

**ON SOME NEW SPECIES OF *CHEIRACANTHIUM* C.L., KOCH AND
SIMALIO SIMON (ARANEAE : CLUBIONIDAE) FROM
COASTAL ANDHRA PRADESH, INDIA.**

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INTRODUCTION

The first record of Indian Clubionid spiders was made in India by Cambridge in 1874 and thereafter through a series of publications of Thorell (1881, 91, 95 and 97), Cambridge (1885), Simon (1885, 86, 89, 97, 98 and 1906), Strand (1907), Gravely (1921, 31), Reimoser (1934), Caporiacco (1935) and Dyal (1935) as many as 59 species belonging to 14 genera were known. Recently Tikader (1962), Singh (1970), Patel & Patel (1973), Tikader (1975, 76, 77, 81), Tikader & Biswas (1981) and Biswas (1984) added another 13 species from India raising the total number of species to 72 from 14 different genera. Lahore now being in Pakistan, Dayal's 4 species are not included in the above number.

Very recently Tikader & Majumder (1985) described 12 new species from 5 different genera, out of which the genus *Eutichurus* Simon was recorded for the first time from India. This brings the total number of species upto 84 belonging to 15 different genera. While examining the spider collections made by one of us (TSR) from Coastal Andhra Pradesh, we came across two new species from *Cheiracanthium* C.L. Koch. and one from *Simalio* Simon of this family are described and illustrated here.

All the type specimens will in due course be deposited in the National Collections of Zoological Survey of India, Calcutta.

1. *Cheiracanthium sambii* sp. nov. (Fig. 1, a-e)

General: Cephalothorax and legs yellowish, abdomen chalk white. Total length 11.75 mm. Carapace 4.80 mm long, 3.35 mm wide ; abdomen 7.15 mm long, 4.00 mm wide.

Cephalothorax : Yellowish, longer than wide, narrowing anteriorly, clothed with pubescence and hairs. Cephalic region high anteriorly, centre of the thorax provided with very light reddish fovea, radiating streaks originate from the fovea. Eyes in two rows, anterior and posterior, all pearly white. The anterior row slightly recurved and slightly shorter than the posterior row; anterior medians slightly

larger than the anterior laterals. The posterior row recurved and posterior medians slightly larger than the posterior laterals. Both the laterals close to each other and remote from the medians. Ocular quad almost square as in Fig. 1a. Clypeus narrow. Sternum oval, pointed behind, yellowish in colour. Labium and maxillae longer than wide, reddish brown with pale distal ends and provided with scopulae; labium convergent apically and maxillae slightly constricted at the middle and wider anteriorly. Sternum, labium and maxillae as in Fig. 1b. Chelicerae strong and stout, reddish brown with scopulated fange groove; the inner and outer margins of fang furrow provided with three teeth each as in Fig. 1e. Legs long, strong and stout, clothed with spines and hairs. Tibiae I and II provided with four and two pairs of ventral spines resp. and metatarsae of all legs provided with three pairs of ventral spines. Tarsi usually short provided with two claws and thick claw tufts. Leg formula 1 4 2 3.

