



REVISION OF KALOPOLYNEMA, WITH NOTES ON PLATYPOLYNEMA (HYMENOPTERA: MYMARIDAE)

Authors: Triapitsyn, Serguei V., and Berezovski, Vladimir V.

Source: Florida Entomologist, 85(4) : 611-619

Published By: Florida Entomological Society

URL: [https://doi.org/10.1653/0015-4040\(2002\)085\[0611:ROKWNQ\]2.0.CO;2](https://doi.org/10.1653/0015-4040(2002)085[0611:ROKWNQ]2.0.CO;2)

BioOne Complete (complete.bioone.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at www.bioone.org/terms-of-use.

Usage of BioOne Complete content is strictly limited to personal, educational, and non-commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

REVISION OF *KALOPOLYNEMA*, WITH NOTES ON *PLATYPOLYNEMA*
(HYMENOPTERA: MYMARIDAE)

SERGUEI V. TRIAPITSYN AND VLADIMIR V. BEREZOVSKIY

Entomology Research Museum, Department of Entomology, University of California
Riverside, California 92521

ABSTRACT

The New World fairyfly genus *Kalopolyntema* is divided into two subgenera, *Kalopolyntema* s. str., the nominal subgenus with the type species *K. (Kalopolyntema) discrepans* Ogloblin, and *Floripolyntema* S. Triapitsyn and Berezovskiy, subgen. nov. with the type species *K. (Floripolyntema) mizelli* S. Triapitsyn and Berezovskiy, sp. nov., described from Florida, USA. The four known species of *Kalopolyntema* are keyed and illustrated, including the North American *K. (Kalopolyntema) ema* (Schauff and Grissell), comb. nov. from *Polynema*, and *K. (Kalopolyntema) poema* S. Triapitsyn and Berezovskiy, sp. nov. from Argentina. Both *Kalopolyntema* and its relative *Platypolyntema*, a monotypic genus from Argentina also treated in this review, are characterized by the presence of subantennal grooves on the face.

Key Words: Hymenoptera, Mymaridae, *Kalopolyntema*, *Floripolyntema*, *Platypolyntema*, taxonomy

RESUMEN

El género de avispas mimáridos *Kalopolyntema* del Nuevo Mundo es dividido en dos subgéneros, *Kalopolyntema* s. str., el subgénero nominal con la especie típica *K. (Kalopolyntema) discrepans* Ogloblin, y *Floripolyntema* S. Triapitsyn y Berezovskiy, subgen. nov. con la especie típica *K. (Floripolyntema) mizelli* S. Triapitsyn y Berezovskiy, sp. nov., descrita de la Florida, los EE.UU. Una clave ilustrada para las cuatro especies conocidas de *Kalopolyntema* es presentado, incluyendo la especie norteamericana *K. (Kalopolyntema) ema* (Schauff y Grissell), comb. nov. desde *Polynema*, y *K. (Kalopolyntema) poema* S. Triapitsyn y Berezovskiy, sp. nov. de Argentina. Ambos *Kalopolyntema* y su relativo *Platypolyntema*, un género monotípico de Argentina que está también tratado en este revisión, se caracterizan por la presencia de surcos subantenaes sobre el frente.

Translation provided by senior author.

The little known mymarid genus *Kalopolyntema* was described by Ogloblin (1960) from two females belonging to the type species, *K. discrepans* Ogloblin. Both the holotype and the paratype were collected in the Province of Buenos Aires, Argentina, and until recently this genus has not been recorded outside that country. Our interest in studying *Kalopolyntema* was sparked by the result of a comparison of the type material of *K. discrepans* with the very distinctive North American species *Polynema ema* Schauff and Grissell, which we found to better fit in *Kalopolyntema*, based on several morphological features discussed below.

