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## **STUDIES ON SOME SPIDERS OF THE FAMILY GNAPHOSIDAE (ARANEAE : ARACHNIDA) FROM MADHYA PRADESH, INDIA**

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### **INTRODUCTION**

*General* : Gnaphosid spiders are found everywhere and can easily be seen running on the grassy land as well as on rocky ground and are strictly ground dwellers. Their body colour is brown and dull, so that they are inconspicuous on the ground vibrations or unturned the stones and they run inside the grass and hide under stones. Gnaphosid spiders occupy a variety of habitat from sea-shore to the high mountains, according to the specific requirements, viz. availability of food, humidity, temperature etc. Most of the gnaphosid spiders are nocturnal. Though the gnaphosid spiders in general do not spin webs, but some are seen to build the small tubular retreats, just underside of the stones, boulders where they stayed at day time and some prey is caught on the web, they come outside of the stone hole and caught, kill and suck the insects prey.

Most of gnaphosids are found under stones or barks or in moss. A few live on the leaves of plants which they roll like the clubionids or at the most they spin an irregular retreat at the time of oviposition. Some of the species that live under stones make a silken sac within which they live and in which the egg-sac is made. The chief food of gnaphosid spiders are insects. These spiders feed on a variety of insects like Diptera, small Lepidoptera, Dictyoptera, Hymenoptera, Coleoptera, Collembola, Dermaptera etc. They may even consume the young spiders of their own species as well as of different species showing cannibalism. Usually these feed in the night. Gnaphosids chase their prey, catch and bite them to inject the poison through the fangs and narcotise them. Then they suck the juices of the body of the prey. The chitinised remains of the insects can be seen on the ground or under stones of some gnaphosid species which inhabit there. The spiders of the family Gnaphosidae are very little known in the Indian fauna. Even the classical work of Pocock (1900) on Indian spiders contains no reference to this family. Caporiacco (1934) was the pioneer worker and he has described 10 species from Himalaya. Recently Tikader (1962, 64, 66, 73, 82),

Tikader & Gajbe (1975, 76, 77, 79) Gajbe (1979, 1983, a, b, 85a, b, c, d, 88, 89, 92a, b, c, d, e, f) described many species from various parts of India. Patel and Patel (1975) described three species from Gujrat.

All the type specimens are deposited in the National Zoological Collection, Zoological Survey of India, Kolkata.

#### Family GNAPHOSIDAE Pocock

1884. *Gnaphosidae* Pocock, *Ann. Mag. Nat. Hist.*, 2(7) : 219.

1905. *Drassidae* : Simon, *Annls. Soc. ent. Fr.*, 74 : 168-170.

*Type-genus* : *Gnaphosa* Latreille.

*Distribution* : All over the world.

Originally the family Gnaphosidae was a part of the family Drassidae. Pocock (1884) proposed to replace Drassidae when *Drassus* was shown to be an objective junior synonym of *Gnaphosa*. The gnaphosidae family formerly known as Drassidae are those spiders which have eight eyes, heterogenous, arranged in two rows. In these spiders the cephalic part is not sharply set off from the thoracic, the cephalothorax is hardly elevated. The Chelicerae have a boss and scopula and the margins of the cheliceral fang furrow are oblique and usually armed. The teeth may be considerably reduced in size to minute denticles, or a single denticle, or the inner margin may have a keeled lamina in place of teeth. The labium is longer than broad, with maxillae converging more or less and provided with scopulae. Usually the maxillae have an oblique or transverse depression. The posterior coxae are more or less separated by the sternum. The legs are generally spinose and the tarsi furnished with scopulae, two claws and claw tufts. Legs formula 4123. The abdomen is oval and usually rather flattened and in some males provided with a dorsal scutum on the abdomen. Many species are uniformly coloured, more often dark than and without markings. Some species have a striking or colourful pattern of lines or spots. The anterior spinnerets are cylindrical, longer than and more heavily sclerotized than the posterior and widely separated.

Most gnaphosids are found under stones or bark or in moss. A few live on the leaves of plants which they roll like the clubionids or at the most they spin an irregular retreat at the time of oviposition. Some of the species that live under stones make a silken sac within which they live and in which egg-sac is made.

#### Key to the Genera of the Family GNAPHOSIDAE

1. Inner margin of cheliceral fang furrow with a keeled lamina. .... 2
- Inner margin of cheliceral fang furrow smooth or with one or more distinct teeth or denticles. .... 3

2. Inner margin of chelicera with a wide serrated lamina. Posterior row of eyes much larger than the anterior with the medians nearer to each other than to the laterals. ....  
..... *Gnaphosa* Latreille
- Inner margin of chelicera with a broad kneel or a narrow lamina. Posterior median eyes oval in shape. .... *Callilepis* Westring
3. Posterior row of eyes very strongly procurved as nearly semicircular. .... 4
- Posterior row of eyes not strongly procurved. .... 5
4. Inner margin of furrow of chelicera with one tooth. Bulb of palpus of male with a stout median apophysis. .... *Scopodes* Chamberlin
5. Eyes of posteiror row nearly equal in size and equidistant from each other. ....  
..... *Scotophaeus* Simon
- Eyes of posterior row not equal in size and not equidistant from each other. .... 6
6. Tibia IV with two or more median dorsal spines ..... 7
- Tibia IV with a single median dorsal or with none. .... 8
7. Posterior median eyes much larger than the posterior laterals and closer to laterals than to each other. Inner margin or chelicera without tooth. .... *Liodrassus* Chamberlin
- Posterior median eyes not much larger than the posterior laterals. Eye row widely separated; Posterior median eyes much nearer to each other than to laterals. Inner margin of chellcerae with tooth ..... *Drassodes* Westring
8. Upper margin of furrow of chelicera unarmed, or provided with a keel or with three teeth, rarely more, the lower margin unarmed or with but a single tooth, bulb of male palpus with no apophysis, at most with one or several small teeth near base of embolus. .... 9
- Upper margin of furrow of chelicera with three to six distinct teeth, the lower margin provided with two or three rarely with only one; bulb of male paplus with one or more apophysis. ....  
..... 12
9. Posterior row of eyes more or less recurved. .... 10
- Posterior row of eyes more or less procurved or straight. .... 11
10. Tibia III with a median dorsal spines, carapace without distinct median furrow. ....  
..... *Sergiolus* Simon
- Tibia III with no median dorsal spines, Carapace with a distinct median furrow. ....  
..... *Poecilochroa* Westring

11. Lower margin of furrow of chelicera smooth, without any tooth, anterior median eyes usually obviously smaller than the laterals. Posterior eyes slightly larger than the laterals. ....  
.....*Nodocion* Chamberlin
- Lower margin of furrow of chelicera with one tooth or nodule; anterior median eye usually as or larger than the laterals. Posterior median eyes always well separated from each other and smaller than or at most as large as the laterals. .... *Herpyllus* Hentz
12. Upper margin of chelicera with three teeth, the lower margin provided with two, all well developed. Posterior median eyes large and oblique, typically close together but well separated from the laterals. .... *Haplodrassus* Chamberlin
- Upper margin of furrow of chelicera provided with four to six teeth, the lower margin provided with to three small teeth or nodules, or rarely the upper margin armed with only one. Posterior medians are different ..... 13
13. Posterior row of eyes straight or slightly procurved; the eyes are equidistant; the posterior medians are small and slightly larger than the laterals. .... *Zelotes* Gistel
- Posterior median eyes are very close together or contiguous, larger than the laterals, usually much so, oblique. .... *Drassyllus* Chamberlin

#### Genus 1. *Gnaphosa* Latreille

1804. *Gnaphosa* Latreille, *Nouv. Dict. Hist. Nat.*, 24 : 134.

1977. *Gnaphosa* : Tikader & Gajbe, *Rec. zool. Surv. India*, 73(1-4) : 43.

1982. *Gnaphosa* : Tikader, *Fauna of India, Spiders*, 2(2) : 329.

*Characters* : Cephalothorax nearly oval and broader in front, not attenuated. Pattern of widening streaks diverging from short fovea. Anterior row of eyes procurved (as seen from in front), occupying one-third to one half width of head. Posterior row considerably longer than anterior and rather strongly recurved, medians irregular in outline, larger than laterals and farther from them than from each other. Sternum oval, pointed behind. Chelicerae not very strong, vertical bearing numerous long bristles which form a scopula on inner part of apical surface. Inner margin with a prominent chitinous ridge, whose edge is concave and serrated. Outer margin with two teeth. Maxillae and labium shorter than that of *Drassodes*. Legs uniform in colour as carapace. Tibiae I and II with one to two ventral spines, metatarsi I and II with two to four ventral spines. Abdomen black or deep brown, with generally six faint marks or impressions dorsally, Male palp with a strong single tibial apophysis.

*Type-species* : *Gnaphosa licifuga* (Walckenaer)

*Distribution* : Europe, Asia, Africa and America.

### Key to species of the genus *Gnaphosa* Latreille

1. Cephalothorax provided with deep brown narrow line encircling almost the entire boarder but without V-Shaped brown marking. Posterior median eyes slightly closer to laterals than to each other. Abdomen posteriorly provided with a whitish chevrons. ....  
..... *poonaensis* Tikader
- Cephalothorax provided with a V-shaped conspicuous brown marking starting from fovea. Posterior median eyes slightly closer to each other than to adjacent laterals. Abdomen without chevrons. .... 2
2. Anterior row of eyes equal in size. Abdomen provided with some round chalk-white spots. .... *pauriensis* Tikader & Gajbe
- Anterior row of eyes not equal in size, anterior medians smaller than the laterals. Abdomen uniform in colour without chalk-white spots ..... *jodhpurensis* Tikader & Gajbe

#### 1. *Gnaphosa poonaensis* Tikader

1973. *Gnaphosa poonaensis* Tikader, *Proc. Indian Acad. Sci.*, 77(5) : 188.

