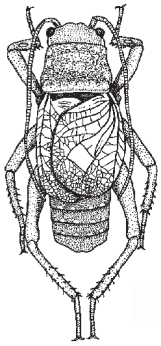

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A NEW SPECIES OF THE GENUS *ORCEVIA* THORELL, 1890 (ARANEAE: SALTICIDAE) FROM VIETNAM

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Summary. A new species of jumping spider, *Orcevia vinhlong* **sp. n.**, is described and illustrated based on both male and female specimens collected from Vinh Long Province, southern Vietnam. New species is similar to *O. deelemanae*, *O. keyserlingi*, *O. kuloni*, *O. meinei*, *O. pakse*, and *O. timburtoni* in its mottled habitus covered with dark grey setae, but it can be distinguished by the specific structure of the male retrolateral tibial apophysis (RTA) apex. The female of *O. vinhlong* **sp. n.** is diagnosed by a flat epigyne lacking a median septum, with slender, parallel insemination ducts and large, globose receptacles. Observations on natural history of new species reveal that it inhabits dry leaf litter of banana trees (*Musa* sp.) and constructs retreats on the bark of starfruit trees (*Averrhoa carambola*). Notably, these retreats are often camouflaged with ant carcasses, suggesting a potential myrmecophagous behavior. The species is currently known only from its type locality in Vietnam.

Key words: Araneae, jumping spider, taxonomy, new species, myrmecophagy, Southeast Asia.

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Резюме. Из провинции Виньлонг в южном Вьетнаме по самцам и самкам описан и проиллюстрирован новый вид паука-скакуна *Orcevia vinhlong* **sp. n.** Новый вид близок к *O. deelemanae, O. keyserlingi, O. kuloni, O. meinei, O. pakse* и *O. timburtoni* своим пятнистым телом, покрытым темно-серыми щетинками, но отличается специфической структурой вершины ретролатерального отростка голени (RTA) самца. Самка *O. vinhlong* **sp. n.** характеризуется плоской эпигиной без срединной перегородки, с тонкими, параллельными семенными протоками и крупными шаровидными рецептакулами. Наблюдения за новым видом показывают, что он обитает в сухой листовой подстилке банановых деревьев (*Musa* sp.) и строит убежища на коре карамболы (*Averrhoa carambola*). Эти убежища часто замаскированы трупами муравьев, что указывает на возможное питание нового вида этими насекомыми. В настоящее время *O. vinhlong* **sp. n.** известен только из типового местонахождения во Вьетнаме.

INTRODUCTION

The jumping spider family Salticidae Blackwall, 1841 is the most diverse group of spiders globally, comprising over 6,955 described species (World Spider Catalog, 2026). Among the diverse salticid fauna of Southeast Asia, the genus *Orcevia* Thorell, 1890 represents a group of colorful and morphologically distinct spiders, traditionally placed within the tribe Euophryini. Since its establishment, the genus *Orcevia* has undergone several taxonomic revisions, most notably the recent comprehensive work by Yu, Maddison & Zhang (2023), which expanded the genus to 25 recognized species primarily distributed across South and Southeast Asia.

Despite the high biodiversity of the Indochinese peninsula, the genus *Orcevia* remains poorly documented in Vietnam. To date, only one species have been formally recorded from the country (Logunov, 2024). However, the taxonomic status of these records is still a subject of academic discussion. For instance, *Bindax dalat* (Logunov, 2024), described from a single female in Da Lat, was recently noted by Logunov (2024) as a potential member of *Orcevia* based on its epigynal architecture. This highlights a significant gap in our understanding of the genus in Vietnam, where many species likely remain undiscovered or lack descriptions for both sexes.

Recent field surveys conducted in the Mekong Delta region have yielded several unique specimens of *Orcevia*. These specimens exhibit a combination of genital and somatic characters that clearly distinguish them from all known congeners, including those described from neighboring regions like China, Malaysia, and Indonesia.

