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Original article

New genus with two new species of the Family Nemesiidae (Araneae: Mygalomorphae) from Arunachal Pradesh, India

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ABSTRACT

The new genus, *Damarchilus* gen. nov., is proposed with descriptions of two new species, *Damarchilus nigricus* sp. nov. and *Damarchilus rufus* sp. nov., from northeast India. External characters for the new genus and new species are examined and illustrated. In addition, the natural history of the species is provided.

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Introduction

The family Nemesiidae is represented by 44 genera and 374 species in the world (World Spider Catalog 2014). So far, only three genera, *Atmetochilus* Simon 1887 (1 species), *Damarchus* Thorell 1891 (2 species), and *Raveniola* Zonstein 1987 (1 species), have been reported from the Himalayas of Jammu and Kashmir, India (World Spider Catalog 2014; Siliwal et al 2013). Mygalomorphs, in general, are poorly documented from India; the studies in the past have been restricted to the large-bodied tarantulas (Theraphosidae), and other mygalomorphs including nemesiids remain an ignored group.

Many large-bodied nemesiids were collected from various locations during Arunachal Pradesh surveys. These nemesiid spiders morphologically resembled the genus *Atmetochilus* Simon 1887, which is known only from Myanmar, with two species. However, none of the nemesiid specimens from Arunachal Pradesh had merged centric sternal sigilla, which is an important generic key character for *Atmetochilus*. Moreover, it possessed characters of the two genera *Atmetochilus* and *Damarchus*, and had no clear or distinct characters of any of these genera. Therefore, in the present

paper, we describe a new genus, *Damarchilus* gen. nov., with two new species, *Damarchilus nigricus* sp. nov. and *Damarchilus rufus* sp. nov., from the western Arunachal Pradesh, India. This study was carried out in summer, and we found no male. Looking at the significance of the new genus, it is necessary to publish based on a single sex. Natural history notes for all the new species are provided.

Materials and methods

All specimens collected from Arunachal Pradesh are deposited at the Wildlife Information Liaison Development Society, Coimbatore, Tamil Nadu, India. Measurements of body parts except for the eyes were taken with a Mitutoyo Vernier Caliper. Eye measurements were performed with a calibrated ocular micrometer. All measurements are in millimeters. Spermathecae were dissected and cleared in concentrated lactic acid in a 100°C water bath for 15–20 minutes. The total length excludes chelicerae. All illustrations were prepared with the help of a camera lucida attached to a MOTIC and CETII stereomicroscope. The taxonomic description style of Siliwal et al (2009) has been followed.

Key to Nemesiidae genera from India and Myanmar (females)

1. Thoracic fovea procurved (more or less U shaped) and spermathecae receptacles with single lobe ----- 2

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- Thoracic fovea straight and spermathecae receptacles with double or multiple lobes ----- *Raveniola*
- 2. Sternal sigilla large, merged, and centric ----- *Atmetochilus*
- Sternal sigilla large, not merged, and subcentric ----- 3
- 3. Cuspules absent on labium, preening comb absent on metatarsus (mt) III–IV, scopulae present on tarsus (ta) IV -----
----- *Damarchilus* gen. nov.
- Cuspules present or absent on labium, preening comb present on mt III–IV, scopulae absent on ta IV ----- *Damarchus*

Systematic accounts

Order Araneae

Suborder Mygalomorphae

Family Nemesiidae

Damarchilus gen. nov.

Type species. Damarchilus nigricus sp. nov.

Diagnosis. The new genus resembles *Atmetochilus* in cuspules absent on labium (differs from *Damarchus* in few cuspules on labium); cuspules size on maxillae normal and distributed from anterior basal corner to half length of the maxillae (in *Damarchus* minute cuspules present); differing from *Atmetochilus* and *Damarchus* by metatarsal preening comb absent on leg III–IV; scopulae present on ta IV (scopulae absent on ta IV in *Atmetochilus* and *Damarchus*); subcentric posterior sigilla (as in *Damarchus*; in *Atmetochilus* posterior and medial sternal sigilla of irregular shape and confluent in center of sternum); spermathecal lobes with distal curved band of dense spermathecal pores appearing as cap on the lobes (in *Damarchus* spermathecal lobes enlarged with evenly distributed spermathecal pores).

