelas. 2013. Floral advertisement scent in a changing plant-pollinator market. *Scientific Reports* 3: 3434 | DOI: 10.1038/srep03434.
- 80) C. Guédot, J.S. Buckner, M. M. Hagen, T.L. Pitts-Singer, **J. Bosch**, W. P. Kemp. 2013. Nest marking behavior and chemical composition of olfactory cues involved in nest recognition in the solitary bee *Megachile rotundata*. *Environmental Entomology* 42: 779-789.
- 79) A. Eklöf, U. Jacob, J. C. Kopp, **J. Bosch**, R. Castro-Urgal, N. P. Chacoff, B. Dalsgaard, C. de Sassi, M. Galetti, P. R. Guimaraes Jr., S. B. Lomáscolo, A. M. Martín González, M. A. Pizo, R. Rader, A. Rodrigo, J. M. Tylianakis, D. P. Vázquez, S. Allesina. 2013. The dimensionality of ecological networks. *Ecology Letters* 16: 577–583.
- 78) F. Sgolastra, W. P. Kemp, S. Maini, **J. Bosch**. 2012. Duration of prepupal summer dormancy regulates synchronization of adult diapause with winter temperatures in bees of the genus *Osmia*. *Journal of Insect Physiology*, 58: 924–933.
- 77) J. D. Fernández, **J. Bosch**, B. Nieto-Ariza, J. M. Gómez. 2012. Pollen limitation in a narrow endemic plant: geographical variation and driving factors. *Oecologia* 170: 421-431.
- 76) A. M. Martín González, S. Allesina, A. Rodrigo, **J. Bosch**. 2012. Drivers of compartmentalization in a Mediterranean pollination network. *Oikos* 121: 2001- 2013.
- 75) M. A. Rodríguez-Gironés, **J. Bosch**. 2012. Effects of body size and sociality on the anti-predator behaviour of foraging bees. *Oikos* 121: 1473-1482.
- 74) F. Sgolastra, W. P. Kemp, J.S. Buckner, T.L. Pitts-Singer, S. Maini, **J. Bosch**. 2011. The long summer: pre-wintering temperatures affect diapause development and winter survival in a solitary bee. *Journal of Insect Physiology*, 57: 1651–1659.

- 73) I. Filella, **J. Bosch**, J. Llusà, A. Peñuelas, J. Peñuelas. 2011. Chemical cues involved in the attraction of the oligolectic bee *Hoplitis adunca* to its host plant *Echium vulgare*. *Biochemical Systematics and Ecology*, 39: 498–508.
- 72) C. A. Stanley, T. L. Pitts-Singer, **J. Bosch**. 2011. Influence of rough handling on *Osmia lignaria* (Hymenoptera: Megachilidae) nest establishment in commercial orchards. *Journal of Economic Entomology*, 104: 750-752.
- 71) I. Filella, **J. Bosch**, J. Llusà, R. Seco, J. Peñuelas. 2010. The role of frass and cocoon volatiles in host location by *Monodontomerus aeneus*, a parasitoid of Megachilid solitary bees. *Environmental Entomology*, 40: 126-131.
- 70) X. Arnan, **J. Bosch**, L. Comas, M. Gracia, J. Retana. 2010. Habitat determinants of abundance, structure and composition of flying Hymenoptera communities in mountain old-growth forests. *Insect Conservation and Diversity*, 4: 200-211.
- 69) **J. Bosch**, F. Sgolastra, W. P. Kemp. 2010. Timing of eclosion affects diapause development, fat body consumption and longevity in *Osmia lignaria*, a univoltine, adult-wintering solitary bee. *Journal of Insect Physiology* 56: 1949–1957.
- 68) F. Sgolastra, **J. Bosch**, R. Molowny-Horas, S. Maini, W. P. Kemp. 2010. Effect of temperature regime on diapause intensity in an adult-wintering Hymenopteran with obligate diapause. *Journal of Insect Physiology* 56: 185–194.
- 67) T.L. Pitts-Singer, **J. Bosch**. 2010. Nest establishment, pollination efficiency, and reproductive success of *Megachile rotundata* (Hymenoptera: Megachilidae) in relation to resource availability in field enclosures. *Environmental Entomology* 39:149-158.
