

## A NEW SPECIES OF JUMPING SPIDER, *ORTHRUS CALILUNGAE* (ARANEAE:SALTICIDAE) FROM LUZON ISLAND, PHILIPPINES

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### ABSTRACT

*Orthrus calilungae*, a new species of jumping spider from Luzon Island, the Philippines is described and illustrated. It represents the third and fourth species from the Philippines and the Oriental Region, respectively. The new species closely resembles *O. bicolor* Simon from Antipolo, Rizal Province (Philippines) and *O. muluensis* Wanless from Sarawak (Malaysia) in body shape and eye pattern. *O. calilungae* however, has vertical chelicerae and different teeth pattern; thick fringes of black hairs on the dorsal and ventral coxa, trochanter, femur, patella and tibia of leg I; black prolateral and retrolateral bands in tibia IV; "9 o'clock" origin of embolus; and inwardly curved and bluntly rounded retrolateral tibial apophysis (RTA).

**Key Words:** Salticidae, *Orthrus calilungae* n. sp., jumping spider

### INTRODUCTION

*Orthrus* Simon, 1900 is a small genus of jumping spiders with three species hitherto recognized in the Oriental Region (Wanless, 1980; Platnick, 1989). Two species - *O. bicolor* Simon, the type species from Antipolo, Rizal Province, Luzon Island and *O. palawanensis* Wanless from Mantalingahan, Palawan Province, Palawan Island - have been described from the Philippines and one species, *O. muluensis* was from Sarawak, Malaysia (Simon, 1900; Wanless, 1980). The body features of *Orthrus* closely resemble *Asemonea* O.P.-Cambridge, 1869 and *Onomastus* Simon, 1900, hence Brignoli (1983) catalogued all three genera under the subfamily Lyssomaninae. Wanless (1980) revised the three genera and confirmed the earlier doubt of Galiano (1976) that *Orthrus* does not belong to the Lyssomaninae. At present, however, the systematic position of *Orthrus* is unclear due to its simple genitalia, a character common to the entire family Salticidae. This paper describes *Orthrus calilungae* n.sp., bringing the total known species from the Philippines and the Oriental Region to 3 and 4, respectively.

All measurements are in mm and all type material are deposited in the Taxonomy Laboratory, Entomology and Plant Pathology Division, International Rice Research Institute, Los Baños, Laguna, Philippines.

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## DESCRIPTION OF NEW SPECIES

***Orthrus calilungae* Barrion, new species**

(Figs. 1-16)

**Diagnosis.** - *O. calilungae* is readily separated from *O. bicolor* Simon and *O. muluensis* Wanless by its vertical chelicerae; very small and closely set promarginal and retromarginal teeth; presence of thick fringes of black hairs on dorsal and ventral coxa, trochanter, femur, patella and tibia of leg I; black prolateral and retrolateral bands in trochanter II, distal and subproximal portion of tibia IV; "9 o'clock" origin of embolus and inwardly curved and bluntly rounded retrolateral tibial apophysis (RTA), and chelicerae length/carapace length 0.26. In contrast, *O. bicolor* and *O. muluensis* have porrect chelicerae, blunt to outwardly curved RTA, stiff orange hairs on the dorsal and venter of femur I in *O. bicolor* only and ratio of chelicerae and carapace length 0.57-0.95.