*Specimen examined* : 1 ♀, Kaladehi village on Jabalpur-Nagpur Road, Jabalpur district, Madhya Pradesh. Coll. U. A. Gajbe, 30.X.1985. 1 ♂, on the bank of Sipnanadi at Bhodia kund Forest village, Betul district, M.P. Coll. H. S. Sharma, 29.III.1990. (Reg. No. A/1717). 1 ♀, Pratappur village, Panna district, M.P. Coll. R. K. Singh, 15.11.1987 (Reg.No. A/1718), 1 ♀, Madla village, Panna district, M.P. Coll. R. K. Singh, 14.11.1987 (Reg. No. A/1719).

*Distribution* : India : Poona (Type-locality) Maharashtra, Andhra Pradesh, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from Jabalpur, Betul, Panna districts of Madhya Pradesh.

#### 2. *Gnaphosa pauriensis* Tikader & Gajbe

1977. *Gnaphosa pauriensis* Tikader & Gajbe, *Rec. zool. Surv. India*, 73(1-4) : 44.

*Specimen examined* : 4 ♀♀, Tondabeda village near Orccha, Bastar district, Madhya Pradesh, Coll. U. A. Gajbe, 29.XII.1983. (Reg. No. A/1583), 1 ♂, University Guest House, Gwalior, M.P. Coll. P. D. Gupta, 25.VIII.1984. (Reg. No. A/1720). 1 ♀, Gupt Mahadev, Piparia Tahsil, Hoshangabad district, M.P. Coll. U. A. Gajbe, 5.1.1990 (Reg. No. A/1721).

*Distribution* : India : Bhagwan Shrinagar, Dist. Pauri (Type-locality) Uttar Pradesh, Bihar, Himachal Pradesh, Orissa, Punjab, Bastar, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from Madhya Pradesh.

3. *Gnaphosa jodhpurensis* Tikader & Gajbe  
(Figs. 1-2)

1977. *Gnaphosa jodhpurensis* Tikader & Gajbe, *Rec. zool. Surv. India*, 73(1-4) : 45.

*Specimen examined* : 1 ♂, Narayanganj, Dist. Mandla, M.P. India, Coll. U. A. Gajbe, 23.1.1985.

*General* : Cephalothorax and legs reddish-green, abdomen brown, Total length 7.90 mm. Carapace 3.40 mm. long, 2.30 mm. wide; abdomen 4.60 mm. long, 2.80 mm. wide.

*Cephalothorax* : Longer than wide, narrowing in front, slightly convex, posterior middle provided with a inconspicuous fovea and V-shaped brown patch starting from fovea, clothed with pubescence and some spines as in fig. 1. Eyes in two rows, anterior medians black, posterior row slightly longer than the anterior row. Anterior row of eyes slightly procurved (as seen from in front), medians smaller than the laterals and closer to laterals than to each other. Posterior row of eyes slightly recurved, posterior medians conspicuously silvery white in colour, oval, larger than the laterals and closer to each other than to adjacent laterals. Sternum heart-shaped, pointed behind, rebordered, clothed with fine hairs. Labium and maxillae longer than wide, anterior end provided with scopulae. Chelicerae vertical, inner margin provided with a chitinous ridge. Legs relatively long and strong, clothed with hairs and spines. Legs formula 4123. Male palp as in fig. 2.

*Abdomen* : Nearly elliptical, clothed with hairs, provided with three pairs of sagilla. Ventral side slightly lighter than the dorsal. Spinnerets very prominent, anterior spinnerets cylindrical, slightly longer and dark in colour than others.

*Distribution* : India, Rajasthan, Sardar Samand, dist. Jodhpur (Type-locality), Madhya Pradesh, Narayanganj, Dist. Mandla. Uttar Pradesh.

*Remarks* : The male specimen is described here for the first from India and the species is being reported here for the first time from Mandla district of Madhya Pradesh.

Genus 2. *Callilepis* Westring

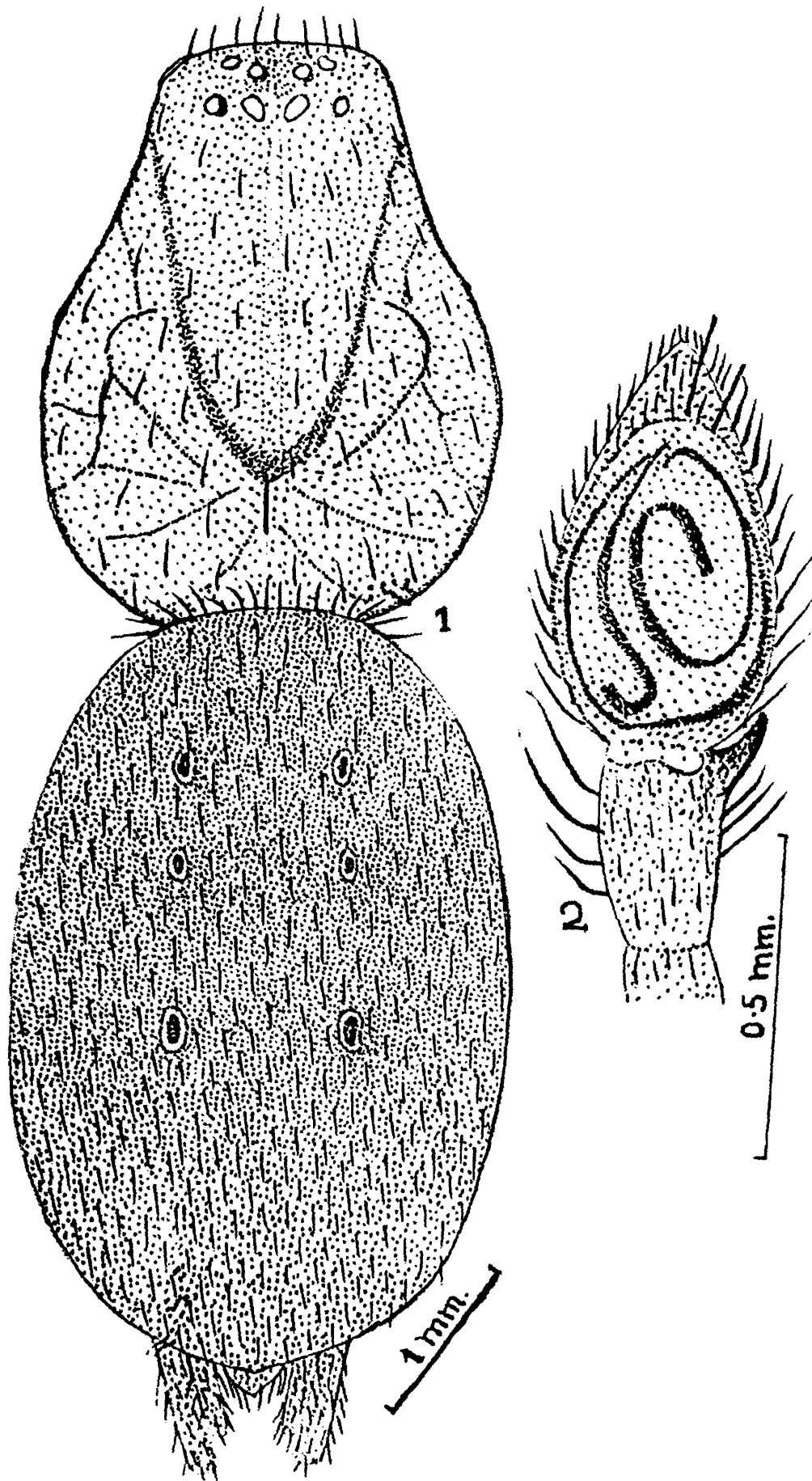
1874. *Callilepis* Westring, *Goteb. Kongl. Vet. Handl.*, 14 : 43.

1892. *Callilepis* : Simon, *Hist. Nat. Araign*, 1 : 383-384.

*Characters* : Posterior row of eyes a little longer than the anterior row and stright or only slightly recurved. The eyes nearly equidistant or the medians little farther from each other than from the laterals. The posterior lateral eyes fairly larger than the posterior median eyes. Sternum short, stout much wider than length of endites. The lower margin of the furrow of the chelicerae armed with a broad keel or a narrow lamina, without serrated edge.

*Type-species* : *Callilepis nocturna* (Linnaeus)

*Distribution* : Europe, Arabia, Ethiopia, Africa, Australia, America, India.



**Figs. 1-2. :** *Gnaphosa jodhpurensis* Tikader & Gajbe  
1. Dorsal view of male, legs omitted; 2. Left male palp, Ventral view.

#### 4. *Callilepis lambai* Tikader & Gajbe

1977. *Callilepis lambai* Tikader & Gajbe, *Rec. zool. Surv. India*, 73(1-4) : 50.

1982. *Callilepis lambai* : Tikader, *Fauna of India, spiders*, 2(2) : 352.

1988. *Callilepis lambai* : Gajbe, *Rec. zool. Surv. India*, 85(1) : 65.

*Specimen examined* : 1 ♀♀, Hanumanghat, Balaghat district, Madhya Pradesh, Coll. U. A. Gajbe, 17.XIII.1983. (Reg. No. 1584.)

*Distribution* : India : Kudgiri (Type-locality) Dist. Shimoga, Karnataka, Jabalpur, Balaghat, Madhya Pradesh, Punjab.

*Remarks* : This species is being reported here for the first time from Balaghat district of Madhya Pradesh.

#### Genus 3. *Scopodes* Chamberlin

1922. *Scopodes* Chamberlin *Proc. biol. Soc. Wash.*, 35 : 156.

1940. *Scopodes* : Comstock, *The Spider Book*, New York : 328.

*Characters* : The cephalothorax is ovate and much narrower in front. The anterior row of eyes are close together in a procurved line, the anterior medians are larger than the anterior laterals. The posterior row of eyes are very strongly procurved in a semicircular line which is more or less equal or slightly longer than the anterior line. The chelicerae are of moderate size, the inner margin is armed with a single, minute tooth. The spinnerets are comparatively long. The bulb of the male palpus has a stout median apophysis.

*Type-species* : *Scopodes catharium* Chamberlin.

*Distribution* : Claremont, America, India.

#### 5. *Scopodes maitraiae* Tikader & Gajbe

1977. *Scopodes maitraiae* Tikader & Gajbe, *Rec. zool. Surv. India*, 73(1-4) : 14.

