

## First record for the jumping spider *Thorelliola ensifera* in Vietnam (Araneae: Salticidae: Euophryini: Australphryni)

Truong Van Tam<sup>1,2</sup>, Tran Hoang An<sup>1</sup>, Nguyen Nhat Quy<sup>1</sup> and David Edwin Hill<sup>3</sup>

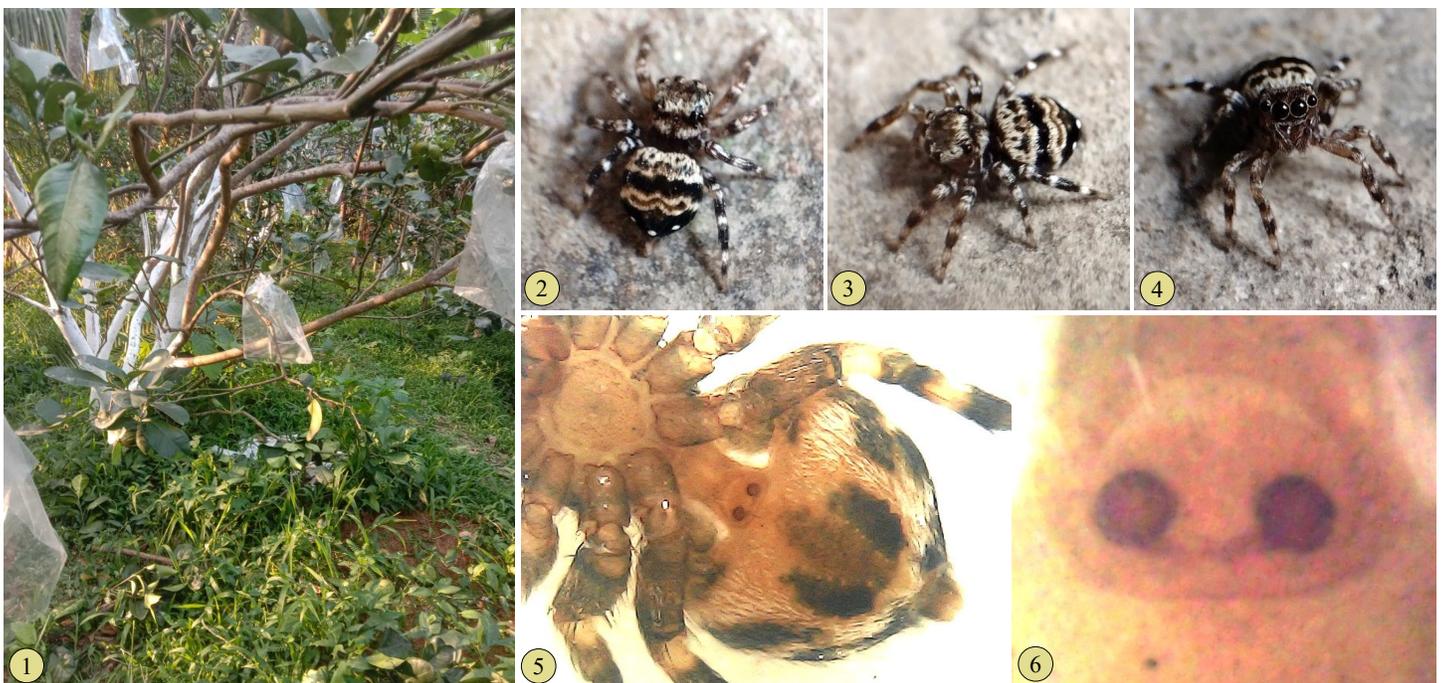
<sup>1</sup> Center for Vocational Education - Continuing Education, Cho Lach District, Ben Tre Province, Vietnam

