

FIRST REPORT OF GENUS *Echinax* DEELEMEN-REINHOLD, 2001 (ARANEAE: CORINNIDAE) FROM INDIA

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ABSTRACT

Echinax Deeleman-Reinhold, 2001 is a relatively new genus of foliage dwelling Corinnid spiders. Although not very species-rich, it is widely distributed in South-East Asia and Africa. We present here, probably, the missing link in the wide distribution of this genus by reporting its occurrence in India. *Echinax panache* Deeleman-Reinhold, 2001 is reported from Konkan- the western coastal region of Maharashtra state thereby extending its range considerably to the west.

Keywords: Spider, *Echinax panache*, Konkan, Maharashtra

INTRODUCTION

Echinax Deeleman-Reinhold, 2001 (Corinnidae: Castianeirinae) is a genus of foliage dwelling spiders inhabiting tropical forests of the old-world. Deeleman-Reinhold (1995) had described 3 species under *Copa* Simon, 1886 from South-East Asia. But subsequent investigations prompted her to erect this new genus for those species with *Echinax oxyopoides* (Deeleman-Reinhold 1995) as type species and describe another new species from the same region (Deeleman-Reinhold 2001). Later, another new species *E. anlongensis* Yang, Song & Zhu, 2004 was described from China and presence of 2 other species was also reported. Thereafter, Marusik *et al.* (2008) described female of *E. panache* from China and clarified the difference between females of *E. panache* and *E. oxyopoides*. Very recently, *E. longespina* (Simon, 1910) was similarly separated from *Copa* to include in *Echinax* and 6 new species were also described from Afrotropical region (Haddad, 2012). Thus, presently there are 12 species in the genus *Echinax* (World Spider Catalog, 2015).

We report here the occurrence of genus *Echinax* in India for the first time thereby providing a link in the *hitherto* disjunct looking range of this genus. This report also extends the range of *E. panache* (Deeleman-Reinhold, 1995) further west.

MATERIALS AND METHODS

This species was collected during fieldwork carried out in Dapoli taluka of Ratnagiri district in Maharashtra state of India during October 2013. The collection localities are sacred groves in the village Male (17°45'16.37"N, 73°17'49.15"E) and

Pichdoli (17°52'22.20"N, 73°11'19.40"E). These small sacred groves are surrounded by settlements, agriculture and forest. At both these places, the forest is mixed semi-evergreen. The middle story is dominated by *Memecylonum bellatum*. The spiders were collected, photographed and preserved in 75% alcohol. They were examined with the help of a Labomed stereo microscope. Photographs were taken with a Dinolite digital microscope and measurements were taken with the help of Dinocapture 2.0 software. All measurements are expressed in mm. The specimens are presently held in the spider collection of College of Forestry, DBSKKV, Dapoli. Subsequent to the publication of this paper, they will be deposited in a national repository. Abbreviations used are –AER = anterior eye row, AL = abdomen length, ALE = anterior lateral eye, AW = abdomen width, CL = carapace length, CW = carapace width, PER = posterior eye row, ST = spermatheca.

Echinax Deeleman-Reinhold, 2001

Echinax panache Deeleman-Reinhold, 2001(figures 1-4)

E. p. Deeleman-Reinhold, 2001; *E. oxyopoides* Yang, Song & Zhu, 2004 (females misidentified as per Marusik, Zheng & Li, 2009); *E. p.* Yang, Song & Zhu, 2004; *E. p.* Marusik, Zheng & Li, 2009.

Diagnosis:

Deeleman-Reinhold (2001) while erecting the genus and Haddad (2012) while revising it have given detailed distinguishing characters which set apart *Echinax* from similar lycosiform Castianeirinae genera like *Copa*, *Humua* Ono, 1987 and *Medmassa* Simon, 1887. *Echinax* can be distinguished from all these by its smaller size, thinner teguments, long deviant spines on all leg segments except tarsi, and posterior eye row strongly procurved.

Material examined:

1 Female, 1.X.2013, Male (Taluka Dapoli, District Ratnagiri, Maharashtra), India, by beating vegetation, Vinayak Patil & Mayur Naik (CFOR-S377); 1 Female, 6.X.2013, Pichdoli (Taluka Dapoli, District Ratnagiri, Maharashtra), India, by beating vegetation, Vinayak Patil & Mayur Naik (CFOR-S393).

Diagnosis:

The present specimen possess the key character of insemination ducts entering the ST II anteriorly (see Haddad, 2012) which is shared by all known females of Asian and one African species. They resemble *E. panachein* the respect of insemination ducts and copulatory pockets. Also in having longitudinal grey bands on carapace formed by prostrate hairs as against tegumental pigments in all other Asian species (Deeleman-Reinhold, 2001, Marusik *et al.*, 2008). We must also note that our specimen also resemble the African *E. scharffi* Haddad, 2012 in respect of pattern on the carapace and abdomen (Haddad, 2012).

