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On the distribution of *Phlegyas* Stål
(Hemiptera: Heteroptera: Pachygronthidae)

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Abstract. Updated distributions are provided for all three species of *Phlegyas* Stål (Hemiptera: Heteroptera: Pachygronthidae) in the New World: *Phlegyas abbreviatus* (Uhler, 1876), *P. annulicrus* Stål, 1869, and *P. patruelis* Berg, 1883. In total, four new state records for the United States of America, four new state records for Mexico, one new Canadian provincial record, and one new country record (Nicaragua, *P. annulicrus*) are presented, along with remarks and corrections.

Key words. Lygaeoidea, New World, Pachygronthinae.

Introduction

The New World genus *Phlegyas* Stål (Hemiptera: Heteroptera: Pachygronthidae) is represented by only three species: *Phlegyas abbreviatus* (Uhler, 1876), *P. annulicrus* Stål, 1869, and *P. patruelis* Berg, 1883. These bugs are associated with grasses or grassy fields and can be collected in great numbers (Slater and Baranowski 1990; Cervantes et al. 2014). Cervantes et al. (2014) provided the most thorough natural history account of any single species (*P. annulicrus*), including descriptions of the nymph stages and a redescription of the adult. Keys to distinguish the species can be found in Slater (1955; all three species), Slater and Baranowski (1990; Florida) and Baranowski and Slater (2005; West Indies, one questionable record).

Herein, new state records are presented for the United States of America and Mexico, a new province record for Canada, and *P. annulicrus* is reported from Nicaragua. Updated distributions are provided for each species combining these new records with the literature.

Methods

Collection holdings representing *Phlegyas* were examined in order to better understand the distribution of the group. For each species, identifications were checked using primary literature (Slater 1955; Slater and Baranowski 1990; Baranowski and Slater 2005), species determinations were performed, corrections were made, and label data were compared to the literature in order to expand the known distributions for each species. Specimens examined from the author's private collection (JMLC; Tampa, Florida), Texas A&M University (TAMU; College Station, Texas), the Florida State Collection of Arthropods (FSCA; Gainesville, Florida) and the Smithsonian Natural History Museum (NMNH; Washington, D. C.) provided data. All new state and country records include verbatim label data and repository data for the specimens examined.

Results and Discussion

Phlegyas abbreviatus (Uhler, 1876)

Distribution. AR, CA, CO, CT, DC, **DE (new state record)**, FL, GA, IA, IL, IN, KS, KY, MA, MD, ME, MI, MN, MS, MO, MT, NC, NE, NH, NJ, NY, OH, OK, PA, RI, SC, TN, TX, VA, VT, **WI (new state**

record), WV (new state record), WY, and Canada (BC, NB (new province record), ONT, QUE) (Ashlock and Slater 1988; Slater and Baranowski 1990; Chordas et al. 2005). There is a single record (NMNH) from Trinidad, probably erroneous or “introduced in commerce” (Baranowski and Slater 2005).

Specimens examined. CANADA: **New Brunswick:** Long Creek, 12-IX-1961, D. E. Leonard (NMNH, 3). **USA: Delaware:** Sussex Co.: 7.5 mi E of Bridgeville, 18-VII-1989, G. F. & J. F. Hevel (NMNH, 6); **West Virginia:** Pocahontas County: Cranberry Glades Botanical Gardens, off State Hwy 130, elevation 3589', 8-VIII-2009, J. M. Leavengood, Jr. & E. Chapman (JMLC, 1); **Wisconsin:** Blooming Grove, 18-VI-1998, S. G. Wellso (TAMU, 2); Muskego, 21-VII-1939, P. B. Lawson (NMNH, 1).