Kalopolyntema species have been practically unrecognizable although the genus was included in the key to females of New World Mymaridae by Yoshimoto (1990). However, *Platypolyntema* Ogloblin would also key to the same couplet with *Kalopolyntema* as both genera share two important morphological features, i.e., a short, subquadrate, petiole and the presence of two converging subantennal grooves on the face, extending from toruli to margin of clypeus. The latter character was not noticed in *Kalopolyntema* by Ogloblin (1960) because of the way he slide-mounted the specimens: the position of the head

prevents one from seeing the lower face and allows only the vertex and the occiput to be observed easily; however, at high magnification we noticed the presence of these grooves just below the toruli in the paratype of *K. discrepans*. The same happened with the original description of *Platypolyntema* (Ogloblin 1960) but later, when more specimens of *P. cautum* Ogloblin became available to him, the presence of subantennal grooves on the face was added to the generic diagnosis (Ogloblin 1967).

Kalopolyntema was not treated by Annecke and Doutt (1961) nor was it included in the key to the Nearctic genera of Mymaridae (Huber 1997), where it would key in the same couplet together with *Polynema* Haliday. To facilitate recognition of *Kalopolyntema* from related genera in the New World, a key is provided that also includes *Platypolyntema* and *Polynema* s. l.

Our interest in the *Polynema* group of genera in a broad sense, which corresponds roughly to the tribe Mymarini of Annecke and Doutt (1961) and where both *Kalopolyntema* and *Platypolyntema* belong, was further instigated by the recent discovery of a specimen from Monticello, Florida, that we first thought to represent a new mymarid genus from that group. However, after a

second female of the same species was discovered and both specimens were carefully studied, we decided that they would be better placed in *Kalopolynema* as a new subgenus and species, described here respectively as *Floripolynema* and *K. (Floripolynema) mizelli*. Inclusion of this taxon in *Kalopolynema* requires broadening of its diagnosis compared to that given by Ogloblin (1960).

Terms for morphological features are those of Gibson (1997). Measurements are given in micrometers (μm) as length or, where appropriate, as length/width. Abbreviations (codens) for depositories of specimens are as follows: CNCI, Canadian National Collection of Insects, Ottawa, Ontario, Canada; FSCA, Florida State Collection of Arthropods, Gainesville, Florida, USA; MLPA, Museo de La Plata, La Plata, Buenos Aires, Argentina; UCRC, Entomology Research Museum, University of California, Riverside, California, USA; USNM, National Museum of Natural History, Washington, D.C., USA. An abbreviation used in the text is: F = funicle segment.

GENUS *KALOPOLYNEMA* OGLOBLIN
(Figs. 1-10)

Kalopolynema Ogloblin, 1960: 3, 6; Yoshimoto, 1990: 72-73.

Type species: *Kalopolynema discrepans* Ogloblin, by monotypy and original designation.

Diagnosis. Face (Figs. 3, 7) with two converging subantennal grooves extending from toruli to margin of clypeus; prosternum "open", not closed by propleura anteriorly; mesoscutum and scutellum with cellulate sculpture; forewing (Figs. 2, 6,

9) narrow, marginal vein relatively short and with 1 (in *Floripolynema* **subgen. nov.**) or 2 (in the nominal subgenus) dorsal macrochaetae; petiole in dorsal view subquadrate, subrectangular, or cross-shaped (Fig. 10), at most $2 \times$ as long as wide, attached posteriorly to gastral tergum; female with ovipositor usually longer than body and strongly exerted beyond apex of gaster.

Comments. The previous diagnoses of *Kalopolynema* are incomplete because they failed to indicate perhaps the most important morphological feature that distinguishes *Kalopolynema*, including the new subgenus described below, and its sister genus *Platypolynema* from all other described genera belonging to the *Polynema* group: the presence of well-developed subantennal grooves on the face. The diagnoses by Ogloblin (1960) and Yoshimoto (1990) emphasized the peculiar shape of the petiole in *Kalopolynema*, which is also almost as short in *Platypolynema*; however, such a character is not unique among the *Polynema*-group genera (e.g., it is also found in the Australian *Polynema quadripetiolatum* Girault), although is very rare. *Kalopolynema* and *Platypolynema* are closely related but can be separated from each other by the combination of several morphological features given in the key.