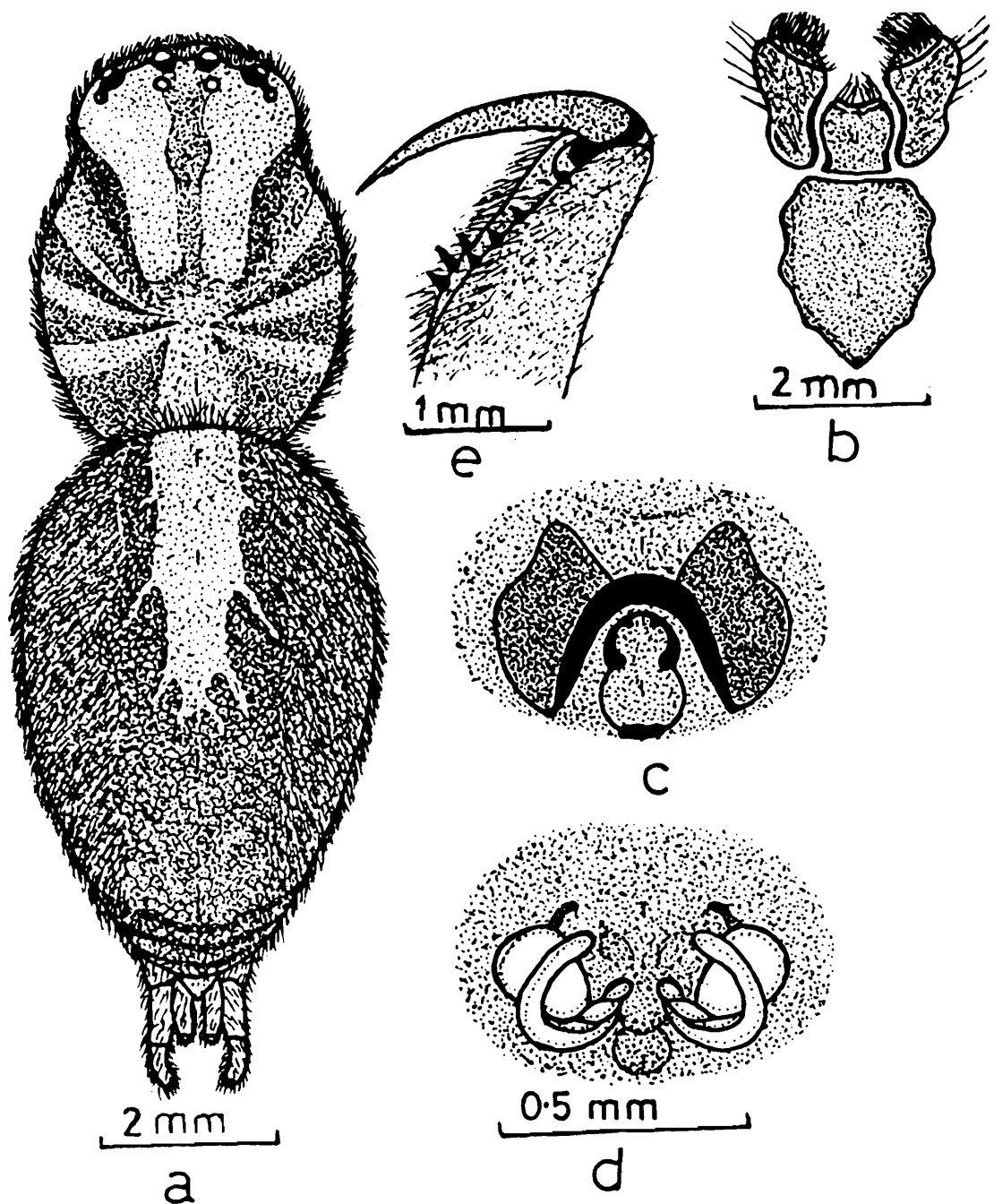


Fig. 1. *Cheiracanthium sambii* sp. nov. : a. Dorsal view of female (legs omitted) ; b. Sternum, labium and maxillae ; c. Epigyne ; d. Internal genitalia ; e. Left chelicera-ventral view.

Male : Unknown.

Abdomen : Oval, chalk white, longer than wide, clothed with pubescence and hair. Anterior mid-dorsal region provided with a lens shaped brown marking as in Fig. 1, a. Ventral side lighter than the dorsal, a brown band is extending from the epigastric furrow to the spinnerets. Epigyne and internal genitalia are as in Fig. 1, c and d.

Holotype : 1 ♀ in spirit.

Type-Locality : Tenali, Dist. Guntur, 20. i. 1986. Coll. T. S. Reddy.

Diagnosis : This species resembles to *Cheiracanthium murina* Thorell but it is separated as follows : (i) Ocular quad almost square but in *C. murina* ocular quad wider than long, narrower anteriorly. (ii) Inner and outer margins of fang furrow provided with three teeth each but in *C. murina* inner and outer margins of fang furrow provided with three and two teeth respectively. (iii) Anterior mid-dorsal side of abdomen provided with a lens shaped brown marking but in *C. murina* anterior mid-dorsal side of abdomen without such lens shaped marking. (iv) Epigyne and internal genitalia are also structurally different.

