FOUR NEW INDIAN GALL MIDGES OF ANARETELLA ENDERLEIN
[DIPTERA : CECIDOMYIIDAE : LESTREMIIINAЕ]

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INTRODUCTION

The genus Anaretella Enderlein was established in 1911 with its type species Lestremia dejecta Winnertz by original description, subsequently Naptunimyia Felt [1912] and Plocimas Enderlein [1936] were merged with Anaretella. Grover [1964] Lestremia orientalis [based on males] from Allahabad, but while revising the Indian Lestremiinae she transferred the species of the genus Anaretella recording the genus for the first time from India.

The genus Anaretella is recognized by the following combination of characters: Male antenna with 2 + 14 segments, female with 2 + 9; each flagellar segment with two well developed whorls of long bristles medially and a pair of digitate sensoria distally on basal 5 to 7 segments, last antennal segments of female entire, not constricted near tip. Wing with vein Cu1 hardly extending back beyond the bend of Cu2; branches of median fork evenly divergent; male styles without terminal teeth; roots of gonocoxites directed anteriorly; tegmen broad.

While studying the gall midges from Maharashtra we encountered four new species of Anaretella which are described here. All the types are retained for the time being in first author’s collection at Science College, Nanded [Maharashtra].

1. Anaretella spinosa sp. nov.
(Figs. 1–11)

Male : Body 1.00mm long. Ocelli two. Trophi normal. Palpus quadriarticulate, densely hairy; first segment oval, short, 2.16x its maximum thickness [13 : 6]; second segment subcylindrical, longer and thinner than first, 3.20x its maximum thickness [16 : 5]; third segment subcylindrical, as long as second and 3.20x its maximum thickness; fourth palpal segment longest of all and 10.6x its maximum thickness [32 : 3]. Antenna : shorter than body, with 2 + 14 segments, segments cylindrical with

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short apical stems, enlargements with whorls of long setae and short digital sensorial processes medially; scape [13 : 13] cup shaped; pedicel [10 : 11] subglobose; Third segment [15], not confluent with and as long as fourth, with a short basal prolongation, enlargement [11 : 9] 0.74 the length of the segment and 1.22x its maximum thickness, apical stem [3 : 4] 0.27 the length of the segment; fourth segment [15] with enlargement [10 : 9] 0.57 the length of the segment and 1.66x its maximum thickness, apical stem [5 : 3] 0.33 the length of the segment; fifth segment [16] longer than fourth; penultimate segment [10 : 6] shortest of all, without stem, 1.66x its maximum thickness, terminal segment [20 : 6] longest of all, 3.33x its maximum thickness, stem in the form of a round nipple like prolongation. Wing: [36 : 15] roughly rectangular, 2.40x as long broad, vein Rs distinct at an oblique angle, vein R5 short, wing margin interrupted at the union of R5 with costa at three-fourth of wing, vein M1+2 present, fork of M1+2 longer than its stem, later obsolete, vein M3+4 complete, vein Cu simple. Legs: long, densely hairy, metatarsus [80], nearly as long as the following segments combined together [81], claw simple on all legs, evenly curved, empodium 0.60 the length of the claw [3 : 5]. Genitalia: dark brown, sparsely setose; basal clasp segment without lobe, root directed upwards, 2x its maximum thickness [40 : 20]; terminal clasp segment tapering towards the tip, ending in a tooth, 0.67 the length of the basal clasp segment and 5x its maximum thickness [30 : 6]; dorsal plate [12 : 23] bilobed, deeply lobed, lobes oval and covered with stiff bristles; subdorsal plate [31 : 10], flask shaped, enlarged submedially, with a pair of spines apically and submedially, emarginate laterally, tip truncated, longer than dorsal plate; tegmen [34], shorter than basal clasp segment, genital rod elongated, longer than subdorsal plate and nearly as long as tegmen, 33x as long as thick [33 : 1], tip rounded.

Female: Unknown.


Paratype: Three males dissected and mounted on slides labeled as in Holotype.

Etymology: The specific epithet refers to spines present on subdorsal plate.

2. Anaretella deepica sp. nov.

(Figs. 12–21)

