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Studies on Indian Mymaridae III

(*Hymenoptera*: *Chalcidoidea*)

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(With 8 Figures)

MANI (1938) in his catalogue on Indian *Chalcidoidea* recorded only 6 genera comprising six species of the Family *Mymaridae*. To this he added three more species (1942). Since then SUBBA RAO & KAUR (1959) described 5 species of *Lymaenon* HALIDAY and a species of *Neurotes* ENOCK. Very recently NARAYANAN et al. (1960) gave descriptions of three more species which include the genera *Polynema* HALIDAY and *Maidliella* SOYKA. In the present paper the authors deal with the descriptions of a few more species of the genera *Lymaenon* and *Polynema*. A key to the species has been given under each genus. Types have been deposited in the "National Pusa Collection", Division of Entomology, Indian Agricultural Research Institute, New Delhi.

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Lymaenon Haliday in Walker

Ann. Mag. nat. Hist., (1) **18**, 50, 1946

Key to Indian species of *Lymaenon* Haliday

1. Thorax evenly brown to dark 2
   Thorax yellow with brown patches 6
2. Pedicel nearly equal to third funicular segment 3
   Pedicel appreciably longer than the third funicular segment; surface hair of the forewing start from just before the marginal vein ..... *ramakrishnai* Subba Rao & Kaur
3. Funicular segments 5 to 8 almost equal 4
   Funicular segments 5 to 8 unequal 5
4. Funicular segments 6 to 8 with sensory pits. Surface hair of forewing start from beyond the marginal vein. Abdomen with brown bands ..... *indicus* Subba Rao & Kaur
   Funicular segments 6 to 8 with-out sensory pits. Surface hair of forewing start almost from the base of the marginal vein. Abdomen bright yellow and thorax black ..... ***nigroides*** n. sp.
5. Funicular segments 5 to 8 unequal. Surface of forewings start from beyond the marginal vein ..... *sahadevani* Subba Rao & Kaur
   Funicular segments 5 to 8 unequal. Surface hair of forewing start from the base of the marginal vein. Eyes black ..... *pahlgamensis* Narayanan
6. Funicular segments almost equal in length 7
   Funicular segments unequal in length 9
7. Abdomen banded with brown patches; wings narrow. Surface hair of forewing starting from the base of sub-marginal vein ..... ***tarae*** n. sp.
   Abdomen not banded 8
8. Last four funicular segments unequal in width 9
   Last four funicular segments almost equal in width. Surface hair of forewing start from just below the marginal vein ..... *shasthryi* Subba Rao & Kaur
9. Last two funicular segments appreciably wider than the rest ..... *longicrus* (Kieffer)
   Not so describable 10
10. Last 3 funicular segments wider than the rest. Surface hair start from the base of the middle of the marginal vein ..... ***delhiensis*** n. sp.
    Last four funicular segments wider than the rest. Surface hair of forewing start from just below the marginal vein ..... *narayani* Subba Rao & Kaur

Lymaenon nigroides n. sp.

Female: Colour: Antenna except scape and pedicel brown to dark brown; thorax almost black; abdomen bright yellow; legs pale yellow. Head cubicle, vertex raised. Eyes prominant. Antenna, comparatively stout; funicular segment of various dimensions, ending in a large eliptical club. Scape long, slightly dialated, nearly three times as long as pedicel, extending far beyond the apex of the eyes. Third segment of antenna smallest; fourth and sixth segments shorter than fifth; segments seventh to tenth almost equal. Club much broader than funicular segments and slightly longer than the scape. All segments except the tenth and the club are devoid of sensory ridges.

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Thorax not compressed, propodeum abruptly declinated. Forewings large, hyaline, uniformly hairy, extending beyond the abdomen; apex smoothy rounded. Marginal vein long and narrow. Stigmal branch well developed, proximal "microchete" stout and well developed. Distal" macrochete" slightly longer and thick; "hypochete" long but curved. Two short "macrochete" around the distal "macrochete". Marginal fringe short.

Abdomen shorter than thorax, rounded at apex, ovipositor slightly exserted. Abdominal tergites beset with a transverse row of fine setae.

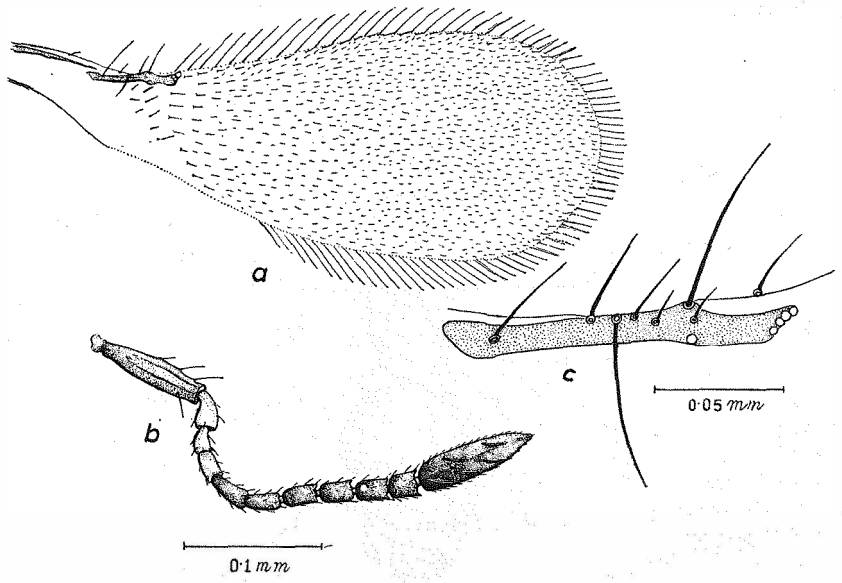

Fig. 1. *Lymaenon nigroides* n. sp. a) Fore wing. — b) Antenne. — c) Fore wing venation enlarged

Holotype: Female (on slide), Delhi, May, 1960. B. R. Subba Rao coll.
Measurements (in mm):
Length 1.234, thorax 0.52, Abdomen 0.455
Antenna: Scape 0.195, pedicel 0.065, III 0.039, IV 0.045, V 0.068, VI 0.52, VII 0.065, VIII 0.052, IX 0.052, X 0.042.
Club 0.221
Legs: Fore: Coxa 0.104, femur 0.234, tibia 0.26, tarsi 0.325
Mid: Coxa 0,091, femur 0.23, tibia 0.351, tarsi 0.299
Hind: Coxa 0.131, femur 0.273, tibia 0.364, tarsi 0.31
Forewing: Length 1.04, breadth 0.39, marginal cilia 0.065.

