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Contributions of Luis F. de Armas to Hispaniolan arachnids (Arthropoda: Arachnida): over 40 years of constant work

GABRIEL DE LOS SANTOS[1*] & SOLANLLY CARRERO-JIMÉNEZ[2]
[1]*Departamento de Investigación y Conservación, Museo Nacional de Historia Natural "Prof. Eugenio de Jesús Marcano", Santo Domingo, Dominican Republic.*
[2]*139 Lawrence St., Clinton, MA 01510, Massachusetts, United State of America.*
solanllycarrero@gmail.com; https://orcid.org/0000-0003-0888-2354
**Corresponding author: g.delossantos@mnhn.gov.do; https://orcid.org/0000-0002-1839-1893*

Abstract

Joining the celebration of Luis F. de Armas 80th birthday, we present a concise overview of his contributions to the knowledge of Hispaniolan arachnids. To do this, we reviewed different checklists and catalogs, and his extensive literature about these arthropods on this island.

Key words: arachnology, taxonomist, new species, distribution record, Dominican Republic, Haiti

The extant arachnid diversity of Hispaniola (Dominican Republic and Haiti) comprises over 760 species, of which 49% are endemic, and represent all the known extant orders of this class, except for Ricinulei (Perez-Gelabert 2020). Araneae, with more than 450 known species, is the most diverse group, followed by Acari (170), Scorpiones (47), and Pseudoscorpiones (36). Regarding the extinct fauna, 215 species are known from the Dominican amber, with spiders being the most diverse group (174), and mites (19) being the only other group to record more than 10 fossil species; these groups are followed by pseudoscorpions (9), scorpions and harvestmen with 4 each, short-tailed whip-scorpions (2) and, finally, whip spiders and camel spiders with one each (Perez-Gelabert 2020; Dunlop *et al*. 2023).

Undoubtedly, this knowledge comes from the work of many taxonomists that have studied Hispaniolan arachnids since the 19th Century. Trying to mention everyone who has contributed to today's knowledge would generate a very long list of names, but the list reduces considerably when you focus on the number of described or recorded species from this island. Regarding the fossil fauna, for example, David Penney, George Poinar, James Cokendolpher, and Jörg Wunderlich are the most prolific taxonomists (Perez-Gelabert 2020; Dunlop *et al*. 2023). In terms of the extant fauna, we can list William B. Muchmore, who contributed to Pseudoscorpiones; Vladimír Šilhavý, Clarence J. Goodnight and Marie L. Goodnight earned a mandatory mention for their contributions in harvestmen (Opiliones), as well as Alexander Sánchez-Ruiz, Bernhard Hubber, Giraldo Alayón García, Herbert Levi, Nadine Dupérré, Norman Platnick and Sarah Crews for their work in spiders (Araneae), with a well-deserved special mention to Elizabeth Bryant, for being the most prolific arachnologist having recorded or described over 150 species. Rolando Teruel and Luis F. de Armas are the other arachnologists who complete this list. Both have contributed in Amblypygi, Schizomida, Scorpions (the main group for both) and Uropygi, with Luis F. de Armas having contributed also in Opiliones, Palpigradi and Solifugae (Armas 1994, 2004; Pérez González & Armas, 2000).

The objective of this short paper is to summarize the contributions made by the Cuban arachnologist Dr Luis Florencio de Armas Chaviano to the knowledge of Hispaniolan arachnids until July 2024. For this task, we carried a review of the Hispaniola arthropods checklists published by Perez-Gelabert (2008, 2020), and catalogs on arachnids available online for the orders on which Luis F. de Armas has contributed: Kury *et al.* (2023, 2024) [Opiliones], Rein (2024) [Scorpiones], World Amblypygi Catalog (2022), World Schizomida Catalog (2022), World Solifugae Catalog (2022) and World Uropygi Catalog (2022). Scorpions' species accounts followed synonyms stated by Armas (2002) and Teruel (2016, 2017).

