

## ***Obolopteryx nigra* (Ensifera: Tettigoniidae) Occurrence on *Ocimum basilicum* (Lamiaceae) in Northeast Mexico<sup>1</sup>**

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*Obolopteryx nigra* Barrientos-Lozano & Rocha-Sánchez (Ensifera: Tettigoniidae) is reported for first time in two locations (Tula City and on El Salitre Farm) in the municipality of Tula, Tamaulipas, Mexico (1,200 to 1,230 m above sea level). The municipality of Tula is located in the highlands of the Sierra Madre Oriental, in southwest Tamaulipas within a transition zone between forested and desert habitats. The major host plants in this zone are *Prosopis laevigata* (Humboldt & Bonpland ex Willdenow) Marshall Conring Johnston (Fabaceae), *Acacia farnesiana* (L.) Willdenow (Fabaceae), and a variety of annual grasses and thorny shrubs (Barrientos-Lozano et al. 2016, Zootaxa 4168: 401–452).

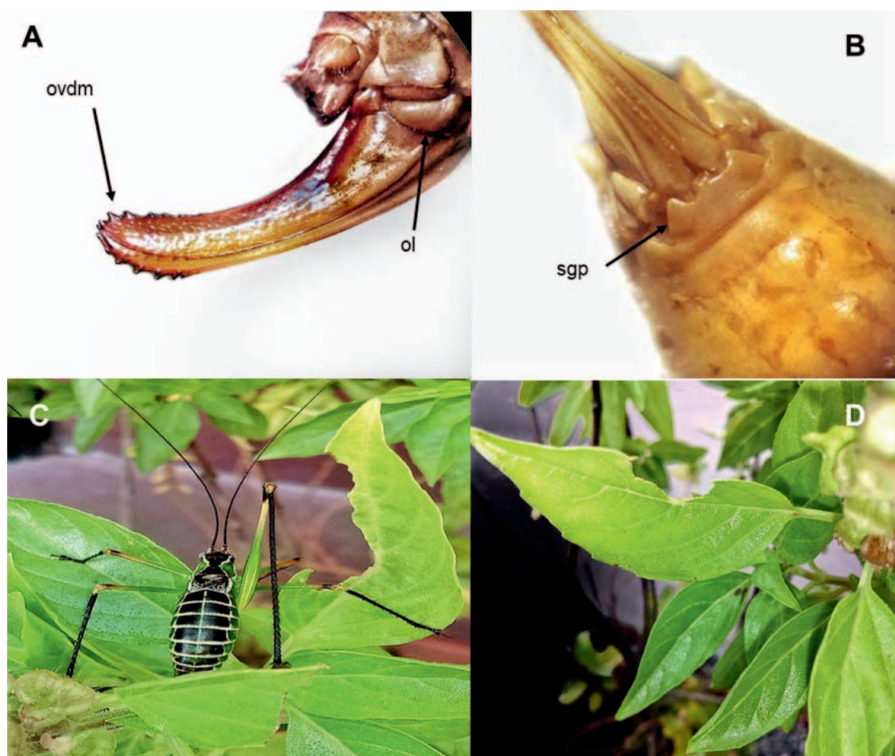
Basil, *Ocimum basilicum* L. (Lamiaceae), is an aromatic herb that grows in several regions in the world and is utilized for food, pharmaceuticals, and cosmetics; possesses antifungal, physicochemical, and insect repellent activity; and is an antimicrobial and antioxidant agent (Govindarajan et al. 2013, Exp. Parasitol. 134: 7–11; Hussain et al. 2008, Food Chem. 108: 986–95). In Mexico, basil is grown as an ornamental plant and is used as a medicinal plant. It has been reported as host to a number of arthropod species including *Pachnaeus litus* Germar (Coleoptera: Curculionidae), *Atta insularis* Guérin-Méneville (Hymenoptera: Formicidae), and *Polyphagotarsonemus latus* Banks (Trombidiformes: Tarsonemidae) (Bernal et al. 2012, Fitosanidad 16: 87–89), *Cochlochila bullita* Stål (Heteroptera: Tingidae) (Dhiman and Datta 2013, Ann. Plant Protect. Sci. 21: 184–185), and *Phenacoccus madeirensis* Green (Homoptera: Pseudococcidae)

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**Fig. 1.** *Obolopteryx nigra* identification: (A) ovipositor lobe (ol), ovipositor distal margin (ovdm), (B), subgenital plate (sgp). (C) *Obolopteryx nigra* over *Ocimum basilicum*; (D) damage caused by *O. nigra*.

(Papadopoulou and Chryssohoides 2012, Bull. OEPP/EPPO. 42: 146–147). This is the first report of the occurrence of *O. nigra* on basil in northeast Mexico.

Adult female tettigoniids were collected from *Ocimum basilicum* in Victoria City, Tamaulipas State, Mexico (N 23°46'19.2"; W 99°5'56.4", 286 m above sea level). Specimens were preserved in 70% alcohol and transported to the Population Ecology Laboratory of the Institute of Applied Ecology of the Autonomous University of Tamaulipas at Victoria City, Tamaulipas State, Mexico, where they were identified as *O. nigra* using the taxonomic keys of Barrientos-Lozano et al. (2016). Identification was primarily based on the following characters (Fig. 1A, B): protuberant ovipositor lobe on females with ovipositor short and smoothly curved, distal dorsal margin with seven to eight pair of spines, and distal ventral margin with eight to nine pair of spines (Fig. 1A); the subgenital plate was represented by two subrobust rectangular structures, each with a wide external distal angle (Fig. 1B).

*Obolopteryx nigra* feeding on three basil plants was observed for 7 d (Fig. 1C), causing 20–30% defoliation of the leaves (Fig. 1D), thus indicating that basil can be successfully consumed and digested by *O. nigra*. Interestingly, Hernández-Juárez et al. (2018, Southwest. Entomol. 43: 1047–1050) reported that the closely related

*Obolopteryx castanea* Rehn and Hebard did not cause damage to *Ocimum tenuiflorum* L. (Lamiaceae), *Rosmarinus officinalis* L. (Lamiaceae), or *Ruta chalepensis* L. (Rutaceae). Those authors postulated that the presence of those insects on those host plants may have provided protection from natural enemies, as those aromatic herbs produce a variety of secondary metabolites that deter predators.

While the injury caused by *O. nigra* to *Ocimum basilicum* in northeast Mexico appears important, the ecological impact of *O. nigra* on the *Ocimum basilicum* is not yet known and requires further study. Damage by *O. nigra* can decrease the market value of the damaged plants. Food preferences and/or host incidence and damage severity to ornamental plants and life history of *O. nigra* should be further studied.