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A NEW SPECIES OF RARE SPIDERS OF THE GENUS *HYPTIOTES* (FAMILY: ULOBORIDAE) FROM INDIA

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THE spiders of the genus *Hyptiotes* (Family Uloboridae) are little known from Indian fauna. The first species *Hyptiotes indicus* Simon was described from Nilgiris, India by Simon². The spiders of the genus are very small and inconspicuous and their webs are simple and triangular in shape. At first sight it appears like a fragment of an orb-web (Fig. 5). The number of radii in the web of this spider is always four, but the number of hackled bands varies greatly; it is usually about ten, but often less than that number and sometimes more than twenty. The spider rests on the single line, upon which the four radii converge near the point where the line joins the supporting twig. The spider is usually quite close to the twig, so that it appears as a small bud; but sometimes it rests a small distance from the twig (Fig. 5). Muma and Gertsch¹ have published the revision of the family Uloboridae including the genus *Hyptiotes* from North America.

While examining the spider collection received from Prof. D. N. Roychaudhuri, Zoology Department, Calcutta University, the author came across a new

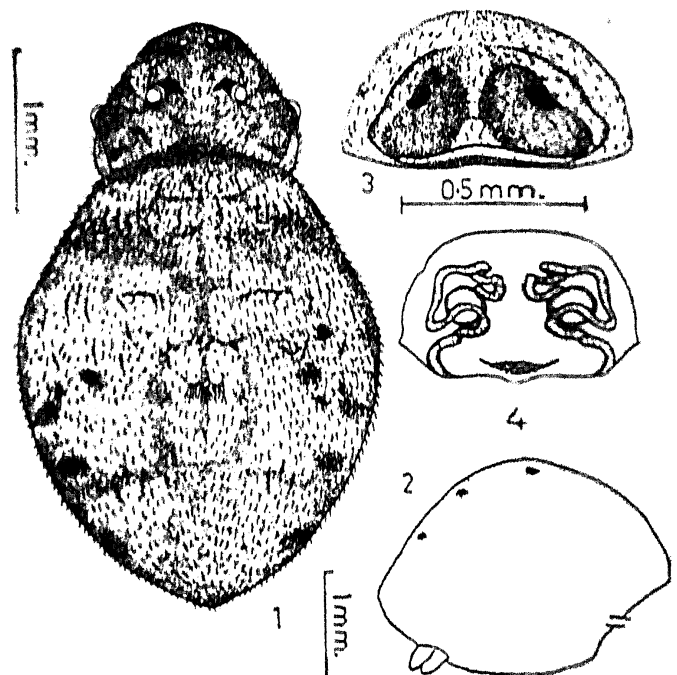
species of spider of the genus *Hyptiotes*, which is described here. It is the second species of this genus *Hyptiotes* from India.

The type specimen will in due course be deposited in the National Collection, Zoological Survey of India, Calcutta. The author is thankful to Prof. D. N. Roychaudhuri, of the Calcutta University for supplying the spider for study.

Hyptiotes himalayaensis sp. nov.

General: Cephalothorax and legs dark brown, abdomen brown. Total length 3.80 mm. Carapace 1.00 mm long, 1.40 mm wide; abdomen 2.80 mm long, 2.20 mm wide.

Cephalothorax: More broadly rounded in front and with narrower clypeus; wider than long, clothed with fine grey pubescence, weakly convex above highest and broadest at second eye row, with pars cephalica narrowed and rounded in front and widely rounded, pars thoracica deeply emarginated behind. Eight eyes present, arranged in two unequal transverse rows; anterior row short and recurved, posterior row long and less recurved than anterior row; eyes of posterior row larger than anterior row, as in Fig. 1. Sternum heart-shaped, longer than wide, clothed with dark hairs. Labium longer than wide, nearly triangular, maxillae provided with thick hairs. Legs moderately stout, clothed with thick hairs. Leg formula 4123. Posterior metatarsus of IV legs provided with conspicuous calamistrum.



FIGS. 1-4. *Hyptiotes himalayaensis* sp. nov. Fig. 1. Dorsal view of female, legs omitted. Fig. 2. Lateral view of abdomen of female. Fig. 3. Epigyne. Fig. 4. Internal genitalia.

