N O T E

# First Record of *Lepidosaphes beckii* (Hemiptera: Diaspidae) on *Pachycereus marginatus* (Cactaceae) and *Myrtillocactus geometrizans* (Cactaceae) in North-Central Mexico[1]

Rapucel T.Q. Heinz-Castro, Salvador Ordaz-Silva[3], Heriberto Méndez-Cortés, Imelda V. López-Sánchez[3], Sandra G. Mora-Ravelo[4], and Julio C. Chacón-Hernández[2,4]

Facultad de Agronomía y Veterinaria, Universidad Autónoma de San Luis Potosí, Carretera San Luis - Matehuala Km. 14.5, Ejido Palma de la Cruz, 78321 Soledad de Graciano Sánchez, San Luis Potosí, México

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The purple scale, *Lepidosaphes* (= *Cornuaspis*) *beckii* Newman (Hemiptera: Diaspididae), is reported herein for first time on *Pachycereus marginatus* (D.) Britton & Rose (Cactaceae) and *Myrtillocactus geometrizans* (Mart. Ex Pfeiff.) (Cactaceae) in North-Central Mexico. The purple scale has been reported on plants representing 56 genera in 40 families and is distributed in various countries, including Mexico (García-Morales et al. 2016, http://scalenet.info/catalogue/Lepidosaphes%20beckii/). In Mexico, *L. beckii* has been reported in Ciudad de Mexico, Colima, Nayarit, Sinaloa and Veracruz in citrus-growing areas (Miller 1996, Proc. Entomol. Soc. Wash. 98: 68–86; García-Morales et al. 2016) and on ornamental and shade plants (García-Morales et al. 2016).

*Pachycereus marginatus* and *M. geometrizans* are endemic cactus species in Mexico. Both grow wild: *P. marginatus* in Colima, Chiapas, Ciudad de Mexico, Guanajuato, Guerrero, Hidalgo, Jalisco, México, Michoacan, Oaxaca, Puebla, Queretaro, San Luis Potosi, Tabasco, Tlaxcala, Veracruz, and Zacatecas states and *M. geometrizans* in Aguascalientes, Durango, Guerrero, Guanajuato, Hidalgo, Jalisco, Mexico, Michoacan, Nuevo Leon, Oaxaca, Puebla, Queretaro, San Luis Potosi, Tamaulipas, Veracruz, and Zacatecas states. These cacti species possess medicinal properties (Bravo-Hollis 1978, Las Cactáceas de México. Univ. Nacion.

[1]Received 7 September 2020; accepted for publication 14 September 2020.
[2]Corresponding author (email: jchacon@docentes.uat.edu.mx).
[3]Facultad de Ingeniería y Negocios San Quintín, Universidad Autónoma de Baja California, Carretera Ensenada-San Quintín, Km 180.2, Ejido Padre Kino, C. P. 22930, San Quintín, Baja California, México.
[4]Instituto de Ecología Aplicada, Universidad Autónoma de Tamaulipas, División del Golfo 356, Colonia Libertad, CP, 87019, Cd. Victoria, Tamaulipas, México.

Autón. México, México; Arias-Toledo et al. 2000, Las Plantas de la Región de Zapotitlán Salinas, Puebla. Instit. Nacion. Ecología/Red de desarrollo Sostenible A.C./Univ. Nacion. Autón. México, México, DF).

Adult female scales of *P. marginatus* and *M. geometrizans* were collected at Ojo Zarco (22°19′ 43.5324′′ N, −101° 1′ 2.8524′′ W, 1,847 m above sea level [masl]) and Lechuguillas (22°19′ 0.1452′′ N, −101° 1′ 6.7938′′ W, 2,728 masl); both in Mexquitic de Carmona, San Luis Potosi, Mexico. Specimens were placed in plastic bags and were transported to the Entomology Laboratory of the Faculty of Agronomy and Veterinary, Autonomous University of San Luis Potosí at San Luis Potosí, Mexico. Scales were mounted according to Triplehorn and Johnson (2005, Borror and Delong's Introduction to the Study of Insects, 7th ed., Thompson Brooks/Cole, Belmont, CA, USA) and were identified using the taxonomic keys of Claps and Teran (2001, Neotrop. Entomol. 30: 391–402). Female *L. beckii* specimens were characterized by the fusiform body and totally membraneous character. The metathorax was without glandular spines, and translucent circular spots were seen on the prepigidial and pygidial segments.

We counted *L. beckii* on 100 cactus plants per ha in a 4-d survey at each location. Our counts yielded a mean ± SD of 120 ± 20 adults (♀/♂) on *P. marginatus* and 110 ± 15 adults (♀/♂) on *M. geometrizans* per plant. For both cactus species, approximately 90% were located in the shade with the remaining 10% in partial sun but less densely populated. Where *L. beckii* was more abundant on the plant, small yellow spots were observed. Dean (1975, Environ. Entomol. 4: 110–114) and Stathas et al. (2015, Bull. OEPP/EPPO. 45: 128–132) reported a greater number of purple scale and, hence, greater damage where the foliage was dense. Otherwise, where foliage was less abundant, the number of *L. beckii* was low and, therefore, the damage was less. Although further studies are required, our preliminary results indicate that the abundance of purple scale is affected by sunlight.

In this note are reported 2 new hosts of *L. beckii* in wild areas. This also represents the first record of the purple scale in San Luis Potosi state, Mexico. Because species of the genus *Citrus* are the preferred hosts of purple scale worldwide (Watson 2002, https://diaspididae.linnaeus.naturalis.nl/linnaeus_ng/app/views/introduction/topic.php?id=3377&epi=155; Stathas et al. 2015), it is important to know the wild hosts of *L. beckii* in areas of orange production (i.e., San Luis Potosi that ranks third in orange production in Mexico [SAGARPA-SIAP 2019, https://nube.siap.gob.mx/gobmx_publicaciones_siap/pag/2019/Atlas-Agroalimentario-2019]). Further studies are required on the population dynamics, incidence, and damage severity to cacti caused *L. beckii*. In addition, studies that determine its spatial distribution and probability of moving to and feeding on other hosts of important economic should be conducted.