<sup>2</sup> email trvtam228@gmail.com

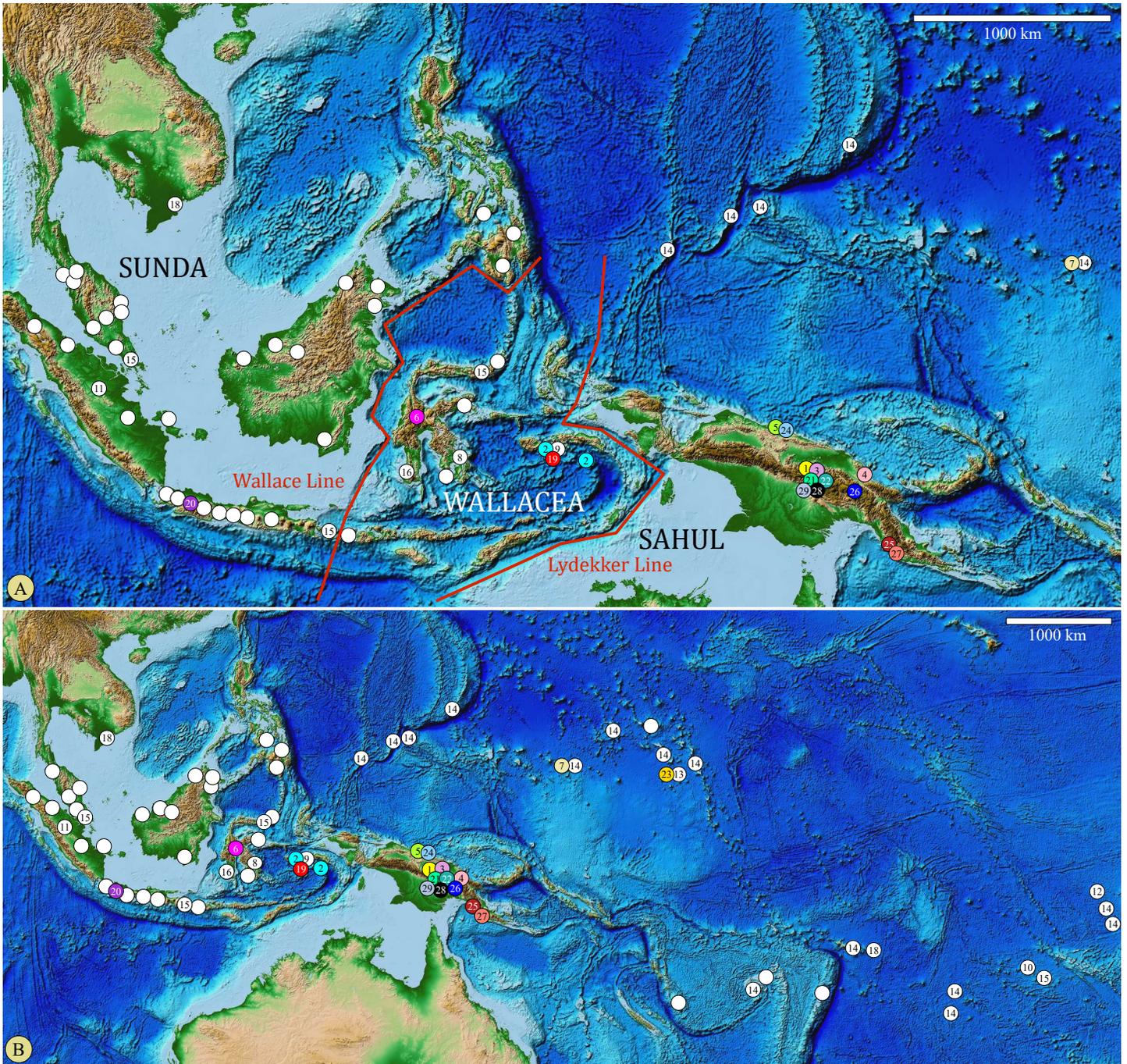
<sup>3</sup> 213 Wild Horse Creek Drive, Simpsonville, South Carolina 29680, USA, email platycryptus@yahoo.com

We report the collection of two female specimens of the jumping spider *Thorelliola ensifera* (Thorell 1887) in Ben Tre Province, southern Vietnam (Figure 1), extending the known range of that species in southeastern Asia (Figure 2, Table 1). In Vietnam this species is rarely seen and collected in dry leaf beds in perennial orchards. This is also the first record of the genus *Thorelliola* Strand 1942 in Vietnam.

Most known *Thorelliola* species are endemic to tropical Australasia, and only *T. ensifera* is widely distributed from southeast Asia to southern Pacific islands or atolls, apparently the result of human activity (Figure 2, Table 1). It is not known whether this distribution is the result of synanthropism, or the tendency to inhabit plants that have been transported by human activity. Males in this genus have relatively long and stout setae (*horns*) projecting to the front from the medial clypeus, and these are known to play a role in male-male combat or agonistic behavior (Jackson & Whitehouse 1989).



**Figure 1.** Female *Thorelliola ensifera* in Ben Tre Province, Vietnam. **1**, Orchard habitat. **2-4**, Views of living female. **5**, Ventral view of female. **6**, Detailed ventral view of epigynum.



**Figure 2.** Known distribution of *Thorelliola* species in tropical southeast Asia and islands of the southwestern Pacific (detail in A). Numbered localities are referenced in Table 1; locality (18) represents our new discovery of this species in Ben Tre Province, Vietnam. Unnumbered localities (white circles) correspond to confirmed records for *T. ensifera* posted on *iNaturalist*. With the exception of the widely distributed *T. ensifera*, each species in this genus appears to be subject to *narrow endemism*, with the greatest diversity in tropical Australasia (Sahul) or New Guinea (Papua). The lack of records from most of New Guinea suggests that many more species remain to be found in that place. Four species are known from the transition zone of Wallacea. *Thorelliola* is presently placed in the Australphryni, a predominantly Australasian clade within the Euophryini with a number of genera that have successfully crossed the islands of Wallacea; this clade also includes the well-know peacock spiders (*Maratus*), endemic to Australia (Hill 2010, 2022).