- 66) F. Perfectti, J. M. Gómez, **J. Bosch**. 2009. The functional consequences of diversity in plant-pollinator interactions. *Oikos* 118: 1430-1440.
- 65) **J. Bosch**, A. M. Martín González, A. Rodrigo, D. Navarro. 2009 Plant-pollinator networks: adding the pollinator's perspective. *Ecology Letters* 12: 409-419.
- 64) J. M. Gómez, F. Perfectti, **J. Bosch**, J. P.M. Camacho. 2009. A geographic mosaic of selection in a generalized plant-pollinator-herbivore system. *Ecological Monographs* 79: 245-263.
- 63) C. Guédot, **J. Bosch**, W. P. Kemp. 2009. Relationship between body size and homing ability in the genus *Osmia* (Hymenoptera; Megachilidae). *Ecological Entomology* 32: 158-161.
- 62) A. Rodrigo, F. Sardà-Palomera, **J. Bosch**, J. Retana. 2008. Changes of dominant ground beetles in black pine forests with fire severity and successional age. *Ecoscience* 15: 442-452.
- 61) J. M. Gómez, **J. Bosch**, F. Perfectti, J.D. Fernández, M. Abdelaziz, J.P.M. Camacho. 2008. Spatial variation in selection on corolla shape in a generalist plant is promoted by the preference patterns of its local pollinators. *Proceedings of the Royal Society of London, B Series* 275: 2241-2249.

- 60) C. I. Huntzinger, R. R. James, **J. Bosch**, W. P. Kemp. 2008. Fungicide tests on adult *Megachile rotundata* (F.) (Hymenoptera: Megachilidae). *Journal of Economic Entomology* 101: 1088-1094.
- 59) C. I. Huntzinger, R. R. James, **J. Bosch**, W. P. Kemp. 2008. Laboratory bioassays to evaluate fungicides for chalkbrood control in larvae of the alfalfa leafcutting bee (Hymenoptera; Megachilidae). *Journal of Economic Entomology* 101: 660-667.
- 58) I. Bartomeus, **J. Bosch**, M. Vilà. 2008. High invasive pollen transfer, yet low deposition on native stigmas in a *Carpobrotus*-invaded community. *Annals of Botany* 102: 417-424.
- 57) J. M. Gómez, **J. Bosch**, F. Perfectti, J.D. Fernández, M. Abdelaziz, J.P.M. Camacho. 2008. Association between floral traits and reward in *Erysimum mediohispanicum* (Brassicaceae). *Annals of Botany* 101: 1413-1420.
- 56) T.L. Pitts-Singer, **J. Bosch**, W.P. Kemp, G.E. Trostle. 2008. Field use of an incubation box for improved emergence timing of *Osmia lignaria* populations used for orchard pollination. *Apidologie* 39: 235-246.
- 55) **J. Bosch**. 2008. Production of under-sized offspring in a solitary bee. *Animal Behaviour* 75: 809-816.
- 54) E. Ladurner, **J. Bosch**, W.P. Kemp, S. Maini. 2008. Foraging and nesting behavior of the mason bee *Osmia lignaria* (Hymenoptera; Megachilidae) in the presence of fungicides: cage studies. *Journal of Economic Entomology* 101: 647-653.
- 53) J.M. Gómez, **J. Bosch**, F. Perfectti, J. Fernández, M. Abdelaziz. 2007. Geographical variation in pollination generalization: Effects on plant reproduction. *Oecologia* 153: 597-605.
- 52) C. Guédot, **J. Bosch**, W. P. Kemp. 2007. Effect of three dimension and color contrast on nest localization performance of two solitary bees (Hymenoptera: Megachilidae). *Journal of the Kansas Entomological Society* 80: 90-104.
- 51) G. D. Yocum, W. P. Kemp, **J. Bosch**, and J. N. Knoblett. 2006. Thermal history influences diapause development in the solitary bee *Megachile rotundata*. *Journal of Insect Physiology* 52: 1113-1120.
