

Community disassembly by an invasive species

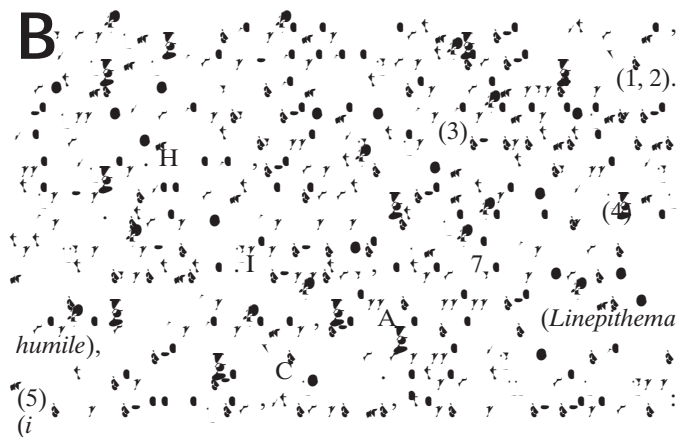
Nathan J. Sanders*[†], Nicholas J. Gotelli[‡], Nicole E. Heller[§], and Deborah M. Gordon[§]

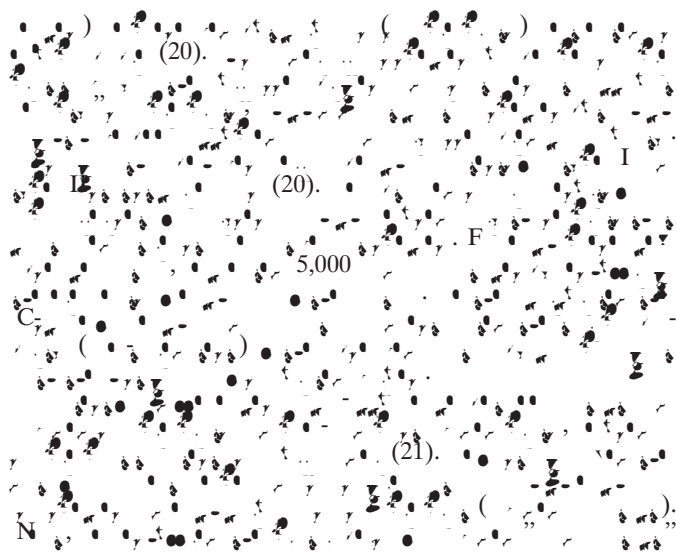
*Department of Biological Sciences, Humboldt State University, Arcata, CA 95521; [†]Department of Biology, University of Vermont, Burlington, VT 05405; and [§]Department of Biological Sciences, Stanford University, Stanford, CA 94305

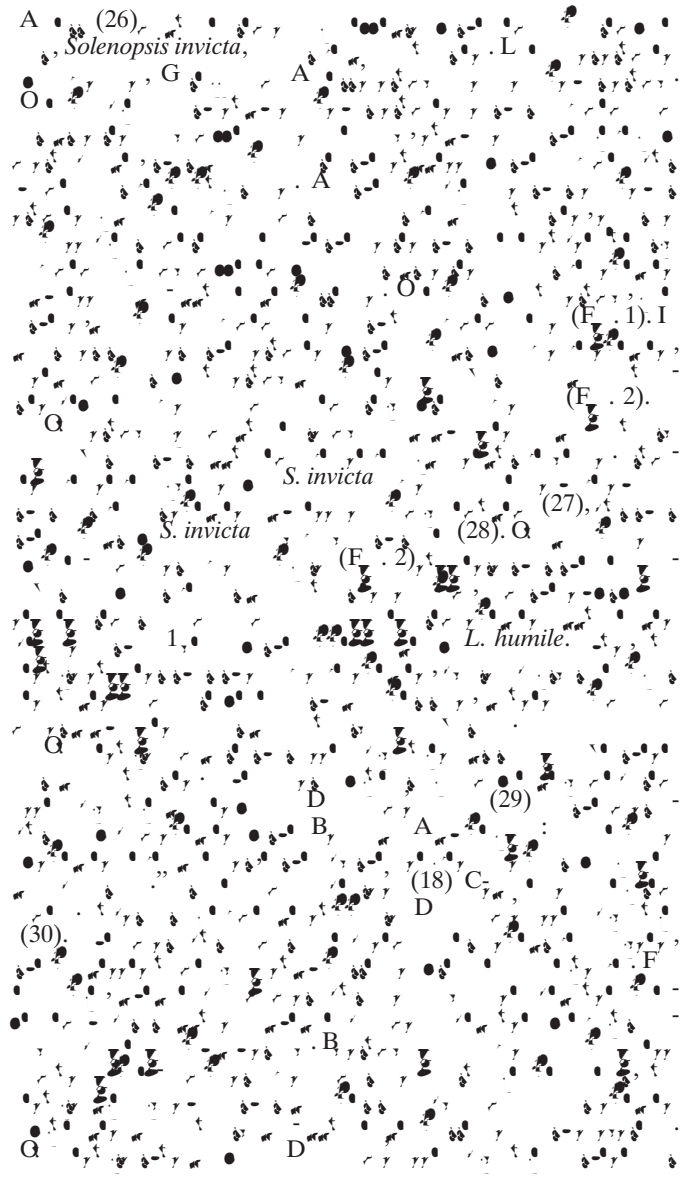
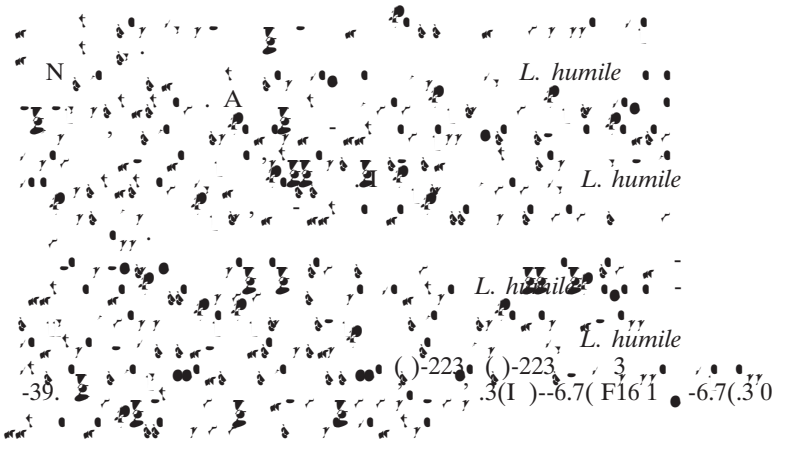
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Invasive species pose serious threats to community structure and ecosystem function worldwide. The impacts of invasive species can be more pervasive than simple reduction of species numbers. By using 7 years of data in a biological preserve in northern California, we documented the disassembly of native ant communities during an invasion by the Argentine ant. In sites without the Argentine ant, native ant communities exhibit significant species segregation, consistent with competitive dynamics. In sites with the Argentine ant, native ant communities appear random or weakly aggregated in species co-occurrence. Comparisons of the same sites before and after invasion indicate that the shift from a structured to a random community is rapid and occurs within a year of invasion. Our results show that invasive species not only reduce biodiversity but rapidly disassemble communities and, as a result, alter community organization among the species that persist.

community organization | null model | *Linepithema humile* | invasive ants







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humile
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(31) C. (32). I.

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(36). G.

