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# A new lynx spider of genus *Oxyopes* Latreille, 1804 from India (Araneae: Oxyopidae)

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## Abstract

The current paper gives the first descriptive report of the male of *Oxyopes kolkhasensis* sp. nov. from India. The new species closely resembles *O. bharatae* Gajbe, 1999, but it is distinguished from it based on a slender, thinner and anteriorly pointed cymbial ending along with a more procurved and posteriorly pointed cymbial spur as well as a smaller ventral tibial apophysis. Detailed taxonomic inputs supporting the novel species are presented.

**Keywords:** lynx spider, *Oxyopes kolkhasensis*, Melghat, India.

## Introduction

Oxyopidae Thorell, 1869, commonly known as lynx spiders, is a fairly small family hosting 9 genera and 442 species (World Spider Catalog, 2021). These small to large sized spiders are distinguished by three tarsal claws, prominent setae on legs, and four distinct rows of eyes (2-2-2-2), mainly inhabiting panicles of plants, leaves of the grasses and on other weeds found along field margins (Zhang & Zhu, 2005). The type genus *Oxyopes* established by Latreille in 1804 had its first Indian subcontinent species recorded in by Walckenaer (1805). The genus represents a diverse group with global distribution. Of the 290 recorded *Oxyopes* species, 55 are recorded from India (World Spider Catalog, 2021). The distinguishing characters of the genus are the almost vertical face, long and distally narrowing chelicerae with short fangs, with one tooth on both

anterior and posterior cheliceral margins. Abdomen is elongate, with spiny legs. Metatarsi are shorter than Patella-Tibia, with few exceptions (Gajbe, 2008).

The current paper gives the first descriptive report of the male *Oxyopes kolkhasensis* sp. nov. reported from the Kolkhas region of Melghat Tiger Reserve, Maharashtra, India.

## Material and Methods

The reported specimen was collected from the Kolkhas region of Melghat Tiger Reserve, Dist. Amravati, Maharashtra by sweep netting method from a grassland vegetation patch. The collecting area is located near the government guest house close to the banks of Sipna river. The samples were preserved in 70% alcohol and deposited in the Spider Research Laboratory (SR Lab), J. D. Patil Sangludkar Mahavidyalaya, Daryapur.

Morphological observations and photography were taken with Olympus SZ61 microscope and SL Image 2013 software respectively. Body measurements were taken with Zeiss Stemi 2000-C microscope and ZEN 2011 software. Male genitalia were dissected and treated in 10% KOH for further analysis. All measurements are given in millimetres.

Abbreviations used in the text are as follows: ALE = anterior lateral eye, ALS = anterior lateral spinnerets, AME = anterior median eye, d = dorsal, Fe = femur, Mt = metatarsus, Pa = patella, pl = prolateral, PLE = posterior lateral eye, PLS = posterior lateral spinnerets, PME = posterior median eye, PMS = posterior median spinnerets, rl = retrolateral, RTA = retrolateral tibial apophysis, Ta = tarsus, Ti = tibia, v = ventral, VTA = ventral tibial apophysis.

## Results

***Oxyopes kolkhasensis*** sp. nov. (Figs. 1-6)
**Material examined:** 1♂ (Holotype) from Kolkhas region of Melghat Tiger Reserve, Dist. Amravati, Maharashtra, India, collected on 2 October 2015 by Atul K. Bodkhe and Subhash S. Kamble.

**Etymology:** The specific name refers to the place of sample collecting.

**Diagnosis:** Male of *Oxyopes kolkhasensis* sp. nov. closely resembles *Oxyopes bharatae* Gajbe, 1999 but differs from it as follows: (i) a pair of prominent concave longitudinal bands running from AME up till the length of chelicerae but in *O. bharatae* such bands are absent, rather four thick longitudinal stripes extend from PME and PLE to posterior end of carapace, (ii) abdomen has several skin folds with no distinct colouration, whereas in *O. bharatae* abdomen has a dark orange band running longitudinally and mid-dorsally, (iii) palp differs from *O. bharatae* in having a VTA larger than RTA, a broad and flat median apophysis and a conductor longer than the embolus (Gajbe, 1999, 2008). It also differs from *O. chittrae* Tikader, 1965 in having a more slender, thinner and anteriorly pointed cymbial ending as compared to a broader one in *O. chittrae* as ventrally seen. It also has a more procurved and posteriorly pointed cymbial spur as well as a smaller VTA as compared to *O. chittrae* which has a blunt and almost rounded spur tip. The dorsal morphological patterns also differ (Tikader, 1965).