Description. Large-sized (30–50 mm) spiders. Cephalothorax and legs covered with short spines and bristles; cephalothorax with short wavy golden hairs, more toward margins. Abdomen cuticle exposed, sparsely covered with short and long black hairs. Cephalic area higher and gradually sloping laterally. Caput distinctly raised and thoracic region slanting posteriorly and laterally. Eyes on ocular tubercle, surrounded by a black patch. Fovea broad, strongly procurved, short U shaped. Clypeus absent. Rastellum consisting of thick long spines accompanied with bristles on vertical upward and dorsal face of chelicerae. Sternum narrow anteriorly and wider posteriorly; posterior sigilla sigmoid, subcentral; median sigilla sigmoid or bean shaped, submarginal. Leg formula 4123; all legs are stout and robust, covered with short spines and hairs sparsely. Coxae prolaterally basally covered with small spinules or short bristles. Scopulae dense, divided on ta I–II and sparse on ta III–IV, intermixed with bristles and hairs; on mt I–II intermixed with bristles at the base; absent on mt III–IV. Paired claws with two rows of dentation; inferior claw on all legs. Spermathecae entire, each with constriction at one-fourth from the distal end and forming a big lobe at the apex. Spermathecal lobes with distal curved band of dense spermathecal pores resembling a cap on the lobe, and area with band appearing swollen or thicker. In males, mt I slightly excavated at the base and band of minute spinules present ventrolaterally; ti I with two distal spurs.

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Distribution. India (Arunachal Pradesh).

Etymology. The new genus name is a combination of two genera, *Damarchus* and *Atmetochilus*, as the new genus possesses characters of both genera.

Natural history. The representatives of the new genus were found restricted to the foothills of the western Arunachal Pradesh (from Balukpong to Likabali), commonly found at an elevation of

100–450 m, although there was one exceptional record of these taxa at an elevation of 870 m. Burrows have mostly been found on the road-side cuts and on ground with a slope. Each burrow was a simple tube, entrance of which was round and had a turret made up of dry grasses, moss or leaves, soil, and silk. Females were observed nesting during March–April. Nesting females made an additional chamber (on the upper side) toward the end of the burrow, where the egg sac was hung like a hammock, and the entrance of this chamber was closed with a silken door. When the burrow got disturbed, the female used to hide behind the egg sac in the additional chamber. Moreover, all nesting females closed the entrance of their burrows with silk. This was also observed in other burrows during rains. No males were found during the surveys; probably they mature during the monsoon season.

Damarchilus nigricus sp. nov.

This species is described in Figures 1A–J and Table 1.

Types. Holotype: female (WILD-05-ARA-40) (WILD stands for Wildlife Information Liaison Development Society), Itanagar Zoo, Papumpare district, Arunachal Pradesh, India (229 m, 27°04'12.9" N, 93°34'56.2" E), April 4, 2005 (leg. Manju Siliwal and Monroe Gogi). Paratypes: 1♀ (WILD-05-ARA-39), Itanagar WLS, Poma, Papumpare district, Arunachal Pradesh, India (267 m, 27°03'27.5" N, 93°31'08.9" E), April 6, 2005 (leg. Manju Siliwal, Dorjie Raptan and Khandu); 1♀-juvenile (WILD-05-ARA-41), Itanagar city, Arunachal Pradesh, India, 2 April 2005 (leg. Manju Siliwal, Dorjie Raptan and Khandu); 2♀-juveniles (WILD-05-ARA-128, WILD-05-ARA-129), Itanagar Zoo, Arunachal Pradesh, India, 3 April 2005 (leg. Manju Siliwal) -coll. WILD.

Diagnosis. The new species differs from other known species by being metallic black in color in life, abdomen is darker with two sigmoid sigilla anteriorly (in *D. rufus* sp. nov. heavily mottled); spermathecae receptacles of an entire mushroom shape but with a shorter stalk, about twice the lobe width (in *D. rufus* sp. nov. about 2.6 times the lobe width). Posterior sternal sigilla sigmoid shaped (in *D. rufus* sp. nov. triangular and anteriorly clearly wider than posteriorly).

Description. Total length 36.2. Carapace 20.14 long, 15.96 wide; chelicerae 10.6 long. Sternum 9.82 long, 8.74 wide. Abdomen 16.06 long, 11.84 wide. Spinnerets: posterior median spinnerets (PMS): 2.54 long, 1.08 wide, 0.9 apart; posterior later spinnerets (PLS): total length 8.54 (3.34 basal, 2.0 middle, 3.2 distal; midwidths 1.58, 1.54, and 1.30, respectively). Morphometry of legs and palp is given in Table 1.