**Table 1.** Published descriptions and distribution records for *Thorelliola* species. Reference numbers at left correspond to numbered localities in Figure 2.

1	<i>Thorelliola aliena</i>	Zhang & Maddison 2012	♂♀	Umgé, Papua, 5.304°S, 142.512°E
2	<i>Thorelliola biapophysis</i>	Gardzińska & Patoleta 1997	♂	Ambon; Lonthoir, Namulu, Banda Island
3	<i>Thorelliola crebra</i>	Zhang & Maddison 2012	♂♀	Porgera, Papua, 5.4833°S, 143.1337°E
4	<i>Thorelliola cyrano</i>	Szűts & De Bakker 2004	♂	Baitea forest, Madang, New Guinea
5	<i>Thorelliola dissimilis</i>	Gardzińska 2009	♀	Lake Sentani, New Guinea, 2.5333°S, 140.7°E
6	<i>Plexippus doryphorus</i>	Thorell 1881	♂	ins. Sorong a Cel.
7	<i>Thorelliola dumicola</i>	Berry, Beatty & Prószyński 1997	♂	Ponape (Pohnpei), Caroline Islands
8	<i>Plexippus ensifer</i>	Thorell 1877	♂	Kendari, Sulawesi
9	<i>Plexippus ensifer</i>	Thorell 1878	♀	Amboina (Teluk Ambon)
10	<i>Thorellia ensifer</i>	Keyserling 1882	♂♀	Huahine, Upolu
11	<i>Hasarius ensifer</i>	Thorell 1892	♂	Kendari, Sualwesi; Sungei Bulu, Sumatra
12	<i>Thorelliola ensifera</i>	Berland 1935	♂♀	Ua-pou, Marquesas Islands; Tahuata; Fatuuku (Fatu Huku); Uhuku (Ua Huka)
13	<i>Thorelliola ensifera</i>	Zabka 1988	♂	Jaluit, Polynesia
14	<i>Thorelliola ensifera</i>	Berry, Beatty & Prószyński 1997	♂♀	Guam; Palau; Yap; Ulithi; Ponape; Eniwetok; Kwajalein; Majuro; Viti Levu; Tutuila; Aitutaki; Rarotonga; Moorea; Fatu Hiva; Hiva Oa; Nuku Hiva
15	<i>Thorelliola ensifera</i>	Gardzińska & Patoleta 1997	♂♀	Sanur, Bali; Dumoga Bone NP, North Sulawesi; Tahiti; Singapore
16	<i>Thorellia ensifera</i>	Merian 2011	♂	Makassar, Celebes
17	<i>Thorelliola ensifera</i>	Peck et al. 2014		Rose Atoll, American Samoa
18	<i>Thorelliola ensifera</i>	(this paper)	♀	Ben Tre Province, Vietnam
19	<i>Thorelliola glabra</i>	Gardzińska & Patoleta 1997	♂	Neira, Banda Islands
20	<i>Thorelliola javaensis</i>	Gardzińska & Patoleta 1997	♂♀	Cibodas NP, Java
21	<i>Thorelliola joannae</i>	Zhang & Maddison 2012	♀	Tualapa, Papua, 5.283°S, 142.498°E; Putuwé, Papua, 5.231°S, 142.532°E; Umgé, Papua, 5.304°S, 142.512°E
22	<i>Thorelliola manhunkai</i>	Szűts 2002	♂	Giluwe Mt., Wau, Madang, Papua
23	<i>Ictidops monocerus</i>	Karsch 1881	♂	Jaluit Atoll, Marshall Islands
24	<i>Thorelliola pallidula</i>	Gardzińska 2009	♀	Lake Sentani, New Guinea, 2.5333°S, 140.7°E
25	<i>Thorelliola squamosa</i>	Zhang & Maddison 2012	♀	Vairirata NP, Papua, 9.436°S, 147.364°E
26	<i>Thorelliola tamasi</i>	Zhang & Maddison 2012	♂	Mt. Gahavisuka PP, Papua, 6.016°S, 145.417°E
27	<i>Thorelliola trucilonga</i>	Gardzińska & Patoleta 1997	♂♀	National Capital District, Papua; Port Moresby, Papua
28	<i>Thorelliola tualapa</i>	Zhang & Maddison 2012	♂♀	Tualapa, Papua, 5.283°S, 142.498°E
29	<i>Thorelliola zabkai</i>	Zhang & Maddison 2012	♂♀	Umgé, Papua, 5.304°S, 142.512°E