**Description.** - Male: (n = 7). Total length without chelicerae 3.75-4.95 (X = 4.45±0.40); length of chelicerae 0.36-0.58 (X = 0.47±0.08), width of chelicerae 0.28-0.35 (X = 0.30±0.03), height of chelicerae 0.26-0.31 (X = 0.28±0.01); length of carapace 1.75-1.90 (X = 1.80±0.08), width of carapace 1.18-1.43 (X = 1.29±0.09), height of carapace 0.70-0.83 (X = 0.76±0.04); length of abdomen 2.05-3.05 (X = 2.52±0.32), width of abdomen 0.58-0.80 (X = 0.71±0.08), height of abdomen 0.54-0.78 (X = 0.64±0.08); eye diameter: AME = 0.45-0.53 (X = 0.50±0.03); ALE = 0.20-0.24 (X = 0.22±0.02), PLE = 0.18-0.23 (X = 0.21±0.02), PME = 0.04-0.06 (X = 0.05±0.01), length of eye field 0.72-0.80 (X = 0.75±0.04), width of eye fields: I = 1.13-1.25 (X = 1.19±0.05), II = 0.84-0.98 (X = 0.91±0.05), III = 0.95-1.08 (X = 1.02±0.05). Clypeus very narrow, barely 0.06 AME diameter. Ratios: height of cephalothorax/width of cephalothorax = 0.59, width of cephalothorax/width of ocular field III = 1.26, diameter of AME/length of chelicerae = 1.06, femur I/width of ocular field III = 1.65, femur III/width of ocular field III = 1.35, tibia I/width of ocular field III = 1.38. Chelicerae moderately vertical, barely one-third length of carapace, both rows of teeth decreasing in size proximally, promargin with 3-4 teeth and retromargin with 7 teeth and distal two teeth of promargin very close together. Fang without inner tooth. Maxillae yellow, longer than wide with rounded apical margins. Labium pale yellow brown except brownish proximal one-third. Carapace yellowish brown with light brown to black lateral bands merging posteriorly, black band from anterior lateral eyes (ALE) to posterior median eyes (PME) covered with thick white hairs encircling margins of PME and PLE, and ocular field with gray tinge. Midregion of ocular field slightly concave with 20 long hairs in or close to the ALE-PLE black band arranged in 3 longitudinal rows - 5 each in the inner row, 3 each in the middle row and 2 each in the outermost row. Sternum one-third longer than wide, smooth and uniformly yellow, relatively convex medially, lateral cavities poorly developed, anterior margin truncate and posterior tip blunt. Abdomen elongate, 3 times or more longer than wide, grayish black interrupted by a pair of yellow spots (or a transverse band if contiguous) subanteriorly, laterals with yellow longitudinal bands as long as one to twice abdominal width, venter gray with a transverse yellow band subposteriorly and gray posteroventrally similar to the uniformly gray and elongate spinnerets. Legs yellow except light to blackish brown coxa, trochanter, femur, patella and tibia of leg I, dorsal and ventral portion of femur I, patella I and tibia I and dorsal coxa I and trochanter I lined with longitudinal fringes of black hairs, retrolateral and

prolateral of coxa II and trochanter II with a longitudinal gray band, tibia IV with a prolateral and retrolateral black spot distally and subproximally. Tibia I with 6 pairs of strong ventral spines. Metatarsus I with 3 pairs of long ventral spines, spine apices of basal pair extended to basal third of middle pair of spine, middle pair reached to two-third basal length of distal pair. Metatarsi and tarsi I-IV each with 3 trichobothria in increasing length distally. Tarsal claws of leg I prominently developed, inner claw with 9 teeth and outer claw with 13 teeth, distal tooth of both claws the largest. Leg formula 4132 except an aberrant case with 1432. Pedipalps yellow with a lateral gray band in the proximal one-fourth of femur, embolus at "9 o'clock" with blunt tip, retrolateral tibial apophysis (RTA) short and inwardly curved as seen ventrally.

Length of leg and pedipalp segments (n = 7):

| Leg      | Femur                    | Patella                  | Tibia                    | Metatarsus               | Tarsus                   | Total                    |
|----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1        | 1.58-1.85<br>(1.68±0.11) | 0.55-0.75<br>(0.66±0.07) | 1.25-1.65<br>(1.41±0.16) | 1.03-1.28<br>(1.14±0.10) | 0.44-0.50<br>(0.47±0.02) | 4.88-6.00<br>(5.36±0.43) |
| 2        | 1.25-1.53<br>(1.41±0.10) | 0.41-0.56<br>(0.50±0.05) | 1.05-1.35<br>(1.16±0.09) | 0.83-1.08<br>(0.95±0.08) | 0.40-0.45<br>(0.42±0.01) | 4.14-4.95<br>(4.45±0.30) |
| 3        | 1.13-1.58<br>(1.38±0.14) | 0.38-0.50<br>(0.45±0.04) | 1.00-1.38<br>(1.18±0.12) | 1.08-1.43<br>(1.24±0.11) | 0.45-0.55<br>(0.49±0.03) | 4.07-5.37<br>(4.76±0.41) |
| 4        | 1.40-1.75<br>(1.56±0.12) | 0.38-0.50<br>(0.44±0.04) | 1.25-1.50<br>(1.37±0.09) | 1.35-1.70<br>(1.48±0.14) | 0.45-0.60<br>(0.53±0.04) | 4.99-5.96<br>(5.39±0.37) |
| Pedipalp | 0.53-0.60<br>(0.57±0.02) | 0.20-0.28<br>(0.24±0.03) | 0.33-0.40<br>(0.37±0.03) |                          | 0.42-0.50<br>(0.45±0.03) | 1.59-1.70<br>(1.63±0.03) |