Lymaenon tarae n. sp.

Female: Colour: Lemon yellow with irregular brown patches all over. Antennal scape and pedicel concolourous with the body; rest of the segments brown.

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Head cubicle, eyes prominant. Antennae slender, funicular segments elongated, ending in a fairly large eliptical club; scape cylindrical, very long, at least three times longer than the pedicel and extending beyond the apex of the eyes. Third antennal segment slightly dialated distally, the rest cylindrical.

Thorax not compressed. Parapsidal furrows well marked, with distinct setae as shown in the figure.

Forewings long, narrowed basally, more or less laddle shaped. Stigmal vein about one fourth of the marginal vein. "Macrochete" strong, well

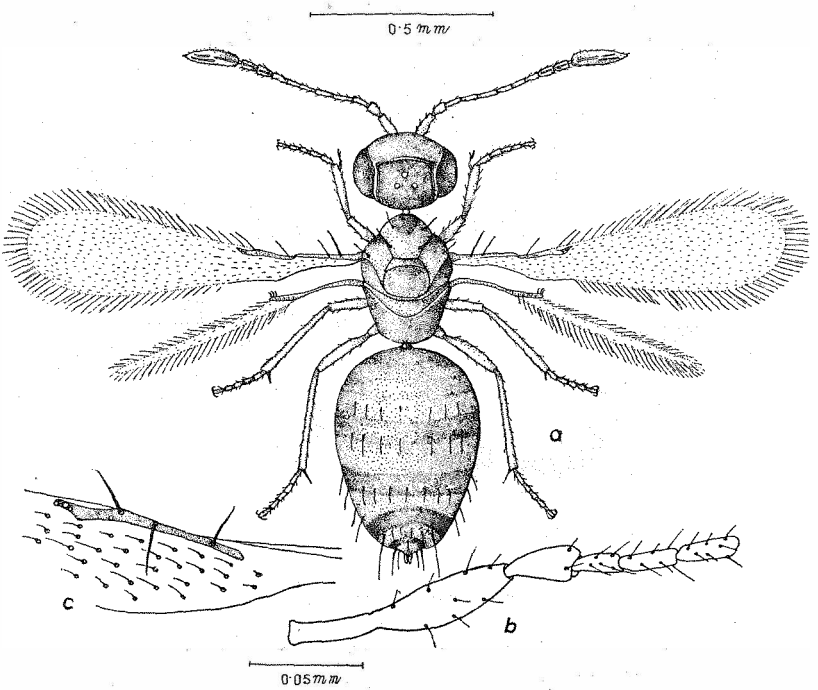

Fig. 2. *Lymaenon tarae* n. sp. a) Female.—b) Antenna.—c) Fore wing venation enlarged

developed, the "hypochete" situated nearer the distal "macrochete". Proximal sensilla just below the distal "macrochete". The distal sensillae are four in a group arranged to form an angle; distal pubscence fine, regular. Hind wing markedly shorter; marginal ciliation shorter than that of the forewing.

Abdomen large, longer than the thorax. Abdominal tergites beset with rows of fine setae. Ovipositor very slightly exserted.

Holotype: Female (on slide), Delhi, May, 1960. B. R. Subba Rao coll.
Paratype on slide, Delhi, May, 1960. B. R. Subba Rao coll.
Measurements (in mm):
Length 1.079, thorax 0.299, abdomen 0.52.

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Antenne: Scape 0.182, pedicel 0.65, III 0.039, IV 0.052, V 0.039, VI 0.0300, VII 0.030, VIII 0.030, IX 0.05, X 0.051
Club 0.169.
Legs: Fore: Coxa 0.117, femur 0.182, tibia 0.169, tarsus 0.221
Mid: Coxa 0.091, femur 0.169, tibia 0.26, tarsus 0.38
Hind: Coxa 0.117, femur 0.195, tibia 0.286, tarsus 0.290.
Forewing: Length 0.936, breadth 0.195, marginal cilia 0.104.

Lymaenon delhiensis n. sp.

Female: Colour: Yellowish brown with a few dark patches on the thorax. Antennae light brown; legs concolourous with body. Eyes prominant and reddish.

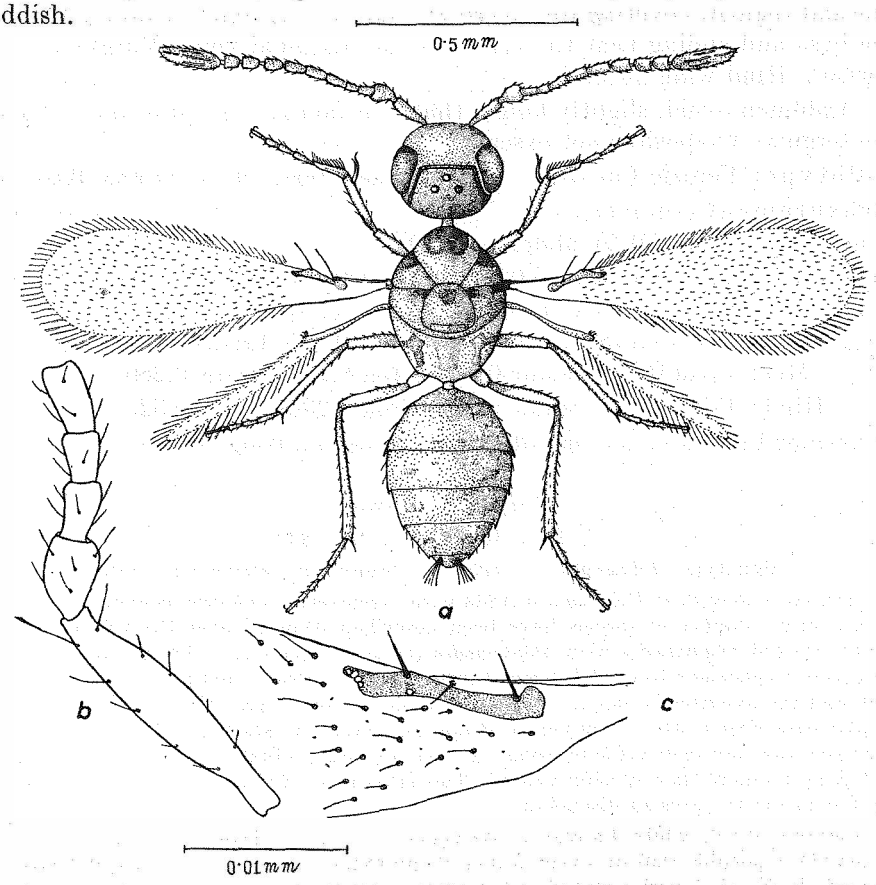

Fig. 3. a) *Lymaenon delhiensis* n. sp. — b) Antenna. — c) Fore wing venation enlarged