1982. *Scopodes maitraiae* : Tikader, *Fauna of India, Spiders*, 2(2) : 365.

1988. *Scopodes maitraiae* : Gajbe, *Rec. zool. Surv. India*, 85(1) : 65.

*Specimen examined* : 1 ♀, Narayanganj, Mandla district, Madhya Pradesh. Coll. U. A. Gajbe, 23.1.1985 (Reg. No. A/1592), 19 ♀♀, 3 ♂♂, Ganjtal village on Jabalpur-Katni road, Jabalpur district, Madhya Pradesh, Coll. D. S. Mathur, 4.ix.1985 (Reg. No. A/1737), 1 ♀, Hathital Colony, Jabalpur, Jabalpur District, Madhya Pradesh, Coll. P. D. Rane, 28.1.1986. 1 ♀, Shelter Caves, Hoshangabad, M.P. Coll. U. A. Gajbe 10.1.1990 (Reg. No. A/1736), 3 ♀♀, on the bank of Sanpna tank, Betul, M.P. Coll. H. S. Sharma, 27.III.1990. (Reg. No. A/1738).

*Distribution* : India : Kopargaon (Type-locality) Ahmednagar district, Poona Maharashtra, Gujrat, Jabalpur, Seoni, Mandla, Madhya Pradesh, Orissa.

*Remarks* : This species is being reported here for the first time from Mandla, Hoshangabad, Betul districts of Madhya Pradesh.



Genus 4. *Megamyrmecon* Reuss

1834. *Megamyrmecon* Reuss, *Zool. Miscell. Mus. Ar.*, : 217.

1893. *Megamyrmecon* : Simon, *Hist. Nat. Araign.* 1(2) : 369.

*Characters* : The cephalothorax is ovate and much narrow in front. The anterior row of eyes are close together in a strongly procurved line, the anterior medians are larger than the laterals. The posterior row of eyes are very strongly procurved in a semicircular line which is more or less equal or slightly longer than the anterior line. The chelicerae are of moderate size, with the inner margin of the furrow unarmed, and with two minute teeth on the outer margin. The spinnerets are comparatively long. Bulb of palpus of male simple, with no true apophysis.

*Type-species* : *Megamyrmecon caudatum* Reuss.

*Distribution* : Africa, America, India.

6. *Megamyrmecon ashae* Tikader & Gajbe

1977. *Megamyrmecon ashae* Tikader & Gajbe, *Rec. zool. Surv. India*, 73(1-4) : 16.

1982. *Megamyrmecon ashae* : Tikader, *Fauna of India, Spiders*, 2(2) : 372.

*Specimen examined* : 1 ♀, Mura village, Betul district, M.P. Coll. H. S. Sharma, 4.III.1990 (Reg. No. A/1739). 1 ♀, Singhpur village, Panna district, M.P. Coll. R. K. Singh, 16.II.1987. (Reg. No. A/1740).

*Distribution* : India : Range Hill, Poona (Type-locality), Maharashtra, Rajasthan, Khargone, Betul, Panna, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from Betul and Panna districts of Madhya Pradesh.

Genus 5. *Scotophaeus* Simon

1893. *Scotophaeus* Simon, *Hist. Nat. Araign.* 1 : 371.

1951. *Scotophaeus* : Locket & Millidge, *British Spiders*, 1 : 104.

*Characters* : General appearance very similar with *Drassodes* Westring. Carapace narrower in front than the *Drassodes*, with a fovea. Eyes of anterior medians larger than the laterals, medians are circular and anterior lateral elliptical. Posterior row slightly longer than anterior, very slightly procurved, eyes equidistant and nearly equal, posterior medians elliptical in shape.

*Type-species* : *Scotophaeus quadripunctuatus* Latreille.

*Distribution* : Oriental and temperate regions of the world.

### 7. *Scotophaeus poonaensis* Tikader

1982. *Scotophaeus poonaensis* Tikader, *Fauna of India, Spiders*, 2(2) : 380.

*Specimen examined* : 1 ♀, Bargi village, Jabalpur district, Madhya Pradesh, Coll. U. A. Gajbe, 10.VI.1982 (Reg. No. A/1588). 1 ♀, Dokrikhera, Piparia. Tahsil, Hoshangabad, district, M.P. Coll. U. A. Gajbe, 4.1.1990. (Reg. No. A/1733).

*Distribution* : India : Aundh, Poona, (Type-locality), Maharashtra, Jabalpur and Hoshangabad district, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from Madhya Pradesh.

### Genus 6. *Geodrassus* Chamberlin

1922. *Geodrassus* Chamberlin, *Proc. biol. Soc. Wash.*, 35 : 159.

1940. *Geodrassus* : Comstock, *The Spider Book*, New York, : 325.

*Characters* : This genus is closely allied to *Drassodes*. The lower margin of the furrow of the chelicera is armed with a single small tooth. The eyes of the anterior row are subequal in size. The palpus of the male is very short, and the tibia completely lacks an apophysis.

*Type-species* : *Geodrassus gosiutus* (Chamberlin).

*Distribution* : Utah, America, India.

### 8. *Geodrassus sirmourensis* Tikader & Gajbe

1977. *Geodrassus sirmourensis* Tikader & Gajbe, *Rec. zool. Surv. India*, 73(1-4) : 71.

1982. *Geodrassus sirmourensis* : Tikader, *Fauna of India, Spiders*, 2(2) : 386.

*Specimen examined* : 1 ♀, Keshala village on Itarsi-Betul road, Hoshangabad district, M.P. Coll. U. A. Gajbe, 11.I.1990. (Reg. No. A/1732).

*Remarks* : This species is being reported here for the first time from Madhya Pradesh.

### Genus 7. *Drassodes* Westring

1861. *Drassodes* Westring, *Goteb, Kongl. Vet. Handl.*, 2 : 25.

1962. *Drassodes* : Tikader, *Proc. First. Cong.*, 2 : 570.

*Characters* : Cephalothorax flat, broad in front with fovea and covered with pubescence. Eyes of anterior row slightly procurved (as seen from in front), medians slightly larger than laterals and a little closer to the laterals than to each other. Posterior row longer, procurved, medians oval, slightly larger than laterals and much closer to each other than to adjacent laterals. Chelicerae strong, inner margin normally with two teeth and two on the outer margin. Sternum oval and pointed behind. Maxillae and labium longer than wide. Legs long and strong, tibiae I and II

sometimes bear one ventral spine on the apical half. Scopulae consists of closely set, short blunt little spines. Abdomen longer than wide, narrowing behind, covered with pubescence and with a 'mousy' appearance.

*Type-species* : *Drassodes lapidosus* (Walck).

*Distribution* : Oriental, sub-tropical and temperate regions of the world.

### Key to species of the genus *Drassodes* Westring

1. Spiders of smaller size, upto 5 mm. .... 2
- Spiders of bigger size, more than 5 mm. .... 3
2. Carapace clothed with pubescence. Posterior median eyes larger than laterals and slightly closer to lateral than to each other. Abdomen provided with conspicuous long thick hairs ..... *oppenheimeri* Tikader
- Carapace clothed with pubescence and some hairs. Posterior median eyes much larger than the laterals and very close to each other than to adjacent laterals. Abdomen clothed with hairs and three pairs of lighter spots. .... *sagarensis* Tikader
3. Carapace with conspicuous fovea. Inner and outer margin of chelicera provided with two small and two slightly bigger teeth each. Abdomen clothed with thick hairs, without black patch. .... *pashanensis* Tikader & Gajbe
- Carapace with inconspicuous fovea. Inner and outer margin of chelicera provided with two and three teeth respectively. Abdomen clothed with mousy hairs and provided with transverse black patch. .... *narayanpurensis* sp. nov.

### 9. *Drassodes oppenheimeri* Tikader

1973. *Drassodes oppenheimeri* Tikader, *Proc. Indian Acad. Sci.*, 77(5) : 186.

1982. *Drassodes oppenheimeri* : Tikader, *Fauna of India, Spiders*, 2(2) : 400.

*Specimen examined* : 1 ♀, Dhuma, Seoni district, Madhya Pradesh. Coll. U. A. Gajbe, 10.VIII.1982 (Reg. No. A/1575). 1 ♀, Karondi village, Jabalpur district, M.P. Coll. U. A. Gajbe, 6.II.1982 (Reg. No. A/1576). 1 ♀, Amkhas village, Jabalpur district, Madhya Pradesh. Coll. V. V. Rao, 4.VII.1969.

*Distribution* : India : Singhpur (Type-locality) Hooghly district, West Bengal, Gujarat, Orissa, Maharashtra, Seoni, Jabalpur district, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from Seoni and Jabalpur districts of Madhya Pradesh.

### 10. *Drassodes sagarensis* Tikader

1982. *Drassodes sagarensis* Tikader, *Fauna of India, Spiders*, 2(2) : 402.

*Specimen examined* : 1 ♀, Jhansighat, Jabalpur district, Madhya Pradesh, Coll. U. A. Gajbe, 10.III.1983 (Reg. No. A/1582). 1 ♂, Parasia, Chhindwara district, Madhya Pradesh, Coll. Y. N. Gupta, 19.XI.1989. (Reg. No. 1726). 1 ♀, Tanhaigram, Panna district, M.P. Coll. R. K. Singh, 17.II.1987. (Reg. No. A/1727).

*Distributions* : Rest House compound, Sagar (Type-locality), Karanataka, Jabalpur, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from Madhya Pradesh.

### 11. *Drassodes pashanensis* Tikader & Gajbe

1977. *Drassodes pashanensis* Tikader & Gajbe, *Rec. zool. Surv. India.*, 73(1-4) : 64.

1982. *Drassodes pashanensis* : Tikader, *Fauna of India, Spiders*, 2(2) : 429.

