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Determining identity and origin of invasive plant species: How and why we do this research.

## Presented by:

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**Description:** Classical biological control is based on co-evolved relationships between the pest species and organisms that will attack the pests (and only the pests). To create an effective biological control program for an invasive plant species, basic taxonomic and population information is required. Molecular studies can be powerful in determining the taxonomy of the invasion and relationships to other taxa, in order to avoid non-target effects. The origin of the invasion, and even pinpointing origins of common invasive genotypes, can help researchers find highly co-evolved biological control agents. Similarly, population genetic studies can search for population structure within an invasion, an important step in fine-tuning control when agents are too host specific. Molecular studies can also elucidate evidence of cryptic hybridization, which can complicate control efforts, as novel hybrids may have no evolutionary history with biological control agents. Here I want to present some molecular research that has helped answer some of these questions, and discuss how the results can impact control of invasive plants.

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