Head cubicle, front slightly excavated above the insertion of the antennae. Antennae stout. Funicular segments short and cylindrical, ending in a long eliptical club. Scape long, extending to the apex of the eyes, slightly

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dialated in the mid region, pedicel much dialated, as broad as scape and more or less one third of the length of the scape. Third and fourth segments the smallest, the rest longer and gradually increasing in girth.

Thorax arched, not compressed; parapsidal furrows well marked.

Forewings large and broad, smoothly broadened, marginal vein broad and long, slightly oblique, touching the border at the point of junction of stigmal and marginal veins. Stigmal vein just about one third of the marginal. Both distal and proximal "macrochete" well developed, moderately long and stout. The "hypochete" situated nearer to the distal "macrochete". Proximal sensillum just below the distal "macrochete". The distal group are composed of three small almost ovoidal sensillae. Discal pubescence fine and regular, covering the entire disc of the wing and continuing towards the base and ending near the origin of the marginal vein. Marginal fringe normal. Hind wing normal.

Abdomen ovoid, slightly longer than the thorax, devoid of fine setae on the tergum. Ovipositor not exserted.

Holotype: Female (on slide), Delhi, June, 1960. B. R. Subba Rao coll.

Measurements (in mm):

Length 1.04, thorax 0.39, abdomen 0.52.

Antenna: Scape 0.195, pedicel 0.052, III 0.039, IV 0.028, V 0.052, VI 0.052, VII 0.065, VIII 0.052, IX 0.045, X 0.045, XI 0.045. Club 0.169.

Legs: Fore: Coxa 0.078, femur 0.195, tibia 0.195, tarsus 0.26
Mid: Coxa 0.091, femur 0.208, tibia 0.273, tarsus 0.286
Hind: Coxa 0.117, femur 0.221, tibia 0.230, tarsus 0.325

Forewing: Length 0.923, breadth 0.273, marginal fringe 0.078.

Polynema Haliday

Ent. Mag. **1**, 269, 347, 1833

Genotype: *Ichneumon ovulorum* L. Design. by Westwood, 1840

Haliday described *Polynema* in 1833 with *Ichneumon ovulorum* as genotype. Since then a large number of species have been described from all ober the world. Enock (1909) erected *Stephanodes* with *Stephanodes elegans* as genotype. Enock distinguished his genus *Stephanodes* from *Polynema* Haliday by the slender non-punctiform marginal vein and the extensively asperate antennal scape in both sexes. Girault (1911) placed *Stephanodes* Enock as a synonym of *Polynema* Haliday, stating "The characteristics of *Stephanodes* lose their value in being too variable and graduate and must be considered as having no more than specific value". This statement of Girault's is of considerable significance in the present discussion.

Hincks (1950) while discussing the generic status of *Polynema* and *Stephanodes* stated "It is possible that an examination of the extensive series of species of *Polynema* occuring in North America and elsewhere may confirm the opinion of Girault already quoted, but in view of the several small characters mentioned in the key on page 175, it will be best to retain *Stephanodes* as a genus, or at least a subgenus, until the critical examination of more species of *Polynema* has been concluded".

Debauche (1948) kept the two genera as valid and gave a detailed description for *Stephanodes similis* (Förster).

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SOYKA (1956) described a new genus *Maidliella* with *Maidliella neofuscipes* SOYKA as the genotype and in the same paper described 14 species under the genus.

A critical study of these related genera of *Mymaridae* was made possible by a collection of a fine series of specimens during the summer months of 1960. The present authors have recorded the following findings during a critical study of the specimens collected by them.

(1) In *Stephanodes* and *Maidliella* the third antennal segment is more than one and a half times as long as the second, whereas in *Polynema* the third segment is almost equal or shorter than the second.

(2) While the marginal vein in *Stephanodes* and *Maidliella* is slender, it is distinctly thicker in *Polynema*, also it is not punctiform in reality.

(3) While the antennal scape is extensively asperated and possesses imbricate scales in *Stephanodes*, only strong striation, are present in the case of *Maidliella*.

In *Polynema* the scape is normal and there is a gradation from a condition with transverse striations to an almost smooth scape in the different species.

The colour pattern, length and shape of abdomen and petiole, discal and surface hair, length and density of surface hair, presence or absence of sensorial ridges on funicular joints and the position and number of "macrochete" are more of specific than generic value. It, therefore, seems that all the three genera fall in a closely allied group. However, the miner characters enumerated above are of sufficient taxonomic value to give the status of subgenus to the later erected genera. Hence it is proposed to retain *Polynema* HALIDAY as a valid genus and sink *Stephanodes* ENOCK and *Maidliella* SOYKA to the status of subgenera. A careful study of SOYKA's rather brief descriptions of *Maidliella* shows that it can be separated from *Stephanodes* ENOCK only with difficulty.