This species also resembles to *C. seshii* sp. nov. but it is separated as follows : (i) Anterior median eyes are larger than all other eyes but in *C. seshii* anterior median eyes are not larger than all other eyes. (ii) Dorsum of abdomen without sigillae but in *C. seshii* dorsum of abdomen provided with two pairs of sigillae. (iii) Abdomen antero-laterally not notched and postero-laterally not provided with any muscular corrugations but in *C. seshii* abdomen antero-laterally notched and postero-laterally provided with muscular corrugations. (iv) Epigyne and internal genitalia are also structurally different.

2. *Cheiracanthium seshii* sp. nov. (Fig. 2, a-e)

General : Cephalothorax reddish brown, legs and abdomen yellowish brown. Total length 8.80 mm. Carapace 3.90 mm long, 2.90 mm wide ; abdomen 5.30 mm long, 3.10 mm wide.

Cephalothorax : Longer than wide, narrow anteriorly, clothed with pubescence and hair. Cephalic region high anteriorly, center of the thorax provided with very light fovea, radiating streaks originate from the fovea. Eyes in two rows, all pearly white. The anterior row slightly recurved. The posterior row slightly procurved and slightly longer than the anterior row. The laterals are close to each other and remote from the medians. Ocular quad wider than long with parallel sides as in Fig. 2 a. Sternum oval, yellowish, clothed with hairs. Labium and maxillae reddish brown, longer than wide, distal ends provided with scopulae ; labium convergent apically and maxillae slightly constricted at the middle and wider anteriorly. Sternum, labium and maxillae as in Fig. 2 b. Chelicerae strong, reddish brown, scopulated fang groove, inner and outer margins of fang furrow provided with three teeth each as in Fig. 2 e. Legs long, strong and stout, clothed with hairs and long spines. Tibiae and metatarsi I and II provided with two and three pairs of ventral spines resp. ; tibiae and metatarsi III and IV provided with one and three pairs of ventral spines respectively. Tarsi of all the legs usually short, provided with two

claws and thick claw tufts. Leg formula 1 4 2 3.

Male : Unknown.

