

El declive de las abejas: Cinco conceptos mal entendidos

Grupo de trabajo ECOFLOR.

Lista completa de bibliografía:

Sobre los polinizadores:

Aguado Martín, L. O. , Ferreres Castiel, A. y Viñuelas Sandoval, E. 2015. Guía de campo de los polinizadores de España. Ed. Mundiprensa. Madrid. 369 pp.

<http://www.mundiprensa.com/catalogo/9788484766575/guia-de-campo-de-los-polinizadores-de-espana>

Herrera, C.M. 2007. La mayoría de abejas no son como las ovejas. *Quercus* 258: 8-10.

Sobre su estado de conservación:

Bartomeus, I, J S Ascher, J Gibbs, B N Danforth, D L Wagner, S M Hedtke, & R Winfree. 2013. Historical Changes in Northeastern US Bee Pollinators Related to Shared Ecological Traits. *Proceedings of the National Academy of Sciences* 110 (12): 4656–60.

Carvalho, L G, W E Kunin, P Keil, J Aguirre-Gutiérrez, W N Ellis, R Fox, Q Groom, et al. 2013. Species Richness Declines and Biotic Homogenisation Have Slowed down for NW-European Pollinators and Plants. *Ecology Letters* 16 (7): 870–78.

Scheper, J, R Bommarco, A Holzschuh, S G Potts, V Riedinger, S P M Roberts, M Rundlöf, et al. 2015. Local and Landscape-Level Floral Resources Explain Effects of Wildflower Strips on Wild Bees across Four European Countries. *Journal of Applied Ecology* In press. doi:10.1111/1365-2664.12479.

Nieto, A. et al. 2014. European Red List of Bees. IUCN, European Commission, Luxembourg.

vanEngelsdorp, D & M D Meixner. 2010. A Historical Review of Managed Honey Bee Populations in Europe and the United States and the Factors That May Affect Them. *Journal of Invertebrate Pathology* 103: S80–S95.

Ollerton, J., Erenler, H., Edwards, M. & Crockett, R. 2014. Extinctions of aculeate pollinators in Britain and the role of large-scale agricultural changes. *Science* 346: 1360–1362.

Valiente-Banuet, A., Aizen, M. A., Alcántara, J. M., Arroyo, J., Cocucci, A., Galetti, M., García, M. B., García, D., Gómez, J. M., Jordano, P., Medel, R., Navarro, L., Obeso, J. R., Oviedo, R., Ramírez, N., Rey, P. J., Traveset, A., Verdú, M., Zamora, R. 2015. Beyond species loss: the extinction of ecological interactions in a changing world. *Functional Ecology* 29: 299–307. doi: 10.1111/1365-2435.12356

Vanbergen, A.J., Ambrose, N., Aston, D., Jacobus C Biesmeijer, Bourke, A., Breeze, T., Brotherton, P., Brown, M., Chandler, D., Clock, M., Connolly, C.N., Costigan, P., Coulson, M., Cresswell, J., Dean, R., Dicks, L., Felicioli, A., Fojt, O., Gallai, N., Genersch, E., Godfray, C., Grieg-Gran, M., Halstead, A., Harding, D., Harris, B., Hartfield, C., Heard, M.S., Herren, B., Howarth, J., Ings, T., Kleijn, D., Klein, A., Kunin, W.E., Lewis, G., MacEwen, A., Maus, C., McIntosh, L., Millar, N.S., Neumann, P., Ollerton, J., Olschewski, R., Osborne, J.L., Robert J Paxton, Pettis, J., Phillipson, B., Potts, S.G., Pywell, R., Rasmont, P., Roberts, S., Salles, J.-M., Schweiger, O., Sima, P., Thompson, H., Titera, D., Vaissiere, B., Van der Sluijs, J., Webster, S., Wentworth, J. & Wright, G.A. (2012) Insect Pollinator Report. UK Science and Innovation Network. Workshop Report.

Sobre los factores que las amenazan:

Cameron, S A, J D Lozier, J P Strange, J B Koch, N Cordes, L F Solter, & T L Griswold. 2011. Patterns of Widespread Decline in North American Bumble Bees. *Proceedings of the National Academy of Sciences* 108 (2): 662–67.

