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A NEW SPECIES OF THE GENUS TETRAGNATHA (ARANEAE: TETRAGNATHIDAE) FROM TROPICAL ASIA*

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Abstract

A new species, *Tetragnatha virescens*, is described from Tropical Asia.

In this paper a new species *Tetragnatha virescens* is described from Tropical Asia. The new species was provisionally named *Tetragnatha* sp. A by Okuma (1968, 1973) and has been treated as such in her personal communications.

I wish to express my sincere gratitude to Professor Y. Hirashima and Associate Professor K. Morimoto of Kyushu University for their continuous guidance. I am also much indebted to Professor Emeritus K. Yasumatsu of Kyushu University, Dr. A. Ôtake of Fruit Tree Research Station, Dr. N. Hokyo of Okinawa Prefectural Agricultural Experiment Station and Dr. H. Mita of Central Agricultural Research Institute of Sri Lanka who provided me with valuable specimens for the present study.

Tetragnatha virescens sp. no v.

Tetragnatha sp. A Okuma. Mushi, 1968, 42(8): 103,112; Okuma, 1973, 47(1):5,8, **11,** 12.

Male. Body length, exclusive of chelicerae 5. 9 to 7.8 mm ; carapacial length 1.8 to 2. 3mm, width 1.1 to 1.4 mm, abdominal length 4.1 to 5.5 mm, width 0.70 to 1.05 mm.

Eyes. Anterior row of eyes occupying the full width of carapace; posterior row considerabley shorter. Viewed from above, anterior row of eyes gently recurved, posterior row strongly recurved ; viewed in front, anterior row definitely procurved, posterior row straight or slightly recurved; central ocular quadrangle wider behind than in front in ratio of 31 : 23, length about equal to width behind; diameter of each eye is as follows : AME : ALE : PME :

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PLE=100 : 48 : 59 : 57 μ; AME separated from one another by their diameter, and from ALE about 2 to 2.7 times their diameter; PME separated from one another about 3 to 3.5 times their diameter and is separated from PLE about 2 to 3 times their diameter; lateral eyes separated from one another about 5 to 7 times by diameter of ALE; AME separated from PME by about 1.5 times their diameter; height of clypeus about as long as diameter of AME.

Chelicerae. Length of basal segment 1.0 to 1.4 mm ; fang with two inner cusps, the basal one about one-fifth from base; prolateral spur not apically bifid, the "large tooth" present, and these together with a continual small tooth forming a group of three teeth, in addition to each five to seven small teeth on pro- and retromargins of fang groove (Figs. 1-3).

Maxillae. Nearly parallel, longer than lip in ratio of 2.4 :1, more than 4 times as long as wide at narrowest level.

Lip. Shorter than broad at base in ratio of 3 : 4; sternal suture nearly straight.

Sternum. Length 0.9 to 1. 1 mm, width 0. 7 to 0. 8 mm; continued between fourth coxae which are separated by about 125 μ.

Legs. 1 2-4 3. All legs with spines and hair. Trichobothria on all femora. Relative measurements of legs as follows:

	Femora	Pa tellae	Tibiae	Metatarsi	Tarsi	Totals
1	5.051-O. 48	0. 88±0. 07	5. 37±0. 56	5. 11±0. 49	1. 33±0. 07	**17.70k1.66**
2	**3.691fi0.35**	0. 71±0. 05	3. 44±0. 30	3. 29±0. 31	0. 93±0. 05	12. 05±1. 03
3	1. 84±0. 18	**0.4510.05**	**1.33io.13**	**1.34t0.09**	0. 53±0. 04	5. 48±0. 45
4	3. 88±0. 36	0. 56±0. 04	**3.28t0.31**	3. 09±0. 27	0. 76±0. 05	11. 56±0. 98
Palp	1. 08±0. 08	0. 28±0. 03	0. 31±0. 04	/	0. 99±0. 05	2. 65±0. 16