- 50) C. Guédot, **J. Bosch**, C, W. P. Kemp. 2006. Effects of three-dimensional and color patterns on nest location and progeny mortality in alfalfa leafcutting bee (Hymenoptera: Megachilidae). *Journal of Economic Entomology* 99: 626-633
- 49) **J. Bosch**, N. Vicens. 2006. Relationship between body size, provisioning rate, longevity and reproductive success in females of the solitary bee *Osmia cornuta*. *Behavioral Ecology and Sociobiology* 60: 26-33.
- 48) **J. Bosch**, W. P. Kemp, G.E. Trostle. 2006. Bee population returns and cherry yields in an orchard pollinated with *Osmia lignaria* (Hymenoptera: Megachilidae). *Journal of Economic Entomology* 99: 408-413.

- 47) C. Guédot, T.L. Pitts-Singer, J.S. Buckner, **J. Bosch**, W. P. Kemp. 2006. Olfactory cues and nest recognition in the solitary bee *Osmia lignaria* Say (Hymenoptera: Megachilidae). *Physiological Entomology* 31: 110-119.
- 46) **J. Bosch**, N. Vicens. 2005. Sex allocation in the solitary bee *Osmia cornuta*: do females behave in agreement with Fisher's theory? *Behavioral Ecology and Sociobiology* 59: 124-132.
- 45) C. Guédot, **J. Bosch**, W.P. Kemp. 2005. The relative importance of vertical and horizontal visual cues in nest location by *Megachile rotundata* (F.) (Hymenoptera: Megachilidae). *Journal of Apicultural Research* 44: 109-115.
- 44) W. P. Kemp, **J. Bosch**. 2005. Effects of temperature on *Osmia lignaria* (Hymenoptera: Megachilidae) prepupa-adult development, survival, and emergence. *Journal of Economic Entomology* 98: 1917-1923.
- 43) E. Ladurner, **J. Bosch**, W. P. Kemp, S. Maini. 2005. Assessing chronic and acute toxicity of five fungicides to *Osmia lignaria* and *Apis mellifera*. *Apidologie* 36: 449-460.
- 42) **J. Bosch**, W. P. Kemp. 2005. Alfalfa leafcutting bee population dynamics, flower availability, and pollination rates in two Oregon alfalfa fields. *Journal of Economic Entomology* 98: 1077-1086.
- 41) E. Ladurner, **J. Bosch**, W. P. Kemp, S. Maini. 2005. Evaluation of a standard artificial flower design to feed individual bees known amounts of pesticides. *Apidologie* 36: 379-387.
- 40) G. D. Yocum, W. P. Kemp, **J. Bosch**, and J. N. Knoblett. 2005. Temporal variation in overwintering gene expression and respiration in the solitary bee *Megachile rotundata*. *Journal of Insect Physiology* 51: 621-629.
- 39) J. S. Buckner, W. P. Kemp, **J. Bosch**. 2004. Characterization of triacylglycerols from overwintering prepupae of the alfalfa pollinator *Megachile rotundata* (Hymenoptera: Megachilidae). *Archives of Insect Biochemistry and Physiology* 57: 1-14.
- 38) V. H. Monzon, **J. Bosch**, J. Retana. 2004. Foraging behavior and pollinating effectiveness of *Osmia cornuta* and *Apis mellifera* (Hymenoptera: Megachilidae, Apidae) on 'Comice' pear. *Apidologie* 35: 575-585.
- 37) **J. Bosch**, W. P. Kemp. 2004. Effect of pre-wintering and wintering temperature regimes on weight loss, survival, and emergence time in the mason bee *Osmia cornuta* (Hymenoptera: Megachilidae). *Apidologie* 35: 469-479.
- 36) W. P. Kemp, **J. Bosch**, B. Dennis. 2004. Oxygen consumption during the life cycle of the prepupa-wintering bee *Megachile rotundata* (F.) and the adult-wintering bee *Osmia lignaria* Say (Hymenoptera: Megachilidae). *Annals of the Entomological Society of America* 97: 161-170.
