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Foto de la portada: Dorsal view of a female specimen of *Psalmopoeus irminia* from Tepui Ichum, Bolivar, Venezuela (photo © Jeff Shea).

On *Psalmopoeus irminia* Saager, 1994 (Araneae: Theraphosidae). Clarifying Distribution Records and Confirming Presence on the Ichum Tepui, Bolívar, Venezuela.

Jorge M. González[1], Jeff Shea[2] & Peter Klaas[3]

RESUMEN

Psalmopoeus irminia es autóctona de las regiones del sur y sureste de Venezuela, así como del norte de Brasil. La bibliografía histórica ha reconocido su presencia en Guyana, aunque sin datos específicos sobre su localización; sin embargo, observaciones recientes documentadas en iNaturalist.org corroboran su presencia en esa región. Los modelos ecológicos indican, además, que la especie podría habitar en el estado venezolano de Delta Amacuro y en la ribera colombiana del río Orinoco. Nuestros estudios de campo han confirmado una presencia localizada de esta especie en el Tepui Ichum, un tepui prácticamente inexplorado situado en el estado de Bolívar, en Venezuela. Los miembros del género *Psalmopoeus* se caracterizan por su rápido movimiento y su comportamiento agresivo, aunque carecen de pelos urticantes. Aunque su veneno no se clasifica como una amenaza médica con consecuencias mortales, posee una potencia superior a la media, capaz de provocar espasmos musculares graves, dolor, náuseas y vómitos. Cabe destacar que, durante la expedición en la que se recogió el espécimen, se observó un comportamiento defensivo notable: el individuo, al verse acorralado, expulsó un líquido lechoso no identificado por sus quelíceros.

Palabras clave: Theraphosidae, araña, Venezuela, Tepui Ichum, Orinoco.

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ABSTRACT

Psalmopoeus irminia is indigenous to the regions of southern and southeastern Venezuela, as well as northern Brazil. Historical literature has acknowledged its presence in Guyana, albeit without specific locality data; however, recent observations documented on iNaturalist.org substantiate its occurrence in that region. Ecological modeling further indicates that the species may inhabit Venezuela's Delta Amacuro state and the Colombian side of the Orinoco River. Our field studies have confirmed a localized presence of this species on Tepui Ichum, a largely unexplored tepui located in Bolívar State, Venezuela. Members of the genus *Psalmopoeus* are characterized by their rapid movement and aggressive behavior, yet they are devoid of urticating hairs. Although their venom is not classified as a medical threat with fatal outcomes, it possesses higher-than-average potency, capable of inducing severe muscle spasms, pain, nausea, and vomiting. Notably, during the expedition in which the specimen was collected, a remarkable defensive behavior was observed: the individual, when cornered, expelled an unidentified milky fluid from its chelicerae (fangs).

Keywords: Theraphosidae, spider, Venezuela, Tepui Ichum, Orinoco.

INTRODUCTION

Venezuela is a megadiverse country with a high number of spider species that have adapted to many ecological niches (Edwards 2026). But despite being a group that exhibits extraordinary diversity, very little is known about them in this country, particularly for tarantulas (González-Sponga 2003). However, the World Spider Catalog (2026) reports almost 50 species in the family Theraphosidae for Venezuela. Among its four or five Neotropical subfamilies, Psalmopoeinae, probably of questionable phylogenetic relationships, includes five distinct genera: *Amazonius*, *Ephebopus*, *Tapinauchenius*, *Yanomamius,* and *Psalmopoeus* (Samm & Schmidt 2010, Cifuentes & Perafan 2020, Cifuentes & Bertani 2022). Roughly 10 to 14 species are known within the latter genus; at least two of them (*Psalmopoeus langenbucheri* Schmidt, Bullmer & Thierer-lutz, 2006 & *P. irminia* Saager, 1994) have been reported from Venezuela (Saager 1994, Klaas 2003, Ray & Sherwood 2019, Perez-Miles 2020, Cifuentes & Perafán 2020, Cifuentes & Bertani 2022, WSC 2026).