Winfree, R, I Bartomeus & D Cariveau. 2011. Native Pollinators in Anthropogenic Habitats. *Annual Review of Ecology, Evolution and Systematics* 42: 1-22.

Bartomeus, I, J S Ascher, J Gibbs, B Danforth, D Wagner, S H Hedke, & R Winfree. 2013. Historical changes in northeastern US bee pollinators related to shared ecological traits. *Proceedings of the National Academy of Sciences* 110 (12): 4656-4660.

González-Varo JP, Biesmeijer JC, Bommarco R, Potts SG, Schweiger O, Smith HG, Steffan-Dewenter I, Szentgyörgyi H, Woyciechowski M & Vilá M. 2013. Combined effects of global change pressures on animal-mediated pollination. *Trends in Ecology and Evolution* 28: 524–530.

Rundlöf, M, G K S Andersson, R Bommarco, I Fries, V Hederström, L Herbertsson, O Jonsson, et al. 2015. Seed Coating with a Neonicotinoid Insecticide Negatively Affects Wild Bees. *Nature* 521 (7550): 77–80.

Kerr, J T, A Pindar, P Galpern, L Packer, S G Potts et al. 2015. Climate Change Impacts on Bumblebees Converge across Continents. *Science* 349 (6244): 177-180.

Morales CL, Arbetman MP, Cameron SA, and Aizen MA. 2013. Rapid ecological replacement of a native bumble bee by invasive species. *Frontiers in Ecology and the Environment* 11: 529–534.

Sobre polinización de cultivos:

Garibaldi, L A, I Steffan - Dewenter, C Kremen. et al. 2011. Stability of Pollination Services Decreases with Isolation

from Natural Areas despite Honey Bee Visits. *Ecology Letters* 14 (10): 1062–1072.

Garibaldi, L A, I Steffan-Dewenter, R Winfree, M A Aizen, R Bommarco, S A Cunningham, C Kremen, et al. 2013. Wild Pollinators Enhance Fruit Set of Crops regardless of Honey Bee Abundance. *Science* 339 (6127): 1608–1611.

Klein, A M, B E Vaissiere, & J H Cane. 2007. Importance of Pollinators in Changing Landscapes for World Crops. *Proc. Soc. B* 274: 303-313.

Kleijn, D., Winfree, R., Bartomeus, I., Carvalheiro, L.G., Henry, M., Isaacs, R., Klein, A-M. et al. 2015. Delivery of crop pollination services is an insufficient argument for wild pollinator conservation. *Nature Communications* 6: 7414.

Scheper, J, M Reemer, R van Kats, W A Ozinga, G T J van der Linden, J H J Schaminée, H Siepel, & D Kleijn. 2014. Museum Specimens Reveal Loss of Pollen Host Plants as Key Factor Driving Wild Bee Decline in The Netherlands. *Proceedings of the National Academy of Sciences* 111 (49): 17552–17557.

Ollerton, J., Price, V., Armbruster, W.S., Memmott, J., Watts, S., Waser, N.M., Totland, Ø., Goulson, D., Alarcón, R., Stout, J.C. & Tarrant, S. 2012. Overplaying the role of honey bees as pollinators: a comment on Aebi and Neumann (2011). *Trends in Ecology & Evolution* 27: 141–142.

Sobre el impacto de *Apis mellifera* en la flora y fauna silvestre:

Dohzono, I. & Yokoyama, J. 2010. Impacts of alien bees on native plant-pollinator relationships: A review with special emphasis on plant reproduction. *Applied Entomology and Zoology* 45: 37-47.

Goulson, D. 2003. Effects on introduced bees on native ecosystems. *Annual Review of Ecology, Evolution, and Systematics* 34: 1-26.

Moritz, R.F.A., Härtel, S., Neumann, P. 2005. Global invasions of the western honeybee (*Apis mellifera*) and the consequences for biodiversity. *Ecoscience* 12: 289-301.

Valido, A., Rodríguez, M.C. & Jordano, P. 2014. Impacto de la introducción de la abeja doméstica (*Apis mellifera*, Apidae) en el Parque Nacional del Teide (Tenerife, Islas Canarias). *Ecosistemas* 23(3): 58-66.