



Figure s3. Phylogeny of *Smilisca* clade (adapted from [1]). Circles following each species name show call timing strategy, assigned based on literature [2] and from call recordings. While *S. sordida*, the sister species of *S. sila*, is described as having alternating calls, male *S. sordida* often call in a rapid sequential “domino” pattern (p. 357 in [2]) that can result in signal overlap. Open circles indicate non-synchronous calling, black circles indicate the use of synchronized calls, and gray circles indicate an intermediate calling strategy: alternating calls with some overlap.

Recordings from the Macaulay Library at the Cornell Lab of Ornithology (catalog number):

- S. puma* (ML194144)
- S. cyanosticta* (ML194131)
- S. phaeota* (ML193677)
- P. fodiens* (ML193959)
- S. sordida* (ML194159)
- S. sila* (ML194145)
- S. baudinii* (ML193667)
- T. petasatus* (ML193835)
- A. spinosa* (NA)
- T. spatulatus* (ML193956)

1. Smith SA, Arif S, De Oca ANM, Wiens JJ. 2007 A phylogenetic hot spot for evolutionary novelty in Middle American treefrogs. *Evolution* **61**, 2075-2085.

2. Savage, J. M. (2002). *The amphibians and reptiles of Costa Rica: a herpetofauna between two continents, between two seas*. Chicago, IL: University of Chicago Press.