**Description.** Total body length 5.77; Cephalothorax length 2.45, width 1.97; Abdomen length 3.32, width 1.06; Sternum length 1.05, width 0.99. AME 0.07, ALE 0.18, PLE 0.16, PME 0.17. Distances between eyes AME-ALE 0.05, ALE-PLE 0.13, PLE-PME

0.19. Eye diameter: ALE 0.18, AME 0.15, PME 0.11, PLE 0.85. Endite length 0.64, Labium length 0.37.

**Cephalothorax**: longer than wide, yellowish orange, smooth, slightly raised around the ocular region, with pubescence present around the fovea and the posterior part of carapace and also around the eyes. Two conspicuous concave shaped longitudinal bands run from the AME up till the length of the chelicerae but end shortly before it. The lateral apices of the base of chelicerae light brown. Fovea deep and prominent. Inconspicuous white stripes radiate from the fovea till the lateral parts of the carapace. Ocular area hexagonal, slightly wider than long, with the presence of fine white hairs around the hexagon. Sternum somewhat heart shaped, slightly longer than wide, yellow and pointed at the posterior tip. Sternum smooth with presence of very few setae anteriorly and mid laterally. Sternum margin wavy in shape. Third and fourth coxae having a pair of basal sclerites. Second pair of coxae having single basal sclerite. First pair of coxae having few setae, rest having fine pubescence of the margins. Chelicerae long, yellowish orange, covered by microsetae, possessing one pair of promarginal teeth. Endites longer than wide, strong with brown anterior tip. The anterior tip of maxillae having fine pubescence along with setae on the retrolateral margins. Labium longer than wide, yellow, clothed in fine hair and microsetae. Posterior base of labium having brown clusters of hair on the lateral margins. Fangs short, yellowish brown, hairy in appearance with clusters of white hair around the fang tip. Eight eyes, all black. AME smallest, strongly procurved and forming a separate row. The ALE, PME and PLE placed in the shape of a hexagon. PME recurved. All eyes have a distinct black rim around them along with pubescence.

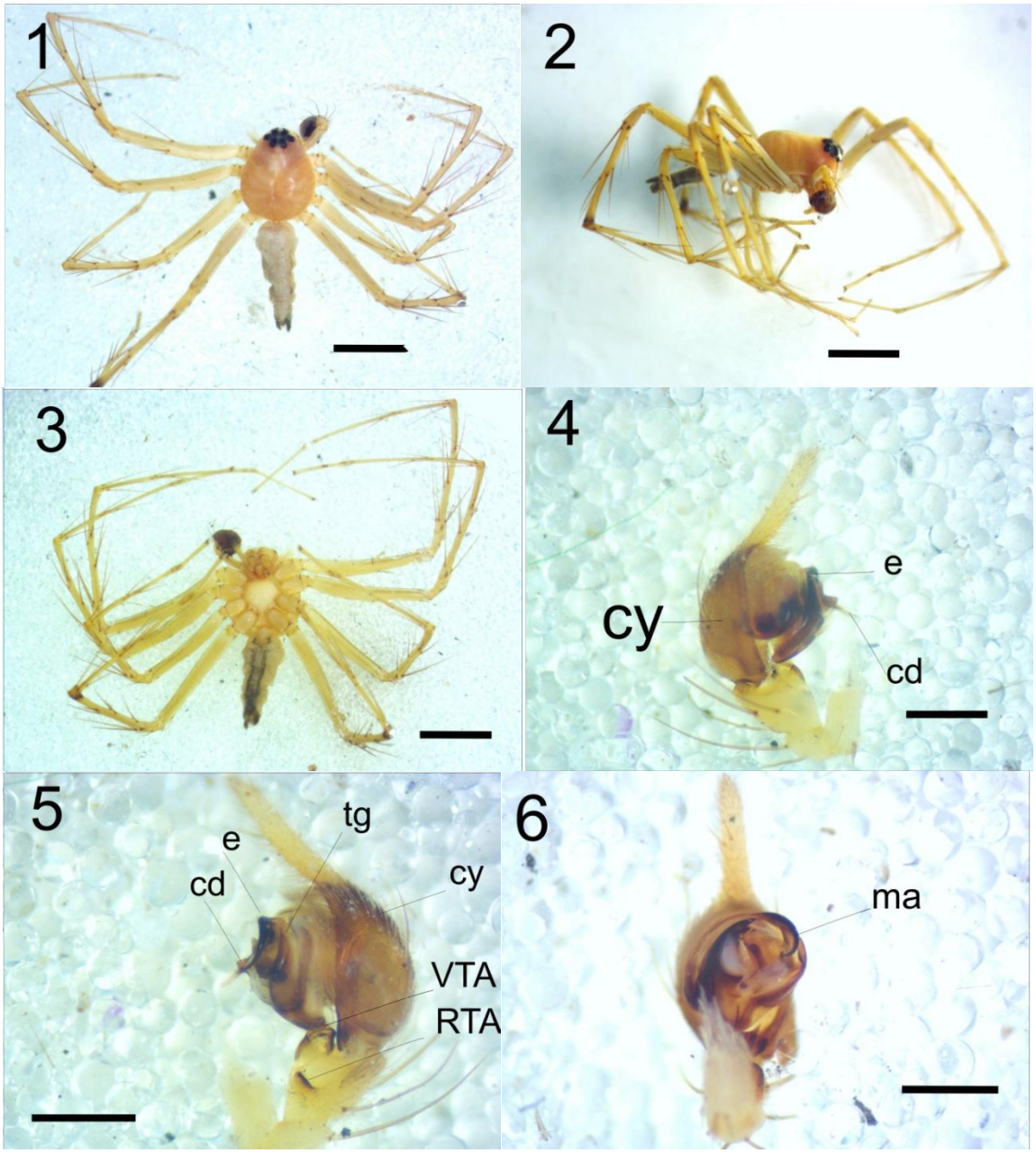
**Abdomen**: longer than wide, dirty whitish, with no conspicuous colouration and a gradually narrowing posterior tip. Two black bands run along the lateral edges of the abdomen, discontinuous in the median region, and meets near the posterior tip before the spinnerets; clothed in fine hairs that are darker and more aggregated near the posterior tip. Presence of a few scanty, short and stiff hairs near the anterior and posterior ends. Abdomen having multiple skin fold, some overlapping the others. Ventral side lighter in colour than dorsal with two mid-ventral olive-green longitudinal bands originating just below the epigastric furrow and running till the spinnerets. Discontinuous patches of similar colour running longitudinally between the stripes. Presence of skin folds in the median and posterior region. Posterior skin folds multiple and almost overlapping. Posterior lateral spinnerets largest, without colulus and darker in shade compares to PMS and ALS. PMS almost hidden between PLS and ALS. PLS darker in colour and hairier compared to PMS and ALS.