Male: Body 1.15mm long. Ocelli two. Trophi normal. Palpus quadriarticulate, long densely setose; first segment subcylindrical, 2.60x its maximum thickness [13 : 6]; second segment cylindrical, slightly longer and thinner than first, 3.50x its maximum thickness [14 : 4]; third segment cylindrical, longer than second and 5.00x its maximum thickness [20 : 4]; fourth palpal segment longest of all, cylindrical, 5.50x its maximum thickness [22 : 4]. Antenna: shorter than body, with 2 + 14 segments, segments cylindrical with short apical stems, enlargements with two whorls of long setae and short digital sensorial processes medially; scape [12 : 13] cup shaped, wider than long; pedicel [9 : 11],
subglobose, shorter than scape; third segment [17] not confluent but as long as fourth, with short basal prolongation [2 : 5], enlargement [12 : 9] 0.79 the length of the segment and 1.33x its maximum thickness, stem [3 : 4] 0.18 the length of the segment and thicker than long; fourth segment [17] with enlargement [13 : 9] 0.76 the length of the segment and 1.33x its maximum thickness, stem [4 : 4] 0.23 the length of the segment and as long as thick; fifth segment [19] slightly longer than fourth, penultimate segment [11 : 6] enlargement 0.90 the length of the segment and 1.66x its maximum thickness, stem [1 : 2] very short; terminal segment [12] with enlargement [9 : 6] 1.5x its maximum thickness, stem [3 : 3] ending into a nipple like prolongation. Wing : [35 : 14], hyaline, roughly rectangular, 2.50x as long as broad; vein R1 meeting costa before middle of the wing, vein Rs distinct, vein R5 unites with costa at three-fourth of the wing, fork of vein M1+2 longer than stem, the latter obsolete, vein M3+4 complete, vein Cu simple. Legs : long, densely hairy, metatarsus [60], longest of all, shorter than the following segments combined together [66]; Claw simple, evenly curved, empodium 0.66 the length of the claw [3 : 5]. Genitalia : dark brown, sparsely setose, basal clasp segment [44 : 22], without lobe, broad medially, length 2x its maximum thickness, roots directed outwards; terminal clasp segment [35 : 7], tapering towards tip, ending in a tooth, 0.75 the length of the basal clasp segment and 5x its maximum thickness; dorsal plate [17 : 20] broader than long, very shallowly incised, lobes small, rounded outwardly, covered with stiff bristles; subdorsal plate [32 : 6], broad basally, narrowed apically, emarginate laterally, with a pair of spine submedially, longer than dorsal plate, tip rounded; tegmen with genital rod, later narrow and pointed basally, 26x its maximum thickness [26 : 1], shorter than tegmen, tegmen shorter than subdorsal plate.

**Female** : Unknown.


Paratype : Three males dissected and mounted on slides, labelled as in Holotype.

**Etymology** : Species name associated with the Sanskrit word for “Deep” means light.

### 3. *Anaretella indica* sp. nov.

(Figs. 22–31)

**Male** : Body 1.05mm long. Ocelli two. Trophi normal. Palpus : quadriarticulate, long, densely hairy; first segment subcylindrical, 2.50x its maximum thickness [15 : 6]; second segment subcylindrical, shorter and thinner than first, 2.40x its maximum thickness [12 : 5]; third segment cylindrical, longer than second, 4.00x its maximum thickness [16 : 4]; fourth segment [20 : 4], cylindrical, longest of all, 5x its maximum thickness. Antenna : shorter than body, with 2+14 segments, segments cylindrical, with short apical stems, enlargements with two whorls of long setae and small digital sensorial processes medially; scape [11 : 14], cup shaped; pedicel [11 : 14], subglobose; third segment [15] not confluent; but as long as fourth, with short basal prolongation [2 : 4], enlargement
[11 : 9] 0.73 the length of the segment and 1.2x its maximum thickness, stem [2 : 4] 0.13 the length of the segment and twice thicker than long; fourth segment [15], with enlargement [11 : 8] 0.73 the length of the segment and 1.37x its maximum thickness, stem [4 : 3] 0.27 the length of the segment and 1.33x its maximum thickness; fifth segment [17], slightly longer than fourth; penultimate segment [11], shorter than fifth, enlargement [8 : 6] 0.72 the length of the segment and 1.33x its maximum thickness; terminal segment [15], longer than penultimate, enlargement [11 : 6] 0.73 the length of the segment and 1.83x its maximum thickness, apical stem [4 : 2] 0.27 the length of the segment and twice as long as thick. Wing: [33 : 13], nearly rectangular, covered with microtrichae, 2.30x as long as broad, vein Rs distinct, vein R5 short, wing margin interrupted at its union of R5 with costa at three-fourth of the wing, vein M1+2 short, fork of M1+2 longer than its stem, vein M3+4 complete, vein Cu simple. Legs : long, densely hairy, metatarsus [90], shorter than the following segments combined together [96]; claw simple, evenly curved, empodium 0.60 the length of the claw [3 : 5]. Genitalia: dark brown, sparsely setose; basal clasp segment [40 : 20], without lobe, broad basally, narrow apically, 2x its maximum thickness, roots directed upwards; terminal clasp segment [30 : 6], 0.75 the length of the basal clasp segment and 5x its maximum thickness, tappering towards tip, ending into tooth; dorsal plate [20 : 22], little wider than long, bilobed, deeply incised, lobes triangular; subdorsal plate [30 : 6], longer than dorsal, broad basally, tip truncated, sclerotised laterally, 5x its maximum thickness; tegmen with genital rod, setose, tegmen rounded apically and slightly longer than genital rod, genital rod [32 : 1], 32x its maximum thickness.