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We found that Luis F. de Armas has the highest number (67 in total, 56 as first author) of published contributions about arachnids from Hispaniola, having published more papers, scientific notes or newspaper articles than any other arachnologist (H. Levi, the araneologist, is the second with 35). Luis has published on taxonomy/systematics (*e.g.*, Armas 1999, 2004), natural history/ecology (*e.g.*, Armas *et al*. 1989; Armas & Ramírez 1989; Armas & Abud-Antún 1992), distribution records (Armas 2001, 2002, 2013, 2024), and cultural aspects (Armas & Abreu Collado 1999; Armas & Abud-Antún 2000), as well as other general scientific dissemination contributions as checklists (Armas 2005, 2014; Santos *et al*. 2016) and a booklet about Hispaniolan scorpions (Santos *et al*. 2023).

Related to the number of species described or recorded, Luis holds the second place with 52 valid of 58 species described (90%), second only to Elizabeth Bryant (see above); nevertheless, he has worked with more different arachnids' orders (7) and has collaborated with more local authors (7) than the rest of the arachnologists. These collaborations started at the end of 1970s through the examination of scorpion specimens, handcarried to him by the Dominican journalist Felix Servio Ducoudray on behalf of Professor Eugenio de Jesús Marcano Fondeur (Ducoudray 2006), which later translated into two collecting visits to the Dominican Republic: August–October 1987 and February–April 1999. Since 1980 to date, Luis has been involved into 58 of the 77 species (75%) described or registered from the island (Table 1). Another aspect of his contributions is to have corrected erroneous distribution records reported from Hispaniola (*e.g.*, Armas 2024).

TABLE 1. Total number of arachnids' species known from Hispaniola before Luis F. de Armas started to receive specimens' donations from Eugenio de Jesús Marcano (before 1979) and its evolution by decade. Parentheses represent the number of described or new species records published by him in that period. Araneae/Acari/Pseudoscorpiones are intentionally omitted.

	< 1979	**1980–1989**	**1990–1999**	**2000–2009**	**2010–2019**	**2020–2024**
Amblypygi	2	2	2	7 (5)	10 (1)	11
Opiliones	23	23	23	26 (1)	26	26
Palpigradi	0	1 (1)	1	1	1	1
Shizomida	2	3 (1)	9 (6)	13 (4)	13	14
Scorpiones	5 (1)	18 (11)	33 (13)	34 (3)	43 (8)	44
Solifugae	1	1	2 (1)	3 (1)	3	3
Uropygi	1	1	1	2 (1)	3	3
Total	**34 (1)**	**49 (13)**	**71 (20)**	**86 (15)**	**99 (9)**	**102**

FIGURE 1. Endemic Hispaniolan arachnid species named in honor to Luis F. Armas. **A**, *Arucillus armasi* in-situ. **B**, *Syspira armasi* habitus (preserved in ethanol). Photos: A, Jimmy Cabra García; B, Gabriel de los Santos.

As an acknowledgement for all these contributions two endemic Hispaniolan species have been named after Luis (Fig. 1): *Arucillus armasi* Pérez-González & Vasconcelos, 2003 (Opiliones: Cosmetidae), and *Syspira armasi* Sánchez-Ruiz, Santos, Brescovit & Bonaldo, 2020 (Araneae: Miturgidae). A third species, *Caribeacarus armasi* Vázquez & Klompen, 2009 (Acari: Mesostigmata: Opilioacaridae), is known from Hispaniola but is also indigenous to Luis' native Cuba (Vázquez & Klompen 2009: 39).

Despite his about 45 years of constant and almost uninterrupted work, resulting in the number and span of contributions summarized here, Luis keeps looking where to collaborate with his guidance or where to contribute directly himself to the knowledge of the scarcely-known Hispaniolan arachnid fauna. The evidence showed here makes Luis F. de Armas, undoubtedly, the most prolific contributor all around.