The present paper aims to describe and illustrate *Orcevia vinhlong* **sp. n.** based on both male and female specimens. In addition to providing a detailed taxonomic description, we provide preliminary observations on the species' natural history, specifically its microhabitat preferences in agricultural landscapes and its unique retreat-building behavior involving the use of ant carcasses. This discovery not only adds a new species to the Vietnamese fauna but also provides the first evidence of potential myrmecophagous-related behavior in this genus within the region.

MATERIAL AND METHODS

The specimens were hand-collected by Lưu Vĩnh Khang and T.V. Truong from their respective habitats. As the primary investigator, I conducted the morphological examination and digital photography using a Relife RL-M5T-B1 stereomicroscope. All measurements were obtained by me using S-EYE 2.0 software. The specimens were preserved in 70% ethanol and are currently deposited in the biology laboratory of the Cho Lach Vocational Education and Continuing Education Center.

DESCRIPTION OF NEW SPECIES

Family Salticidae Blackwall, 1841

Subfamily Salticinae Blackwall, 1841

Tribe Euophryini

Genus *Orcevia* Thorell, 1890

COMPOSITION. The genus consists of twenty-five described species, with *Orcevia keyserlingi* Thorell, 1890 being the type species of the genus (WSC, 2026), and a new species described here from Vietnam.

Orcevia vinhlong **Truong et Khang, sp. n.**

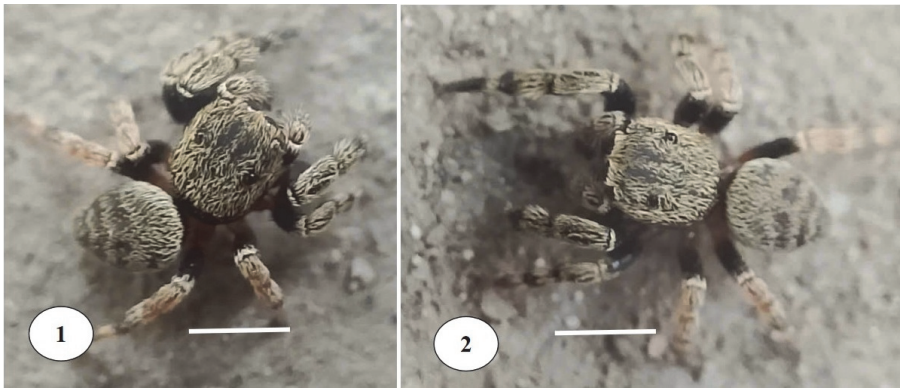
https://zoobank.org/NomenclaturalActs/6d8f40ca-7255-42b6-bf83-34b6be9bf3b7

Figs 1–11

TYPE MATERIAL. Holotype: ♂ (CL-Sal-Orc 001), **Vietnam**: Vinh Long province, 10.27037º N, 106.09327º E, 25 May 2025, Truong Van Tam & Luu Vinh Khang leg. Paratypes: 2♂ (CL-Sal-Orc-002, 003), 3♀ (CL-Sal-Orc-004, 005, 006), same data as holotype.