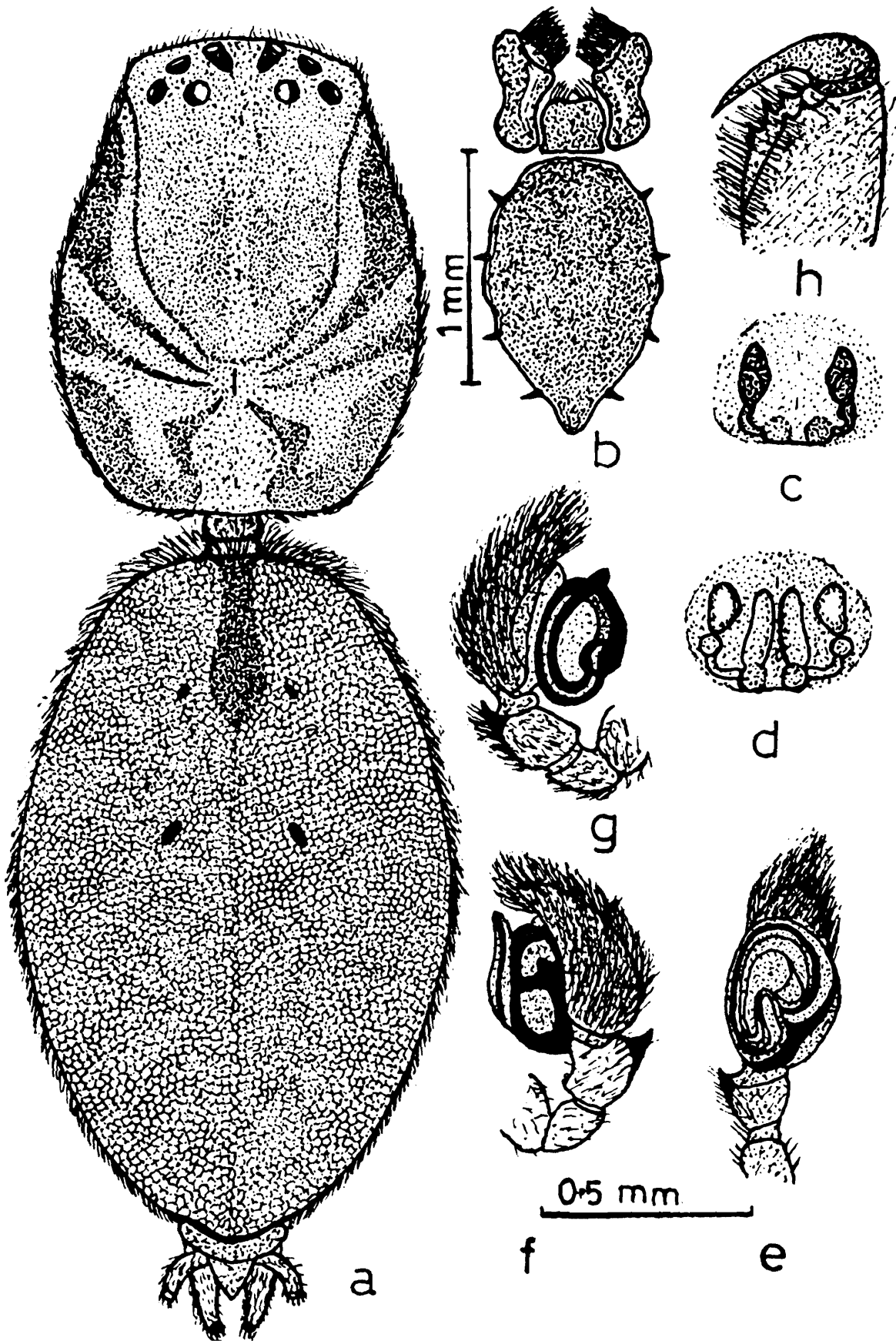


Fig. 2. *Cheiracanthium seshii* sp. nov. : a. Dorsal view of female (legs omitted) ; b. Sternum, labium and maxillae ; c. Epigyne ; d. Internal genitalia ; e. Left chelicera-ventral view.

Abdomen : Yellowish brown longer than wide, clothed with pubescence and hair. Dorsum of abdomen provided with two pairs of sigillae. Anterior mid-dorsal side provided with a lens shaped brown marking. Abdomen antero-laterally notched and postero-laterally provided with muscular corrugations as in Fig. 2 a. Ventral side pale in colour. Epigyne and internal genitalia are as in Fig. 2 c. and d.

Holotype : 1 ♀ in spirit.

Type-Locality : Palasa, Dist. Srikakulam, 13.x.1986. Coll. T. S. Reddy.

Diagnosis : This species resembles to *Cheiracanthium murina* Thorell but it is separated as follows : (i) Ocular quad wider than long with parallel sides but in *C. murina* ocular quad wider than long and narrower anteriorly. (ii) Chelicerae strong, inner and outer margins of fang furrow provided with three teeth each but in *C. murina* chelicerae strong, inner and outer margins of fang furrow provided with three and two teeth respectively. (iii) Dorsum of abdomen provided with two pairs of sigillae and antero-laterally notched and postero-laterally provided with muscular corrugations but in *C. murina* dorsum of abdomen not provided with sigillae and not provided with antero-lateral notch and not any postero-lateral muscular corrugations. (iv) Epigyne and internal genitalia are also structurally different.

3. **Simalio aurobindoi** sp. nov. (Fig. 3, a-h)

General : Cephalothorax and legs yellowish brown, abdomen pale yellow. Total length 5.20 mm. Carapace 1.90 mm long, 1.50 mm wide ; abdomen 3.10 mm long, 1.80 mm wide.

Cephalothorax : Longer than wide, narrow anteriorly, clothed with thin pubescence, provided with inconspicuous fovea situated just below the median half of the cephalothorax. Eyes in two rows ; the anterior row of eyes usually shorter, slightly recurved, medians blackish, slightly smaller than the laterals and equidistant. The posterior row usually longer than the anterior, slightly procurved, medians larger than all other eyes, widely separated from each other and closer to the laterals. Clypeus narrow. Ocular quad wider than long, much wider behind than in front as in Fig. 3 a. Sternum, oval, yellowish, pointed behind, clothed with hairs. Labium nearly as long as wide, yellowish with pale distal end and provided with scopulae. Maxillae longer than broad, yellowish, slightly depressed at the middle, clothed with fine hairs, distal end pale and provided with scopulae. Sternum, labium and maxillae as in Fig. 3 b. Chelicerae moderately strong, pale yellow, inner and outer margins of fang furrow provided with two and three teeth resp. as in Fig. 3 h. Legs short and strong, coxae long, trochanters and patellae shorter. Femora, tibiae and metatarsi relatively long. Femora I and II provided with three apical and one median spines, III and IV with three apical and two median spines on the dorsal side. Patellae of all legs provided with two basal, one retrolateral and one apical median spines. Tibiae I and II apically provided with one pair and one antero-retrolateral spines and metatarsi II with antero-prolateral spine on ventral side. Tibiae III and IV provided with one and two pairs of dorsal spines, metatarsi III with three pairs and IV with four pairs of dorsal spines. Tibiae III and IV with one median ventral spine, metatarsi III and IV with one median and one pair of apical ventral spines. Leg formula 4 1 2 3.