It is pertinent to quote in this connection the remarks made by Mr. O. BAKKENDORF, who has devoted a life time of study on this group, in one of his letters to junior author: "DEBAUCHE gives more characters separating the two genera, firstly the slender marginal vein and the absence of "macrochete". In fact it is much more slender than any *Polynema* sp. seen by me, but it is also smaller, so that at a low magnification it will look like a *Polynema*, and also the asperate scape gives a high magnification. Further the antennal funicle is without the sensoria, though in one of my preparations, I see a single one on the underside of the last funicle joint. The legs are of a uniform reddish colour than in *Polynema* sp. p. with unicoloured legs. The only macroscopical character is the long inner joints of the funicle which is, therefore, for convenience the characters used in the keys. I think that this character and the long marginal vein, are primitive in relation to *Polynema*. In reality I think it must be a separate genus, but the larval stages are not known and possibly the knowledge of these stages could settle the question. But there is also the question of convenience and for this reason some authors say that a genus must be as large as can easily be determined by workers not familiar with the section . If you, therefore, still mean to drop the genus *Stephanodes* ENOCK, I think it will be better to sink it to the level of a subgenus of *Polynema* HALIDAY".

The genus *Polynema* HALIDAY resembles a few genera that are closely related and has to be separated with ease before any studies could be taken

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up on the group. The related genera are *Doriclytus* Förster, *Eustochus* Haliday and *Caraphractus* Hal. in Walker. Hincks (1950) has given an excellent key for the separation of the genera mentioned above. The following key based on Hincks' has been drawn up with the exclusion of *Stephanodes* Enock and the recently erected genus *Maidliella* Soyka, which we prefer to regard as subgenera of *Polynema* Haliday.

Key to genera allied to *Polynema* Haliday

1. Club of antennae in female 2 segmented; ovipositor longer than abdomen ... 2
   Club of antennae in female 1 segmented; ovipositor not longer than abdomen, rarely half as long ... 3
2. Posterior tarsi longer than tibiae; stigma very short ..... *Doriclytus* Förster
   Posterior tarsi considerably shorter than tibiae; stigma very long; wings broad, hairs course; marginal cilia long; base of wings infuscate .. *Eustochus* Haliday
3. Stigma long; propodeum with two longetudinal carinae; antennae of male 12 segmented; club of female slender, little wider than preceding segments; wings often abbreviate in both wings ..... *Caraphractus* Hal. in Walker
   Stigma very short; propodeum with one longetudinal carina; antennae of male 13 segmented; club of female stout ..... *Polynema* Haliday

Key to subgenera of *Polynema* Haliday

1. 3rd antennal segment at least one and a half times longer than pedicel, marginal vein slender and long ... 2
   3rd antennal segment short or rarely longer than pedicel; marginal vein short; scape with transverse striations or bare; stigma punctiform ..... Subgenus *Polynema* Haliday (1833)
2. Scape extensively asperate, almost like the scales of a fish; third and fourth segments of antennae sub-equal, proximal macrochete absent ..... Subgenus *Stephanodes* Enock (1909)
   Scpae with distinct transverse striations and third and fourth segments of antennae sub-equal. Proximal macrochete present ..... Subgenus *Maidliella* Soyka (1946)

Subgenus *Polynema* Haliday

Key to Indian species of Subgenus *Polynema* Haliday

1. Body colour brown to dark brown ... 2
   Body colour bright yellow. Forewings with two fuscous spots. Marginal cilia very long, the longest being longer than the breadth of the wing. Fore wings nearly six and half times as long as broad ..... *Polynema* (*Polynema*) *bagicha* Narayanan, Subba Rao & Kaur
2. Marginal fringe of forewing more than half the greatest wing width ... 3
   Marginal fringe of forewing about half the breadth. Thorax dark brown, forewing three times as long as its breadth ..... *Polynema* (*Polynema*) *anantanagana* Narayanan
3. Marginal fringe of forewing nearly as long as its breadth. Abdomen elongate, eyes small, petiole long ..... ***Polynema (Polynema) indica*** n. sp.
   Marginal fringe of forewing not as long as its breadth. Abdomen ovoidal. Eyes prominant, reddish, petiole short ..... ***Polynema (Polynema) truncata*** n. sp.

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Polynema (Polynema) indica n. sp.

Female: Colour: Head and thorax dark brown. Abdomen brown. Legs, petiole and scape of antenna bright golden yellow. Pedicel, funicular joints and club progressively darkening from golden yellow to brown; eyes small, not prominant.

Head cubicle, antennal scape reaching beyond the vertex. Scape not much dialated, about one and a half times longer than the pedicel which is a shade longer than the third segment. Fourth segment more than two times as long

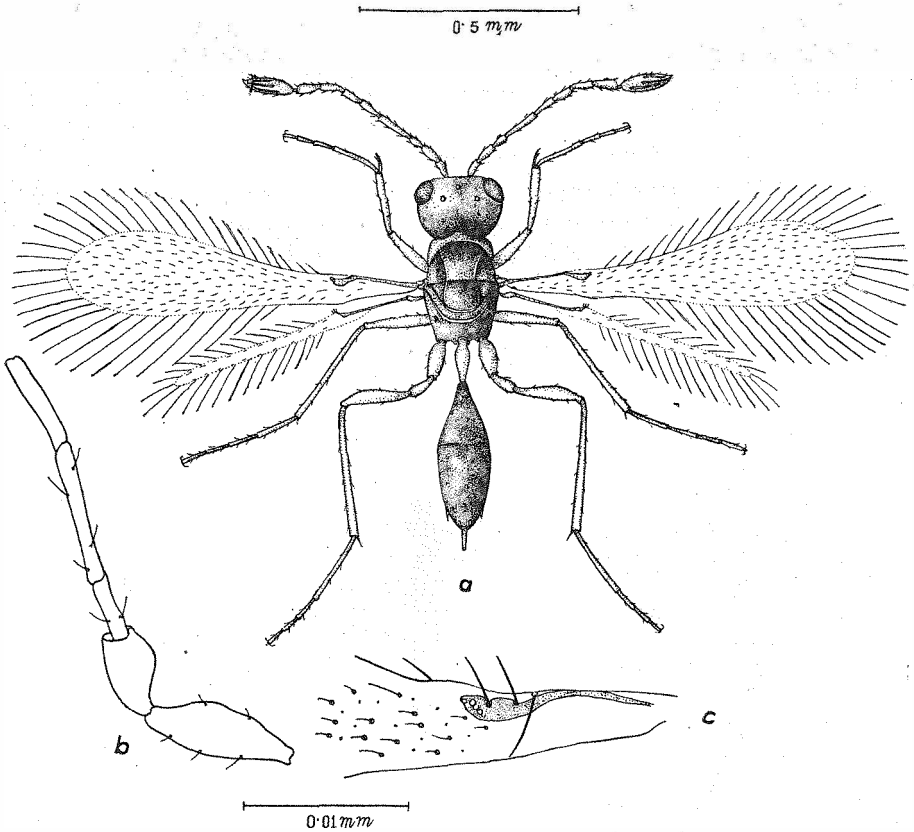

Fig. 4. a) *Polynema indica* n. sp. — b) Antenna. — c) Fore wing venation enlarged

as third segment. Fifth segment shorter then fourth but longer than third. Segments 6th and 8th slightly longer than 7th. Club longer than scape.

