

Jacob N. Barney, PhD

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Brief Bio: Dr. Jacob N. Barney is Professor of invasive plant ecology in the School of Plant and Environmental Sciences and Director of the Invasive Species Collaborative at Virginia Tech. He studies the causes, impacts, evolution and expansion, mitigation, and policy of invasive species.

Dr. Jacob N. Barney received his BS in chemistry from the University of Kentucky and his MS and PhD from Cornell University in weed ecology. He then moved to the University of California Davis as a Postdoctoral Scholar where he worked on the invasion potential of large statured perennial grasses for biofuel. Dr. Barney joined the faculty in Blacksburg at Virginia Tech in 2010. Dr. Barney works on the causes, consequences, and epidemiology of invasive species to develop innovative mitigation strategies to this element of global change. Dr. Barney works in a variety of natural and managed ecosystems across the United States, and has projects on both emerging and longstanding invasive species. Projects have included determining the ecological impact of invasive plant species in natural systems; interaction of propagule pressure, species traits, and receiving habitat characters determining invasion successes; evaluating the role of local adaptation and phenotypic plasticity in range expansion; the role of epigenetics in stress tolerance; how restorations impacts plant invasion; and how invasive species change the soundscape. Dr. Barney has research programs in a variety of systems, including deciduous forests, reclaimed coal mines, riparian systems, and agroecosystems. Dr. Barney has published >100 peer-reviewed papers, 1 book, 6 book chapters, 4 policy documents, 3 extension publications, given 37 invited and >130 contributed presentations, and co-created several science-art projects that have been exhibited at several art museums.