Color. Spider in life is jet black with a metallic shine. In alcohol spider is brownish-black except for the abdomen; abdomen black.

Carapace (Figures 1A and 1C). Broad oval with length-to-width ratio 1.26; reddish black, darker toward the anterior side; covered with short golden wavy hairs intermixed with short black bristles, more dense toward the margins and concentrated along the interstitial ridges radiating from the fovea, posterior end of fovea with long curved golden hairs. Fovea, broad, deep, strongly procurved, short U-shaped, and one-third on the posterior side. Bristles: 25–30 long on caput, 11 long on the anterior edge; six long, two short between the posterior eyes; two long between the anterior eyes; no bristles between the anterior median eye (AME) and posterior median eye (PME), elsewhere absent. Setae absent. Clypeus absent.

Eyes (Figures 1A and 1B). Ratio of eye group width to length is 1.92. Anterior lateral eye (ALE) larger than the rest, AME slightly larger than the posterior lateral eye (PLE), and PME clearly smaller than rest. Eyes tubercle are well developed, raised. Eye diameters: ALE 0.80, AME 0.72, PLE 0.66, and PME 0.39. Distance between eyes: AME–AME 0.12, PME–PLE adjacent, AME–ALE 0.31, PLE–PLE 1.84, and PME–PME 1.2. Ocular quadrate 1.53 long and 2.94 wide. Median ocular quadrate: length 1.35, front width 1.49, and back width 1.97.