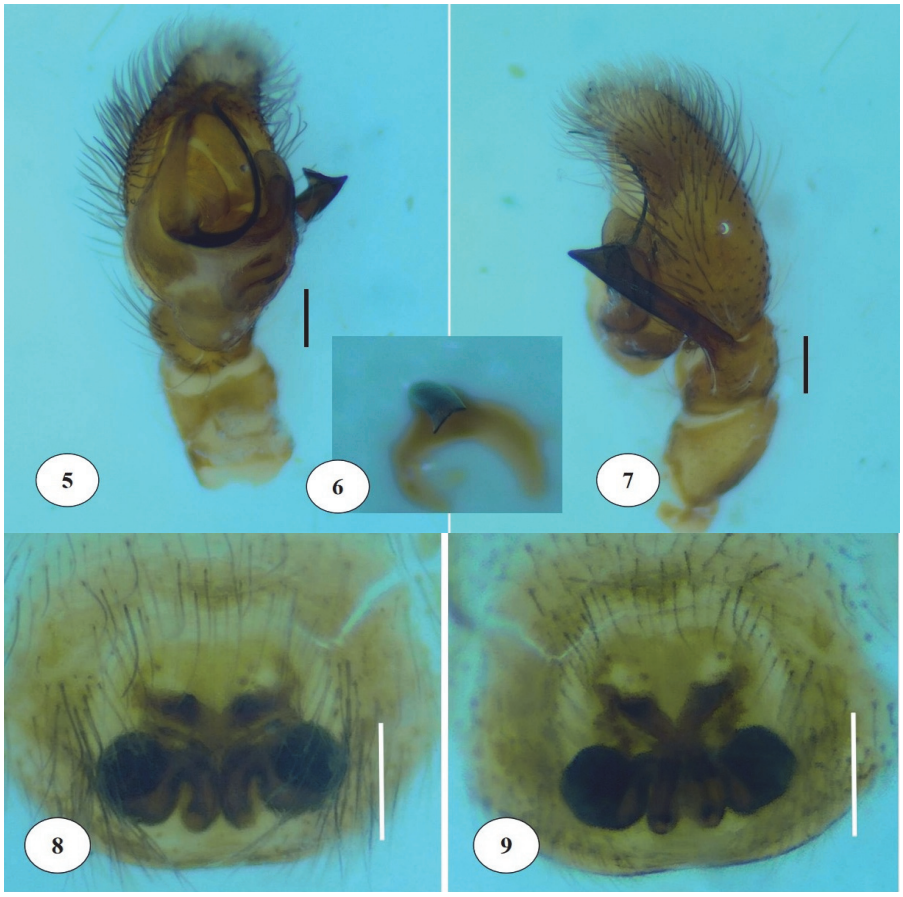
DESCRIPTION. Male (holotype). Total length 4.39. Carapace length 2.30, width 1.75; abdomen length 2.09, width 1.42 (Figs 1–2). Prosoma: Anterior eye row (AER) procurved in anterior view. Carapace granulated, primarily on the cephalic and most of the thoracic regions, densely covered with grey setae; ocular quadrangle 1.21 long, 1.30 wide (at PLE). Eye diameters (mm): AME: 0.37; ALE: 0.21; PME: 0.05; PLE: 0.20. Fovea distinct, black. Carapace covered with grey setae, except for the thoracic and lateral slopes. Chelicerae vertical, nearly parallel; paturon lacking a mastidion; paturon length 0.78; promargin with two teeth, retromargin with two closely set single teeth. Labium 0.35 long, 0.43 wide, distal margin covered with setae. Endites (maxillae) without setae on the outer margin, anterior margin with long but sparse setae, inner margin covered with shorter, dense setae (scopula). Sternum 1.06 long, 0.86 wide.Opisthosoma: Abdominal integument covered with small dark setae; scutum absent. Dorsum and carapace dark grey; venter with pairs of transverse patterns.Legs: Femora of all four legs black. Leg I with three pairs of ventral spines on the tibia and two pairs of ventral spines on the

metatarsus. Leg formula: 4123.Male Palp: Palpal femur 0.83 long; tibia 0.39 long; cymbium 0.84 long, densely covered with macrosetae. Tegulum 0.41 long, 0.50 wide. Retrolateral Tibial Apophysis (RTA) robust, margins non-serrated (Fig. 6). In retrolateral view, RTA directed anteriorly; distal portion flattened and flared into a smooth lobe directed mesally (towards the cymbium). RTA length approximately 0.59 mm, 1.5 times the length of the tibia. Embolus sclerotized, originating from the prolateral base of the bulb at the 9 o'clock position, curving gently upwards to form an S-shape; the embolic tip terminates at the distal part of the bulb at the 12 o'clock position (Figs 5–7).



Figs 1–2. Specimen of *Orcevia vinhlong* **sp. n.**, holotype male from Vinh Long province (CL-Sal-Orc 001). Scale bar 2 mm.

