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“Sympatric Speciation On A Remote Oceanic Island”

Tuesday, December 19, 2017 - 11:00 a.m.

Salle Favard - IBENS - 46 rue d'Ulm - 75005 Paris

The idea that populations must be geographically isolated (allopatric) to evolve into separate species persisted for a long time, but it has now become clear that new species can also diverge despite ongoing genetic exchange. However, the mechanisms and genomic architectures that permit such divergence are still debated. Here, we examined the plants of Lord Howe Island, Australia, and in particular its *Howea* palms. We use field experiments, phylogenetics, genomics, transcriptomics and demographic modelling to disentangle the underlying processes that lead to sympatric speciation and coexistence. Also, although interpretation of the genomic architecture of divergence is more complex than initially appreciated, our results indicate that speciation with gene flow nonetheless produces identifiable genomic patterns, providing a link between genome organisation and the origin of species.

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