

S1 The list of the major invasive wasp specie

Polistes dominula, *Polistes chinensis*, *Polistes versicolor*, *Polistes humilis*, *Vespula vulgaris*, *Vespula germanica*, *Vespula pensylvanica*, *Vespa velutina*, *Vespa mandarinia*, *Vespa velutina nigrithorax*, *Vespa orientalis* and *Vespa crabro*.

References

- Addison, P., Veldtman, R., & Van Zyl, C. (2018). The invasive Vespidae in South Africa: potential management strategies and current status. *African entomology*, 26(2), 267-285.
- Alaniz, A. J., Carvajal, M. A., & Vergara, P. M. (2021). Giants are coming? Predicting the potential spread and impacts of the giant Asian hornet (*Vespa mandarinia*, Hymenoptera: Vespidae) in the USA. *Pest management science*, 77(1), 104-112.
- Beggs, J. (2001). The ecological consequences of social wasps (*Vespula spp.*) invading an ecosystem that has an abundant carbohydrate resource. *Biological Conservation*, 99(1), 17-28.
- Beggs, J. R., Brockerhoff, E. G., Corley, J. C., Kenis, M., Masciocchi, M., Muller, F., ... & Villemant, C. (2011). Ecological effects and management of invasive alien Vespidae. *BioControl*, 56, 505-526.
- Benadé, P. C., Veldtman, R., Samways, M. J., & Roets, F. (2014). Rapid range expansion of the invasive wasp *Polistes dominula* (Hymenoptera: Vespidae: Polistinae) and first record of parasitoids on this species and the native *Polistes marginalis* in the Western Cape Province of South Africa. *African Entomology*, 22(1), 220-225.
- Bessa, A. S., Carvalho, J., Gomes, A., & Santarém, F. (2016). Climate and land-use drivers of invasion: predicting the expansion of *Vespa velutina nigrithorax* into the Iberian Peninsula. *Insect Conservation and Diversity*, 1(9), 27-37.
- Bulgarella, M., Mieses, A. E., Rodríguez, J., Campaña, Y., Richardson, G. M., Keyzers, R. A., ... & Lester, P. J. (2022). Integrating biochemical and behavioral approaches to develop a bait to manage the invasive yellow paper wasp *Polistes versicolor* (Hymenoptera, Vespidae) in the Galápagos Islands. *Neotropical Biodiversity*, 8(1), 271-280.
- Bulgarella, M., Baty, J. W., McGruddy, R., & Lester, P. J. (2023). Gene silencing for invasive paper wasp management: Synthesized dsRNA can modify gene expression but did not affect
- Carisio, L., Cerri, J., Liroy, S., Bianchi, E., Bertolino, S., & Porporato, M. (2022). Impacts of the invasive hornet *Vespa velutina* on native wasp species: a first effort to understand population-level effects in an invaded area of Europe. *Journal of Insect Conservation*, 26(4), 663-671.
- Cunningham-Eurich, I., Kontou, D., Yordanova, M., Maeda-Obregon, A., Favreau, E., Wang, J., ... & Sumner, S. (2023). Using citizen science data to assess the population genetic structure of the common yellowjacket wasp, *Vespula vulgaris*. *Insect Molecular Biology*, 32(6), 634-647.
- Downing, H. (2012). Nest parameters of *Polistes* and *Mischocyttarus* species (Hymenoptera: Vespidae) before and after detection of the invasive wasp, *Polistes dominula* in western South Dakota and Wyoming. *Journal of the Kansas Entomological Society*, 85(1), 23-31.
- Duthie, C., & Lester, P. J. (2013). Reduced densities of the invasive wasp, *Vespula vulgaris* (Hymenoptera: Vespidae), did not alter the invertebrate community composition of *Nothofagus* forests in New Zealand. *Environmental entomology*, 42(2), 223-230.
- Gamboa, G. J., Greig, E. I., & Thom, M. C. (2002). The comparative biology of two sympatric paper wasps, the native *Polistes fuscatus* and the invasive *Polistes dominulus* (Hymenoptera, Vespidae). *Insectes Sociaux*, 49, 45-49.