- 35) E. Ladurner, **J. Bosch**, S. Maini, W.P. Kemp. 2003. A method to feed bees known amounts of pesticides. *Apidologie* 34: 597-602.

- 34) **J. Bosch**, W. P. Kemp. 2003. Effect of wintering duration and temperature on survival and emergence time in males of the orchard pollinator *Osmia lignaria* (Hymenoptera: Megachilidae). *Environmental Entomology* 32: 711-716.
- 33) W. P. Kemp, **J. Bosch**. 2002. Blue orchard bees – Another six-legged secret to improved fruit tree pollination. *American Bee Journal* 142: 501-503.
- 32) **J. Bosch**, W. P. Kemp. 2002. Developing and establishing bee species as crop pollinators: the example of *Osmia* spp. and fruit trees. *Bulletin of Entomological Research*, 92: 3-16.
- 31) **J. Bosch**, N. Vicens. 2002. Body size as an estimator of production costs in a solitary bee. *Ecological Entomology*, 27: 129-137.
- 30) W. P. Kemp, **J. Bosch**. 2001. Bees in your backyard. *American Bee Journal* 141: 183-185.
- 29) **J. Bosch**, Y. Maeta, R. W. Rust. 2001. A phylogenetic analysis of nesting behavior in the genus *Osmia* (Insecta, Hymenoptera, Megachilidae). *Annals of the Entomological Society of America*, 94: 617-627.
- 28) W. P. Kemp, **J. Bosch**. 2001. Post-cocooning temperatures and diapause in the alfalfa pollinator *Megachile rotundata* (Hymenoptera: Megachilidae). *Annals of the Entomological Society of America*, 94: 244-250.
- 27) **J. Bosch**, W. P. Kemp, S. S. Peterson. 2000. Management of *Osmia lignaria* (Hymenoptera, Megachilidae) populations for almond pollination: methods to advance bee emergence. *Environmental Entomology*, 29: 874-883.
- 26) W. P. Kemp, **J. Bosch**. 2000. Development and emergence of the alfalfa pollinator, *Megachile rotundata* (Hymenoptera, Megachilidae). *Annals of the Entomological Society of America*, 93: 904-911.
- 25) N. Vicens, **J. Bosch**. 2000. Weather-dependent pollinator activity in an apple orchard, with special reference to *Osmia cornuta* and *Apis mellifera* (Hymenoptera, Megachilidae and Apidae). *Environmental Entomology*, 29: 413-420.
- 24) N. Vicens, **J. Bosch**. 2000. Pollinating efficacy of *Osmia cornuta* and *Apis mellifera* (Hymenoptera, Megachilidae, Apidae) on 'Red Delicious' apple. *Environmental Entomology*, 29: 235-240.
- 23) N. Vicens, **J. Bosch**. 2000. Nest site orientation and relocation of populations of the orchard pollinator *Osmia cornuta* (Hymenoptera, Megachilidae). *Environmental Entomology*, 29: 69-75.
- 22) **J. Bosch**, W. P. Kemp. 2000. Development and emergence of the orchard pollinator, *Osmia lignaria* (Hymenoptera, Megachilidae). *Environmental Entomology*, 29: 8-13.
- 21) **J. Bosch**, W. P. Kemp. 1999. Exceptional cherry production in a cherry orchard pollinated with blue orchard bees. *Bee World*, 80: 163-173.
- 20) **J. Bosch**, J. Retana and X. Cerdá. 1997. Flowering phenology, floral traits and pollinator composition in a herbaceous mediterranean plant community. *Oecologia*, 109: 583-591.

- 19) **J. Bosch**, F. García del Pino, J. Ramoneda, J. Retana. 1996. Fruiting phenology and fruit set in four carob cultivars, *Ceratonia siliqua* L. (Cesalpiniaceae). *Israel Journal of Plant Sciences*, 44: 359-368.
- 18) **J. Bosch**. 1995. Comparison of nesting materials for the orchard pollinator *Osmia cornuta* Latr. (Hymenoptera, Megachilidae). *Entomologia Generalis*, 19: 285-289.
