



## INTRODUCED SPECIES

# The Value of Inspection Stations for Detecting Nonindigenous Species Lacking Agricultural Significance: The Mexican Treefrog, *Smilisca baudinii* Complex (Duméril and Bibron 1841) (Hylidae), Interdicted in Florida, USA, from a Shipment of Peppers

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The Mexican Treefrog or Rana Arborícola Mexicana, *Smilisca baudinii* (Duméril and Bibron 1841) (Fig. 1), is indigenous across a broad range from Hidalgo and Cameron Counties in southernmost Texas, USA, southward through most of Mexico and Mesoamerica to Costa Rica (Duellman and Sweet 1999; Duellman 2001; Savage 2002; Malone 2005; McCranie and Casteñada 2007). It likely represents a species complex (McCranie 2017). Individuals collected farther north in Bexar and Refugio Counties, Texas, may represent nonindigenous cargo introductions; however, their actual status is uncertain (Malone 2005; Dixon 2013; Dodd 2013). Recuero et al. (2004) speculated that specimens discovered in Baja California Sur, Mexico, also could be the result of cargo introductions. However, Lovich et al. (2009) considered *S. baudinii* indigenous to this region.

On 13 November 2018, a subadult *S. baudinii* (Fig. 2; snout–urostyle length [SUL] = 33 mm; Florida Museum [FLMNH], Herpetology Collection: UF 188705; verified by Coleman M. Sheehy III) was collected from inside a box of Poblano Peppers (*Capsicum annuum*) in a shipping truck (Truck #5) at Agriculture Interdiction Station No. 6B, I-10 East Bound, Live Oak, Suwannee County, Florida (30.3492°N, 83.1541°W, WGS 84), USA, by Dyrana N. Russell, Logan P. Cutts, and Catherine E. White. The peppers were shipped from a produce company in McAllen, Hidalgo County, Texas, USA, and originated from an unspecified locality in Mexico. The ultimate destination of the truck and its contents was Pompano Beach, Broward County, Florida. The specimen was originally turned in to the Division of Plant Industry (DPI), Florida Department of Agriculture and



Fig. 1. An adult Mexican Treefrog (*Smilisca baudinii*) from the Pacific coast of Guatemala near the Mexican border. Photograph by David G. Barker.

Consumer Services (FDACS), as Entomology Sample Log No. E2018-5911-1. Whether the origin for this individual was Mexico or Hidalgo County, Texas, is not known, but either is consistent with the indigenous range of this species. This is a single cargo interception (Stage 1: Colautti and MacIsaac 2004) and the first record for *S. baudinii* intercepted in Florida. Currently no evidence suggests that *S. baudinii* has been successfully introduced into and established in Florida, although this species could survive climatic conditions in the southern part of the state and at the scheduled destination of this shipment.



**Fig. 2.** Mexican Treefrog, *Smilisca baudinii* (UF 188705), collected on 13 November 2018 by Dyrana N. Russell, Logan P. Cutts, and Catherine E. White from a produce shipping truck in Live Oak, Suwannee County, Florida. Photograph by Gary J. Steck.

The state of Florida has more introduced nonindigenous species of amphibians and reptiles than any other place in the world: 180 introduced species and two interceptions (Krysko et al. 2016, 2019). At least 64 of these species are established and perhaps an additional 12 more are of uncertain status (Krysko et al. 2019). In Florida, the cargo pathway accounts for 19 (approximately 10%) nonindigenous introduced species (Krysko et al. 2016). Cargo transport of alien species is a burgeoning problem in an age of intense, escalating global commerce. Intercepting *S. baudinii* in cargo underscores the value of frequent state agency inspections of agricultural shipping trucks for preventing introductions of nontarget species that are not considered agricultural pests, but potentially could become invasive and have unforeseen negative impacts on the environment. Currently such interceptions can be serendipitous for organisms not specifically listed as pests.

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