Phlegyas annulicrus Stål, 1869

(Fig. 1–3)

Distribution. AZ, CA, FL, GA, ID, KS, LA, MO, MS, NC, NJ, NM (new state record), OK, SC, TX, UT, Canada (BC), Mexico (Ashlock and Slater 1988; Slater and Baranowski 1990; Scudder 2012) and **Nicaragua (new country record)**. Slater (1955) listed Mississippi whereas subsequent literature listed Missouri (perhaps in error). This species is known to occur in the following states of Mexico: Aguascalientes, Baja California Sur, **Chiapas (new state record)**, **Coahuila (new state record)**, Colima, Distrito Federal, Guanajuato, Guerrero, Jalisco, Estado de México, Michoacán, Morelos, Nayarit, Nuevo León, Oaxaca, Puebla, San Luis Potosí, Sonora, **Tamaulipas (new state record)**, Veracruz and **Zacatecas (new state record)** (Cervantes et al. 2014).

Specimens examined. MEXICO: **Chiapas:** 3 mi S.W. Cintalapa, 19-X-1976, Cate & Clark (TAMU, 1), 12 mi. east Huixtan, 15-IX-1990, Robert W. Jones (TAMU, 1), Chorreadero Canyon, Tuxtla Gutierrez, 20-VI-1987 (TAMU, 2); **Coahuila:** El Infante, 18-IX-1976, W. F. Chamberlain (TAMU, 2); **Tamaulipas:** 7 miles south of Antigua Morelos, 21-VIII-1974, W. E. Clark (TAMU, 1); **Zacatecas:** Rt. 54, circa Las Palmas, 1500 m elevation, 21.149020° N 103.18290° W, 22-X-2005, C. H. Dietrich (FSCA, 6; JMLC, 5), 24.7 mi. s. Juchipila, 6-VIII-1988, Ferreira, Schaffner (TAMU, 2), 4 mi NE Concepción del Oro, 4-VII-1984, J. B. Woolley (TAMU, 2), Tropic of Cancer marker on highway 54, elevation 1958 m., 14-VII-1984, J. B. Woolley (TAMU, 1), 2.6 km E of rt. 54, 1600m, 21.08947° N 103.13170° W, 22-X-2005, C. H. Dietrich (FSCA, 3). NICARAGUA: Esteli Dept.: 13.4 mi. NW Sebago, 17-VI-1972, CA-3, R. R. & M. E. Murray (TAMU, 1). USA: **New Mexico:** Harding County: Gallegos, 16-VI-1992, W. F. Chamberlain (TAMU, 1), Hidalgo County: 5.8 miles west Animas, 31°56'31" N 108°54'48" W, el. 4450 ft., 25-VIII-2000, J. C. Schaffner (TAMU, 1), Peloncillo Mts., Geronimo Pass Rd., along creekbed, N31°31.090' W109°00.20', 16-VIII-2009, CW & LB O'Brien (FSCA, 1).

Diagnostic remarks. Slater (1956) noted that [some] specimens from southern Mexico were darker colored and may be mistaken for *P. abbreviatus*, but that examination of the claspers and antennae facilitate distinguishing the species apart. Cervantes et al. (2014) also provides a detailed discussion to separate the two species. I examined large series of TAMU specimens from Mexico and observed specimens with strikingly dark (particularly anterior) pronotal coloration (Fig. 3) with the rest of the body of typical coloration. One specimen (TAMU, Chiapas) had an entirely black pronotum (Fig. 2), with the front legs and central scutellar marking notably darker than I had otherwise seen. The lone specimen representing the new record for Nicaragua was of typical coloration (Fig. 1).

Phlegyas patruelis Berg, 1883

Distribution. Melo et al. (2004) recorded *P. patruelis* from Argentina, Paraguay and Uruguay. Perhaps an accidental omission, Melo et al. (2004) did not include Bolivia, although Slater (1966) noted specimens in the Drake Collection. Dellapé et al. (2015) included more detail regarding distributional records in Argentina.