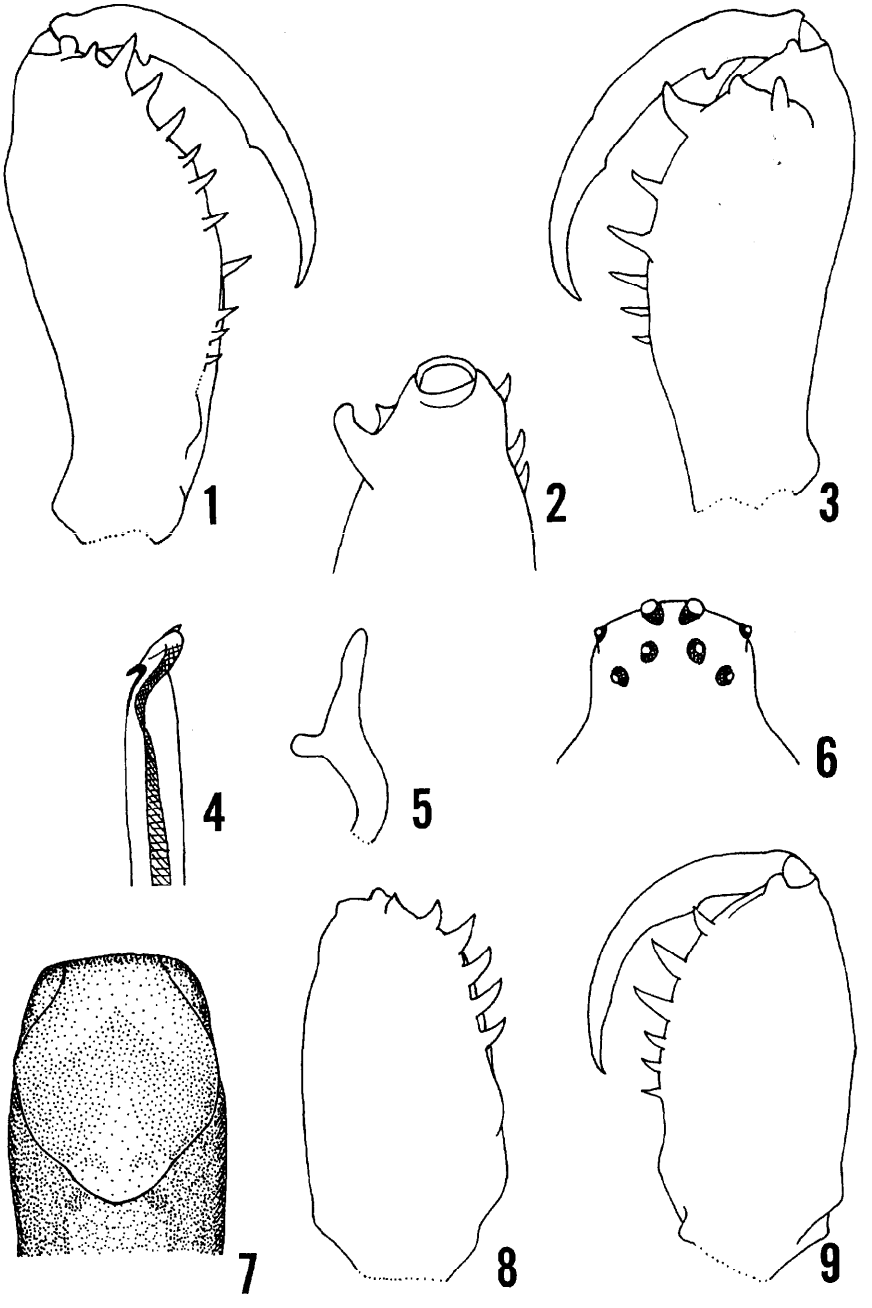
Palp. Tibia only slightly longer than patella; paracymbium long, slender, bluntly rounded at its distal end; distal end of conductor and embolus as shown in Figs. 4 and 5.

Abdomen. Long and slender, slightly extended posteriorly to spinnerets.

Color *in alcohol*. Legs, cephalothorax and mouthparts yellowish brown ; abdomen covered with many yellowish silvery spangles and grayish reticulations; venter also covered with yellowish silvery spangles, without a median stripe which is so frequently present in the genus.

Female. Body length, exclusive of chericerae 6.55 to 8. **25** mm ; carapacial length 1.85 to 2.25 mm, width 1.2 to 1.4 mm; abdominal length 4.6 to 6. 0 mm, width 1.0 to 2.0 mm.

Eyes. Essentially as in male (Fig. 6), but each ratio and diameters of eyes somewhat different from male; central ocular quadrangle, slightly wider behind than in front in ratio of 30 : 29; length about equal to width behind; diameter of each eye as follows: AME: ALE : PME : PLE= 103 : 48 : 58 :55 μ; AME separated from one another by their diameter, and from ALE slightly



Figs. l-9. *Tetragnatha* virescens sp. nov. *1-3:* Right chelicerae of male. 4: Distal end of male conductor and embolus. 5: Male paracymbium. 6: Eye group of female from above. 7: Genital fold of female. 8-9: Right chelicerae of female.

more than 2 times their diameter; PME separated from one another about 3 times their diameter and is separated from PLE about 2.4 times their diameter; lateral eyes separated from one another by 4.3 times diameter of PLE; AME separated from PME by slightly more than diameter of AME; height of clypeus about 0.75 times as long as diameter of AME.