Table 1. Leg measurements (mm) of *Oxyopes kolkhasensis* sp. nov. ♂.

| Leg | **Fe** | **Pa** | **Ti** | **Mt** | **Ta** | **Total length** |
|---|---|---|---|---|---|---|
| I | 3.58 | 0.87 | 4.01 | 4.12 | 1.94 | 14.52 |
| II | 3.06 | 0.92 | 3.46 | 3.69 | 1.39 | 12.52 |
| III | 2.57 | 0.79 | 2.45 | 2.92 | 1.15 | 9.88 |
| IV | 2.94 | 0.84 | 3.14 | 4.04 | 1.38 | 12.34 |

**Legs**: long, strong and covered with conspicuous spines; yellowish orange with a thin black band running on the prolateral margin of the femur on every leg. Every leg has

three tarsal claws. Leg measurements are given in Table (1). Leg formula: 1-2-4-3. Leg spination is given in Table (2).




Figs. 1-6. *Oxyopes kolkhasensis* sp. nov. ♂. 1-3. Habitus. 1. dorsal view. 2. lateral view. 3. ventral view. 4-6. Palp. 4. prolateral view. 5. retrolateral view. 6. ventral view. [Abbreviations: cd = conductor, cy = cymbium, e = embolus, ma = median apophysis, RTA = retro-tibial apophysis, tg = tegulum, VTA = ventro-tibial apophysis]
Scale bars: 1,3 (2.01 mm), 2 (2.0 mm), 4-6 (0.50 mm).

**Palp**: Tibia with an RTA and a VTA. RTA small, slightly projecting proventrally. VTA near the anterior tip of tarsus procurved into a blunt pointed tip. Three spines on tibia and two on the patella. Cymbium has two dorsal spines and two ventral spines. Embolus long, originates from 12 o'clock position of the palpal bulb, shaped like a laterally inverted "C", runs anti-clockwise and ends medially on the same longitudinal plane. Median

apophysis broad, flat and anteriorly oval shaped with rough edges. Conductor broad, runs close to the embolus and extending beyond it.

Table 2. Spination of legs of *Oxyopes kolkhasensis* sp. nov. ♂.

| | **Leg I** | **Leg II** | **Leg III** | **Leg IV** |
|---|---|---|---|---|
| **Fe** | d=5, rl=3, v=1 | d=4, rl=3, pl=2, v=1 | d=4, rl=1, v=1 | d=3, rl=2, v=1 |
| **Pa** | rl=2 | d=3, rl=1 | d=2, pl=1 | d=1, rl=1 |
| **Ti** | d=2, rl=1, pl=1, v=3 | d=3, rl=2, pl=3, v=3 | d=2, rl=3, pl=2, v=3 | d=3, rl=1, pl=2, v=2 |
| **Mt** | d=3, rl=1, pl=2 | d=6, rl=1, pl=4 | d=4, rl=1, pl=3 | d=4, rl=1, pl=3 |

**Type locality**: *Oxyopes kolkhasensis* sp. nov. was found in a grassland patch, along a leaf blade, in close proximity to a water body, Sipna River. As is established for the genus, it preferred open grassy habitats with well-spaced leaf blades.

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