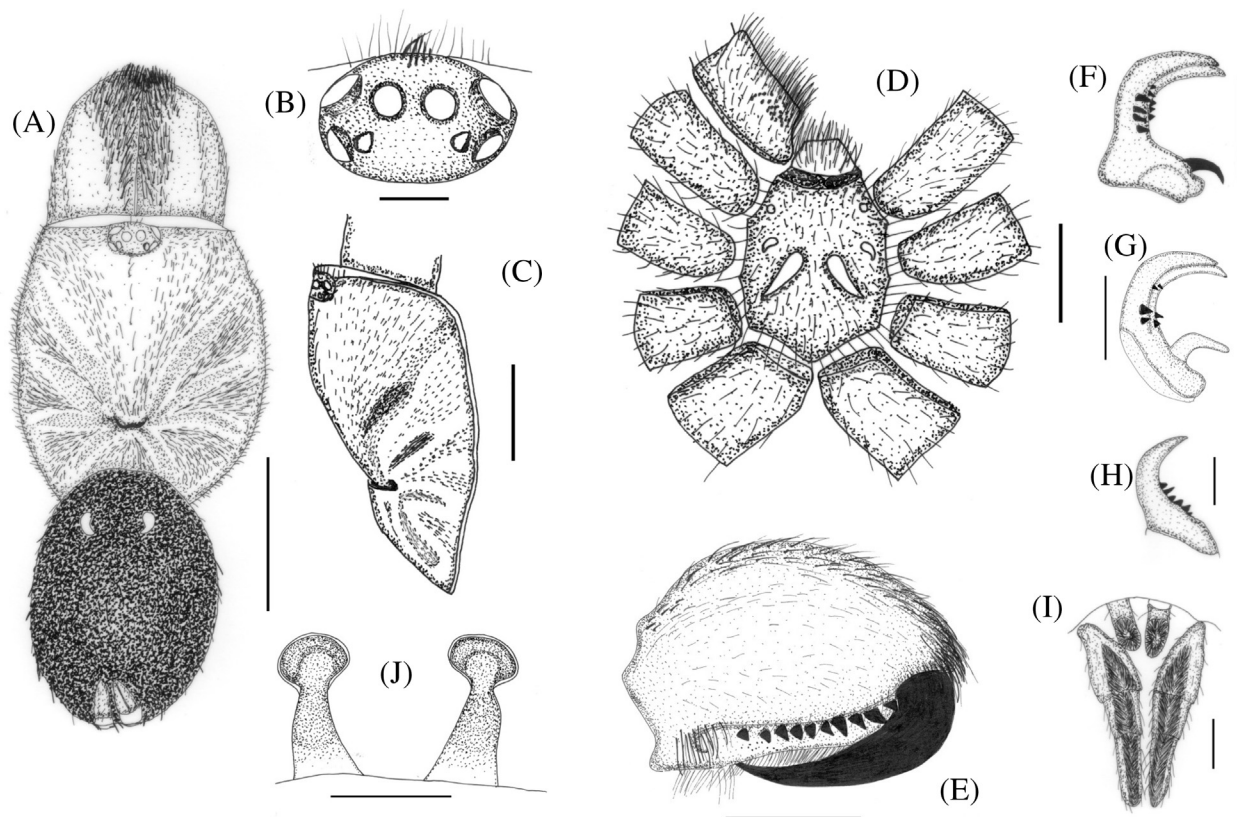


Figure 1. *Damarchilus nigricus* sp. nov., female (WILD-05-ARA- 40). A, Carapace and abdomen dorsal view; B, eye; C, carapace, lateral view; D, sternum, maxillae, labium; E, chelicerae prolateral view; F, claws on leg I; G, claws on leg IV; H, claw on palp; I, spinnerets; and J, spermathecae. Scale: 10.0 mm for A, 5.0 mm for C–E and H, and 1.0 mm for B, F, G, I, and J.

Maxillae (Figure 1D). 7.16 front length, 8.66 back length, and 4.42 wide. Posterior ventral edge gently rounded for length. Anterior lobe short, distinct. Cuspules: ca. 70 sparsely arranged in anterior corner in triangle region. Maxillary lyra absent. Prolateral face with short and long uniformly distributed hairs, a band of setae is present above the maxillary suture. Retrolateral face glabrous, reddish brown.

Labium (Figure 1D). 2.50 long and 3.50 wide; cuspules absent; labiosternal groove convex; one pair of large sigilla, meeting at center.

Chelicerae (Figure 1E). Intercheliceral spines absent. Prolateral face covered with short and long hairs; retrolateral face glabrous with few hairs on inner edge, reddish brown; fangs rough and slender; 10 promarginal teeth, 12–13 granules at basal chelicerae furrow or groove. Rastellum not on mound, consisting of thick long spines and bristles on vertical upward and dorsal face of chelicerae.

Sternum (Figure 1D). Saddle-shaped, high in center, sloping gradually, covered with long and short black hairs and bristles; posterior angle short, pointed, and not separating coxae IV; posterior edge clearly seen; pedicel pallid, not clearly visible; marginal long bristles present.

Sigilla (Figure 1D). Three pairs: anterior—round, marginal; median—oval, 3.66 apart and 0.70 from the margin; posterior—sigmoid shape, subcentral, 4.12 long, 1.10 wide, 1.00 apart, and 1.60 from margin.

Legs. Formula 4123; leg II subequal to III, leg IV slightly thicker than I; basifemoral thorns absent on all; metatarsus/tarsus ratio (length): III 1.9, IV 2.5, rest 1.6; and femorae of palp and legs I–II gently curved prolaterally and of IV curved retrolaterally.

Spines. Leg I: femur (fe), prolateral (p)1; patella (pa), and p2, ventral (v)2; tibia (ti), p3, v10; mt, p4, v15; leg II: fe, p2, pa, p5, ti, p3,

v10; mt, and p4, v13, retrolateral (r)1; leg III: fe, p1; pa, p5; ti, p2, dorsal (d)1, v7, r2; mt, p13, d11, v7, r2; leg IV: ti, v6, r2; mt, p8, d5, v18, r1; palp: pa, p1, d2; ti, p9, v3, r6; elsewhere absent. Spines on metatarsi: I with one ventrodistal, two ventrolateral; II with four ventrolateral; and III–IV with two ventrodistal, six ventrolateral distal.

Trichobothria. Clavate absent; tibiae with 8–10 filiform in two rows in distal half; metatarsi I–III with 8–10, metatarsus IV with 20 long and short filiform in two zigzag rows along length; and tarsi I–IV with 24 long and short filiform in two bands along length.

Leg coxae. Coxal bases dorsally easily seen from above; I longest, about 1.3 times length of II; IV clearly widest, edge curves dorsally, angular at interface; ventrally covered with long black hairs and bristles, weak thorns present on prolateral face; and coxae I–II sloping forward; retrolateral setation absent, glabrous.

Scopulae. Mt I—distal 3/4th, not divided; mt II—in distal half, thin, intermixed with bristles at base; mt III–IV absent; ta I entire, divided with two to four rows of long hairs; ta II distal 3/4th, divided with six to eight rows of long hairs; ta III distal 3/4th; and ta IV distal 1/4th but not as dense as ta I–II and intermixed with hairs and bristles.

Claws (Figures 1F–H). Claw tufts falsified; all legs with third claw; paired claws with two rows of teeth: on I–II with two prolateral teeth, three to four retrolateral teeth; III with one to two prolateral teeth and two to three retrolateral teeth; IV with one prolateral tooth and two retrolateral teeth; palp with single claw with six teeth.

