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Florivory records of *Jamides* spp. (Lepidoptera: Lycaenidae) on *Strongylodon macrobotrys* A. Gray and *S. juangonzalezii* Hadsall et al. (Fabaceae)

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Abstract

The endemic Jade Vine, *Strongylodon macrobotrys* A. Gray (Fabaceae) is reported for the first time as a larval host plant for the butterfly, *Jamides suidas* C. & R. Felder [1865] (Lepidoptera: Lycaenidae) in the Mt. Makiling Forest Reserve. This discovery not only contributes to the missing host plant data of this butterfly but is also the first record of larval feeding on the inflorescence of *S. macrobotrys*. Meanwhile, adults and larvae of *Jamides alecto* (C. Felder) were recorded as nectarivore and florivore, respectively, on *S. juangonzalezii* Hadsall et al.

Keywords: biodiversity, butterfly, herbivory, insect-plant interaction, natural history

Introduction

The etymology of the genus *Strongylodon* (Fabaceae) can be traced to the Greek words *strongylos* meaning round, and *odonto* meaning tooth. Both words describe the shape of the outermost whorl of the flower known as the calyx. The Plant List (TPL) (2013) which contains the working list of all plant species known to the botanical community has a record of 14 valid species of *Strongylodon*, eight of which are known to occur in the Philippines (Hadsall et al., 2016). These eight species are: 1) *Strongylodon caeruleus* Merr.; 2) *S. elmeri* Merr.; 3) *S. juangonzalezii* Hadsall et al.; 4) *S. loheri* Huang; 5) *S. lucidus* (G.Forst.) Seem.; 6) *S. macrobotrys* A.Gray; 7) *S. pulcher* C.B.Rob. and 8) *S. zschokkei* Elmer. Of these eight native species, *S. lucidus* has a wider distribution reaching Andaman Isls, Australia, Indian Ocean, Java Sea, Moluccas, New Guinea, Solomon Isls, Sri Lanka, and Sulawesi. (Pelser et al., 2023). At the same time, *S. lucidus* is the only representative of the genus *Strongylodon* that has records of being a lepidopteran host plant (Robinson et al., 2010). Table 1 lists three lepidopteran families that are associated with *S. lucidus*.

Table 1. Lepidopteran records for *Strongylodon lucidus* (Fabaceae) from Robinson et al. (2010).

Families	Scientific Names	Localities
Lycaenidae	*Hypochlorosis lorquinii* (C. & R. Felder, 1865)	Papua New Guinea
Pyralidae	*Omiodes monogona* Meyrick, 1888	Hawaii
Tortricidae	*Cydia parapteryx* (Meyrick, 1932)	Hawaii

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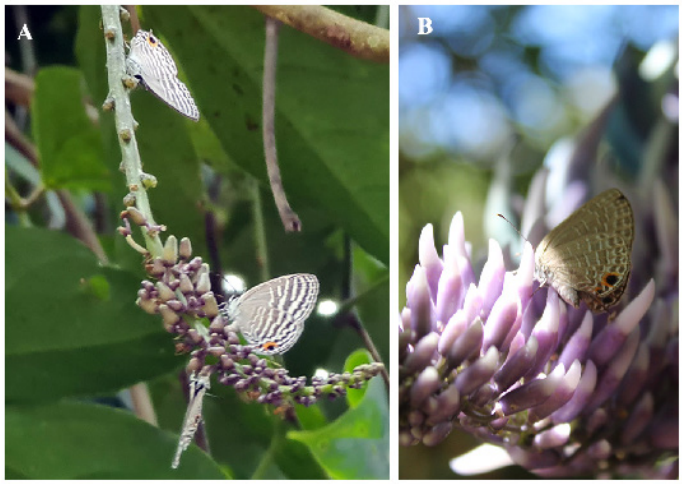

Figure 1. Ovipositing lycaenid butterflies on inflorescences of *Strongylodon macrobotrys* **(A)** and *S. juangonzalezii* **(B)**.

Figure 2. Keel damage **(A)** caused by larval florivory **(B)** on *Strongylodon juangonzalezii*.

Notes and Observations

In Mt. Banahaw de Majayjay, indirect references of butterflies using *S. macrobotrys* as adult and larval host plant were mentioned by Gestiada et al. (2014). Unfortunately, there were no species association nor any notes or records of herbivorous activities on this *Strongylodon* species. Meanwhile, buds of *S. macrobotrys* in the Mt. Makiling Forest Reserve in Los Baños, Laguna were observed to be frequented by female *Jamides suidas* C. & R. Felder [1865]. It seems that these females bend their abdomen to deposit eggs between the base of the keel and the calyx (Figure 1A). The same behavior was observed in *J. alecto* (C. Felder) ovipositing on *S. juangonzalezii* (Figure 1B).

The emerging larva subsequently bores into the flower, creating a 3-mm hole (Figure 2A). These buds fall off the pendulous inflorescence and land on the ground. Dissecting these buds show frass-filled calyx and larva tucked inside the damaged floral keel and wings (Figure 2B). In addition, while the complete development of larvae was not recorded due to limited field visits brought about by multiple restrictions during the COVID-19 pandemic, it is still important to report this kind of florivory.

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