Chelicerae. Basal segment 0.65 to 0.85 mm in length, fang without cusps; promargin of fang groove with five to eight teeth; retromargin with four to five teeth (Figs. 8 and 9).

Legs. Essentially as in male. Relative measurements of legs as follows:

	Femora	Patellae	Tibiae	Metatarsi	Tarsi	Totals
1	4.44±0.30	0.86±0.06	4.51±0.37	4.28±0.32	1.17±0.05	15.25±1.07
2	3.17±0.23	0.70±0.05	2.86±0.21	2.76±0.22	0.84±0.05	10.32±0.73
3	1.63±0.12	0.43±0.04	1.111-O.08	1.18±0.11	0.51±0.06	4.85±0.36
4	3.51 to.24	0.55±0.05	2.79±0.22	2.65±0.24	0.72±0.05	10.21±0.76
Palp	0.74±0.04	0.23±0.03	0.49±0.04	/ 0.74±0.05		2.20±0.13

Color in *alcohol*. Essentially as in male.

DISTRIBUTION: Sri Lanka, Thailand, Malaysia, Indonesia and Philippines.

TYPE MATERIAL: Holotype ♂ (Type No. 2155, Kyushu Univ.), Bangkhen, Thailand, 12. XI. 1970, C. Okuma leg. Paratopotypes: 12 ♂♂ and 15 ♀♀, same data as holotype. Paratypes : Thailand, 11 ♂♂ an♀♀, Rangsit, 7. XI. 1966, C.

Table 1. Measurements of Tetragnatha *virescens* sp. nov.

Sex	♂		♀	
No. of specimens examined	10		10	
	mean±s.d.	(range)	mean-t s.d.	(range)
Body length (mm)	6.63±0.55	(5.90-7.80)	7.2410.60	(6.55-8.25)
Carapace, length	2.06±0.14	(1.80-2.30)	2.04±0.13	(1.85-2.25)
width	1.25±0.09	(1.10-l.40)	1.30±0.06	(1.20-l.40)
Sternum, length	1.01±0.06	(0.90-l.10)	1.00±0.05	(0.90-l.10)
width	0.73±0.04	(0.70-O.80)	0.74±0.05	(0.70-o.80)
Abdomen, length	4.57±0.44	(4.10-5.50)	5.20±0.53	(4.60-6.00)
width	0.85±0.09	(0.70-l.05)	1.14±0.11	(1.00-l.30)
Chelicerae, length	1.22±0.11	(1.00-l.40)	0.74±0.06	(0.65-o.85)
Maxilla, length (μ)	683k51.5	(600-775)	640± 55.0	(575-725)
width	170±8.8	(150-175)	208-t 14.8	(188-238)
Lip, length	290rfi22.5	(250-325)	285i 20.0	(250-313)
width (base)	393± 16.8	(375-425)	403±25.0	(375-450)
Eye diameter				
AME	100±4.5	(95-l 13)	103±4.0	(100-113)
ALE	48±4.0	(38-50)	48±2.5	(45-50)
PME	59t3.8	(55-63)	58±6.3	(50-70)
PLE	57±3.0	(55-63)	55±4.0	(59-63)

Okuma leg. ; 10 ♂♂ and 10 ♀♀ , Ubol Rochathani, 29. X. 1976, K. Yasumatsu leg. ; Sri Lanka, 6 ♂♂ and 10 ♀♀, Gannoruwa, Peradenia, H. Mita leg. ; West Malaysia, 4 ♂♂ and 6 ♀♀, Coastal Plain, 5. II. 1976, Ôtake et Hokyo leg. ; Cental Java, 3 ♂♂ and 2 ♀♀, Kanang Anom, 18. II. 1976, Ôtake et Hokyo leg. ; East Java, 3 ♂♂ and 3♀♀, Rogo Jampi, 21. II. 1976, Ôtake et Hokyo leg.

TYPE DEPOSITORY : The holotype is preserved in the collection of the Entomological Laboratory, Faculty of Agriculture, Kyushu University.

DIAGNOSIS: This new species is related to *T. vermiformis* Emerton 1884, from U.S.A. but is separable from the latter by the body pale and silky (much darker in *vermiformis*) and the male cheliceral fang with two inner cusps, the basal one about one-fifth from base (male cheliceral fang with only one inner cusp in *vermiformis*). The arrangement of the male cheliceral teeth is also different.

NOTE: This new species is common in the paddy field of Tropical Asia, and the body is light green in color similar to the leaf of rice plant in life.

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