Abdomen (Figure 1A). Dorsally blackish-gray with two pale sigmoid-shaped sigilla anteriorly; cuticle exposed dorsally and ventrally, covered with short and long black hairs; ventrally blackish-brown.

Table 1. Morphometry of legs and palp of female *Atmetochilus nigricus* new species from Arunachal Pradesh, holotype (WILD-05-ARA-40), paratype (WILD-05-ARA-39, 134).

	Leg I		Leg II		Leg III		Leg IV		Palp	
	Holo	Para	Holo	Para	Holo	Para	Holo	Para	Holo	Para
Femur	15.48	12.4	13.22	11.88	10.52	8.94	15.00	12.58	9.84	8.48
Patella	8.62	7.26	7.76	6.64	6.72	5.30	7.86	7.54	5.70	5.10
Tibia	10.04	8.08	8.44	7.92	5.88	5.60	9.40	8.30	6.88	5.78
Metatarsus	10.12	8.00	9.70	7.56	8.74	7.28	13.12	11.76	—	—
Tarsus	6.14	4.72	6.12	4.56	4.68	4.12	5.34	4.78	7.62	6.56
Total	50.40	40.46	45.24	38.56	36.54	31.24	50.72	44.96	30.04	25.92
<i>Midwidth</i>										
Femur	3.44	2.90	3.52	2.92	4.56	3.64	3.86	3.00	2.16	1.58
Tibia	3.32	2.70	3.16	2.56	3.40	2.84	4.44	3.00	2.66	2.30

Spinnerets (Figure 1I). Two pairs, digitiform covered with yellowish with brown hairs.

Spermathecae (Figure 1J). Paired receptacles. Each receptacle of an entire mushroom shaped with a shorter stalk (2 times longer than the lobe width), broader at the base and gradually narrowing with a notch/constriction distally forming a lobe slightly wider than the receptacle width at the base.

Morphometry, WILD-05-ARA-39 (Table 1). Total length 34.90; cephalothorax 17.16 long, 13.34 wide, and chelicerae 8.68 long intact. Sternum, 8.44 long and 7.00 wide. Labium 2.52 long and 2.46 wide. Maxillae 7.66 back length, 5.56 front length, and 3.4 wide. Abdomen 17.74 long and 10.38 wide. Spinnerets: PMS—2.60 long, 0.86 wide, and 0.78 apart; PLS—2.62 basal, 1.42 middle, 2.42 distal, and 6.46 total length, and midwidths 1.12, 1.08, and 0.92, respectively.

ZooBank ID (LSID). urn:lsid:zoobank.org:act:8BD697E0-BB34-402E-9DBC-AA236018481E

Distribution. India (Arunachal Pradesh)

Etymology. The species name is based on the Latin word for black, referring to the black body color of spider in life.

Natural history. The new species was found in Itanagar, Poma, and nearby areas, at an elevation of 200–350 m. They were mostly found on grassy road-cuts, which were common in the study area. In favorable habitats, the burrows were observed to be more or less densely clustered. The maximal burrow clustering was observed in the most crowded area of Itanagar city. There were about 500 burrows of varying sizes in a 100 m × 6 m bund. The bund was located on a curved band, facing west, south, and east. More burrows were found on the bund area facing west, as compared to the burrows facing south or east. The burrows were mostly found on the roadside cuts and on ground with a slope. Every studied burrow was a simple tube, entrance of which was round and had a turret made up of dry grasses, moss or leaves, soil, and silk. Silk at the turret and inside the burrow was not very thick, as seen in case of theraphosids. In case of females, the diameters of burrows ranged from 20 mm to 35 mm and depth from 0.3 m to 0.5 m. No males were found during the survey; probably they mature during the monsoon.

Damarchilus rufus sp. nov.

This species is described in Figures 2A–J and Table 2.

Types. Holotype: female (WILD-05-ARA-43), Khari, Pakke Tiger Reserve, Arunachal Pradesh, India (211 m, 26°58' 07.5" N, 92°54'42.2" E), April 11, 2005 (leg. Manju Siliwal, Dorjie Raptan and Khandu). Paratypes: 1♀ (WILD-05-ARA-44), near Upper Seijosa village, Seijosa, Arunachal Pradesh, India (152 m, 26°57'40.2" N, 93°00'43.7" E), April 12, 2005 (leg. Manju Siliwal, Dorjie Raptan and Tapi Tapan); 2♀—juveniles (WILD-05-ARA-108, WILD-05-ARA-127), same data as holotype-coll. WILD.