*Specimen examined* : 1 ♀, Hatkachora village near Jagdalpur, Bastar district, Madhya Pradesh. Coll. U. A. Gajbe, 5.I.1984. (Reg. No. A/1577). 3 ♀♀, 1 ♂, Karondi village, Jabalpur district, Madhya Pradesh, Coll. U. A. Gajbe, 6.II.1982 (Reg. No. A/1579). 1 ♀, Charama, Bastar district, Madhya Pradesh. Coll. U. A. Gajbe, 5.I.1984. (Reg. No. A/1578). 12 ♀♀, Shivpuri National park, Shivpuri district, Madhya Pradesh. Coll. P. D. Rane, 28.II.1982. (Reg. No. A/1580). 1 ♀, Porpa village near Jagdalpur, Madhya Pradesh Coll. U. A. Gajbe, 31.XII.1983. (Reg. No. A/1581). 1 ♀, on the bank of Nāla, 1 Km. West of Forest Rest House Katawadi, Betul district, M.P. Coll. H. S. Sharma, 22.III.1990 (Reg. No. A/1723). 1 ♀, Tawa River bridge on Hoshangabad-Piparia road, Hoshangabad district, M.P. Coll. U. A. Gajbe, 12.I.1990. (Reg. No. A/1724). 1 ♀, on the bank of Sanpana tank Betul, M.P. Coll. H. S. Sharma, 27.III.1990. (Reg. No. A/1725).

*Distribution* : India : Pashan, Poona (Type-locality) Maharashtra, Shivpuri, Bastar, Madhya Pradesh, Orissa, Pubjab, Bhutan.

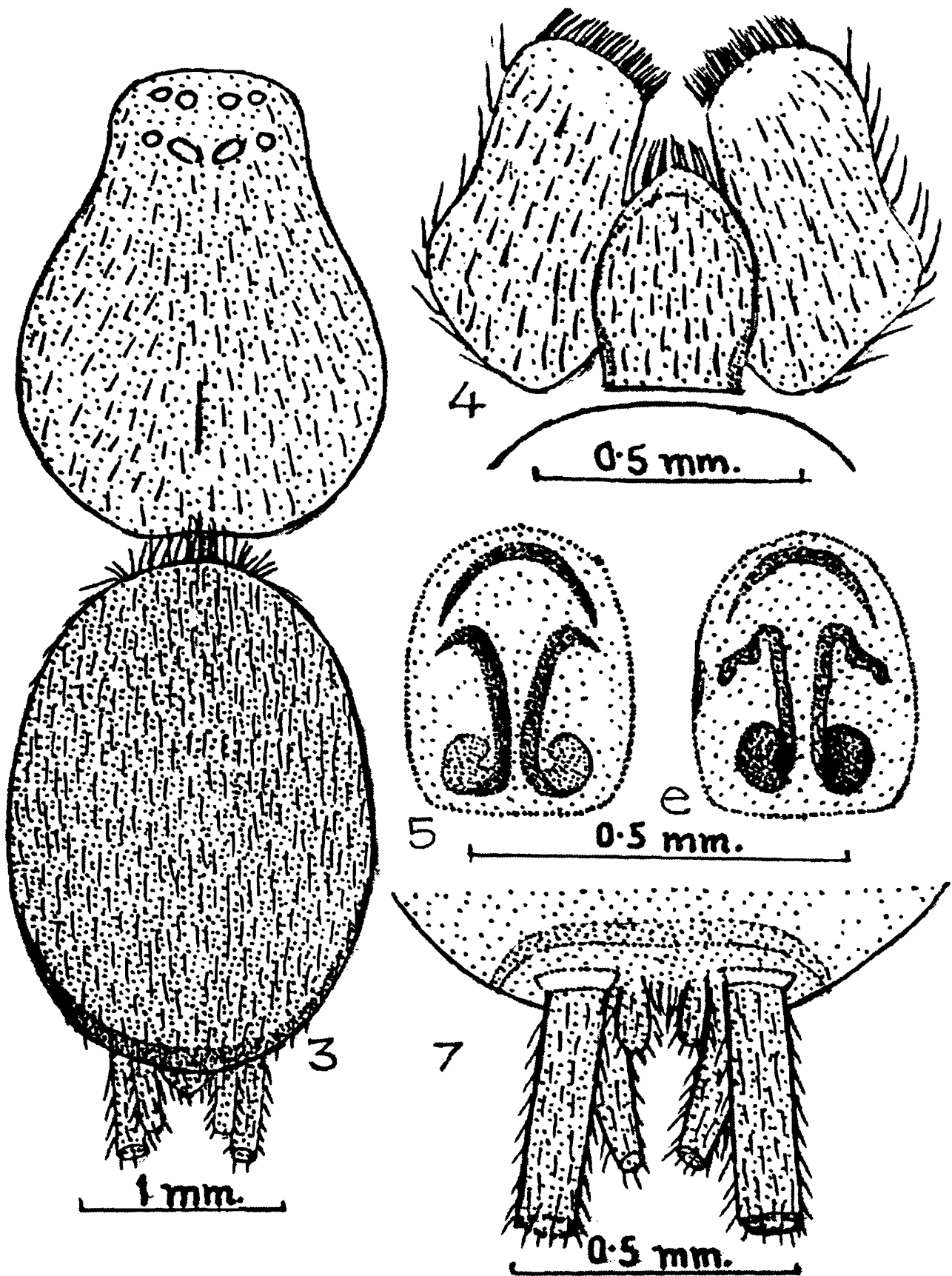
*Remarks* : This species is being reported here for the first time from Madhya Pradesh.

### 12. *Drassodes narayanpurensis* sp. nov.

(Figs. 3-7)

*General* : Cephalothorax and legs light reddish-green, abdomen brown. Total length 5.20 mm. Carapace 2.30 mm. long, 1.90 mm. wide; abdomen 2.70 mm. long, 1.90 mm. wide.

*Cephalothorax* : Longer than wide, flat, cephalic region slightly high and wide with fine pubescence and some hairs, posterior middle provided with a short inconspicuous longitudinal fovea. Eyes pearly white except anterior medians, posterior row of eyes slightly longer than the



Figs. 3-7. : *Drassodes narayanpurensis* sp. nov.

3. Dorsal view of female, legs omitted; 4. Labium and maxillae;

5. Epigyne; 6. Internal genitalia; 7. Spinnerets.

anterior row. Anterior row of eyes slightly procurved (as seen from in front), medians, black, larger than the laterals which are oval and closer to adjacent laterals than to each other. Posterior row of eyes strongly procurved, medians oval, larger than the laterals and closer to each other than to adjacent laterals. Median ocular quadrangle longer than broad and wider in front than behind. Clypeus provided with a short and long spines, clypeal height is greater than the diameter of anterior median eye. Chelicerae vertical, strong, inner margin provided with two teeth and outer margin with three dissimilar teeth. Sternum oval, pointed behind, clothed with fine hairs. Labium and maxillae longer than wide, yellow in colour, clothed with hairs and anterior end provided with scopulae as in fig. 4. Legs long and strong, clothed with hairs and some spines. Metatarsi and tarsi I and II provided ventrally with conspicuous scopulae and tarsi with two claws and claw tufts. Leg formual 4123.

*Abdomen* : Longer than wide, nearly elliptical, clothed with mousy hairs, anterior end of abdomen provided with very long hairs and posterior end with transverse black patch as in fig. 3. Ventral side lighter than the dorsal. Epigyne as in fig. 5. Internal genitalis as in fig. 6. Spinnerets as in fig. 7.

*Type-specimen* : *Holotype* ♀, in spirit, other details as above. Registration No. 5448/18.

*Type-locality* : India : Madhya Pradesh, Dhaurai village Narayanpur Tahsil, Bastar district, Coll. U. A. Gajbe, 24.XII.1983.

*Remarks* : This species closely resemble *Drassodes himalayensis* Tikader and Gajbe but can be separated as follows : (1) Outer margin of chelicera provided with three teeth but in *D. himalayensis* outer margin with two teeth. (ii) Abdomen dorsally provided with transverse balck patch but in *D. himalayensis* abdomen without patch. (iii) Epigyne and internal genitalis also structurally different.

### 13. *Drassodes himalayensis* Tikader & Gajbe

1975. *Drassodes himalayensis* Tikader & Gajbe, *Oriental Ins.*, 9(3) : 274.

1982. *Drassodes himalayensis* : Tikader, *Fauna of India, Spiders*, 2(2) : 427.

*Specimen examined* : 1 ♀, 1 ♂, On the bank of Sanpna tank Betul, Betul district, Madhya Pradesh. Coll. H. S. Sharma, 27.III.1990 (Reg. No. A/1722)

*Distribution* : India : Harsil, Dist. Uttarkashi, (Type-locality), Uttar Pradesh, Assam, Himachal Pradesh, Jammu and Kashmir, Arunachal Pradesh, Madhya Pradesh, Meghalaya, Orissa, Rajasthan, West Bengal.

*Remarks* : This species is only known from Seoni and Sarguja districts and first time reported here from Betul district of Madhya Pradesh.

14. *Drassodes meghalayaensis* Tikader & Gajbe

1977. *Drassodes meghalayaensis* Tikader & Gajbe, *Rec. zool. Surv. India*, **73**(1-4) : 66.

*Specimen examined* : 1 ♀, On the bank of Sanpna tank, Betul, Betul district; Coll. H. S. Sharma, 27.III.1990. (Reg. No. A/1728)

*Distribution* : India : Degrangiri, Garo Hills, Meghalaya (Type-locality), Betul district, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time Madhya Pradesh.

Genus 8. *Sosticus* Chamberlin

1922. *Sosticus* Chamberlin, *Proc. biol. Soc. Wash.*, **35** : 160.<sup>4</sup>

1940. *Sosticus* : Comstock, *The Spider Book*, New York, : 329.

*Characters* : Eye rows distinctly separated, posterior row of eyes is in a straight line. The anterior median eyes are slightly smaller than the anterior lateral eyes. The median ocular quadrangle is somewhat longer than broad, and the front eyes are as large as or longer than the posterior median eyes. The inner margin of the furrow of the chelicera is armed ordinary with-two teeth, but three are some times present. Two spines are present on the dorsal surface of the fourth tibia.

*Type-species* : *Sosticus insularis* (Banks).

*Distribution* : America, India.

15. *Sosticus poonaensis* Tikader

1982. *Sosticus poonaensis* Tikader, *Fauna of India, Spiders*, **2**(2) : 440.