**Material Examined.** - Philippines: Luzon Is., Quezon Prov., Atimonan, Quezon National Forest Park, shrub and vegetation shaking and beating, 1 M (holotype) and 4 MM (paratypes), 7 November 1997, A.T. Barrion; Laguna Prov., Los Baños, Mt. Makiling, trunk of *Ceiba pentandra* L., 2 MM (paratypes), 14 January 1995, A.T. Barrion.

**Remarks.** - This species is named in honor of Dr. Venus J. Calilung (Entomology Department, U.P. Los Baños, Laguna, Philippines) for her pioneering works on Philippine aphids.

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#### REFERENCES

- BRIGNOLI, P.M. 1983. Catalogue of the Araneae described between 1940 and 1981. Manchester University Press, Oxford, UK. 755 p. GALLIANO, M.E. 1976. Comentarios sobre la categoria sistematica del taxon Lyssomanidae (Araneae). Revta Mus. Argent. Cienc. Nat. Bernardino

Rivadavia Inst. Nac. Invest. Cionc. Nat. 5(3): 59-70 (not seen).  
 PLATNICK, N. 1989. Advances in Spider Taxonomy 1981-1987. A Supplement to Brignoli's 'A Catalogue of the Araneae described between 1940 and 1981'. Manchester University Press, Manchester, U.K. 673 p.  
 WANLESS, F. 1980a. A revision of the spider genus *Orthrus* (Araneae: Salticidae). Bull. Br. Mus. (Nat. Hist.) Zool. 38: 225-232.  
 WANLESS, F. 1980b. A revision of the spider genus *Onomastus* (Araneae: Salticidae). *Ibid.* 39: 179-188.  
 WANLESS, F. 1980c. A revision of the spider genera *Asemonea* and *Pandisus* (Araneae: Salticidae). *Ibid.* 39: 213-257.  
 SIMON, E. 1900. Etudes arachnologiques 30<sup>e</sup> Memoire (1) XLVII. Descriptions d'especes nouvelles de la famille des Attidae. Ann. Soc. Ent. Fr. 69: 27-61.

Length of leg and pedipalp segments (n = 7)

| Leg      | Femur                    | Patella                  | Tibia                    | Metatarsus               | Tarsus                   | Total                    |
|----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1        | 1.58-1.85<br>(1.65±0.15) | 0.55-0.75<br>(0.65±0.07) | 1.35-1.85<br>(1.41±0.16) | 1.03-1.34<br>(1.14±0.10) | 0.44-0.60<br>(0.47±0.03) | 4.38-5.00<br>(4.35±0.43) |
| 2        | 1.35-1.55<br>(1.41±0.10) | 0.41-0.55<br>(0.50±0.03) | 1.05-1.35<br>(1.15±0.09) | 0.82-1.08<br>(0.95±0.08) | 0.49-0.55<br>(0.51±0.01) | 4.14-4.95<br>(4.45±0.30) |
| 3        | 1.14-1.55<br>(1.34±0.14) | 0.38-0.58<br>(0.45±0.04) | 1.00-1.35<br>(1.15±0.13) | 1.08-1.45<br>(1.24±0.11) | 0.45-0.65<br>(0.49±0.07) | 4.07-5.37<br>(4.70±0.41) |
| 4        | 1.30-1.75<br>(1.55±0.15) | 0.35-0.50<br>(0.42±0.04) | 1.35-1.65<br>(1.51±0.09) | 1.35-1.70<br>(1.48±0.14) | 0.45-0.65<br>(0.53±0.07) | 4.39-5.95<br>(5.29±0.37) |
| Pedipalp | 0.55-0.60<br>(0.57±0.03) | 0.30-0.38<br>(0.34±0.03) | 0.33-0.40<br>(0.37±0.03) |                          | 0.45-0.50<br>(0.45±0.04) | 1.58-1.70<br>(1.63±0.03) |

Material Examined: Luzon Is., Quezon Prov., Atimonan, Quezon National Forest Park, shrub and vegetation shaking and beating, 1 M (holotype) and 4 MM (paratypes), 7 November 1997, A.T. Barrion, Laguna Prov., Los Baños, Mt. Malinao, trunk of *Cecropia pentandra* L., 2 MM (paratypes), 14 January 1995, A.T. Barrion.