Diagnosis. The new species differs from other known species by having cephalothorax, legs and palp reddish brown in spider in life (in *D. nigricus* sp. nov. metallic black); abdomen heavily mottled (in *D. nigricus* sp. nov. darker abdomen with two sigmoid sigilla

anteriorly). Spermathecae receptacles entire mushroom shaped with longer stalk, about 2.6 times the lobe width (in *D. nigricus* sp. nov. about 2 times). Posterior sternal sigilla triangular (in *D. nigricus* sp. nov. sigmoid shaped).

Description. Total length, 39.48; carapace 21.26 long and 17.54 wide; chelicerae 9.92 long intact. Sternum 11.08 long and 9.48 wide. Abdomen 18.22 long and 12.84 wide. Spinnerets: PMS—2.36 long, 1.54 wide, and 0.90 apart; PLS—total length 9.40 (3.76 basal, 2.00 middle, and 3.64 distal; midwidths 1.84, 1.62, and 1.18, respectively). Morphometry of legs and palp is given in Table 2.

Color. Spider in life: carapace, legs and palps are reddish brown except the tarsi, metatarsi, and distal tibiae black; abdomen is dorsally black, ventrally brown. In alcohol: color slightly lighter, orangish-red and the abdomen is dorsally mottled with clay brown irregular dots, ventrally clay brown.

Carapace (Figures 2A and 2C). Broad oval with length-to-width ratio 1.21; orangish-red, interstitial ridges arising from the fovea darker in color and light blackish area on the anterior area of the caput; covered with short golden wavy hairs, more dense toward the margins and along interstitial ridges radiating from the fovea. Fovea is deep, strongly procurved, short, W shaped, one-third on the posterior side. Bristles: nine long on the anterior margin, 25 long and black on the caput, 12 long on the anterior edge; three long between the anterior edge of the tubercle; four long, 12 short on the posterior end of the tubercle; no bristles between the AME. Setae absent. Clypeus absent.

Eyes (Figures 2A and 2B). Ratio of eye group width to length 2.40. ALE is larger than rest, AME is slightly larger than PLE, and PME is clearly smaller than the rest. Eyes tubercle is well developed and raised. Eye diameters: ALE 0.80, AME 0.70, PLE 0.60, and PME 0.30. Distance between eyes: AME–AME 0.20, PME–PLE adjacent, AME–ALE 0.30, PLE–PLE 2.11, and PME–PME 1.80. Ocular quadrate 1.40 long and 3.40 wide. Median ocular quadrate: length 1.20, front width 1.80, and back width 2.40.

Maxillae (Figure 2D). 7.84 front length, 9.36 back length, and 4.82 width. Posterior ventral edge gently rounded for length. Anterior lobe is short and distinct. Cuspules: ca. 75 sparsely arranged in the anterior corner in the triangle region. Maxillary lyra are absent. Pro-lateral face with scattered short and long hairs, a band of setae are present above the maxillary suture. Retrolateral face is glabrous, yellowish-red.

Labium (Figure 2D). 2.26 long and 3.00 wide; cuspules absent; labiosternal groove shallow, convex, one pair of large sigilla, and meeting at the center.

Chelicerae (Figure 2E). Intercheliceral spines are absent. Pro-lateral face is covered with scattered small and long hairs; retro-lateral face is glabrous with a few hairs on the inner edge, reddish brown; fangs rough and slender; 10 promarginal teeth, 12 granules at the basal chelicerae furrow or groove. Rastellum not on mound, consisting of thick long spines and bristles on vertical upward and dorsal face of chelicerae.