*Specimen examined* : 1 ♀, On the bank of Chuharinala, Kanha National Park, Kanha, M.P. Coll. R. K. Singh, 28.XI.1986. (Beg. No. A/1734)

*Distribution* : India : Mukund Nagar, Poona (Type-locality) Maharashtra, Kanha National Park, Kanha, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from Madhya Pradesh.

16. *Sosticus dherikanalensis* Gajbe

1979. *Sosticus dherikanalensis* Gajbe, *Bull. zool. Surv. India*, **2**(1) : 71.

1982. *Sosticus dherikanalensis* : Tikader, *Fauna of India, Spiders*, **2**(2) : 434.

*Specimen examined* : 1 ♀, Ganjtal village, Jabalpur district, M.P. Coll. D. S. Mathur, 4.IX.1985. (Reg. No. A/1735).

*Distribution* : India : Tikarpara, Dist. Dherikanal, (Type-locality), Orissa, Jabalpur, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from Madhya Pradesh.

Genus 9. *Sergiolus* Simon

1891. *Sergiolus* Simon, *Proc. zool. Soc. London*, : 573.

1922. *Sergiolus* : Chamberlin, *Proc. biol. Soc. Wash.*, 35 : 151.

*Characters* : These spiders are brightly coloured. Both rows of eyes straight or slightly recurved, posterior median eyes round and median ocular area longer than wide and wider behind than in front. Inner margin of chelicera with one small tooth or unarmed. Tibia III provided with a median dorsal spine.

*Type-species* : *Sergiolus variegatus* (Hentz).

*Distribution* : America, India.

17. *Sergiolus singhi* Tikader & Gajbe

1976. *Sergiolus singhi* Tikader & Gajbe, *Proc. Indian Acad. Sci.*, 84(5) : 189.

1982. *Sergiolus singhi* : Tikader, *Fauna of India, Spiders*, 2(2) : 445.

1988. *Sergiolus singhi* : Gajbe, *Rec. zool. Surv. India*, 85(1) : 70.

*Specimen examined* : 2 ♀♀, On the bank of Gajana Nalla, near Bargi village, Jabalpur district, Madhya Pradesh, Coll. U. A. Gajbe, 30.XI.1985. 1 ♀, Bhilkharva village on Jabalpur Katangi road, Jabalpur district, M.P. Coll. U. A. Gajbe, 5.XII.1985. (Reg. No. A/1729). 1 ♀, Katav village near Katangi, Jabalpur district, M.P. Coll. U. A. Gajbe, 5.XII.1985. (Reg. No. A/1730).

*Distribution* : India : Forest Lodge compound, Bellara (Type-locality), Sira Tahsil, Tumkur district, Karnataka, Bhandara, Madharashtra, Jabalpur district, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from the localities mentioned above from Madhya Pradesh.

18. *Sergiolus poonaensis* Tikader & Gajbe

1976. *Sergiolus poonaensis* Tikader & Gajbe, *Proc. Indian Acad. Sci.*, 84(5) : 186.

1982. *Sergiolus poonaensis* : Tikader, *Fauna of India, Spiders*, 2(2) : 447.

*Specimen examined* : 1 ♀, 1 ♂, Borla village, Kawardha Tahsil, Rajnandgaon district, Madhya Pradesh, Coll. U. A. Gajbe, 7.I.1984 (Reg. No. A/1574) 1 ♀, 1 ♂, Shikara village, Lakharadon Tahsil, Seoni district, M.P. Coll. U. A. Gajbe, 26.XI.1986. (Reg. No. A/1731).

Genus 10. *Herpyllus* Hentz

1832. *Herpyllus* Hentz, *Silliman Soum. Sci. a. Arts*, 21 : 102.

1922. *Herpyllus* : Chamberlin, *Proc. biol. Soc. Wash.*, 35 : 146.

*Characters* : The two rows of eyes are nearly straight and widely separated, the eyes of each row are quite evenly spaced. The anterior median eyes are round, a little smaller than the posterior



lateral eyes. Height of clypeus is not more than the diameter of an anterior median eyes. Lower margin of furrow of chelicera is armed with one tooth or nodule.

*Type-species* : *Herpyllus ecclesiasticus* Hentz.

*Distribution* : United States of America, India.

### 19. *Herpyllus goaensis* Tikader

1982. *Herpyllus goaensis* Tikader, *Fauna of India, Spiders*, 2(2) : 460.

*Specimen examined* : 2 ♀♀, Narayanganj, Mandla district, Madhya Pradesh, Coll. U. A. Gajbe, 23.I.1985 (Reg. No. 1590). 1 ♀, Haratickeri village near Ambikapur, Sarguja district, Madhya Pradesh. Coll. H. Khajuria, 4.1.1975 (Reg. No. A/1601). 1 ♀, on the bank of Gajana Nalla, near Bargi, Jabalpur district, Madhya Pradesh. Coll. U. A. Gajbe, 30.XI.1985.

*Distribution* : India : Caranzalem (Type-locality), Goa, Jabalpur, Mandla, Sarguja districts of Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from Madhya Pradesh.

### Genus 11. *Haplodrassus* Chamberlin

1922. *Haplodrassus* Chamberlin, *Proc. biol. Soc. Wash.*, 35 : 151.

1940. *Haplodrassus* : Comstock, *The Spider Book, New York*, : 326.

1982. *Haplodrassus* : Tikader, *Fauna of India, Spiders*, 2(2) : 462.

*Characters* : Carapace flat, ocular area narrowed, thoracic region with thin erect black setae, cephalic area not elevated. Anterior row of eyes slightly procurved (as seen from in front), and posterior row of eyes procurved. Eyes of the anterior row round. Posterior medians larger than others, and close together, well away from the posterior laterals, Median ocular area wide behind than in front. Height of the clypeus greater than the diameter of anterior medians. Inner margin of cheliceral furrow bears two teeth and outer margin with two or three teeth. Leg formula 4123. Fourth tibia without spines on dorsal side. Anterior spinnerets widely separated than median or posterior spinnerets widely separated than median or posterior spinnerets. Epigyne with large paired chitinous processes separated by median septum.

*Type-species* : *Haplodrassus hiemalis* (Emerton).

*Distribution* : America, India.

### 20. *Haplodrassus sataraensis* Tikader & Gajbe

1977. *Haplodrassus sataraensis* Tikader & Gajbe, *Rec. zool. Surv. India*, 73(1-4) : 70.

1982. *Haplodrassus sataraensis* : Tikader, *Fauna of India, Spiders*, 2(2) : 466.

*Specimen examined* : 1 ♂, Garhbengal village near Narayanpur, Bastar district, Madhya Pradesh. Coll. U. A. Gajbe, 30.XII.1983 (Reg. No. 1585). 1 ♂, Chitrakote, Bastar district, Madhya Pradesh,

Coll. *U. A. Gajbe*, 1.1.1984. (Reg. No. A/1586). 1 ♀, Shantinagar Colony, Rajnandgaon, Rajnandgaon district, Madhya Pradesh, Coll. *U. A. Gajbe*, 22.XII.1983 (Reg. No. A/1587), 1 ♀, Sind Bag Village, Baihar Tahsil, Balaghat district, M.P. Coll. *U. A. Gajbe*, 19.XII.1983 (Reg. No. A/1741). 1 ♀, Gupt Mahadev, Piparia Tahsil, Hoshangabad district, M.P. Coll. *U. A. Gajbe*, 5.I.1990. (Reg. No. A/1742). 2 ♀, 2 ♂, Keshala village on Itarsi-Betul Road, Hoshangabad district, M.P. Coll. *U. A. Gajbe*, 11.1.1990 (Reg. No. A/1743).

**Distribution** : India : Ambanali village near Mahabaleshwar (Type-locality), Satara district, Maharashtra, Himachal Pradesh, Sarguja, Bastar, Rajnandgaon, Balaghat, Hoshangabad districts of Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh, Punjab.

**Remarks** : This species is being reported here for the first time from Rajnandgaon, Balaghat, Hoshangabad & Bastar districts of Madhya Pradesh.

### Genus 12. *Zelotes* Gistel

1848. *Zelotes* : Gistel, *Nat. Thierr* : 11.

1982. *Zelotes* : Tikader, *Fauna of India, Spiders*, 2(2) : 470.

**Characters** : Cephalothorax oval, narrowed markedly in front, covered with fine hairs. Generally the pattern of widening streaks diverging from short foves. Eyes rather closely grouped, posterior row of eyes slightly longer than the anterior row. Anterior row of eyes more or less procurved (as seen from in front), lateral eyes larger than medians. Posterior row of eyes straight, medians often irregular in shape, sometimes larger than laterals and farther from adjacent laterals than from each other or equally spaced. Chelicerae not very strong, vertical, with a number of hairs on inner part of anterior surface. Sternum oval, pointed behind. Legs relatively long, tibia and metatarsi III & IV may bear ventral spines. Scopulae reach between mid-point and base of metatarsi I and II and to apices of metatarsi III and IV. Abdomen dark black covered with fine hairs. Dorsally there may occur three pairs of spots or impressions.

**Type-species** : *Zelotes subterranea* (Koch).

**Distribution** : Oriental and temperate region of the world.

### Key to species of the genus *Zelotes* Gistel

1. Spiders of smaller size, upto 6 mm. .... 2
- Spiders of bigger size, above 6 mm. .... 4
2. Carapace provided with U-Shaped deep brown markings. Abdomen clothed with pubescence and some hairs. .... *viveki* sp. Nov
- Carapace not provided with U-shaped deep brown markings. Abdomen clothed with fine hairs but not with pubescence. .... 3

3. Inner and outer margin of chelicera provided with one and three teeth respectively. ....  
 ..... *mandae* Tikader & Gajbe  
 — Inner and outer margin of chelicera provided with two and four teeth respectively. ....  
 ..... *yogeshi* sp. nov.
4. Abdomes clothed with pubescence and provided with three pairs of sagilla. ....  
 ..... *bharatae* sp. nov.  
 — Abdomen clothed with fine hairs and not provided with sagilla .....  
 ..... *sataraisis* Tikader & Gajbe

21. *Zelotes viveki* sp. nov.