Female: Unknown.


Paratype: Two males dissected and mounted on slides, labelled as in Holotype.

4. Anaretella bhokarensis sp. nov.

(Figs. 32–41)

Male: Body 1.00mm long. Ocelli two. Trophi normal. Palpus: quadriarticulate, long, densely hairy; first segment subcylindrical, 3.00x its maximum thickness [15: 5]; second segment subcylindrical, shorter and thinner than first, 3.00x its maximum thickness [12 : 4]; third segment subcylindrical, longer than second, 5.25x its maximum thickness [12 : 4]; fourth palp segment [30 : 3], longest of all, cylindrical, 10x its maximum thickness. Antenna: shorter than body, with 2+14 segments, segments cylindrical, with short stems, enlargement with two whorls of long setae, and short digital sensorial processes medially; scape [12 : 14], cup shaped, wider than long; pedicel [9 : 11], subglobose; third segment [16], with a short basal prolongation [1 : 4], enlargement [11 : 4], 0.68 the length of the segment and 1.22x its maximum thickness, stem [4 : 4], 0.36 the length of the enlargement and as long as thick; fourth segment [18], not confluent but little longer than third, enlargement
Fig. 32-41. *Anaretella bhokarensis*: 32. Palpus; 33a. penultimate antennal segment; 33b. terminal antennal segment; 34. fifth antennal segment; 35. third antennal segment; 36. fourth antennal segment; 37. scape; 38. pedicel; 39. claw; 40. genitalia; 41. wing.
[13 : 9] 0.72 the length of the segment and 1.44x its maximum thickness, stem [5 : 3] 0.38 the length of the enlargement and 1.66x its maximum thickness; fifth segment [19], slightly longer than fourth; penultimate segment [9 : 7], without apical stem, 1.50x its maximum thickness; terminal segment [12], with enlargement [10 : 6] 1.66x its maximum thickness, stem [2] in the form of small nipple like prolongation. Wing: [43 : 17], rectangular, hyaline, 2.52x as long as broad, vein Rs distinct, wing margin interrupting at union of R5 with costa at three-fourth of the wing, vein M1 + 2 longer than its stem, vein M3 + 4 complete, vein Cu simple. Legs: long, densely hairy, metatarsus [90], shorter than the following segments combined together [98]; claw simple, shott, empodium 0.60 the length of the claw [3 : 5]. Genitalia: dark brown, sparsely setose, basal clasp segment [40 : 23], without lobe, 1.73x its maximum thickness, roots directed outwards; terminal clasp segment [32 : 8], broad, narrow apically, 0.75 the length of the segment, 4x its maximum thickness, ending into a tooth; dorsal plate [20 : 25], bilobed, shallowly incised, lobes rounded apically, broader than long, setose apically; subdorsal plate [33 : 9], broad basally, truncated apically, emarginate apically, 3.9x its maximum thickness basally, tegmen with genital rod, tegmen slightly longer than subdorsal plate, genital rod [30 : 1], as long as subdorsal plate and 30x its maximum length.

**Female**: Unknown.


Paratype: Two males dissected and mounted on slides, labelled as in Holotype.

All the Types are retained in collection at Science College, Nanded for the time being.

*Key to the Indian species of Anaretella Enderlein*

1. Antenna with 2 + 13 segments ......................................................... 2
   Antenna with 2 + 14 segments .......................................................... 3

2. Fourth palpal segment 7x as long as thick; dorsal plate narrowly incised, lobes bluntly pointed outwardly ................................................................. orientalis o* [Grover]

3. Subdorsal plate with spines .............................................................. 4
   Subdorsal plate without spines ......................................................... 5

4. Subdorsal plate with a pair of spine apically and submedially, flask shaped tip, truncated; dorsal plate deeply incised, lobes oval; fourth palpal segment 10.6x as long as thick ...........
   ............................................................................................................ spinosa o* sp. nov.
   Subdorsal plate with a pair of spine submedially only, broad basally, narrow apically, tip rounded; dorsal plate, shallowly incised, lobes rounded outwardly; fourth palpal segment 5.50x as long as thick ............................................................ deepica o* sp. nov.
5. Lobes of dorsal plate bluntly triangular; fourth palpal segment 5.00x as long as thick .......... 
......................................................................................................................................... indica \( \sigma' \) sp. nov.

Lobes of dorsal plate broadly rounded apically; fourth palpal segment 10x as long as thick 
......................................................................................................................................... bhokarensis \( \sigma' \) sp nov.

SUMMARY

Four new gall midges viz., spinosa, deepica, indica and bhokarensis of genus Anaretalla Enderlin, collected from Bhokar Dist. Nanded, Maharashtra, have been described and illustrated. A key to the Indian species is also provided.

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REFERENCES