Among the characteristics common to the species in the genus *Psalmopoeus,* as noticed in *P. irminia* and *P. cambridgei* Pocock, 1895, they are very fast and aggressive and lack urticant hairs (Saager 1994, Cifuentes & Bertani 2023, Penaherrera-R. & Leon-E. 2023).

However, while not venomous enough to be considered of medical interest (R. Bertani, personal communication), they seem to have a higher-than-average venom potency; thus, their bites, while not fatal, can be painful, causing muscle spasms, nausea, and vomiting (Simon & Hoyte 2023).

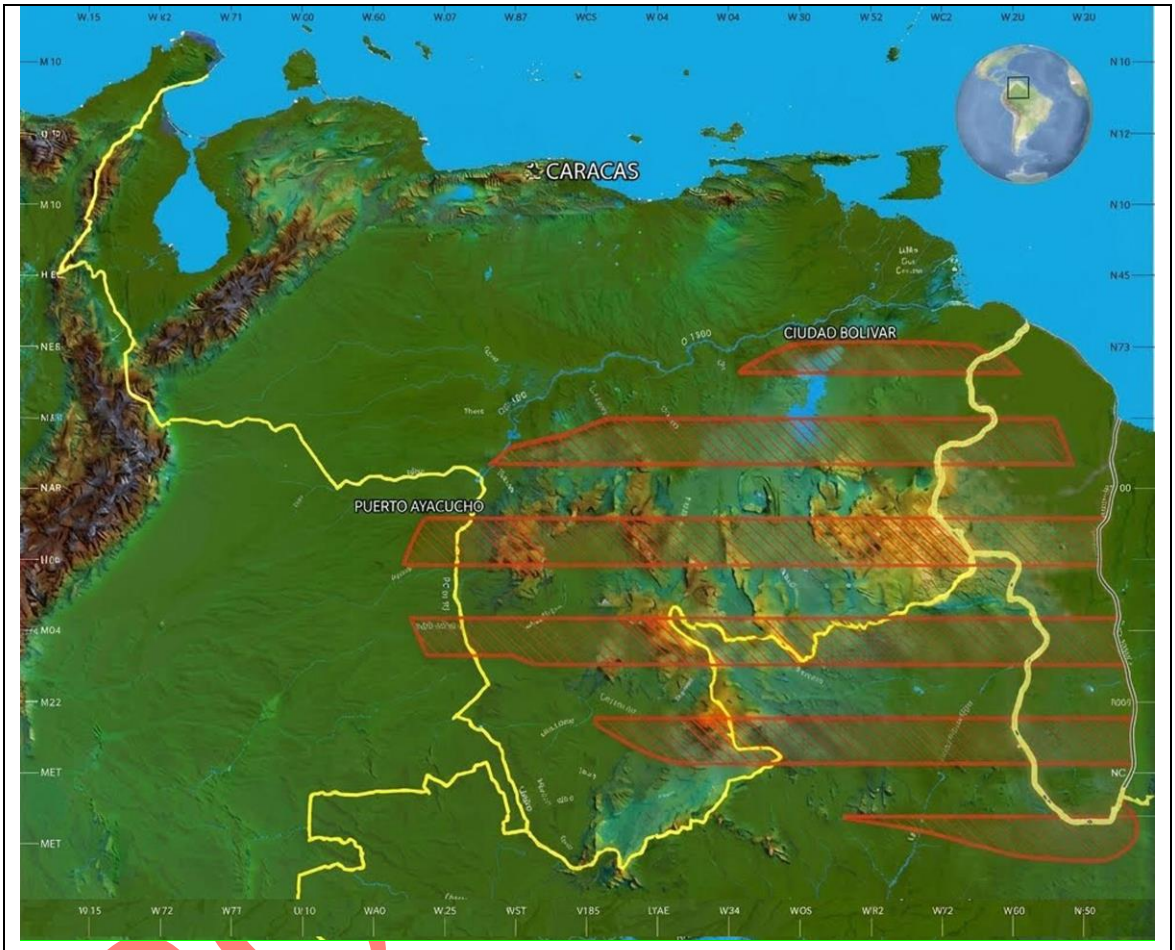

Figure 1: Approximate general distribution of *Psalmopoeus irminia* in northern South America (highlighted in red). This distribution includes the Venezuelan Guayanas Region (part of Amazonas and Bolivar states) in Venezuela, possibly reaching the Orinoco Delta; the country of Guyana, most probably west of the Essequibo River (known as Zone in Reclamation); Northern Roraima State, Brazil. It is quite possible that this tarantula could be found along the western side of the Orinoco River in Colombia. (Original map: Charles Brewer Carias).

The species *P. irminia* was described from a few localities in southeastern Venezuela, and has also been reported from Brazil (Saager 1994; Cifuentes & Bertani 2022). Interestingly, Saager (1994) also mentioned that the species was present in Guyana, but he did not include any Guyanese locality.

However, he provided a map where the distribution is shown along both sides of the border from the region around Roraima Tepui (Bolivar State) to Delta Amacuro State.

Cifuentes & Bertani (2022), improved Saagar's (1994) distribution map and reported the species in Brazil. They also mentioned Guyana as part of *P. irminia* distribution, based on Saagar (1994), but did not include any locality from that country (Cifuentes & Bertani 2022). However, they did include a new locality in Amazonas State, Venezuela. Even though we did not find any published data from Guyana in the literature reviewed, several citizen-scientists have reported the species from that country on the iNaturalist.org platform, a very valuable tool for research and studying biodiversity (García-Díaz & González 2026).

