

## Extension of the known distribution of *Gasteracantha cancriformis* (Linnaeus, 1758) (Arachnida: Araneae: Araneidae) in South America, with the first records from Chile

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**Abstract:** The spider *Gasteracantha cancriformis* (Linnaeus, 1758) is reported for the first time from Chile. The new records extend the known geographic range of the species in South America to southern Peru and northern Chile.

**Key words:** Araneae, Araneidae, spiders, *Gasteracantha cancriformis*, desert, new records, southern Peru, northern Chile.

**Ampliación de la distribución conocida de *Gasteracantha cancriformis* (Linnaeus, 1758) (Arachnida: Araneae: Araneidae) en Sudamérica, con las primeras citas de Chile**

**Resumen:** Se cita de Chile por primera vez a la araña *Gasteracantha cancriformis* (Linnaeus, 1758). Las nuevas citas extienden el área de distribución conocida de la especie en Sudamérica hasta el sur de Perú y el norte de Chile.

**Palabras clave:** Araneae, Araneidae, arañas, *Gasteracantha cancriformis*, desierto, nuevas citas, sur de Perú, norte de Chile.

The spider *Gasteracantha cancriformis* (Linnaeus, 1758), commonly known as “spiny orb weaver spider” is one of the most common subtropical spiders occurring in the New World (Platnick, 2014). Frequently it is found in semiarid or dry habitats (Levi, 1996), and it makes its web between trees or around trees in shrubs (Levi, 1978; Muma & Stone, 1971; Muma, 1971). It is found across the southern part of the United States from California to Florida, as well as in Central America, Jamaica, Cuba, Dominican Republic, Bermuda and Puerto Rico (Levi, 1978). In South America, it is present in Colombia, Ecuador, Venezuela, northern Peru, Paraguay, Brazil and northern Argentina (Levi, 1978, 1996).

This spider exhibits marked sexual dimorphism in size. Females are 5 to 9 mm in length and 10 to 13 mm in width. Males are 2 to 3 mm long and a small amount shorter in width. Six abdominal spines are present in all morphs, but color and shape show geographic variation (Levi, 1978). Most individuals have white spots on the underside of the abdomen, but the color of the back may be orange, yellow or white (sometimes black in Caribbean populations), and the spines may be black, red, orange or yellow. Also, a small number of spiders have colored legs other than black (Levi, 1978; Muma, 1971).

We report the first record of the spiny orb weaver spider *G. cancriformis* (Fig. 1) for Chile. This species was previously distributed from southern United States in North America to northern Argentina. With these new records we are expanding its distribution in South America for southern Peru and northern Chile. This species seems to prefer deserts, tropical and subtropical habitats in South America, but is not present in Mediterranean and temperate forests with cold climates (Fig. 2).

On January 2014, a female of *G. cancriformis* was collected in Arequipa, Peru (16° 23' 55.55" S, 71° 32' 12.78" W). Subsequently on May of the same year five females of the same species were found at the mouth of Lluta River, Arica, northern Chile (18°24'41" S, 70°19'11" W). This species is normally associated with bushes growing on the grasslands, specifically linked to *Tessaria absinthioides* (Hook. & Arn.), they living frequently in sympatry with the

spider *Argiope argentata* (Fabricius, 1775). In nature, this species preys upon many small insect pests that are present in crops and suburban areas. These spiders usually feed on whiteflies, beetles, moths, drosophilids, and other small fly species that fall into its web. It helps to control overpopulation of such insects (Muma & Stone, 1971).

This study expands the distribution of the species in South America and contributes significantly to the knowledge of the biodiversity of northern Chile, where studies of spiders are quite rare. Species identification was based on Levi (1996). The specimens examined were preserved in 70% alcohol and deposited in Museo Nacional de Santiago de Chile (Curator: Mario Elgueta).

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**Figure 1.** Live *G. cancriformis* female in Lluta Valley, northern Chile.



**Figure 2.** Current distribution of *Gasteracantha cancriformis* (Linnaeus) in South America. The data was obtained from the following records: Levi (1978, 1996), Antonio Brescovit (pers.comm. Brazil records) and GBIF data.