- Gorosito, C. A., & Cueto, V. R. (2024). Neotropical songbird chick predation by an invasive wasp, the German yellowjacket (*Vespula germanica*). *Austral Ecology*, 49(2), e13488.
- Harrop, T. W., Guhlin, J., McLaughlin, G. M., Permina, E., Stockwell, P., Gilligan, J., ... & Dearden, P. K. (2020). High-quality assemblies for three invasive social wasps from the *Vespula* genus. *G3: Genes, Genomes, Genetics*, 10(10), 3479-3488.
- Howse, M. W. F., Reason, A., Haywood, J., & Lester, P. J. (2024). Improving wasp control by identifying likely causes of eradication failure. *Journal of Pest Science*, 1-15.
- Kishi, S., & Goka, K. (2017). Review of the invasive yellow-legged hornet, *Vespa velutina nigrithorax* (Hymenoptera: Vespidae), in Japan and its possible chemical control. *Applied entomology and zoology*, 52, 361-368.
- Lester, P. J., & Beggs, J. R. (2019). Invasion success and management strategies for social *Vespula* wasps. *Annual review of entomology*, 64, 51-71.
- Lester, P. J., O'Sullivan, D., & Perry, G. L. (2023). Gene drives for invasive wasp control: Extinction is unlikely, with suppression dependent on dispersal and growth rates. *Ecological Applications*, 33(7), e2912.
- Lioy, S., Carisio, L., Manino, A., & Porporato, M. (2023). Climatic niche differentiation between the invasive hornet *Vespa velutina nigrithorax* and two native hornets in Europe, *Vespa crabro* and *Vespa orientalis*. *Diversity*, 15(4), 495.
- Masciocchi, M., & Corley, J. (2013). Distribution, dispersal and spread of the invasive social wasp (*Vespula germanica*) in Argentina. *Austral Ecology*, 38(2), 162-168.
- McGruddy, R., Howse, M. W., Haywood, J., Toft, R. J., & Lester, P. J. (2021). Nesting ecology and colony survival of two invasive *Polistes* wasps (Hymenoptera: Vespidae) in New Zealand. *Environmental Entomology*, 50(6), 1466-1473.
- Melo, R., Masciocchi, M., & Corley, J. C. (2023). Allee effects in an invasive social wasp: an experimental study in colonies of *Vespula germanica*. *Scientific Reports*, 13(1), 16323.
- Monceau, K., Bonnard, O. & Thiéry, D. *Vespa velutina*: a new invasive predator of honeybees in Europe. *J Pest Sci* 87, 1–16 (2014). <https://doi.org/10.1007/s10340-013-0537-3>
- Moreyra, S., Lozada, M., Fernández-Arhex, V., & Pietrantuono, A. L. (2023). *Polistes dominula* (Hymenoptera: Vespidae) paper wasps detect native grasshoppers using olfactory cues. *Austral Ecology*, 48(8), 2041-2052.
- Newsome, T., Cairncross, R., Cunningham, C. X., Spencer, E. E., Barton, P. S., Ripple, W. J., & Wirsing, A. J. (2024). Scavenging with invasive species. *Biological Reviews*, 99(2), 562-581.
- Pereira, A. J., Pirk, G. I., & Corley, J. C. (2016). Foraging behavior interactions between two non-native social wasps, *Vespula germanica* and *V. vulgaris* (Hymenoptera: Vespidae): implications for invasion success?. *Journal of Insect Science*, 16(1), 78.
- Rankin, E. E. W. (2021). Emerging patterns in social wasp invasions. *Current opinion in insect science*, 46, 72-77.
- Reason, A., Felden, A., Bulgarella, M., & Lester, P. J. (2024). Population dynamics and prey community of the invasive paper wasp *Polistes chinensis* (Hymenoptera: Vespidae) in a protected coastal habitat in New Zealand. *Austral Entomology*.
- Rojas-Nossa, S. V., O'Shea-Wheller, T. A., Poidatz, J., Mato, S., Osborne, J., & Garrido, J. (2023). Predator and Pollinator? An invasive hornet alters the pollination dynamics of a native plant. *Basic and Applied Ecology*, 71, 119-128.
- Rothman, J. A., Loope, K. J., McFrederick, Q. S., & Wilson Rankin, E. E. (2021). Microbiome of the wasp *Vespula pensylvanica* in native and invasive populations, and associations with Moku virus. *Plos one*, 16(7), e0255463.

- Sankovitz, M., Loope, K. J., Wilson Rankin, E. E., & Purcell, J. (2023). Unequal Reproduction Early in a Social Transition: Insights from Invasive Wasps. *The American Naturalist*, 201(2), 241-255.
- Schmack, J. M., Lear, G., Astudillo-Garcia, C., Boyer, S., Ward, D. F., & Beggs, J. R. (2021). DNA metabarcoding of prey reveals spatial, temporal and diet partitioning of an island ecosystem by four invasive wasps. *Journal of Applied Ecology*, 58(6), 1199-1211.
- Schmack, J. M., Schleuning, M., Ward, D. F., & Beggs, J. R. (2020). Biogeography and anthropogenic impact shape the success of invasive wasps on New Zealand's offshore islands. *Diversity and Distributions*, 26(4), 441-452.
- Spencer, E. E., Barton, P. S., Ripple, W. J., & Newsome, T. M. (2020). Invasive European wasps alter scavenging dynamics around carrion. *Food Webs*, 24, e00144.
- Stratford, J. E., Stratford, F. M., Brown, R. L., & Oi, C. A. (2024). Nest visitors of *Vespula* wasps and their potential use for biological control in an invaded range. *Journal of Pest Science*, 97(1), 445-453.
- Veldtman, R., Addison, P., & Tribe, G. D. (2012). Current status and potential future impact of invasive vespid wasps (*Vespula germanica* and *Polistes dominulus*) in South Africa.
- Villemant C, Barbet-Massin M, Perrard A, Muller F, Gargominy O, Jiguet F, Rome Q. Predicting the invasion risk by the alien bee-hawking Yellow-legged hornet *Vespa velutina nigrithorax* across Europe and other continents with niche models. *Biol. Conserv.* 2011; 144(9): 2142-2150.