Figure 2: Dorsal view of a specimen of a female *Psalmopoeus irminia* from Tepui Ichum, Bolivar, Venezuela (photo © Jeff Shea).

The approximate overall distribution, based on the currently known locations where specimens have been collected is shown in figure 1. As it shows, there is a possibility that the species might reach the state of Delta Amacuro in Venezuela (Orinoco Delta), and almost certainly it will be eventually found on the Colombian side of the Orinoco River, around and South of Puerto Ayacucho, Amazonas, Venezuela (fig. 1)

On or about February 15, 2014, a female tarantula belonging to the species *P. irminia* was found during an expedition to the Tepui Ichum. It was then photographed and collected by one of us (JS) (figs. 2 & 3). This small Venezuelan tepui is basically unknown, and so far, interesting species have been found from this particular expedition (González et al. 2015; Sormani et al. 2026).

Figure 3: Profile of the same specimen of a female *Psalmopoeus irminia*, showing the distinctive marking on its legs (photo © Jeff Shea).

While assembling the boats to continue rafting the river, one of us (JS) and two Shiriana Indigenous companions found the tarantula walking in a riparian forest within 20 meters of the Ichum River at 4° 43' 05"N, 63° 22' 14"W at an altitude of approximately 430 m (figs. 4 & 5). The nearest permanent village is approximately 20 km downstream. After attempting to confine the arachnid to a small area in the sand for JS to take photographs, the tarantula reacted aggressively, ejecting an unidentified milky fluid from its chelicerae.

Figure 4: Sandy beach along the river on Ichum Tepui, where a *Psalmopoeus irminia* tarantula was collected (photo © Jeff Shea).

Figure 5: Section of riparian forest, the environment from which a *Psalmopoeus irminia* tarantula emerged towards a neighboring sandy area on Ichum Tepui (photo © Jeff Shea).

Even though the aggressiveness of this species has been previously reported, as far as we know, such behavior as “ejecting venom” has never been mentioned in other tarantulas.

MATERIALS & METHODS

Material examined and known distribution of *P. irminia*, with comments on some of the localities.