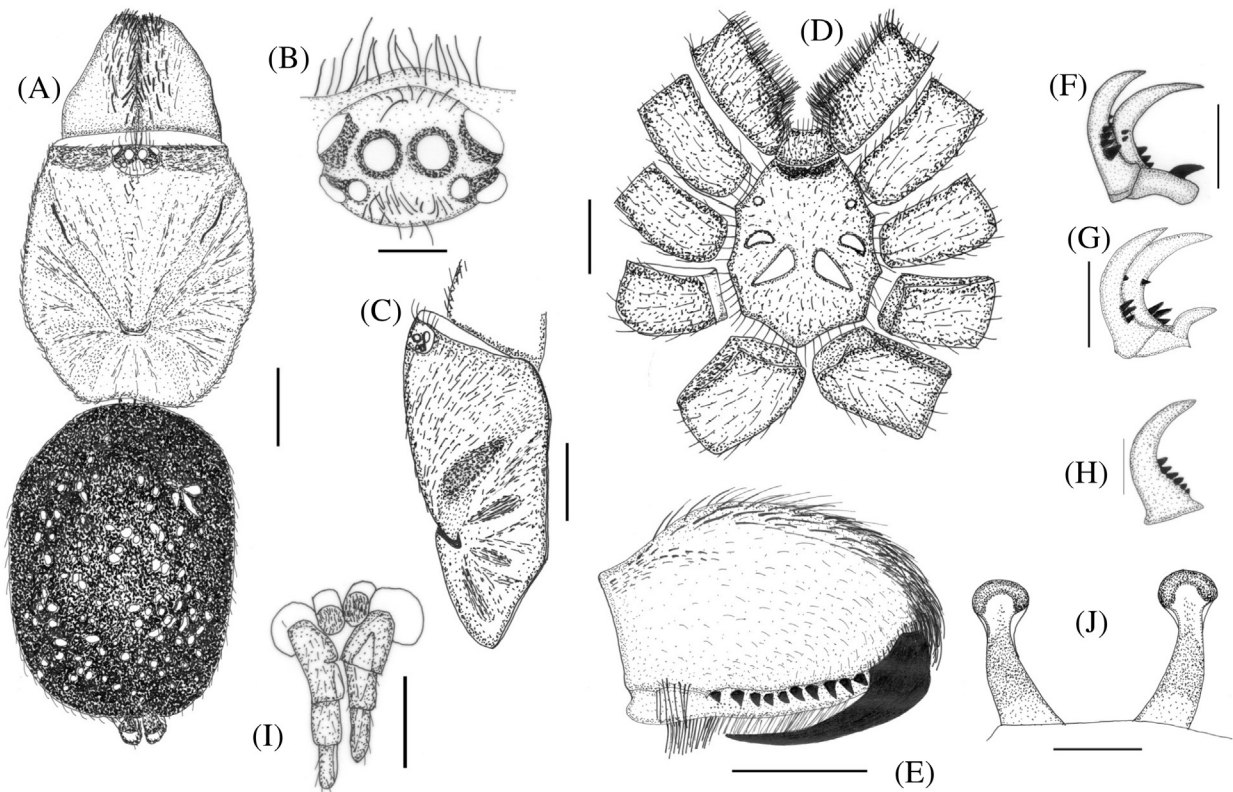


Figure 2. *Damarchilus rufus* sp. nov., female (WILD-05-ARA-43). A, Carapace and abdomen dorsal view; B, eye; C, carapace, lateral view; D, sternum, maxillae, labium; E, chelicerae prolateral view; F, claws on leg I; G, claws on leg IV; H, claw on palp; I, spinnerets; and J, spermathecae. Scale: 5.0 mm for A, C–E, H, and I, and 1.0 mm for B, F, G, and J.

Sternum (Figure 2D). Saddle shaped, depression in the center due to posterior and median sigilla, high anteriorly and posteriorly, sloping gradually, covered with long, dense, black hairs and bristles; posterior angle not pointed and not separating coxae IV; pedicel pallid, not clearly visible; posterior edge clearly seen; marginal long bristles are present.

Sigilla (Figure 2D). Three pairs: anterior—round, marginal; median—oval, 2.00 long, 4.42 apart, and 1.00 from margin; posterior—sigmoid shape, subcentral, 3.70 long, 1.80 wide, 1.24 apart, and 1.50 from margin.

Legs. Formula 4123; II subequal to III, leg IV slightly thicker than I; basifemoral thorns absent on all; metatarsus/tarsus ratio (length): III 1.8, IV 2.7, rest 1.5–1.6; femorae of palp and legs I–II gently curved prolaterally and of IV curved retrolaterally.

Spines. leg I: fe, p1; pa, p2; ti, p2, v8; mt, p2, v9; leg II: fe, p2; pa, p3; ti, p3, r9; mt, p3, r12; leg III: fe, r1; pa, p5, r1; ti, p2, d1, v6, r2; mt, p6, d2, v4, r3; leg IV: ti, v5, r2; mt, p13, d1+1 broken, v6; palp:

pa, p2; ti, p5, v2, r5; ta, p1, v6; and elsewhere absent. Spines on metatarsi: I, three (1 ventrodiscal, 2 ventrolateral distal); II, five (1 ventrodiscal, 4 ventrolateral distal); III, six (2 ventrodiscal, 4 ventrolateral distal); and IV, seven (2 ventrodiscal, 4 ventrolateral distal, 1 dorsodistal).