Description:

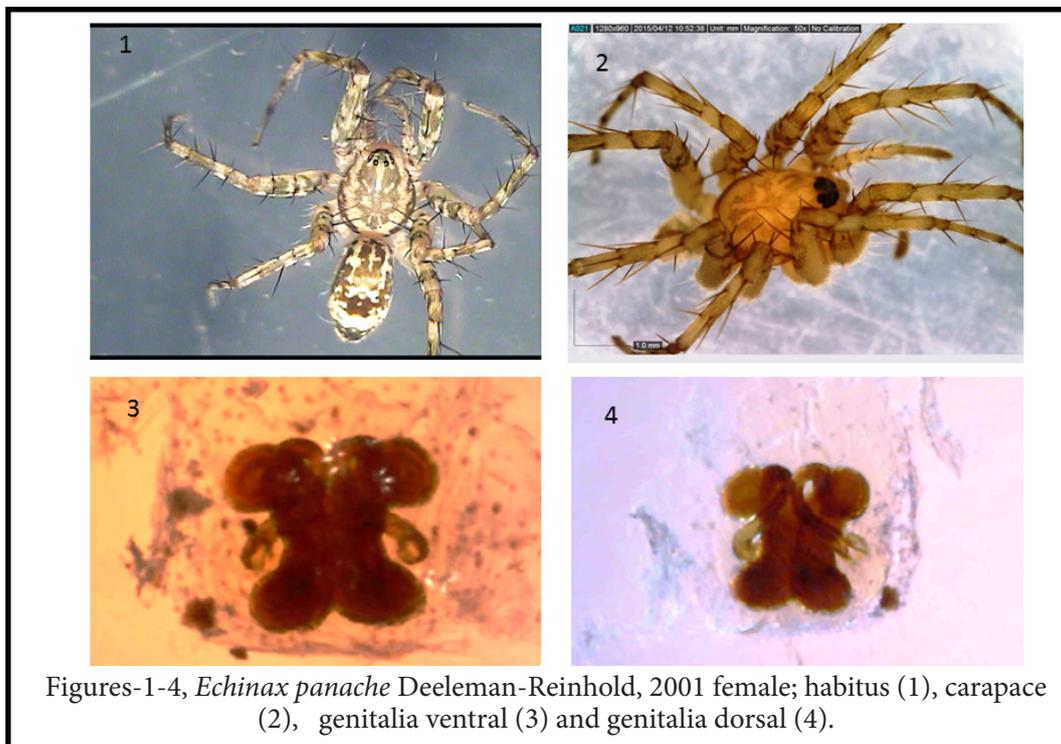
TL5.10, CL2.15, CW1.62, AL3.12, AW1.56

Carapace cream colored with broadest in the middle and narrowing anteriorly. A deep brown longitudinal thoracic fovea. Lateral margins with irregular broad patches

formed by black prostrate hair. A similar broad patch running midlongitudinally from eyes to almost posterior margin of carapace. This patch is broken by hairless areas forming a pattern. A prominently black eye area with eyes arranged in a compact circle on a slightly elevated cephalic area. AER slightly procurved; PER strongly procurved and slightly wider than AER. ALE the smallest; ocular quad slightly longer than wide and wider behind. All eyes circled by black rings.

All mouthparts uniform cream colored with dense scapulae and sparse short hairs throughout. Chelicerae with 2 teeth each on prolateral and retrolateral margins. Maxillae longer than wide; labium longer than wide and like a hemi-circle. Sternum as long as wide and roundish uniform cream colored with sparse short hairs.

Legs medium and strong, yellowish cream colored with brown mottling on most segments; Leg formula: 4123; leg lengths as in table 1. The ventral side of all femora uniformly cream colored with just a distal black ring on leg III & IV. All legs have 3 dorsal, 2 prolateral and 2 retrolateral erect long spines on femora. All patellae have a very long dorso-distal spine. All other segments of legs possess whorls of very long erect spines.



Abdomen is oval with cream color of the tegument on which a pattern of light to dark brown created by prostrate hairs. Venter cream colored with a broad mid-longitudinal light brown band.

Table 1: Leg lengths of *Echinax panache* female from Konkan region of Maharashtra.

	F	P+T	MT	T	Total
Leg I	2.02	2.17	1.60	0.95	6.74
Leg II	1.91	2.00	1.56	0.85	6.33
Leg III	1.77	2.04	1.51	0.82	6.14
Leg IV	2.17	2.55	2.37	1.03	8.12

Epigyne: A broad sclerotized plate with copulatory openings on the lateral sides. These are guarded by 6-shaped ridges forming copulatory pockets. In ventral view, the spermathecae give impression of a broad X. Each spermatheca is elongated and convoluted; with anterior part termed ST II and posterior ST I (Haddad, 2012). The insemination ducts lead internally in a curved manner to enter ST II anteriorly.

Remarks

This is the first report of the genus *Echinax* from South Asia. Haddad (2012) had predicted that South Asian forests with similar habitat in South-East Asia and Africa could hold this genus. However, we must remark that a specimen similar to ours in most aspects was described as *Mimetus tikaderi* by Gajbe (1992) and it has already been placed *incertae sedis* in the World Spider Catalog (Platnick, 2014). It is also likely that not only *Echinax* but also *Medmassa* could be present in South Asia given its presence in Africa and South-East Asia. It is also possible that *Copa* is an exclusively African genus and two species reported from Sri Lanka might be from other genus. This question was, however, left unresolved by Deeleman-Reinhold (2001) for want of type specimen.

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