(Figs. 8-12)

*General* : Cephalothorax and legs deep brown, abdomen black. Total length 5.50 mm. Carapace 2.30 mm. long, 1.90 mm. wide ; abdomen 3.30 mm. long, 2.10 mm. wide.

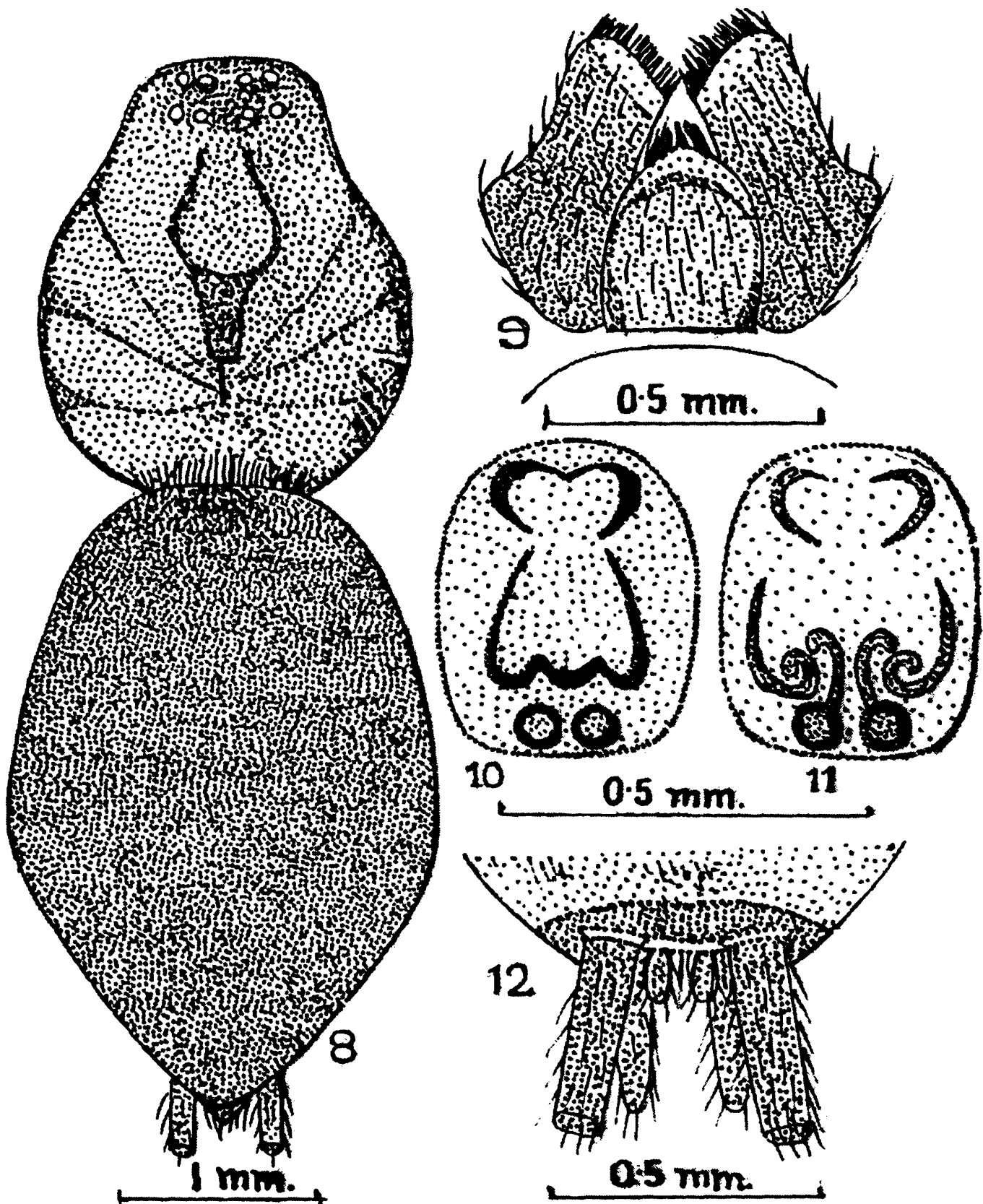
*Cephalothorax* : Longer than wide, narrow in front, slightly convex, clothed with pubescence, posterior middle provided with a conspicuous short fovea, just above the fovea there is a U-shaped deep brown marking. Pattern of radiating streaks diverge from fovea to lateral sides as in fig. 8. Eyes closely grouped, silvery white except anterior medians, posterior row of eyes slightly longer than the anterior row. Anterior row of eyes slightly procurved (as seen from in front), median slightly smaller than the laterals and closer to adjacent laterals than to each other. Posterior row of eyes nearly straight, medians, oval, smaller than the laterals and closer to adjacent laterals than to each other. Median ocular area longer than wide and wider behind than in front. Clypeal height greater than the diameter of anterior median eye and clypeus provided with two spines. Sternum heart-shaped, pointed behind, rebordered, clothed with long spine like hairs. Labium and maxillae reddish-green, clothed with spine like hairs, anterior end provided with scopulae, shape as in fig. 9. Chelicerae moderately strong, vertical, inner and outer margin provided with three small and bigger teeth respectively. Legs relatively long and strong, clothed with hairs and spines. Tibiae III and IV provided with three pairs of ventral spines. Scopulae reach upto the base of metatarsi I and II and upto apices of metatarsi III & IV. Legs Formula 4123.

*Abdomen* : Longer than wide, nearly elliptical, widest behind the middle, clothed with pubescence and some hairs, anterior end provided with long spine like hairs. Ventral side slightly lighter than the dorsal. Epigyne as in Fig. 10 Internal genitalia as in fig 11. Spinnerets as in fig. 12.

*Type-specimen* : Holotype ♀, in spirit, other details as above. Registration No. 5449/18.

*Type-locality* : India, Madhya Pradesh, Porpa-village near Jagdalpur, Baster district, Coll. U. A. Gajbe, 31.XII.1983.

*Remarks* : This species resembles *Zelotes ashae* Tikader & Gajbe, but differs from it as follows :  
 (1) Cephalothorax and legs deep brown but in *Z. ashae* cephalothorax and legs reddish-brown.



Figs. 8-12. : *Zelotes viveki* sp. nov.

8. Dorsal view of female, legs omitted; 9. Labium and maxillae;  
10. Epigyne; 11. Internal genitalia; 12. Spinnerets.

(ii) Abdomen black but in *Z. ashae* abdomen uniform deep brown. (iii) Inner and outer margin of chelicerae provided with three teeth but in *Z. ashae* inner and outer margin provided with two and four teeth respectively. (iv) Epigyne and internal genitalia also structurally different.

## 22. *Zelotes mandae* Tikader & Gajbe

1979. *Zelotes mandae* Tikader & Gajbe, *Bull. zool. Surv. India*, 2(2) : 87.

1982. *Zelotes mandae* : Tikader, *Fauna of India, Spiders*, 2(2) : 492.

*Specimen examined* : 1 ♀, 1 ♂, Kaladehi village, Jabalpur district, Madhya Pradesh, Coll. U. A. Gajbe, 20.IV.1982. (Reg. No. A/1589). 1 ♀ on the bank of Megha river, 7 km. from Forest Rest House, Kukru, Betul district, Coll. H. S. Sharma, 1.IV.1990. (Reg. No. A/1745).

## 23. *Zelotes yogeshi* sp. nov.

(Figs. 13-17)

*General* : Cephalothorax and legs deep brown, abdomen brown. Total length 4.90 mm. Carapace 1.90 mm. long, 1.50 mm. wide; abdomen 2.90 mm. long, 2.00 mm. wide.

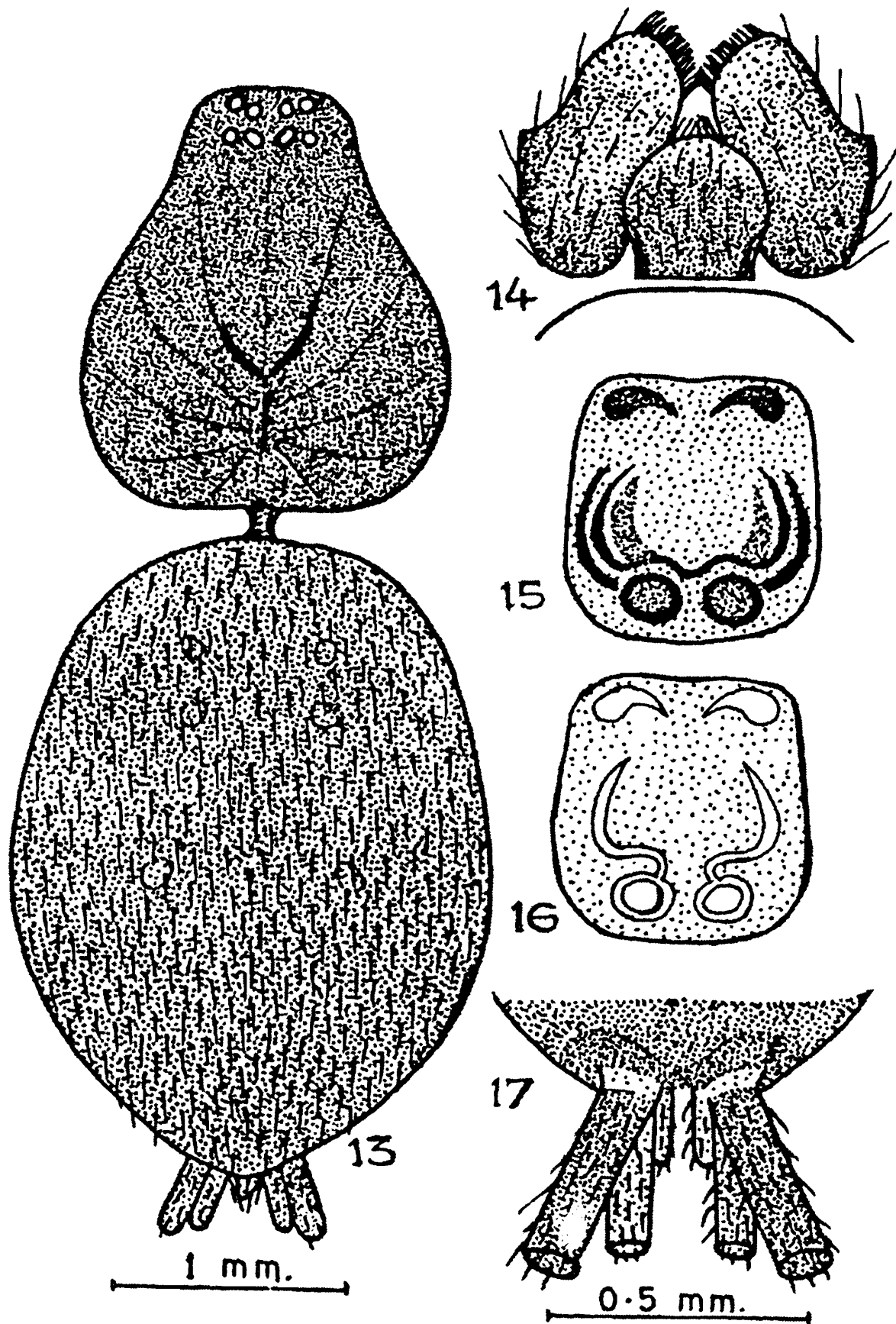
*Cephalothorax* : Longer than wide, narrow in front, clothed with pubescence, posterior middle provided with a conspicuous short fovea, radiating streaks diverge from short fovea to lateral sides of cephalothorax. Eyes closely grouped, silvery white except anterior medians which are black, posterior row of eyes same in length as anterior row. Anterior row of eyes slightly procurved (as seen from in front), median smaller than the laterals and closer to adjacent laterals than to each other. Posterior row of eyes straight, irregular in shape, slightly larger than the laterals and equally spaced as in fig. 13. Sternum oval, pointed behind, clothed with long black spine like hairs. Labium and maxillae longer than wide, anteriorly with scopulae, shape as in fig. 14. Chelicerae moderately strong, vertical, inner margin provided with two small teeth and outer margin with four dissimilar teeth. Legs relatively long and strong, clothed with hairs and spines. Tibia III and IV provided with three pairs of ventral spines. Scopulae reach upto base of metatarsi I and II and upto apices of metatarsi III and IV. Legs formula 4123.

