



Cyrtophora noorani and *Cyrtophora citricola* (Araneae, Araneidae: Cyrtophorinae) new species and a new record from Sindh, Pakistan

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Abstract

Spiders are carnivorous and miscellaneous arthropods. They devour 50 times the number of prey then their body weights hence are best tool for biological control. There are 110 families, 3859 genera and 42751 species in world. The effort on spiders from Sindh, Pakistan is not appropriate. For this, an wide appraisal was conceded out in diverse vicinities of the Sindh (lies between 23° to 35° and 28°-30°, north latitude and 66° to 42° to 71°-37°, degree east longitude) during the year 2006 - 2010. Reported exertion is an ingredient of that survey. The *Cyrtophora noorani*, new species and *Cyrtophora citricola* (Forskal, 1775) a new record, their body measurements and a brief description of the diagnostic characters have been described first time as a new work from Sindh, Pakistan. Presented material is *Cyrtophora noorani*, (Qasimabad (Hyd.), 1♀, 1♂ 1mm, 08-VI-09 (J. I. Chandio) and new record *Cyrtophora citricola* (Forskal, 1775) Qasimabad, 4♀, 1♂ 1mm, 11-VI-10 (T.J. Chandio); same data but, 2♀, 11-VII-09 (P.Chandio); Jamshoro, 1♀, 19-VII-2009 (Abdullah). The specimens were processed in Petri dishes wrapped up in alcohol with a layer of fine sand /glass beads/black paraffin was spread in the bottom of the dish for the holding and positioning of the specimen. The specimen was vigilantly manipulated with the help of a pair of forceps to evade the pierce of abdomen. The identification of specimens was done comprehensively examined under binocular dissecting microscope and with the facilitated of keys and description given in literature (Kaston, 1978; SGNART, 2005 and other relevant literature of neighboring Asian countries).

Keywords: new species, araneae, araneidae, sindh

Introduction

Sindh is agricultural province of Pakistan have four seasons hence it is rich in fauna and flora. The most important part of fauna is Araneids (Spiders). Spiders are carnivorous and diverse arthropods (Nyffeler *et al.*, 1994, 2003; Riechert & Lockley, 1984) [7, 8, 10]. There are 44032 species, 3905 genera and 112 families reported (Platnick, 2012) [13]. They mostly feed upon insects and exterminate 50 times the number of prey then their body weight (Kajak, 1978) [5]. Their role as a predator historically considered useful and research done also signify that spiders may restrain pest populations within limit (Riechert & Lockley, 1984; Sunderland, 1999; Symondson *et al.*, 2002; Ghafoor & Beg, 2002; Ghafoor & Alvi, 2007; Schmidt *et al.*, 2004; Pearce & Zalucki, 2006; Butt & Beg, 2001) [10, 16, 17, 3, 4, 11, 9, 2]. A few species of spiders are venomous demonstrated as harmful to men (Maretic, 1987; Vetter & Isbister, 2004). On the other hand their venom is very effective for killing insects, therefore many pesticides derived from spider venoms (King *et al.*, 2002). Medical uses of spider venom are also being explored since recent research indicates that venom components are useful in treating cardiac disorders (Bode *et al.*, 2001). The work on spiders in Pakistan is insufficient and only few researchers have contributed work from Punjab province of Pakistan. While this reported work is new from Sindh.

Materials and Methods

Specimens were assembled from Qasimadad (a city of Sindh lying on the bank of Indus river) and its adjacent areas during

2006 to 2010 by hand picking, hand aspirator, pit-fall traps, and jarring. Samples were conserved in Oudemans' preservative. Identification was carried out on the basis of morphometric characters of body parts, by means of information provided by, Kaston (1978) [6], Tikader (1980) [14], Tikader and Biswas (1981) [15], Barrion and Litsinger (1995) [1], Platnick (2006, 2012) [12, 13] and Ursani *et al.*, 2010, 2013) [18, 19] While for the study of genitalia Sgnart (2005) method was adapted.

Results and Discussions

Genus *Cyrtophora* Simon, 1864

1895. *Cyrtophora* Simon, Hist. Nat. Araign., P.261. 1890. *Euetria* Thorell, Ann. Mus. Civ. Stor. Nat. Genova, 28: 109. 1893. *Cyrtophora*, McCook, Amerc. Spiders.3, P: 235. 1921. *Cyrtophora* Gravely, Rec. Indian Mus., 22:413.1935. *Cyrtophora* Dyal, Bull. Zool. Punj. Univ., 1: 174.

Diagnosis: Carapace almost dreary, cephalic region stretched; ocular quad petite elongate in comparison than broad; sideways eyes identical and considerably alienated from each one to other; legs reasonably extended and were stout; tummy too elevated interiorly and endow with harmonizing tubercles.

Cyrtophora noorani, new species

Diagnosis: Related to *Cyrtophora citricola* (Forskal, 1775) which belongs to Genus *Cyrtophora* Simon, 1864, Fig a; b, except three small tubercles one median and two lateral near anterior margin of dorsum but no such tubercles in *citricola*;

copulatory ducts close to each other but in *Citricola noorani* copulatory ducts far apart.