Thorax more or less compressed. Scutum and scutellum almost on the same level, flat. Propodeum declining gradually. Petiole moderately long, not longer than the petiole. Forewings long, extending beyond the abdomen. Marginal vein short. Both distal and proximal "macrochete" well developed but short and stout. "Hypochete" a little away from the proximal "macrochete", long and almost as long as the breadth of the wing at base.

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Abdomen elongate, longer than thorax; ovipositor slightly exserted.
Holotype: Female (on slide), Delhi, May, 1960, B. R. Subba Rao coll.
Number of paratypes on slides, Delhi, May-June, 1960, B. R. Subba Rao coll.
Measurements (in mm):
Length 0.936, thorax 0.273, abdomen 0.416, petiole 0.13
Antenne: Scape: Pedicel 0.0582, III 0.039, IV 0.096, V 0.52, VI 0.052, VII 0.052, VIII 0.063, Club 0.13
Legs: Mid: Coxa 0.078, femur 0.221, tibia 0.299, tarsus 0.273
Hind: Coxa 0.143, femur 0.234, tibia 0.338, tarsus 0.390
Forewing: Length 0.923, breadth 0.208, marginal cilia 0.208
Hindwing: Length 0.715, breadth 0.026, marginal cilia 0.13.

Polynema (Polynema) truncata n. sp.

Female: Colour: Head, thorax and abdomen brown. Legs pale yellow. Antennal scape and pedicel yellow, rest of the segments gradually darkening; club dark brown. Eyes prominant and reddish.

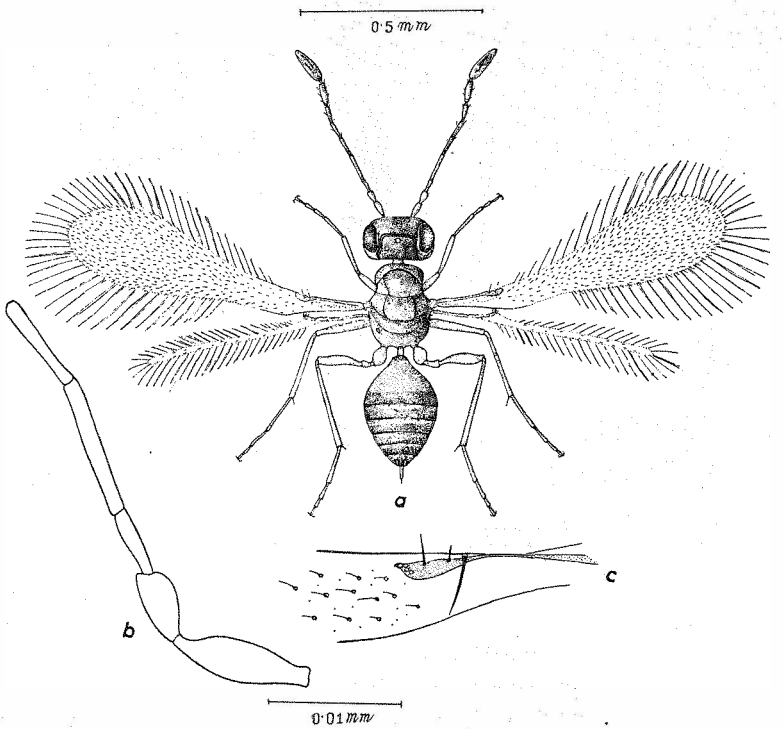

Fig. 5. a) *Polynema truncata* n. sp. — b) Antenna. — c) Fore wing venation enlarged

Head cubicle, broader than thorax, concave behind. Ocelli prominant. Face not much excavated; carinae strongly developed. Antennae 9 seg-

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mented, funicular segments moderately elongated and devoid of sensorial ridges. Pedicel short, not much dialated; third segment slightly shorter than the pedicel , 4th segment two times as long as the third, 5th longer than 3rd, 6th to 8th segments longer than 3rd and progressively longer and broader. Club large, elliptical. The inner side of the scape with very weak transverse striations.

Thorax short, smooth, convex. Parapsidal furrows well impressed. Scutellum almost quadrate. Metanotum transverse, propodeum declining gradually. Petiole sigmoid in shape, short. Legs not very slim, moderately stout.

Forewings normal, surface hair short, brownish, uniformly well spread. Marginal vein short and broad, not reaching the margin of the wings. Proximal and distal "macrochete" short, but well developed. "Hypochete" stout and long and almost as long as the breadth of the wing at its base.

Abdomen ovoidal, longer than thorax. Ovipositor slightly exserted.
Holotype: One female (on slide), Delhi, May, 1960. B. R. Subba Rao coll.
Number of Paratypes (females) on slides, Delhi, May—June 1960. B. R. Subba Rao coll.
Measurements (in mm):
Length 0.891, thorax 0.26, abdomen 0.364, petiole 0.091
Antenna: Scape 0.13, pedicel 0.052, III 0.045, IV 0.104, V 0.078, VI 0.052, VII 0.065, VIII 0.078, IX 0.13.
Legs: Fore: Coxa 0.078, femur 0.208, tibia 0.182, tarsus 0.286
Mid: Coxa 0.078, femur 0.195, tibia 0.26, tarsus 0.325
Hind: Coxa 0.091, femur 0.234, tibia 0.312, tarsus 0.364
Wings: Fore: Length 0.91, breadth 0.221, marginal cilia 0.195
Hind: Length: 7.15, breadth 0.026, marginal cilia 0.117

Polynema (Polynema) thornypoda n. sp.

Male: Colour: Head, testaceous; thorax, petiole and abdomen dark brown. Fore and middle legs yellowish brown, hind legs concolourous with body.