*Abdomen* : Longer than wide, clothed with fine hairs and three pairs of sagitta. Ventral side slightly lighter than the dorsal. Epigyne as in fig. 15. Internal genitalia as in fig. 16. Spinnerets very prominent, anterior spinnerets cylindrical, larger and darker in colour than others as in fig. 17.

*Type-specimen* : *Holotype*, female in spirit, other details as above. Registration No. 5450/18.

*Type locality* : Tappa village, District Rajnandgaon, Madhya Pradesh, India, Coll. U. A. Gajbe, 22.XII.1983.

*Remarks* : This species closely resembles *Zelotes ashae* Tikader and Gajbe but differs from it as follows : (i) Cephalothorax and legs deep brown but in *Z. ashae* cephalothorax and legs reddish brown. (ii) Chelicerae provided with dissimilar teeth but in *Z. ashae* chelicerae with similar teeth (iii) Epigyne and internal genitalia also structurally different.



Figs. 13-17. : *Zelotes yogeshi* sp. nov.

13. Dorsal view of female, legs omitted; 14. Labium and maxillae;  
15. Epigyne; 16. Internal genitalia; 17. Spinnerets.

24. *Zelotes bharatae* sp. nov.

(Figs. 18-22)

**General** : Cephalothorax reddish-brown, legs deep brown, abdomen uniform glossy black. Total length 7.00 mm. Carapace 2.70 mm, long, 2.00 mm. wide; abdomen 4.40 mm. long, 2.40 mm. wide.

**Cephalothorax** : Longer than wide, narrow in front, convex, clothed with pubescence, posterior middle provided with a conspicuous short fovea. Pattern of radiating streaks diverge from short fovea to lateral sides. Eyes closely grouped, silvery white except anterior medians which are black, posterior row of eyes slightly longer than the anterior row. Anterior row of eyes slightly procurved (as seen from in front), medians slightly smaller than the laterals and closer to adjacent laterals than to each other. Posterior row of eyes nearly straight, medians irregular in shape, smaller than the laterals and closer to adjacent laterals than to each other. Median ocular quadrangle longer than wide and wider behind than in front. Clypeal height greater than the diameter of anterior median eyes. Strenum oval, pointed behind, rebordered, clothed with fine hairs, labium and maxillae longer than wide, clothed with hairs, anterior end provided with conspicuous scopulae, shape as in fig. 19. Chelicerae moderately strong, long, vertical. Inner margin provided with one small tooth and outer margin with two bigger teeth. Legs relatively long and strong, clothed with hairs and spines. Tibia III and IV provided with three pairs of ventral spines. Scopulae reach upto base of metatarsi I and II and apices of metatarsi III and IV. Legs formula 4123.

**Abdomen** : Longer than wide, nearly elliptical, widest behind the middle, clothed with pubescence and provided with three pairs of sagilla as in fig. 18. Ventral side much lighter than the dorsal. Epigyne as in fig. 20. Internal genitalia as in fig. 21. Spinnerets very prominent, anterior spinnerets cylindrical than others as in fig. 22.

**Type-specimen** : *Holotype* ♀, in spirit, other details as above. Registration No. 5452/18.

**Type-locality** : India : Madhya Pradesh, Sikara village, Lakhanadown Taluka, Seoni district, Coll. U. A. Gajbe, 19.XI.1981.

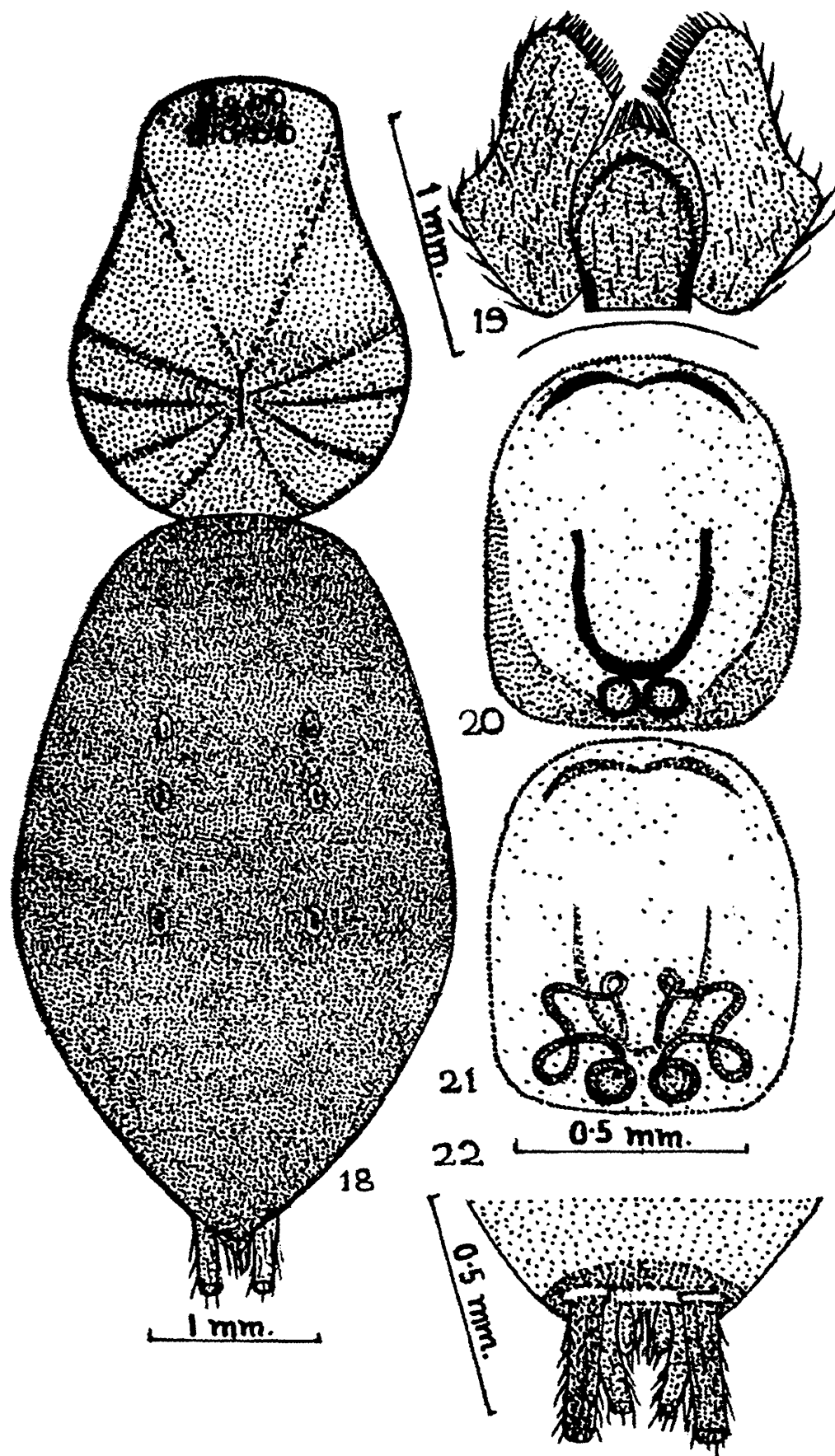
**Remarks** : This species resembles *Zelotes nasikensis* Tikader and Gajbe, but differs from it as follows : (i) Cephalothorax reddish brown but in *Z. nasikensis* cephalothorax deep brown. (ii) Abdomen dorsally provided with three pairs of sagilla but in *Z. nasikensis* abdomen without sagilla. (iii) Epigyne and internal genitalia also structurally different.

25. *Zelotes sataransis* Tikader & Gajbe

1979. *Zelotes sataransis* Tikader & Gajbe, *Bull. zool. Surv. India*, 2(1) : 87.

1982. *Zelotes sataransis* : Tikader, *Fauna of India, Spiders*, 2(2) : 504.

1988. *Zelotes sataransis* : Gajbe, *Rec. zool. Surv. India*, 85(1) : 72.