Trichobothria. Clavate absent; tibiae with 8–10 filiform in two rows in the distal half; metatarsi with 6–10 filiform in zigzag row; tarsi with 20–24 filiform in wide zigzag row, two to three rows are visible.

Leg coxae. Coxal bases dorsally easily seen from above. I longest, about 1.2 times length of II; IV clearly widest, edge curving dorsally, angular at interface; ventrally covered with long black hairs and bristles, weak thorns present on prolateral face; coxae I–II sloping forward; and retrolateral setation absent.

Scopulae. Mt I, distal 3/4th, not divided; mt II—in distal half, thin, intermixed with bristles at the base; mt III–IV absent; ta I—entire, divided with two to four rows of long hairs; ta II—distal 3/4th,

Table 2. Morphometry of legs and palp of female *Atmetochilus rufus* new species from Arunachal Pradesh, holotype (WILD-05-ARA-43), paratype (WILD-05-ARA-44).

Leg/parts	I		II		III		IV		Palp	
	Holo	Para	Holo	Para	Holo	Para	Holo	Para	Holo	Para
Femur	14.72	13.70	12.76	12.56	10.20	9.56	15.00	13.8	10.66	9.54
Patella	8.42	7.74	8.14	7.28	7.36	6.92	8.68	8.00	5.42	5.64
Tibia	9.52	9.22	8.10	8.04	5.74	5.32	8.96	8.64	7.18	6.84
Metatarsus	9.74	9.00	9.40	8.64	8.58	8.24	12.98	12.66	—	—
Tarsus	6.00	5.34	6.12	4.82	4.82	4.26	4.80	5.10	6.92	6.64
Total	48.40	45.00	44.52	41.34	36.70	34.30	50.42	48.20	30.18	28.66
Midwidth										
Femur	3.42	3.2	3.52	3.44	4.28	4.14	3.14	3.42	2.10	2.16
Tibia	3.32	3.00	3.00	2.72	3.42	3.00	3.54	3.34	2.58	2.38

divided with six to eight rows of long hairs; and ta III—distal 3/4th; ta IV—distal 1/4th but not as dense as on ta I–II and intermixed with hairs and bristles.

Claws (Figures 2F–H). Claw tufts falsified; all legs with a third claw; paired claws with two rows of teeth: on I–II with two pro-lateral teeth and three retrolateral teeth; III–IV with one prolateral tooth and three retrolateral teeth; palp with single claw with six teeth.

Abdomen (Figure 2A). Blackish brown, heavily mottled with yellowish-brown spots, sparsely distributed on dorsal side, cuticle exposed dorsally and ventrally; covered with small black hairs and bristles; ventrally greenish brown.

Spinnerets (Figure 2I). Two pairs, digitiform covered with yellowish brown with brown hairs.

Spermathecae (Figure 2J). Paired receptacles. Each receptacle are entire mushroom shaped, longer stalk (2.6 times longer than the lobe width), broader at the base (1.1 times wider than the lobe width) and gradually narrowing toward the apex with a notch/constriction distally forming a lobe.

Morphometry (WILD-05-ARA-44) (Table 1). Total length 39.04; cephalothorax 19.32 long, 14.46 wide; chelicerae 10.12 long. Sternum, 9.82 long and 8.00 wide. Labium 2.64 long and 2.00 wide. Maxillae 8.10 back length, 5.00 front length, and 4.00 wide. Abdomen 19.72 long and 14.10 wide. Spinnerets: PMS, 2.74 long, 1.00 wide, and 0.70 apart; PLS, 3.24 basal, 1.96 middle, 3.00 distal, and 8.20 total length, and midwidths 1.72, 1.44, and 1.02, respectively.

ZooBank ID (LSID). urn:lsid:zoobank.org:act:7F5A4E6C-B668-4F94-BC45-190051D83835

Distribution. India (Arunachal Pradesh)

Etymology. The species name is based on the Latin word for red, referring to reddish color cephalothorax and legs of spider in life.

Natural history. The new species was restricted to the foothills of Pakke Tiger Reserve and nearby area in East Kameng district, Arunachal Pradesh, at an elevation of 250–350 m. Habit and habitat of this species were similar to those of *D. nigricus* sp. nov., but the soil in this area was more sandy.

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