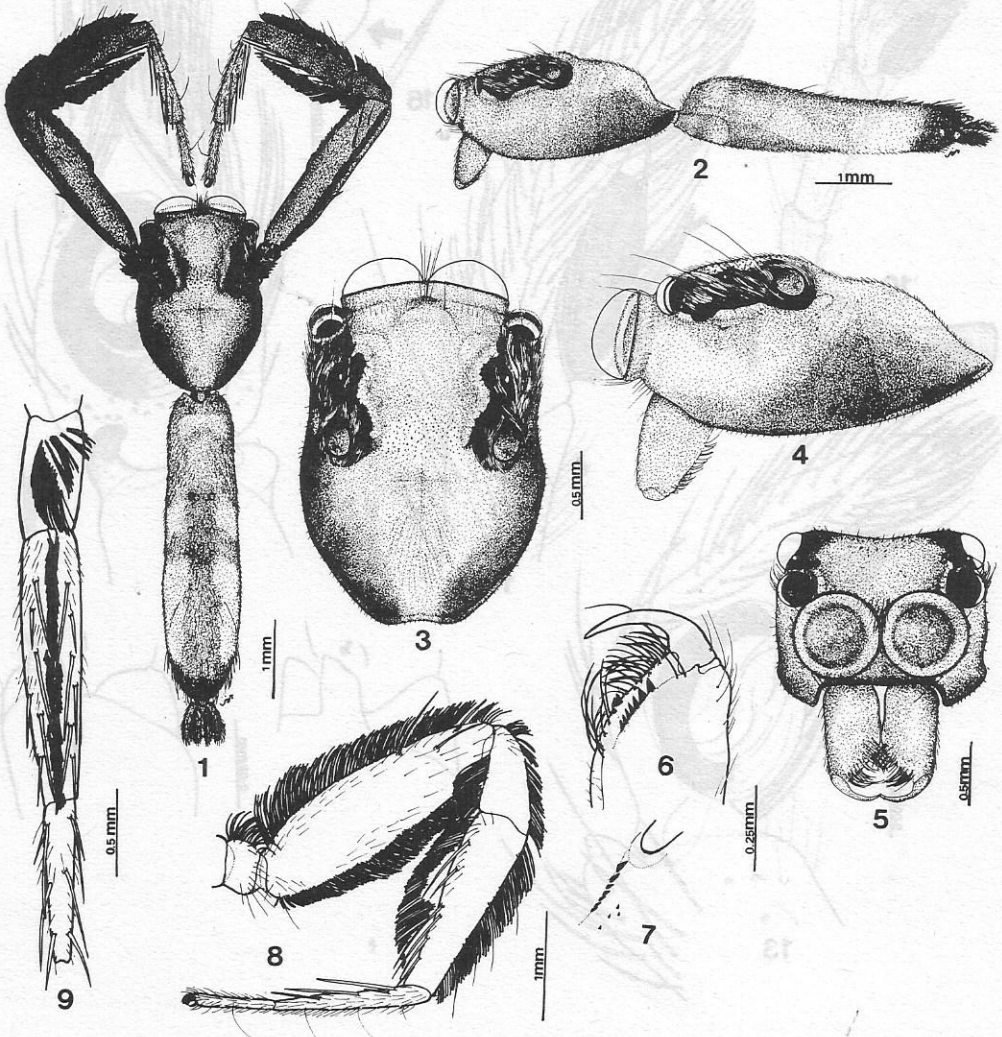
Remarks: - This species is named in honor of Dr. Verne J. Cahill (Entomology Department, U.P. Los Baños, Laguna, Philippines) for her pioneering works on Philippine aphids.