- 17) M. Suárez-Cervera, J. Márquez, **J. Bosch**, J. Seoane-Camba. 1994. Ultrastructural study of pollen grains digested by larvae of *Osmia* bees (Hymenoptera, Megachilidae). *Grana*, 33: 191-204.
- 16) J. Márquez, **J. Bosch**, N. Vicens. 1994. Pollens collected by wild and managed populations of the potential orchard pollinator *Osmia cornuta* (Latr.) (Hymenoptera, Megachilidae). *Journal of Applied Entomology*, 117: 353-359.
- 15) N. Vicens, **J. Bosch**, M. Blas. 1994. Biology and population structure in *Osmia tricornis* Latr. (Hymenoptera, Megachilidae). *Journal of Applied Entomology*, 117: 300-306.
- 14) **J. Bosch**. 1994. *Osmia cornuta* Latr. (Hymenoptera, Megachilidae) as a potential pollinator in almond orchards: releasing methods and nest-hole length. *Journal of Applied Entomology*, 117: 151-157.
- 13) **J. Bosch**, M. Blas. 1994. Effect of over-wintering and incubation temperatures on adult emergence in *Osmia cornuta* Latr. (Hymenoptera, Megachilidae). *Apidologie*, 25: 265-277.
- 12) **J. Bosch**. 1994. The nesting behaviour of the mason bee *Osmia cornuta* Latr. (Hymenoptera, Megachilidae) with special reference to its pollinating potential. *Apidologie*, 25: 84-93.
- 11) **J. Bosch**. 1994. Improvement of field management of *Osmia cornuta* Latr. for almond pollination (Hymenoptera, Megachilidae). *Apidologie*, 25: 71-83.
- 10) **J. Bosch**, M. Blas. 1994. Foraging behaviour and pollinating efficiency of *Osmia cornuta* Latr. and *Apis mellifera* L. on almond (Hymenoptera, Apoidea). *Applied Entomology and Zoology*, 29: 1-10.
- 9) J. Retana, J. Ramoneda, F. García del Pino, **J. Bosch**. 1994. Flowering phenology of carob, *Ceratonia siliqua* L. (Cesalpiniaceae). *Journal of Horticultural Science*, 69: 97-103.
- 8) **J. Bosch**. 1992. Parasitism in wild and managed populations of the almond pollinator *Osmia cornuta* Latr. (Hymenoptera, Megachilidae). *Journal of Apicultural Research*, 31: 77-82.
- 7) P. F. Torchio, **J. Bosch**. 1992. The biology of *Tricrania stansburyi* (Coleoptera, Meloidae), a cleptoparasite of *Osmia lignaria propinqua* (Hymenoptera, Megachilidae). *Annals of the Entomological Society of America*, 85:713-721.
- 6) **J. Bosch**. 1992. Floral biology and pollinators of three co-occurring *Cistus* species (Cistaceae). *Botanical Journal of the Linnean Society*, 109: 39-55.

- 5) X. Cerdá, J. Retana, **J. Bosch**, A. Alsina. 1989. Daily foraging activity and food collection of the thermophilic ant *Cataglyphis cursor* (Hymenoptera, Formicidae). *Vie et Milieu*, 39: 207-212.
- 4) X. Cerdá, J. Retana, **J. Bosch**, A. Alsina. 1989. Exploitation of food resources by the ant *Tapinoma nigerrimum* (Hym., Formicidae). *Acta Oecologia*, 10: 419-429.
- 3) X. Cerdá, **J. Bosch**, A. Alsina, J. Retana. 1988. Dietary spectrum and activity patterns of *Aphaenogaster senilis* (Hym., Formicidae). *Annales de la Société Entomologique de France*, 24: 69-75.
- 2) J. Retana, X. Cerdá, A. Alsina, **J. Bosch**. 1988. Field observations of the ant *Camponotus sylvaticus* (Hym., Formicidae): diet and activity patterns. *Acta Oecologica*, 9: 101-109.
- 1) **J. Bosch**, A. Alsina, X. Cerdá, J. Retana. 1987. Incidence du cycle biologique et de la disponibilité des ressources alimentaires sur le régime trophique d'une fourmi. *Vie et Milieu*, 37: 237-242.