Male : Male is similar to the female and slightly smaller. Total length 3.85 mm. Tibiae of male palp provided with retrolateral apophysis, which is short and blunt, tegulum without apophysis, embolus short and narrow, cymbium without spur. Male palps in Fig. 3 e, f and g.

Abdomen : Oval, light yellowish-brown, longer than wide, broader anteriorly and narrow posteriorly. Dorsum of abdomen anteriorly provided with two pairs of sigillae. Anterior portion of abdomen provided with a lens-shaped pale brown marking clothed with hairs and anteriorly with a cluster of semierect setae as in Fig. 3 a. Ventral side pale in colour. Epigyne with 'U' shaped elongated plate as in Fig. 3 c. Internal genitalia as in Fig. 3 d.

Holotype : 1 ♀, **paratype :** 5 ♀, **allotype :** 1 ♂ in spirit.

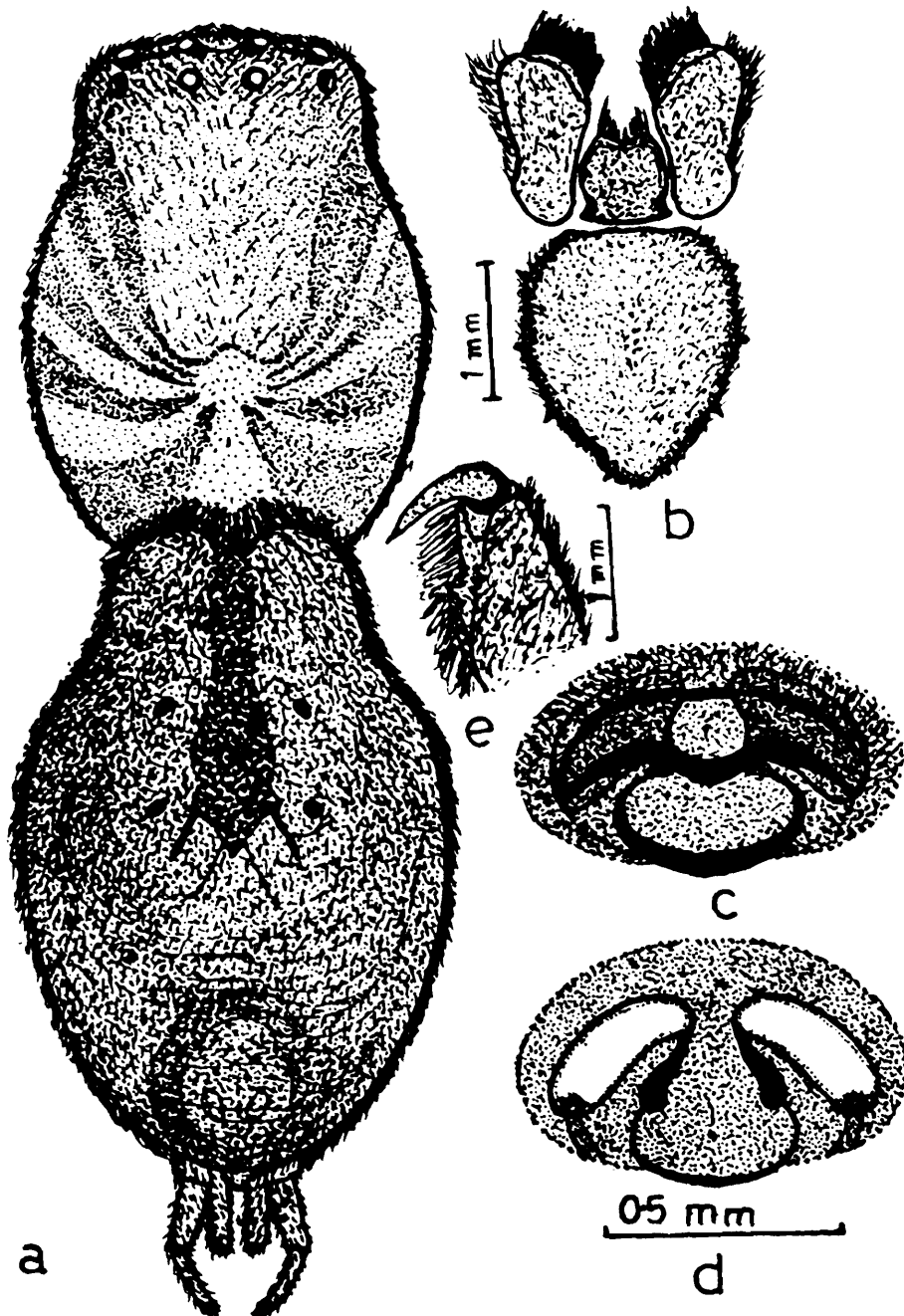


Fig. 3. *Simalio aurobindoi* sp. nov. : a. Dorsal view of female (legs omitted) ; b. Sternum, labium and maxillae ; c. Epigyne ; d. Internal genitalia ; e. Right male palp-ventral view ; f. Right male palp-inner view ; g. Right male palp - outer view ; h. Left chelicera - ventral view.

Type-Locality : Valiveru, Dist. Guntur, 20.iv.1986. Coll. T.S. Reddy.

Diagnosis : This species resembles to *Simalio biswasi* Tikader and Majumder but it is separated as follows : (i) Labium nearly as long as wide, yellowish with pale distal end and provided with scopulae but in *S. biswasi* labium moderately elongated more or less parallel and not scopulated anteriorly. (ii) Femora I and II provided with three apical and one median spins on the dorsal side but in *S. biswasi* femora I and II provided with two pairs of dorsal spines. (iii) Tibiae I and II provided with one pair of ventral spines apicably and one retrolateral spine anteriorly but in *S. biswasi* tibiae I and II provided with two pairs of ventral spines. (iv) Epigyne and internal genitalia are also structurally different.

