



## Review of the genus *Sinoe* (Lepidoptera: Gelechiidae) with descriptions of two new species

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### Abstract

Species of the North American genus *Sinoe* Chambers, 1873, are reviewed. A neotype for *Anacampsis robiniella* Fitch, 1859, the type species of *Sinoe*, is designated, and the species is redescribed. A lectotype for *S. fuscopallidella* Chambers, 1873 and a neotype for *Gelechia robiniaefoliella* Chambers, 1880, both junior synonyms of *S. robiniella*, are also designated. Two new species, *Sinoe chambersi* **sp. nov.** and *S. kwakae* **sp. nov.** are described. Adults and male and female genitalia are illustrated for the three recognized species. Keys to the species are given based on external characters and the genitalia of both sexes.

**Key words:** Nearctic, Gelechiidae, Litini, *Robinia pseudoacacia*, neotype, lectotype, Chambers, Gracillariidae

### Introduction

*Sinoe* Chambers, a previously monotypic genus, is one of 25 Holarctic genera in Litini (formerly Teleiodini) and is restricted in distribution to eastern North America (Lee and Brown 2008). Chambers (1873) described this genus to include a new species, *S. fuscopallidella*, collected in Kentucky (see Miller and Hodges (1990) for information on the types of Chambers.). Chambers (1878) synonymized *Sinoe* with *Gelechia*, misspelling the type species as *G. fuscopallidella*. Chambers (1880) subsequently described *Gelechia robiniaefoliella* based on a single specimen reared from a larva webbing leaves of *Robinia pseudoacacia* L. (Fabaceae) (black locust) in New York. Other specimens from the same reared series as Chambers' type specimen were available to Comstock (1880), who described the larva and pupa. Dyar (1903) synonymized *S. fuscopallidella* [sic] and *G. robiniaefoliella* with *Anacampsis robiniella* Fitch (1859), with the latter transferred to *Recurvaria*. Hodges (1965) resurrected *Sinoe* from synonymy with *Recurvaria* and maintained the synonymy of *S. fuscopallidella* and *A. robiniella*, the latter being the senior name, but he did not mention *G. robiniaefoliella*. This latter synonym was not included in subsequent checklists (Hodges 1983, Lee *et al.* 2009).

The identity of *S. robiniella* has been uncertain because no type specimens of Fitch exist in the New York State Museum (McCabe and Johnson 1980), Academy of Sciences of Drexel University in Philadelphia, Yale's Peabody Museum, American Museum of Natural History, or any of the collections from which material was borrowed. In addition, the moth described by Fitch (1859) was associated with larvae in leaf mines of *Robinia pseudoacacia* L. (Fabaceae), and these represent more than one species of Gracillariidae based on his descriptions of the larva and mine (see following discussion of *S. robiniella*). Fitch's description of the moth is clearly not that of any species of Gracillariidae (Clemens 1863), and Fitch was unlikely to have confused a gelechiid with a gracillariid because he described *Argyromiges pseudacaciella*, a junior synonym of *Phyllonorycter robiniella* (Clemens), in the same publication. Fitch's description of the moth was vague, but it does not conflict with specimens that have historically been identified as *S. robiniella*. This manuscript designates a neotype for *S. robiniella* to resolve this nomenclatorial problem and to connect the name to its two junior synonyms. In addition to a redescription of *S. robiniella*, two new species from the eastern United States are described here, both of which have been mixed previously with *S.*