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References

Armas, L.F. de. (1994) Descripción de un género y una especie nuevos de Ammotrechidae (Arachnida: Solpugida) de República Dominicana. *Avicennia*, 1, 1–5.

Armas, L.F. de. (1999) Quince nuevos alacranes de La Española y Navassa, Antillas Mayores (Arachnida: Scorpiones). *Avicennia*, 10–11, 109–144.

Armas, L.F. de. (2001) Scorpions of the Greater Antilles, with the description of a new troglobitic species (Scorpiones: Diplocentridae). *In*: Fet, V. & Selden, P.A. (Eds.), *Scorpions 2001. In Memoriam Gary A. Polis*. British Arachnological Society, Burnham Beeches, Bucks, pp. 245–253.

Armas, L.F. de. (2002) Alacranes de República Dominicana. *Centruroides nitidus* (Thorell, 1876) y *Microtityus lantiguai* Armas & Marcano Fondeur, 1992 (Scorpiones: Buthidae). *Revista Ibérica de Aracnología*, 5, 61–66.

Armas, L.F. de (2004) Arácnidos de República Dominicana. Palpigradi, Schizomida, Solifugae y Thelyphonida (Chelicerata: Arachnida). *Revista Ibérica de Aracnología*, Volumen especial monográfico, 2, 1–64.

Armas, L.F. de (2005) Antillean scorpions deposited at the Montana State University (Arachnida: Scorpiones). *Euscorpius*, 18, 1–4.

Armas, L.F. de (2013) Presencia de *Phrynus alejandroi* Armas & Teruel, 2010 (Amblypygi: Phrynidae) en República Dominicana. *Revista Ibérica de Aracnología*, 23, 91–92.

Armas, L.F. de (2014) Tipos de Amblypygi (Arachnida: Pedipalpi) depositados en el Instituto de Ecología y Sistemática, La Habana, Cuba. *Novitates Caribaea*, 7, 117–125. https://doi.org/10.33800/nc.v0i7.71

Armas, L.F. de (2024) On the supposed presence of *Centruroides platnicki* Armas, 1981 (Scorpiones: Buthidae) in Hispaniola, Greater Antilles. *Revista Ibérica de Aracnología*, 44, 146–147.

Armas, L.F. de & Abreu Collado, D. (1999) Mitos y realidades sobre el guabá. *Hoy (Santo Domingo)*, 18 de marzo, 22B.

Armas, L.F. de & Abud-Antún, A. (1992) Depredación de vertebrados por escorpiones (Scorpiones: Buthidae) de República Dominicana. *Comunicaciones Breves de Zoología, La Habana*, 1992, 5–6.

Armas, L.F. de & Abud-Antún, A. (2000) El alacrán en la cultura de República Dominicana. *Revista Ibérica de Aracnología*, 1, 77–79.

Armas, L.F. de, Marcano, E. de J. & Abud Antún, A. (1989) Notas sobre la historia natural y distribución de *Mastigoproctus proscorpio* (Uropygi: Telyphonidae) en República Dominicana. *Garciana*, 20, 2–4.

Armas, L.F. de & Ramírez, O.B. (1989) Algunas observaciones sobre la historia natural y la distribución de *Phrynus longipes* (Amblypygi: Phrynidae) en República Dominicana. *Garciana*, 21, 2–3.

Ducoudray, F.S. (2006) La naturaleza dominicana. Tomo 6. Ámbar/Varios/Anexos. *In*: Inchaústegui, A. & Delgado Malagón, B. (Eds.), *Santo Domingo: Colección Centenario.* Grupo León Jiménez, pp. 381–386.