Figs 3–4. Specimen of *Orcevia vinhlong* **sp. n.**, paratype female from Vinh Long province (CL-Sal-Orc 004). Scale bar 2 mm.



Figs 5– 9. Genital structures of *Orcevia vinhlong* **sp. n.**: 5 – palp (CL-Sal-Orc-001) in ventral view; 6 – apex of RTA in dorsal view, 7 – palp, retrolateral view; 8 – cleared epigyne (CL-Sal-Orc-004), ventrall view, 9 – cleared epigyne , dorsal view. Scale bar 0.2 mm.

Female (paratype). General Habitus: Female similar to male in general habitus, exhibiting sexual dimorphism with proportional differences; chelicerae and endites are consistent with the male. Total length 4.03. Carapace 2.33 long, 1.70 wide; abdomen 2.96 long (Figs 3–4). Clypeus 0.12.Prosoma: Anterior eye row (AER) procurved in anterior view (consistent with male). Upper margin of AME situated slightly lower than the upper margin of ALE in anterior view. Ocular quadrangle 1.19 long, 1.27 wide (at PLE). Eye diameters (mm): AME: 0.39; ALE: 0.22; PME: 0.06; PLE: 0.19. Fovea longitudinal and black. Carapace covered with setae except for the thoracic and lateral slopes, revealing a characteristic dark brown coloration. Chelicerae similar to male; paturon 0.76 long, with two teeth on the promargin and two single teeth on the retromargin. Labium 0.49 long, 0.44 wide. Outer angle

of endites with long setae. Sternum 0.98 long, 0.78 wide.Opisthosoma: Abdominal integument covered with small setae; scutum absent. Dorsum covered with dark yellow setae (in life). Venter consistent with male description (transverse patterns present).Legs: Leg IV is the longest; Leg III is the shortest (Leg formula: 4123). Leg I with three pairs of ventral spines on the tibia and two pairs of ventral spines on the metatarsus. Legs I and II dark brown; legs III and IV lighter in color. Femora of all legs dark brown, consistent with the male.Genitalia (Epigyne): Epigyne surface flat, lacking fossae and a median septum. Copulatory openings (COs) positioned medially, opening anteriorly, separated by a distance approximately equal to their diameter. Insemination ducts slender, extending posteriorly and running parallel to each other. Receptacles (spermathecae) large and globose, situated laterally to the insemination ducts. Fertilization ducts prominent, located at the anterior end of the receptacles (Figs 8–9).

DIAGNOSIS. *Orcevia vinhlong* **sp. n.** shares a similar mottled habitus and dark grey setation (Figs 1–4) with several Southeast Asian congeners, including *O. deelemanae* Yu et Zhang, 2023, *O. keyserlingi*, *O. kuloni* Yu, Maddison et Zhang, 2023, *O. meinei* Yu, Maddison et Zhang, 2023, *O. pakse* Yu et Zhang, 2023 and *O. timburtoni* Yu, Maddison et Zhang, 2023. However, the new species can be distinguished by the following suite of morphological characters:

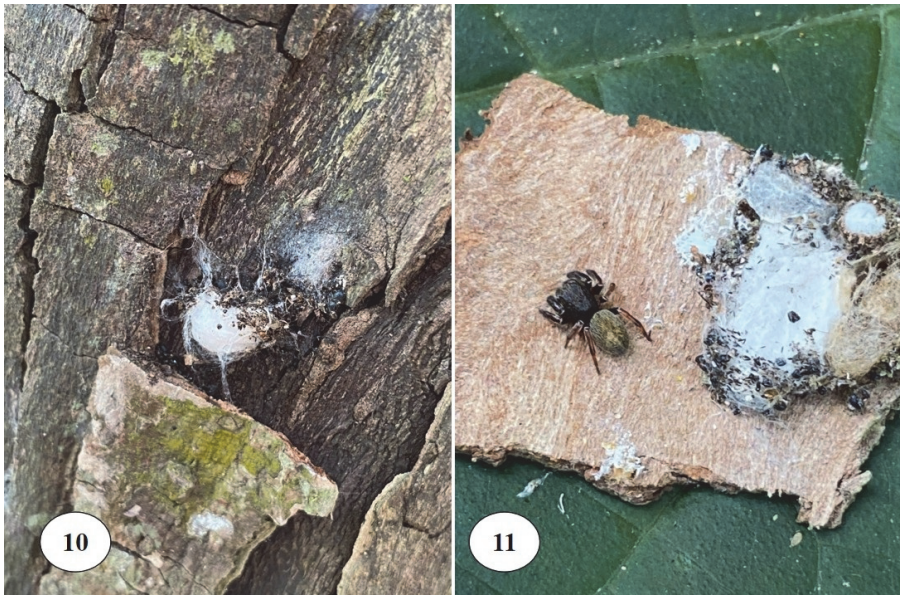
Male palp of new species differs from *O. deelemanae*, *O. meinei*, *O. pakse*, and *O. timburtoni* by the entirely smooth and non-serrated margins of the retrolateral tibial apophysis (RTA) (Figs 5–7). It also differs from *O. kuloni* and *O. keyserlingi* by the RTA distal portion, which is non-lobated, flattened, and possesses a distinctly sharp apex. The RTA of the new species features a flattened and flared distal portion, forming a smooth, sharp lobe directed mesally, whereas *O. bidoup* Logunov, 2024 lacks this leaf-like distal expansion (Figs 5–7).

Female epigyne: the females of *Orcevia* species are difficult to distinguish due to their highly conservative epigynal morphology (exhibiting minimal variation between species). Extreme caution is advised when identifying female specimens within this species group based solely on external genital structures. New species similar to *Bindax dalat* (Logunov, 2024) by the complete absence of an epigynal atrium, while *B. dalat* features a prominent, large circular atrium encompassing the copulatory openings, *O. vinhlong* **sp. n.** possesses a flat epigynal surface (Figs 8–9).

NATURAL HISTORY AND BIOLOGY. Specimens of *Orcevia vinhlong* **sp. n.** were observed and collected by hand (hand-collecting). Several individuals were found within the dry leaf litter surrounding banana pseudostems (*Musa* sp.). Additionally, some specimens were collected from retreats located on the bark of starfruit trees (Averrhoa carambola). These retreats were notably camouflaged or covered with numerous carcasses of unidentified black ants. The specific identity of the prey/ant species remains undetermined at this time.

DISTRIBUTION. The species is currently known only from the type locality in Vietnam. Further surveys are required to determine its full distributional range within the region.

ETYMOLOGY. The specific epithet is a noun in apposition, derived from the type locality, Vinh Long Province, where the holotype specimens were collected.



Figs 10–11 Retreat on the bark of *Averrhoa carambola* of *Orcevia vinhlong* **sp. n.** (Photo by Luu Vinh Khang).

DISCUSSION

The genus *Orcevia* Thorell, 1890 is a group of colorful jumping spiders primarily distributed in Southeast Asia. *Orcevia vinhlong* **sp. n**. is the latest addition to this genus from the Mekong Delta region of Vietnam.

The most striking biological feature of *O.vinhlong* **sp. n.** is the architecture of its retreats. The incorporation of numerous ant carcasses (unidentified Formicidae) into the silken retreats on the bark of *Averrhoa carambola* suggests a specialized ecological relationship. While many salticids are opportunistic predators, the deliberate use of prey remains for retreat construction is often associated with myrmecophagy (ant-eating) or chemical/visual camouflage to avoid larger predators (Figs. 10–11).

Similar behaviors have been documented in other salticid genera, but for *Orcevia*, this observation provides crucial data for future ethological studies. The presence of these spiders in both agricultural litter (banana pseudostems) and arboreal habitats (starfruit bark) indicates a degree of microhabitat flexibility within tropical agroecosystems.

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