Head cubicle, eyes small. Face slightly depressed above the insertion of the antennae, carinae well developed. Antennae 13 segmented, scape of antennae very small, just reaching the vertex. Funicular joints long, flat and with number of sensory ridges.

Thorax longer than abdomen. Petiole very long, straight, cylindrical Forewings very long. Marginal vein long and slender, stigmal short; a very long not well differentiated post marginal. Proximal and distal "macrochete" strong, well developed, black. "Hypochete" close to proximal "macrochete" long, almost the length of the breadth of the wing. Proximal sensillae just below the distal "macrochete".

Fore and hind legs normal though tibia in both the legs are armed with short spines. Hind legs very long. Coxa is also very much longer and almost cylindrical. Femur, tibia and tarsi armed with long sharp spines.

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This character has not been described in any known species under the genus *Polynema*. If more specimens, particularly females are studied, it is possible that this species, belongs to a new genus.

Holotype: One male dissected on slide, Balehonnur, Mysore State, August, 1957. M. J. Chacko coll.

Paratype: One male (on card mount), Balehonnur, Mysore State, August, 1957. M. J. Chacko coll.

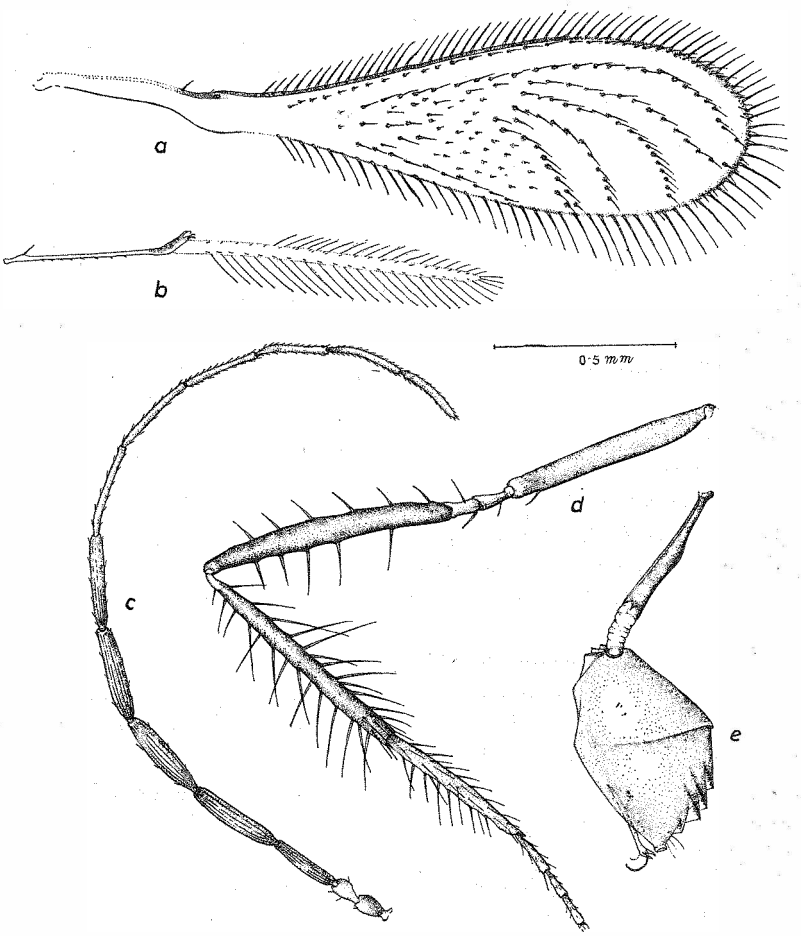

Fig. 6. *Polynema thornypoda* n. sp. — a) Fore wing. — b) Hind wing. — c) Antenna. — d) Hind leg. — e) Abdomen and petiole

Measurements (in mm):

Thorax 0.78, petiole 0.546, abdomen 0.65

Antenna: Scape 0.104, pedicel 0.078, III 0.208, IV 0.273, V 0.299, VI 0.286, VII 0.299, VIII 0.26, IX 0.26, X 0.234, XI 0.221, XII 0.208.

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Legs: Fore: Coxa 0.221, femur 0.52, tibia 0.481
Mid: Coxa 0.208, femur 0.416, tibia 0.702, tarsus 0.676
Hind: Coxa 0.611, femur 0.845, tibia 0.715, tarsus 0.806
Wings: Fore: Length 2.145, breadth 0.52, marginal cilia 0.182
Hind: Length 1.30, breadth 0.039, marginal cilia 0.13

Polynema (*Polynema*) *bagicha* NARAYANAN, SUBBA RAO & KAUR
Beitr. Ent., **10**, 886, 1960

Additional Characters: Both the "macrochete" present. "Hypochete" long and slender.

Subgenus *Maidliella* SOYKA

Zentralbl. Gesamtgeb. Ent., **1**, 178, 1886
Subgenotype: *Maidliella neofuscipes* SOYKA

Key to Indina species of subgenus *Maidliella* SOYKA

Antennae more than half the length of the body; forewing with two fuscous fascia; the longest marginal cilia less than half the greatest wing width .... *Polynema* (*Maidliella*) *orientalis* NARAYANAN, SUBBA RAO & KAUR

Antennae less than half the length of the body; forewings with one fuscous fascia in about its middle. The longest marginal cilia half the greatest wing width ..... *Polynema* (*Maidliella*) *incognita* NARAYANAN, SUBBA RAO & KAUR

Polynema (*Maidliella*) *orientalis* NARAYANAN, SUBBA RAO & KAUR
Beitr. Ent., **10**, 888, 1960

Additional Characters: Forewings fuscous. Both the distal and proximal "macrochete" present. "Hypochete" strong and short. The scape is very much asperated and the transverse ridges are very strong and in most cases complete.

Polynema (*Maidliella*) *incognita* NARAYANAN, SUBBA RAO & KAUR
Beitr. Ent. **10**, 889, 1960

Additional Characters: Forewings somewhat fuscous. Proximal "macrochete" is absent. "Hypochete" strong and short. Scape asperate, the transverse ridges are not strong and in most cases incomplete.

Subgenus *Stephanodes* ENOCK

Transact. ent. Soc. London, 1901, p. 457, 1909
Subgenotype: *Stephanodes elegans* ENOCK

Polynema (Stephanodes) imbricatus n. sp.

