French Polynesia: a threatened biodiversity hotspot

Being one of the most remote archipelagos in the world, French Polynesia has a unique terrestrial biota characterized by a high level of endemism. It is thus a biodiversity hotspot. Tahiti and Moorea are the most human populated and are facing the highest biological invasion pressures, as they are entry points into the archipelago.

Four major invasive ants are threatening Tahitian native habitats

Among the introduced species, four major invasive ants are recorded:
- Anoplolepis gracilipes (Yellow crazy ant).
- Pheidole megacephala (Big headed ant).
- Solenopsis geminata (Tropical fire ant).
- Wasmannia auropunctata (Little fire ant).

Three of these species were already recorded by Cheesman in 1928 (from sampling in 1925). W. auropunctata is the most recent and threatening arrival. To date, these 4 species appear mostly restricted to human modified habitats, at low elevation. They represent major threats to Tahitian biodiversity, especially if they spread higher in altitude where most of the endemic species are restricted. The recent discovery of W. auropunctata in the Mahina district, in July 2004, this tiny stinging ant may be spread there since 1994. The Bishop Museum in Honolulu displays a W. auropunctata specimen from 1977, which may represent a wrong record or a beachhead of a previous unsuccessful invasion.

Spread of Wasmannia auropunctata on Tahiti

Following the identification of Wasmannia auropunctata in October 2004, a global ant survey has been launched on Tahiti but also on the adjacent island of Moorea. This effort leads to an update of the ant fauna of both islands both from literature and field records. Forty five ant species are now recorded from these two islands. Three ant families appear largely dominated by introduced species: no endemic species are recognized in far, and only nine species may be considered native: Hypoponera confinis, Carebara longipes, Hypoponera opaciceps, Cardiocondyla nuda, Cardiocondyla minutior, Cardiocondyla wroughtoni, Solenopsis geminata, Myrmica pharaonis, and Monomorium destructor.

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