SUMMARY

Three new species of the genera *Cheiracanthium* Koch and *Simalio* Simon (family : Clubionidae) viz., *Cheiracanthium sambii*, *C. seshii* and *Simalio aurobindoi* are described and illustrated from Guntur and Srikakulam Districts of Coastal Andhra Pradesh, India.

ACKNOWLEDGEMENTS

The authors are grateful to Prof. K.B. Tipnis, Principal, Sir P.P. Institute of Science, Bhavnagar for providing laboratory facilities. The financial assistance to one of us (TSR) by the Government of Gujarat is acknowledged.

REFERENCES

- Biswas, B.K. 1984. Description of six new species of spiders of the families Clubionidae, Gnaphosidae and Salticidae from India. *Bull. zool. Surv. India*, **6**(1-3) : 119-127
- Cambridge, O.P. 1874. On some New species of *Drassodes*. *Proc. zool. Soc. Lond.*, : 370-419.
- Cambridge, O.P. 1885. Araneida in Scientific Results of the Second Yarkand Mission, Calcutta, 1885. *Res. Sec. Yarkand Miss., Anan.*, : 20-30.
- Caporiacco, L. 1935. Aracnidi dell' Himalaia del Karakoram, *Mem. Soc. ent. Ital.*, **13** : 216-225.
- Dyal, S. 1935. Spiders of Lahore. *Bull. Dept. zool. Panjab Univ.*, **1** : 214-216.
- Gravely, F. H. 1921. The fauna of an Island in the Chílka lake, spiders and scorpions. *Rec. Indian Mus.*, **22** : 418.
- Gavely, F.H. 1931. Some Indian spiders of the families Ctenidae, Sparassidae, Selenopidae and Clubionidae. *Rec. Indian Mus.*, **33**(3) : 261-276.
- Majumder, S.C. 1985. Studies on some spiders of the Family Clubionidae from India. Ph.D. Thesis, Kalyani University, : 1-296.
- Patel, B.H. and Patel, H.K. 1973. On some new species of spiders of family Clubionidae (Araneae : Arachnida) with a record of genus *Castianeira* Keyserling from Gujarat, India *Proc. Indian. Acad. Sci.*, **78**(1) : 1-9.
- Reimoser, E. 1934. Araneae us Sud. Indian *Rev. Suisse Zool.*, **41** (32) : 489-497.