Female: Colour: brown; smooth, the first three antennal segments, the legs including the coxae, except the last tarsal segment and the abdominal petiole bright golden yellow, 4th antennal segment onwards light to dark brown.

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Head cubicle, hardly broader than the thorax, concave behind, the front strongly excavated uptil the insertion of the antennae; lateral ocelli a little prominent, carinae strongly developed; mandibles strong; tridentate.

Antenna 9 segmented, funicular segments elongated and narrow, devoid of sensorial ridges, these ridges present only on the club. Club large, simple

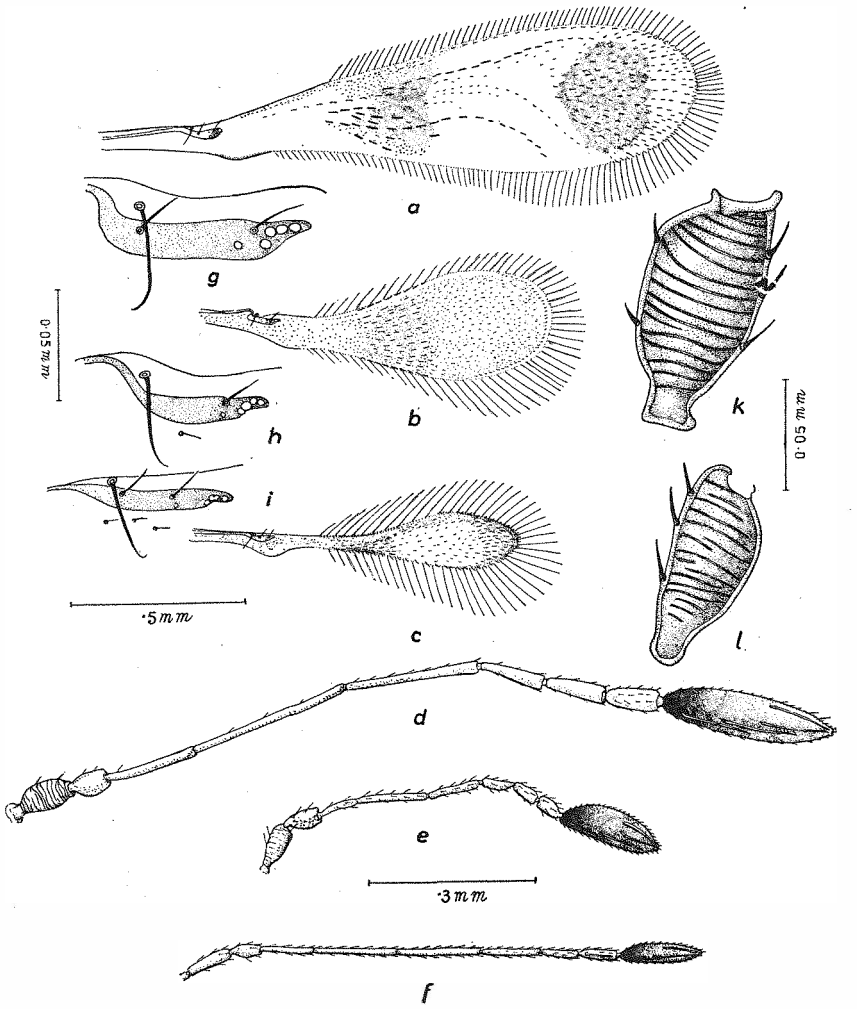

Fig. 7. a) *Polynema* (*M.*) *orientalis* Narayanan, Subba Rao & Kaur. — Fore wing. — b) *Polynema* (*M.*) *incognita* Narayanan, Subba Rao & Kaur. Fore wing. — c) *Polynema* (*P.*) *bagicha* Narayanan, Subba Rao & Kaur. Fore wing. — d) *P.* (*M.*) *orientalis* Antenna. — e) *P.* (*M.*) *incognita*. Antenna. — f) *P.* (*P.*) *bagicha*. Antenna. — g) *P.* (*M.*) *orientalis*. Fore wing venation enlarged. — h) *P.* (*M.*) *incognita*. Fore wing venation enlarged. — i) *P.* (*P.*) *bagicha*. Fore wing venation enlarged. — k) *P.* (*M.*) *orientalis*. Scape. — l) *P.* (*M.*) *incognita*. Scape

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elliptical. Scape nearly twice as long as pedicel and much dialated ventrally. The scape is sculptured and is in the form of the scales of a fish.

Thorax short, somewhat compressed, entirely smooth; propleurae smooth; mesonotum slightly convex; longer than broad; the notaulices well marked, diverging in front. Scutellum quadrate, slightly convex, shorter than mesonotum, metanotum transverse. Legs slim, very long.