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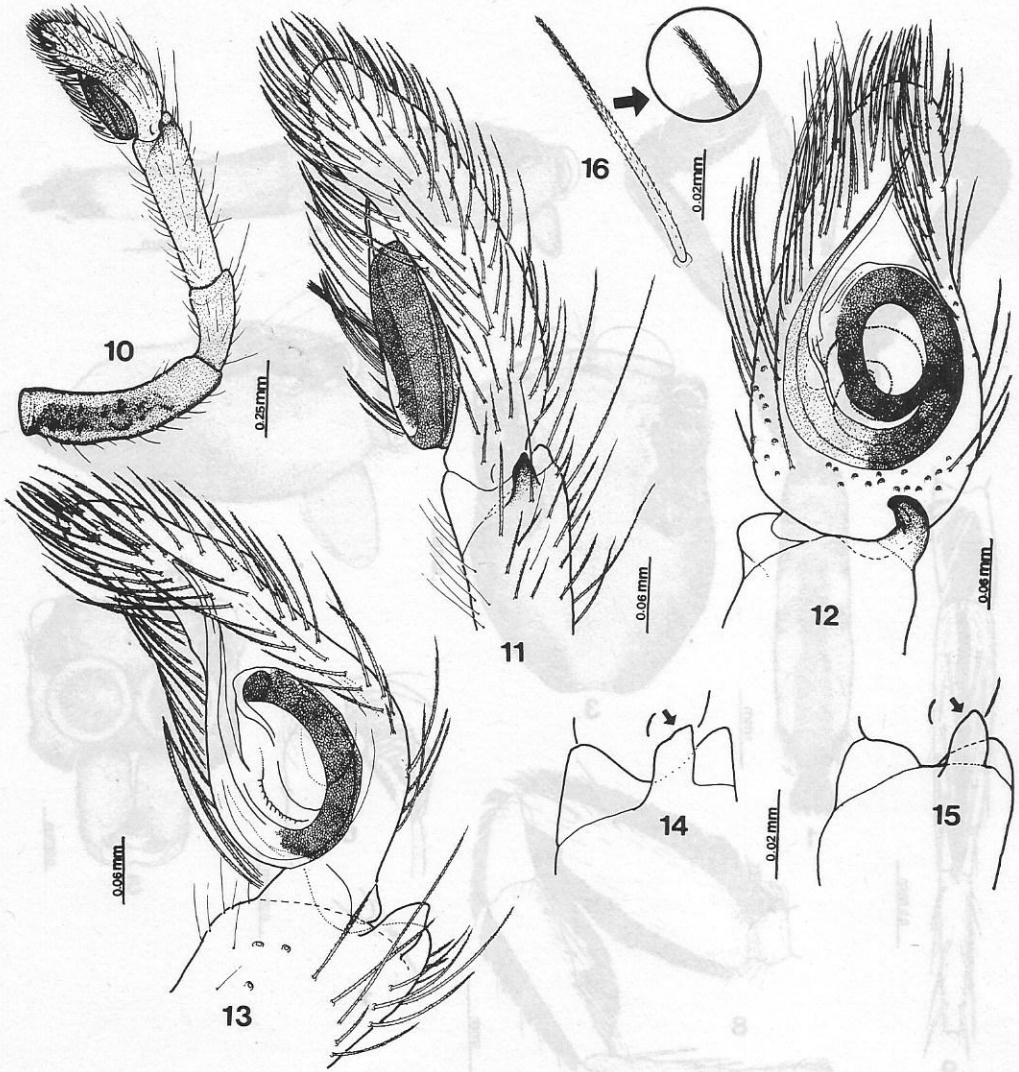
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REFERENCES

BRIGNOLI, P.M. 1968. Catalogue of the Araneae described between 1940 and 1981. Manchester University Press, Oxford, UK. 785 p.  
 GALLIANO, M.R. 1972. *Comentarios sobre la taxonomia del taxon Lysanoides* (Araneae, Revisio Mus. Argent. Cienc. Nat. Bernardino



**Figures 1-9.** Dorsal view of male *Orthrus calilungae* n.sp. without legs II-IV (1); side view with all legs omitted (2); dorsal (3), lateral (4), and frontal (5) views of cephalothorax; ventral view of left chelicera (6); teeth pattern (7); leg I (8) and ventral view of patella I, tibia I and metatarsus I (9).



**Figures 10-16.** Pedipalp of *Orthrus calilungae* n.sp. (10); lateral (11), ventral (12) and ventrolateral (13) views of cymbium and distal part of tibia; lateral (14) and ventral (15) views of retrolateral tibial apophysis (RTA); and close-up of cymbial hair (16).