- Simon, E. 1885. Arachnides rec. a Ramnad Distr. Madura. *Bull. Soc. zool. Fr.*, **10**(4-6) : 26-39.
- Simon, E. 1886. Arachnides recueillis Par M.A. Pavia (Souschef du service des pestes au Cambridge) dans le royaume de Simon, au Cambridge et au, Cochinclume. *Annls Soc. Linn. Bord.*, **40** : 158.
- Simon, E. 1889. Etude sur les Arachnides de l' Himalaya recueillies par, M.M. Oldham et Wood-Mason et faisant partie des collections de l' Indian Museum Ire Partie. *J. Asiat. Soc. Beng.* **58** (2) : 342-343.
- Simon, E. 1897a. Materiaux pour servir a la faune arachnologique de l' Asie Meridionale. V (1), Arachnides recueillis a Dehra-Dun (N.W. Prov.) et dans le Dekka par M.A. Smythies. *Mem. Soc. zool. Pr.*, **10** (2) : 260-263.
- Simon, E. 1897b. Arachnides recueillis par M.M. Maindron a Kurrachee et a Matheran (Press Bombay) en 1896. *Bull. Mus. Hist. nat. Paris*, **3** (7) : 294.
- Simon, E. 1898. *Histoire naturelle des Araignees*, Paris, **2** (2) : 214.
- Simon, E. 1906. Description ue quelques Arachnides des bas plateaur de l' Himalaya, Commuriques, par le R.P. Costets (de st. Josephs College a Trichinopoly). *Ann. Soc. Ent. Fr.*, **75** : 297-312.
- Singh, G. 1970. Description of a new species of the genus *Clubiona* Latrielle (Clubionidae : Araneae) from India. *Sci. Cul.* **36** : 410-412.
- Strand, E. 1907. Vorlanfuge Diagnosen Sud-Und Ostosiatischer Clubioniden, Ageloniden, Pisauriden, Lycosiden, Oxyopiden and Salticisen. *Zool. Anz.*, **31**(17-18) : 562-563.
- Thorell, T. 1881. Studi sui Ragni Malesie Papuani III. Ragni dell Austro-Malesia e del Capo York. Conservatin el Musco civico de Storia Naturale de Genova. *Ann. Mus. Div. Stor. Nat. Genova*, **17** : 209-210.
- Thorell, T. 1891. Spindlar from Nicobarerna och andra Delar of Sodra Asien, etc. *Kongl. Sv. Vet. Acad. Handle*, **24**(2) : 22-30.
- Thorell, T. 1895. *Descriptive Catalogue of spiders of Burma*, London : 40-50.
- Thorell, T. 1897. Seconbo saggio sui ragni Birmani. 1. *Ann. Mus. Civ. Stor. Genova*, **37** : 231-232.
- Tikader, B. K. 1962. Studies on some Indian spiders (Araneae : Arachnida). *J. Linn. Soc., Zool.* **44** (300) : 561-584.
- Tikader, B.K. 1975. A new species of spider of the genus *Cheiracanthium* Koch (Family : Clubionidae) from India. *J. Bombay nat. Hist. Soc.*, **72**(1) : 43-45.
- Tikader, B.K. 1976. Two new species of the spiders of genus *Cheiracanthium* Koch & *Clubiona* Latreille (Family : Clubionidae) from India. *J. Bombay nat. Hist. Soc.*, **73**(1) : 175-177.
- Tikader, B.K. 1977. Studies on spider fauna of Andaman and Nicobar Islands, Indian Ocean. *Rec. zool. Surv. India*, **72** : 194-196.
- Tikader, B.K. 1981. Studies on spiders of the genus *Castianeira* Keyserling (Family : Clubionidae) from India. *Bull. zool. Surv. India*, **4**(3) : 257-265.
- Tikader, B.K. and Biswas, B.K. 1981. Spider fauna of Calcutta and vicinity — I. *Rec. zool. Surv. India, Occ. Paper No.* **30** : 67-74.