Description of female holotype: Cephalothorax blackish brown, abdomen and legs yellowish brown; cephalothorax stretched than expansive, tapering to anterior and is extremely extensive to posterior, compactly dressed by means of grey pubescence; thoracic part of fovea not immediately obvious; ocular quad forming a trapezium and slightly raised, protracted than broad, ample in anterior side than at the back, frontal median eyes superior than subsequent medians, sideways eyes semi equal in dimension, slightly apart from each other and positioned lying on high up tubercles; in cooperation lines of eyes strappingly arched; sternum triangular protruding between coxae I to IV providing longitudinal chalk white bar; labium wider than long, dark brown with pale, inner margin, providing dark brown scapulae; chelicerae dark reddish brown, strong, swollen at the base with prominent boss; legs short, strong and stout, yellow brown with black brown patches except leg III and IV have dark brown bends clothed with hairs; pubescence, and spines; abdomen yellowish brown, anteriorly high and overlapping on the cephalothorax; abdomen with three pairs of humps, one pair of shoulder hump, one pair of mid-lateral hump, one pair of bifid caudal hump and three small tubercles one median and two lateral near anterior margin, at posterior mid to end two pairs of transverse brown lines provided and five pairs of distinct sigilla arranged mid-longitudinally, ventral of abdomen with chalk white dumble shaped patch between the epigastric furrow and spinnerets; epigyne provided with a broad scape with prominent rim, basal part convex, terminal part often extends beyond it; spermathecae base large, circular, copulatory ducts curved and close to each other.

Coloration: luminosity brown; mostly to all the hefty spines in front femora and tibia in addition brown apically; while prosternum was lack heart shaped black spot and is brown small and slender; coastal margin of tegmina unicoloratious; anal membrane blackish with pale margin; hind wing brown.

Material Examined: Qasimabad (Hyd.), 1♀, 1♂ 1mm, 08-VI-09 (J. I. Chandio).

Measurements (mm)

Table 1

Parameters	Holotype ♀
Body Length	3.86
Carapace Length	1.80
Carapace Width	1.19
Abdomen Length	2.9
Abdomen Width	1.95

Etymology: This new species is named after by my beloved father Mr. Noor Muhammad Ursani.

Depository: Both the new species and new recorded specimens were set down in the Advanced Entomology Laboratory, Department of Zoology, University of Sindh, Jamshoro, Pakistan.

Cyrtophora citricola Forskal, 1775

DIAGNOSIS: Carapace nearly flat, cephalic region long; ocular quad modest broader than ample; imaginative eyes equivalent and somewhat alienated from each other; legs reasonably elongated and stout; abdomen extremely far above the ground interiorly and make available with paired tubercles. Distribution: Old World. Hispaniola, Colombia, Pakistan, India

Material Examined: Qasimabad, 4♀, 1♂ 1mm, 11-VI-10 (T.J. Chandio); same data but, 2♀♀, 11-VII-09 (P. Chandio); Jamshoro, 1♀, 19-VII-2009 (Abdullah).

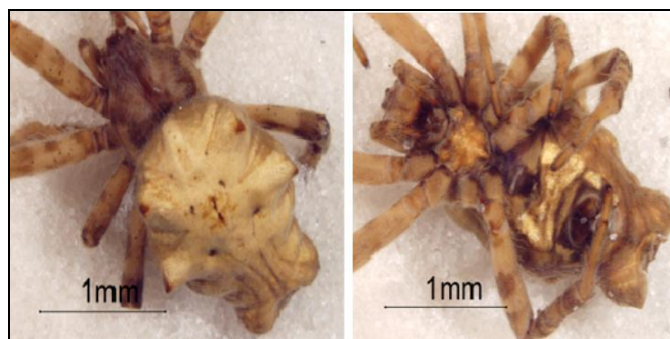


Fig 1(a, b): Dorsal and ventral view of *Cyrtophora noorani* n.sp



Fig 2(c-d): c. ventral, d. dorsal view of epigynum of *Cyrtophora noorani* n.sp

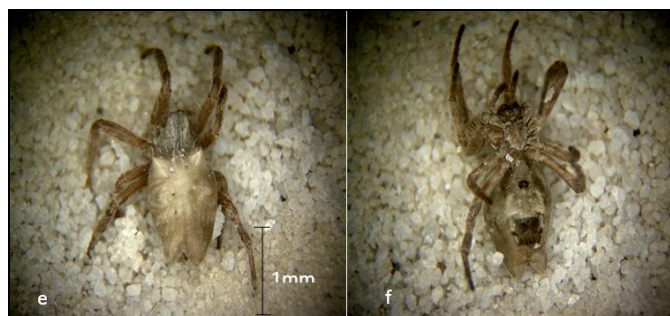


Fig 3(e, f): Dorsal and ventral view of *Cyrtophora citricola* reported a new record from Sindh, Pakistan.

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