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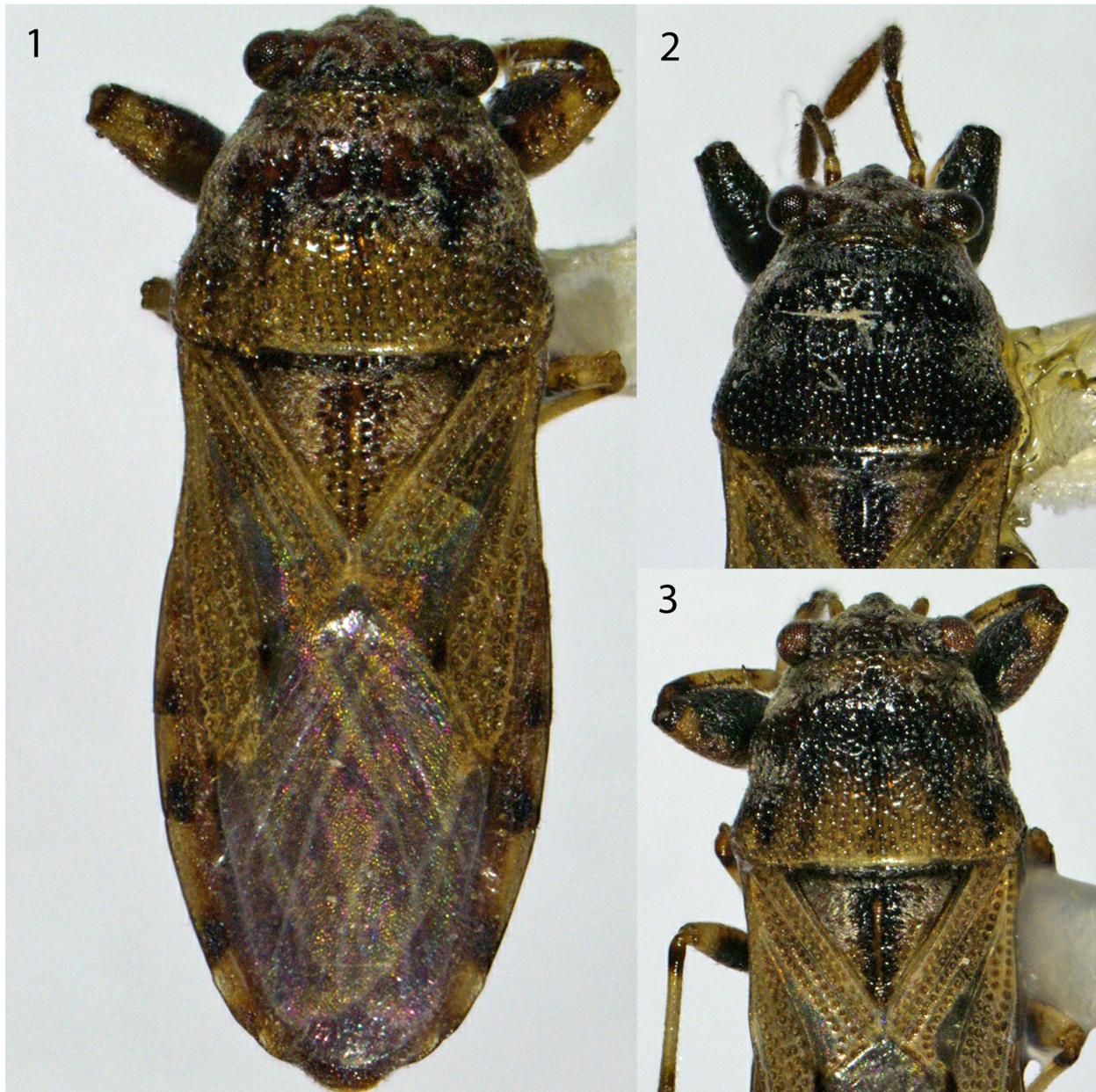
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Figures 1–3. *Phlegyas annulicrus* Stål. **1)** Mexico, Puebla (TAMU). **2)** Mexico, Chiapas (TAMU). **3)** Mexico, Puebla (TAMU).