Figs. 18-22. : *Zelotes bharatae* sp. nov.

18. Dorsal view of female, legs omitted; 19. Labium and maxillae;  
20. Epigyne; 21. Internal genitalia; 22. Spinnerets.



*Specimen examined* : 1 ♀, Sikara village, Lakhanadown Tahsil, Seoni district, Madhya Pradesh. Coll. U. A. Gajbe, 19.X.1981, 1 ♀, Chhotedonger village, Narayanpur Tahsil, Bastar district, Madhya Pradesh. Coll. U. A. Gajbe, 26.XII.1983. (Reg. No. A/1593).

*Distribution* : Pratapgarh near Mahabaleshwar (Type-locality), Satara district, Maharashtra, Andhra Pradesh, Himachal Pradesh, Karnataka, Rajasthan, Uttar Pradesh, Seoni, Jabalpur, Bastar, Madhya Pradesh.

*Remarks* : This species is being reported for the first time from Bastar district of Madhya Pradesh.

#### 26. *Zelotes ashae* Tikader & Gajbe

1976. *Zelotes ashae* Tikader & Gajbe, *Proc. Indian Acad. Sci.*, **83**(3) : 111.

1982. *Zelotes ashae* : Tikader, *Fauna of India, Spiders*, **2**(2) : 502.

*Specimen examined* : 3 ♀♀, Gupt Mahadev, Piparia Tahasil, Hoshangabad district, M.P. Coll. U. A. Gajbe, 5.1.1990. (Reg. No. A/1746).

*Distribution* : Range Hill, Poona (Type-locality), Jodhpur, Rajasthan, Hoshangabad, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from Madhya Pradesh.

#### 27. *Zelotes shantae* Tikader

1982. *Zelotes shantae* Tikader, *Fauna of India, Spiders*, **2**(2) : 483.

*Specimen examined* : 1 ♀, Mura village, Betul district, M.P. Coll. H. S. Sharma, 24.III.1990. (Reg. No. A/1744).

*Distribution* : Katraj near Khed Shivapur, Dist. Poona (Type-locality), Maharashtra, Betul district, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from Madhya Pradesh.

#### Genus 13. *Drassyllus* Chamberlin

1922. *Drassyllus* Chamberlin, *Proc. biol. Soc. Wash.*, **35** : 166.

1976. *Drassyllus* : Tikader & Gajbe, *Oriental Insects*, **10**(3) : 431.

1982. *Drassyllus* : Tikader, *Fauna of India, Spiders*, **2**(2) : 509.

*Characters* : The posterior row of eyes procurved, the posterior median eyes large, oval, oblique, and much closer to each other than to the posterior lateral eyes. The outer margin of the cheliceral fang furrow provided with three to six teeth, the inner margin from two to four. The species are all much alike in general appearance. The colours vary from orange to dark brown on the cephalothorax and grey to black on the abdomen. There are no markings, though in males there is a very

conspicuous orange or brown scutum on the abdomen which covers from less than one-third to almost one-half of the dorsum. Epigynum without prominent sclerotized ridges on each side ending freely in front.

*Type-species* : *Drassyllus fallens* Chamberlin.

*Distribution* : America, India.

### 28. *Drassyllus mahabalei* Tikader

1982. *Drassyllus mahabalei* Tikader, *Fauna of India, Spiders*, 2(2) : 510.

*Specimen examined* : 1 ♀, Narayanganj, Mandla district, Madhya Pradesh. Coll. U. A. Gajbe, 23.I.1985. (Reg. No. A/1590).

*Distribution* : India : Sindhi Colony, Poona (Type-locality), Maharashtra, Mandla, district, Madhya Pradesh.

*Remarks* : This species is being reported here for the first time from Madhya Pradesh.

### 29. *Drassyllus jabalpurensis* sp. nov.

(Figs. 23-27)

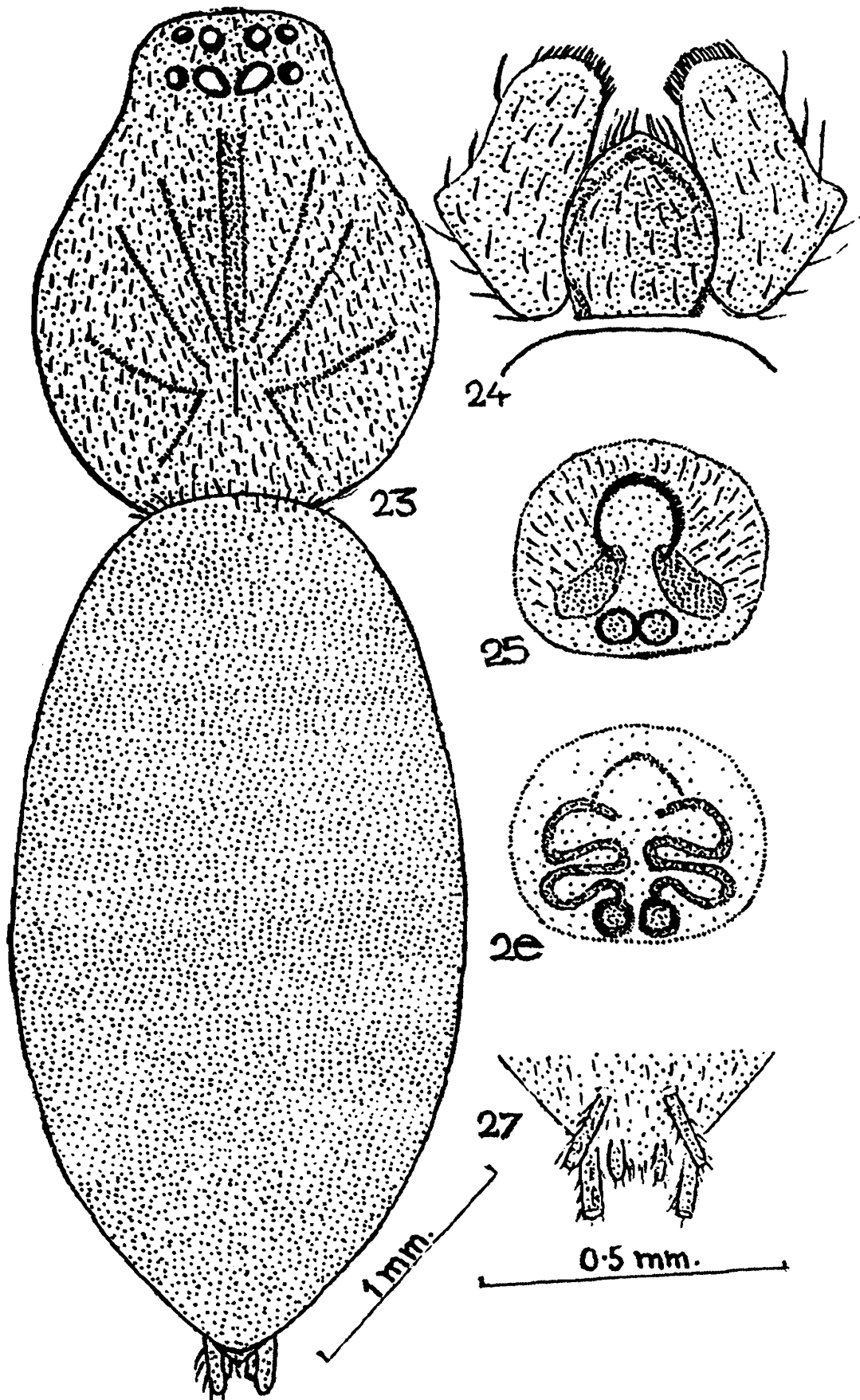
*General* : Cephalothorax light reddish-green, legs reddish green, abdomen brownish-green. Total length 5.60 mm. Carapace 2.10 mm. long, 1.60 mm. wide; abdomen 3.50 mm. long, 1.90 mm. wide.

*Cephalothorax* : Longer than wide, narrow in front, slightly convex, posterior middle of thorax provided with an inconspicuous short fovea, clothed with very short spine like hairs. Eyes silvery white in colour except anterior medians which are black and all eyes situated in a compact area, posterior row of eyes slightly longer than the anterior row. Anterior row of eyes procurved (as seen from in front), medians slightly larger than laterals and closer to adjacent laterals than to each other. Posterior row of eyes slightly procurved, medians large, oval, oblique and closer to each other than to adjacent laterals as in fig. 23. Sternum oval, pointed behind, rebordered, clothed with long spine like hairs. Labium and maxillae light yellowish-green, clothed with spine like hairs, anterior end provided with scopulae as in fig. 24. Chelicerae long, not very strong, vertical, inner margin with one minute tooth and outer margin with four moderate teeth. Legs relatively long and strong, clothed with hairs and spines. Legs formula 4123.

*Abdomen* : Nearly elliptical, clothed with pubescence and anterior portion provided with some spine like, hairs. Ventral side lighter than the dorsal. Epigyne as in fig. 25. Internal genitalia as in fig. 26. Spinnerets as in fig. 27.

*Type-specimen* : Holotype 1 ♀, in spirit, other details as above. Registration No. 5452/18.

*Type-locality* : India : Madhya Pradesh, Bhirki village on Jabalpur-Chargawa road, Jabalpur district. Coll. D. K. Ghosal, 24.XI.1970.



Figs. 23-27. : *Drassyllus jabalpurensis* sp. nov.  
23. Dorsal view of female, legs omitted; 24. Labium and maxillae;  
25. Epigyne; 26. Internal genitalia; 27. Spinnerets.

*Remarks* : This species closely resembles *Drassyllus khajuriae* Tikader & Gajbe, but differs from it as follows : (i) Cephalothorax light reddish-green and legs reddish-green but in *D. khajuriae* cephalothorax and legs light-green. (ii) Outer margin of chelicerae provided with four teeth but in *D. khajuriae* outer margin of chelicerae with two teeth. (iii) Abdomen brownish-green and without sigilla but in *D. khajuriae* abdomen deep brown and provided with three pairs of sigilla (iv) Epigyne and internal genitalia also structurally different.

### SUMMARY

This paper deals with 29 species under 13 genera of the family Gnaphosidae out of which 5 species are described as new to science.

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