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Parasites and genetic diversity in an invasive bumblebee

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Biological invasions pose one of the biggest threats to biodiversity, with climate change and the global transportation of species are likely to increase the ecological and economic damage caused by biological invasions. Therefore understanding the mechanisms behind invasion success is essential. Both the release of non-native populations from natural enemies, such as parasites, and the genetic diversity of these populations may play key roles in their invasion success. We investigated the roles of parasite communities, through enemy release and parasite acquisition, and genetic diversity in the invasion success of the non-native bumblebee, *Bombus hypnorum*, in the United Kingdom. The invasive *B. hypnorum* had higher parasite abundance than native congeners, probably due to higher susceptibility and parasite acquisition. Consequently parasites had a higher impact on the invader's fitness than on native species. *B. hypnorum* also had lower functional genetic diversity than native species. Higher parasite abundance and lower genetic diversity have not prevented the rapid invasion of the UK by *B. hypnorum*. These data may inform our understanding of similar invasions by commercial bumblebees around the world. In addition, this study has important implications for biodiversity and species conservation, such as introduction and translocation programs, where small founding populations, with low parasite loads, are required to establish, produce self-sustaining populations and expand their range