Dunlop, J.A., Penney, D. & Jekel, D. (2023) A summary list of fossil spiders and their relatives. In World Spider Catalog. Natural History Museum Bern. Available from: http://wsc.nmbe.ch, version 23.5 (accessed 20 July 2024)

Kury, A.B., Kury, I.S. & Oliveira, A.B.R. de. (2024) Checklists of extant harvestman (Arachnida: Opiliones) species for all the countries of the world. *Zootaxa*, 5515 (1), 1–162. https://doi.org/10.11646/zootaxa.5515.1.1

Kury, A.B., Mendes, A.C., Cardoso, L., Kury, M.S., Granado, A.de A. Giribet, G., Cruz-López J.A., Longhorn, S.J., Medrano, M., Oliveira, A.B.R. de, Kury, I.S. & Souza-Kury, M.A. (2023) World Catalogue of Opiliones. WCO-Lite version 2.6. Available from: https://wcolite.com/ (accessed on 10 July 2024)

Perez-Gelabert, D.E. (2008) Arthropods of Hispaniola (Dominican Republic and Haiti): A checklist and bibliography. *Zootaxa*, 1831 (1), 1–530. https://doi.org/10.11646/zootaxa.1831.1.1
Perez-Gelabert, D.E. (2020) Checklist, bibliography and quantitative data of the arthropods of Hispaniola. *Zootaxa*, 4749 (1), 1–668. https://doi.org/10.11646/zootaxa.4749.1.1
Pérez González, A. & Armas, L.F. de. (2000) A new species of the genus *Kimula* (Opiliones, Minuidae) from the Dominican Republic. *Journal of Arachnology*, 28, 257–260.
Pérez González, A. & Vasconcelos, E. (2003) A new species of *Arucillus* Šilhavý, 1971 from the Dominican Republic (Opiliones: Laniatores: Cosmetidae). *Revista Ibérica de Aracnología*, 7, 135–140.
Rein, J.O. (2024) The Scorpion Files. Trondheim: Norwegian University of Science and Technology. Available from: https://www.ntnu.no/ub/scorpion-files/ (accessed 20 June 2024)
Santos, G. de los, Armas, L.F. de & Teruel, R. (2016) Lista anotada de los escorpiones (Arachnida: Scorpiones) de La Española (República Dominicana y Haití). *Novitates Caribaea*, 10, 1–22. https://doi.org/10.33800/nc.v0i10.10
Santos, G. de los, Armas, L.F. de & Teruel, R. (2023) *Los escorpiones: guía ilustrada*. Museo Nacional de Historia Natural "Prof. Eugenio de Jesús Marcano", 2 pp. [https://mnhn.gob.do/images/publicaciones/escorpiones-guia-ilustrada.pdf]
Teruel, R. (2016) The true taxonomic identity of *Centruroides tenuis* (Thorell, 1876) and *Centruroides zayasi* Armas, 1976 (Scorpiones: Buthidae). *Revista Ibérica de Aracnología*, 29, 91–93.
Teruel, R. (2017) Some taxonomic corrections to the genus *Tityus* C. L. Koch, 1836 (Scorpiones: Buthidae) in Hispaniola, Greater Antilles. *Euscorpius*, 242, 1–9.
Vázquez, M.M. & Klompen, H. (2009) New species of New World Opilioacaridae (Acari: Parasitiformes) with the description of a new genus from the Caribbean region. *Zootaxa*, 2061 (1), 23–44. https://doi.org/10.11646/zootaxa.2061.1.2
World Amblypygi Catalog (2022) World Amblypygi Catalog. Natural History Museum Bern. Available from: http://wac.nmbe.ch (accessed on 10 July 2024)
World Schizomida Catalog (2022) World Schizomida Catalog. Natural History Museum Bern. Available from: http://wac.nmbe.ch (accessed on 10 July 2024)
World Solifugae Catalog (2022) World Solifugae Catalog. Natural History Museum Bern. Available from: http://wac.nmbe.ch (accessed on 10 July 2024)
World Uropygi Catalog (2022) World Uropygi Catalog. Natural History Museum Bern. Available from: http://wac.nmbe.ch (accessed on 10 July 2024)