VENEZUELA: Amazonas: Cejal[sic], Orinoco river (5°25’N, 67°43’W) (Cifuentes & Bertani 2022) [this is a small Yanomami village near the mouth of the Casiquiare River and Tama Tama, on the right side of the Orinoco River; its name is Sejal, not Cejal. The name derives from the abundance of Seje palms (*Oenocarpus bataua* von Martius 1823, Arecaceae) in the area]; **Bolivar**: Tepui Ichum, 4° 43' 05"N, 63° 22' 14"W, ~430m., 15.II.2014, Coll. Jeff Shea [This voucher specimen will be deposited in the Entomology collection of The Academy of Natural Sciences of Drexel University, Philadelphia];; Santa Elena de Uairen; [Slope or vicinity of] Roraima-tepui; Gran Sabana (Cited in Saager 1994; [Saager wrongfully cited them from the “State of Guyana” (Estado Guyana), was he referring to Guyana or Bolivar State?; “Guyana” is the neighboring country of Venezuela, to the east; “Guayana” is a “nickname” for the region in Bolivar state, below the Orinoco River, because it is part of the larger historic and geographical region known as "The Guianas," traditionally divided by European colonial powers. Curiously also, Saager does not present any collecting data of the species from Guyana or close to the Orinoco Delta, in Venezuela, however he presents a map with the distribution of the species that includes both regions.]); Santa Elena de Uairén (Cited in Cifuentes & Bertani 2022); **BRAZIL: Roraima**: Amajari, Tepequém (3°44’13.4”N, 61°43’33.2”W); 1 female, Pacaraima, (04°29’44” N 61°07’27”W), 17.VII.2025, Arthur_de_Sena (Cited in Bertani et al. 2016 and Cifuentes & Bertani 2022) ; **GUYANA**: 1 female, Potaro-Siparuni, Lat/Lon: 4.25465, -58.86611, 11.XI.2012, hoppy1951 https://www.inaturalist. org/observations/198189; 1 male, Upper Takutu-Upper Essequibo, Sand Creek – Dadanawa, Catunarib, Sawariwau, UD, Lat/Lon: 3.04649, -59.48736, 122m, 24.X.2015, White River https://www.inaturalist.org/observations/326724771; 1 female, Upper Takutu-Upper Essequibo, 24.VI.2018, eamoncorbett https://www. inaturalist.org/observations/15851326; 1 female, Upper Takutu-Upper Essequibo, Yakarinta – Wowetta, Surama, UD, Lat/Lon: 4.16121, -59.17798, 122m, 22.VI.2019, thewildgingerbeast https://www.inaturalist.org/ observations/184362383; 1 female? Killed by a Pompilidae wasp, Potaro-Siparuni region, Iwokrama Forest Reserve Lethem to Georgetown Road Mauisparu, 27.XII.2021, lauren_re https://www.inaturalist.org/observations/ 148684398; 1female, Upper Takutu-Upper Essequibo, Lat/Lon: 3.66109, -59.35325, 29m, 12.IX.2023, kyma https://www.inaturalist.org/observations/ 184782364; 1 female, Upper Takutu-Upper Essequibo, Lat/Lon: 3.29924,

-59.22377, 977m, 18.I.2024, zakwildlife https://www.inaturalist.org/observations/226452539; 1 female, Potaro-Siparuni region, Lat/Lon: 4.24622, -58.90707, 14.I.2025, avocat https://www.inaturalist.org/observations/261079635; 1 juvenile, Potaro-Siparuni region, Lat/Lon: 4.26291, -58.88950, 11.III.2025, adam_timpf https://www.inaturalist.org/observations/264977496; 1 female, Cuyuni-Mazaruni region, Lat/Lon: 6.34107, -59.12231, 28.X.2025, mxkalx https://www.inaturalist.org/observations/323794027; 1 female, Upper Takutu-Upper Essequibo, Toka – Jakaretinga, UD, Lat/Lon: 3.74514, -59.31404, 37m, 2.XI.2025, danbrown_wild-discovery-tours https://www.inaturalist.org/observations/324915519 [All Photographic Observations presented from Guyana were shown by Citizen-Scientists in iNaturalist.org as of 04.29.2026]

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Finally, we would like to mention that iNaturalist is a powerful tool that has been providing important and relevant information about many species worldwide. Many thanks to all citizen scientists, especially those mentioned in this note, who allow scientists to learn and know about the presence and distribution of so many organisms.

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