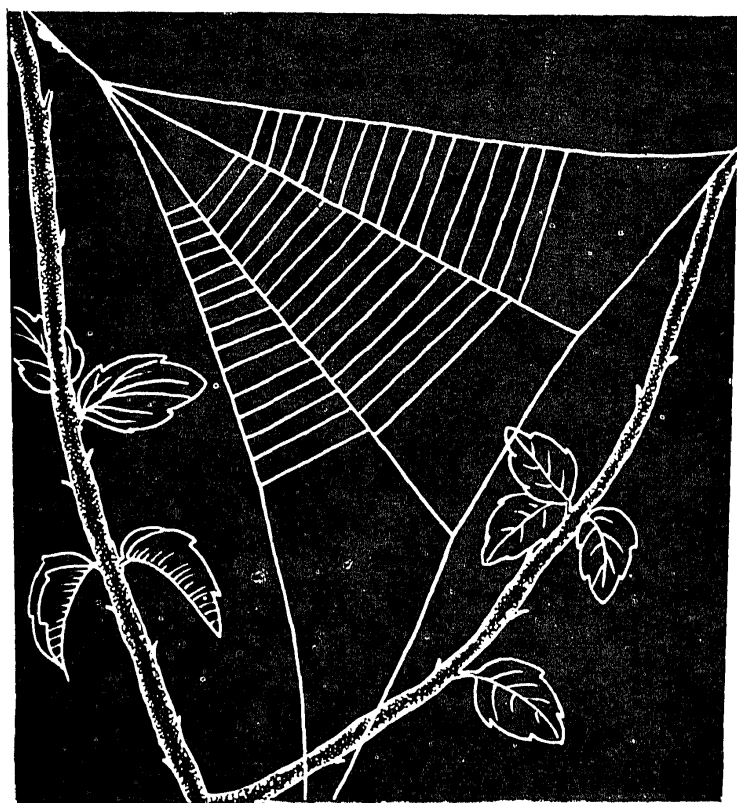


FIG. 5. Web of *Hyptiotes himalayaensis* sp. nov.

Abdomen : Longer than wide, strongly convex on the middle, clothed with thick hairs and there are tufts of hairs on the dorsal side of abdomen as in Figs. 1 and 2. Ventral side uniform dark colour but just below the epigastric furrow there are small chalk-white irregular patches. Epigyne as in Fig. 3 and internal genitalia as in Fig. 4.

Holotype : One female in spirit and epigyne in a microvial along with holotype.

Type-locality : Simla, Himachal Pradesh, India 1-4-1980. Coll. S. K. Das.

This species appears to be closely related to *Hyptiotes indica* Simon. However *Hyptiotes himalayaensis* sp. nov. differs from *H. indica* by the structure of female epigyne as well as internal genitalia. Abdomen provided dorsally with tuft of hairs but abdomen of *H. indica* without tuft of hairs.

August 2, 1980.

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REDUCTION IN PATHOGENIC AND SAPROPHYTIC FUNGI IN MAIZE, CHILLI AND PADDY SEEDS BY HYDROCHLORIC ACID VAPOUR AND SOAKING IN HCl SOLUTION TREATMENT*

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SEVERAL fungicides and physical treatments are employed to control pathogenic fungi associated with seeds¹⁻⁷. Hydrochloric acid gas has been used to kill fungal spores in empty petri dishes⁸. In the present study, concentrated HCl vapour and soaking in hot dilute hydrochloric acid under various conditions have given significant reduction in pathogenic and saprophytic fungal counts in maize, chilli and paddy seeds on a laboratory scale.

Application of HCl Vapour in a Jar

About 5 ml of concentrated HCl is poured on the floor of a specimen jar (40 × 30 × 20 cm). Seeds are placed in an open petri plate and the lid closed with vaseline. Seeds were removed after 1 hour.

Application of HCl Vapour in Plastic Bag

Two drops of concentrated HCl are placed in a 20 × 12 cm plastic bag and the neck closed. The bag is shaken to disperse the HCl. About 400 test seeds are placed in the bag and the neck closed tightly with a string. The seeds are shaken for 1 min at 10 min intervals for a total of 1 hour to ensure HCl vapour treatment all round the seeds. Using a 30 × 45 cm plastic bag a 500 gm paddy (masuri) sample was treated similarly using 1.5 ml concentrated HCl.

Treatment by soaking

Seeds were soaked in HCl solution in water. The percentage of various fungi was obtained by the blotter method using 200-400 seeds and incubating for 7 days at room temperature (20-25°C) in natural daylight or under near UV light.

In all treated seeds the apparent germination was improved probably due to suppression of the saprophytes. Germination tests and observations were based on appearance of the root in the plates. The

* Part of the work was read by YIS at the First All-India Comparative Seed Health Testing Workshop held at Manasagangotri, Mysore, from July 1-6, 1980.