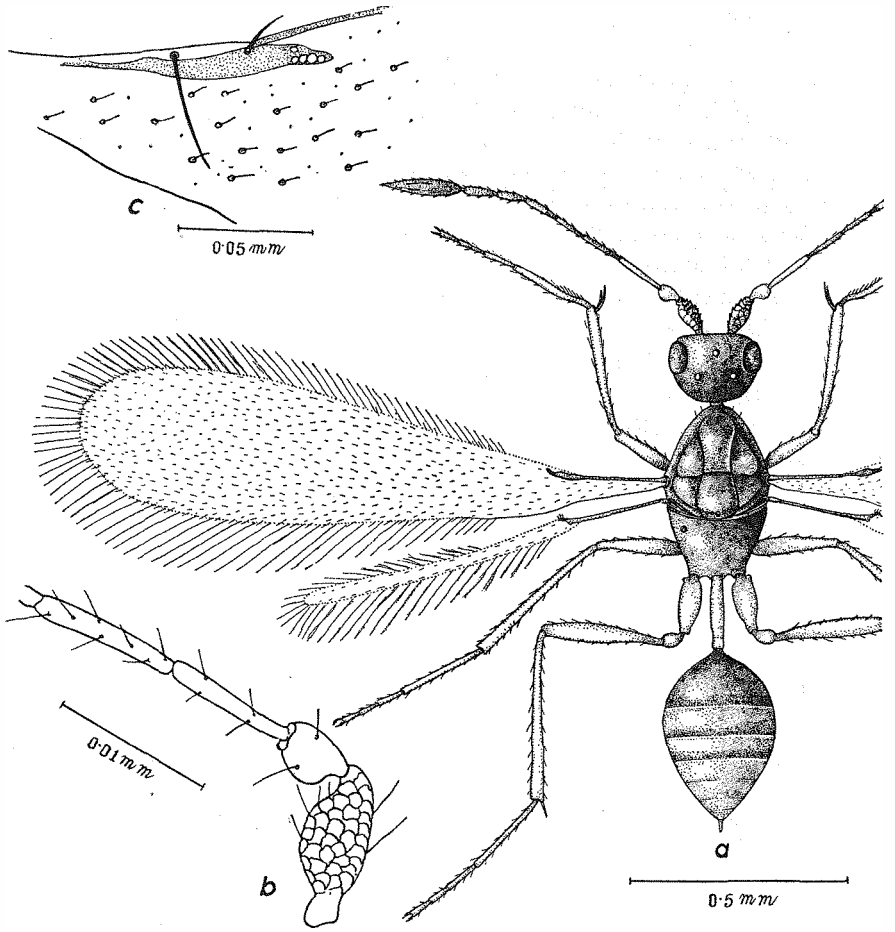

Fig. 8. a) *Polynema* (*Stephanodes*) *imbricatus* n. sp. — b) Antenna. — c) Fore wing venation enlarged

Femora dialated in the middle and narrowed at the extrimities to some extent; tibia long and subcylindrical; tarsi small, delicate, the first segment much elongated. The fore metatarsus strongly bent in its proximal half to form the comb.

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Forewings large, extending much beyond the body; fine uniform pubiscence on the entire disc. Marginal vein long, narrow, not reaching the wing margin, giving of an ill defined long post marginal from the point insertion of the distal "macrochete", stigmal vein narrow. Proximal "macrochete" absent; "hypochete" strong, well developed. The distal macrochete short and stout.

Petiole of abdomen cylindrical, long, definitely longer than the posterior coxae. Abdomen ovoid, a little conical behind. Ovipositor very small, not exserted.

Holotype: Female (on slide), New Delhi, Mai 1960. B. R. Subba Rao coll. Number of Paratypes (females) on slides, New Delhi, May-June 1960. B. R. Subba Rao coll.

Stephanodes imbricatus n. sp. runs very close to *Stephanodes similis* (Förster) in Debauches key to *Stephanodes*. However, *S. imbricatus* differs from *S. similis* in colour, pattern of antenna and body, the ratio between the 3rd and 4th antennal segments.

Measurements (in mm):

Length 1.11 mm, thorax 0.39, petiole 0,2, abdomen 0.39

Antenna: Scape 0.117, pedicel 0.052, III segment 0.091, IV 0.117, V 0.078, VI 0.065, VII 0.065, VIII 0.065, IX 0.156.

Forewing: Length 1,30. breadth 0.351, length of marginal cilia 0.195.

Legs: Fore: Coxa 0.091, femur 0.26, tibia 0.312, tarsi 0.39.
Mid: Coxa 0.091, femur 0.247, tibia 0.325, tarsi 0.364
Hind: Coxa 0.143, femur 0.299, tibia 0.39, tarsi 0.39.

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We are grateful to Mr. O. Bakkendorf, Copenhagen, Denmark, for his keen interest in this paper and helpful suggestions.

Summary

The present paper is the third of the series on Indian *Mymaridae*. In this paper the Genus *Lymaenon* Haliday, *Polynema* Haliday, *Maidliella* Soyka and *Stephanodes* Enock have been dealt with. Key to Indian species of *Lymaenon* has been given and three new species under the genus have been described. The generic status of the *Polynema* group of insects have been thoroughly discussed, and it is proposed that while *Polynema* will retain its generic status the other two genera, i. e. *Stephanodes* and *Maidliella* should only have the status of sub-genera. Two new species under the sub-genus *Polynema* and one species under the subgenus *Stephanodes* have been described as new to science.

Zusammenfassung

Die vorliegende Arbeit ist die dritte einer Publikationsreihe über indische *Mymaridae*. Sie behandelt die Gattungen *Lymaenon* Haliday, *Polynema* Haliday, *Maidliella* Soyka und *Stephanodes* Enock. Bestimmungsschlüssel für die indischen *Lymaenon*-Arten werden gegeben und drei neue Arten dieser Gattung beschrieben. Der generische Status der *Polynema*-Gruppe wird ausführlich diskutiert; es wird vorgeschlagen, daß *Polynema* seinen generischen Status behalten möge, während die beiden anderen Genera (*Stephanodes* und *Maidliella*) als Untergattungen betrachtet werden sollen. Zwei neue Arten der Untergattung *Polynema* und eine neue Art der Untergattung *Stephanodes* werden beschrieben.

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Резюме

Настоящая работа является третьей ряда публикаций об индийских *Mymaridae*. Она описывает роды *Lymaenon* Haliday, *Polynema* Haliday, *Maidliella* Soyka и *Stephanodes* Enock. Даются ключи определения для видов индийских *Lymaenon* и описываются три новых вида этого рода. Родовое положение группы *Polynema* подробно обсуждается; предлагается, чтобы *Polynema* сохраняло свое родовое положение, в то время как оба других рода (*Stephanodes* и *Maidliella*) следует считать разновидностям. Описываются два новых вида разновидности *Polynema* и один новый вид разновидности *Stephanodes*.

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Pigmentmodifikation und neuer Fundort von Aphelinus semiflavus How.

(*Hymenoptera*: *Chalcidoidea*)

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(Mit 5 Textfiguren)

Immer mehr verbreitet sich in der Chalcididen-Systematik die Erkenntnis, daß bei Bestimmungen oder Neubeschreibungen einer Art ihre Variationsbreite bisher zu wenig beachtet worden ist. Es besteht kein Zweifel mehr, daß sich die Zahl der gültigen Chalcididen-Arten verminderte, könnten von allen „Arten" Serien gezogenen Materials studiert werden.

[1]) Die Arbeit wurde mit Unterstützung der Deutschen Forschungsgemeinschaft durchgeführt. — Herrn Dr. Charles Ferrière, Genf, danke ich für seine wertvollen Ratschläge beim Studium dieser Art.

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