## References

- Berland 1935.** Lucien Berland. Nouvelles araignées marquisiennes. Bernice P. Bishop Museum Bulletin 142: 31-63.
- Berry, Beatty & Prószyński 1997.** James W. Berry, Joseph A. Beatty and Jerzy Prószyński. Salticidae of the Pacific Islands. II. Distribution of nine genera, with descriptions of eleven new species. Journal of Arachnology 25: 109-136.
- Gardzińska 2009.** Joanna Gardzińska. New species of the genus *Thorelliola* Strand, 1942 (Araneae: Salticidae). Annales Zoologici, Warszawa 59: 131-139.
- Gardzińska & Patoleta 1997.** Joanna Gardzińska and Barbara Patoleta. Notes on the genus *Thorelliola* Strand, 1942 (Araneae: Salticidae). Memoirs of the Queensland Museum 42: 213-222.
- Hill 2010.** David Edwin Hill. 19 MAY 2010. Sunda to Sahul: Trans-Wallacean distribution of recent salticid genera (Araneae: Salticidae). Peckhamia 80.1: 1-60.
- Hill 2022.** David Edwin Hill. 22 OCT 2022. Jumping spider scales (Araneae: Salticidae). Peckhamia 279.1: 1-83.
- Jackson & Whitehouse 1989.** Robert R. Jackson and Mary E.A. Whitehouse. Display and mating behaviour of *Thorellia ensifera*, a jumping spider (Araneae: Salticidae) from Singapore. New Zealand Journal of Zoology, 16 (1): 1-16.
- Karsch 1881.** F. Karsch. Arachniden und Myriopoden Mikronesiens. Berliner Entomologische Zeitschrift 25: 15-16.
- Keyserling 1882.** Graf E. Keyserling. Die Arachniden Australiens, nach der Natur beschrieben und abgebildet. Erster Theil, Lieferung 29-30. Bauer & Raspe, Nürnberg: 1325-1420, pl. 113-120.
- Merian 1911.** P. Merian. Die Spinnenfauna von Celebes. Beiträge zur Tiergeographie im Indoaustralischen Archipel. Zoologische Jahrbücher, Abteilung für Systematik, Geographie und Biologie der Tiere 31: 165-354.
- Peck et al. 2014.** Robert Peck, Paul Banko, Frank Pendleton, Mark Schmaedick and Kelsie Ernberger. DEC 2014. Arthropods of Rose Atoll with special reference to ants and *Pulvinaria urbicola* scales (Hemiptera: Coccidae) on *Pisonia grandis* trees. University of Hawaii at Hilo, Technical Report HCSU-057: i-iii, 1-22.
- Strand 1942.** E. Strand. Miscellanea nomenclatorica zoologica and paleontologica. X. Folia Zoologica et Hydrobiologica, Rigā 11: 386-402.
- Szűts 2002.** Tamas Szűts. Description of a new horned jumping spider species *Thorelliola manhunkai* (Araneae: Salticidae) from New Guinea. Folia Entomologica Hungarica 63: 17-22.
- Szűts & De Bakker 2004.** Tamas Szűts and D. De Bakker. Taxonomical relevance of the clypeal setae in *Thorelliola* (Araneae: Salticidae). Folia Entomologica Hungarica 65: 13-24.
- Thorell 1877.** Tamerlan Thorell. Studi sui Ragni Malesi e Papuani. I. Ragni di Selebes raccolti nel 1874 dal Dott. O. Beccari. Annali del Museo Civico di Storia Naturale di Genova 10: 341-637.
- Thorell 1878.** Tamerlan Thorell. Studi sui ragni Malesi e Papuani. II. Ragni di Amboina raccolti Prof. O. Beccari. Annali del Museo Civico di Storia Naturale di Genova 13: 5-317.
- Thorell 1881.** Tamerlan Thorell. Studi sui Ragni Malesi e Papuani. III. Ragni dell'Austro Malesia e del Capo York, conservati nel Museo civico di storia naturale di Genova. Annali del Museo Civico di Storia Naturale di Genova 17: 1-720.
- Thorell 1892.** Tamerlan Thorell. Studi sui ragni Malesi e Papuani. IV, 2. Annali del Museo Civico di Storia Naturale di Genova 31: 1-490.
- Żabka 1988.** Marek Żabka. 30 MAY 1988. Salticidae (Araneae) of Oriental, Australian and Pacific regions, III. Annales Zoologici, Warszawa 41 (14): 421-479.
- Zhang & Maddison 2012.** Jun-Xia Zhang and Wayne P. Maddison. 20 SEP 2012. New euophryine jumping spiders from Papua New Guinea (Araneae: Salticidae: Euophryinae). Zootaxa 3491: 1-74.