Known host associations of *Kalopolynema* include two species of the planthopper genus *Megamelus* Fieber (Delphacidae) that reproduce on plants in or near water. The females of *Kalopolynema* species are equipped with a long ovipositor, apparently to be able to reach their hosts' eggs imbedded in the host plant tissue, which could be the aerenchyma in some water plants.

KEY TO THE SUBGENERA AND SPECIES OF *KALOPOLYNEMA*, FEMALES

1. Marginal vein of forewing with two dorsal macrochaetae (Figs. 2, 6); propodeum without dorsal elevation in the middle (subgenus *Kalopolynema* Ogloblin s. str.) 2
- Marginal vein of forewing with only one (the distal) dorsal macrochaeta (Fig. 9); propodeum with dorsal elevation in the middle (*Floripolynema* S. Triapitsyn and Berezovskiy, **subgen. nov.**)
..... *K. (Floripolynema) mizelli* S. Triapitsyn and Berezovskiy, **sp. nov.**
2. F1 almost as long as pedicel; F4 almost as long as F1 *K. (Kalopolynema) discrepans* Ogloblin
- F1 less than $0.5 \times$ length of pedicel; F4 longer than F1 3
3. Petiole in dorsal view longer than wide *K. (Kalopolynema) ema* (Schauff and Grissell), **comb. nov.**
- Petiole in dorsal view about as long as wide
..... *K. (Kalopolynema) poema* S. Triapitsyn and Berezovskiy, **sp. nov.**

SUBGENUS *KALOPOLYNEMA* OGLOBLIN S. STR.
(Figs. 1-6)

Kalopolynema Ogloblin, 1960: 3, 6; Yoshimoto, 1990: 72-73.

Type species: *Kalopolynema discrepans* Ogloblin.

Diagnosis. Female clava with 7 or 9 longitudinal sensilla (Figs. 1, 5); sculpture on scutellum ante-

rior to frenal line notably less pronounced than on mesoscutum and frenal area of scutellum; propodeum smooth or with a median carina, without a dorsal elevation in the middle; marginal vein of forewing with 2 dorsal macrochaetae; petiole in dorsal view subquadrate or subrectangular; female with ovipositor usually much longer than body and very strongly exerted beyond apex of gaster.

KALOPOLYNEMA (*KALOPOLYNEMA*)
DISCREPANS OGLOBLIN
(Figs. 1, 2)

Kalopolyntema discrepans Ogloblin, 1960: 6-7, figs. 5-11.
Type locality: Tigre, Buenos Aires, Argentina.

Types. Holotype female (MLPA), examined. On slide, labeled: 1. "*Kalopolyntema discrepans* Ogl. HOLOTIPO ♀ Bs. As. Tigre IV-1942, A. O."; 2. "*Kalopolyntema dictynn*[a - crossed out]um [this is a manuscript name] A. Ogl. ♀ Tigre, B. A. IV.1942, A. O.". Paratype female (MLPA), examined. On slide, labeled: 1. "*Kalopolyntema discrepans* Ogl. PARATIPO ♀ Bs. As. Bella Vista X.1946, A. O." 2. "*Kalopolyntema dictynna* A. O. ♀ [an illegible word follows] Bella Vista X.1942, A. O.".

Diagnosis. This species is easy to separate from the other two known species in this genus by characters given in the key. Other distinguishing features of *K. discrepans* females include the presence of two longitudinal sensilla on both F5 and F6 and nine longitudinal sensilla on the clava.

Male. Unknown.

Distribution. Known only from the type localities, Tigre and Bella Vista, in the Province of Buenos Aires, Argentina.

Host. Unknown.

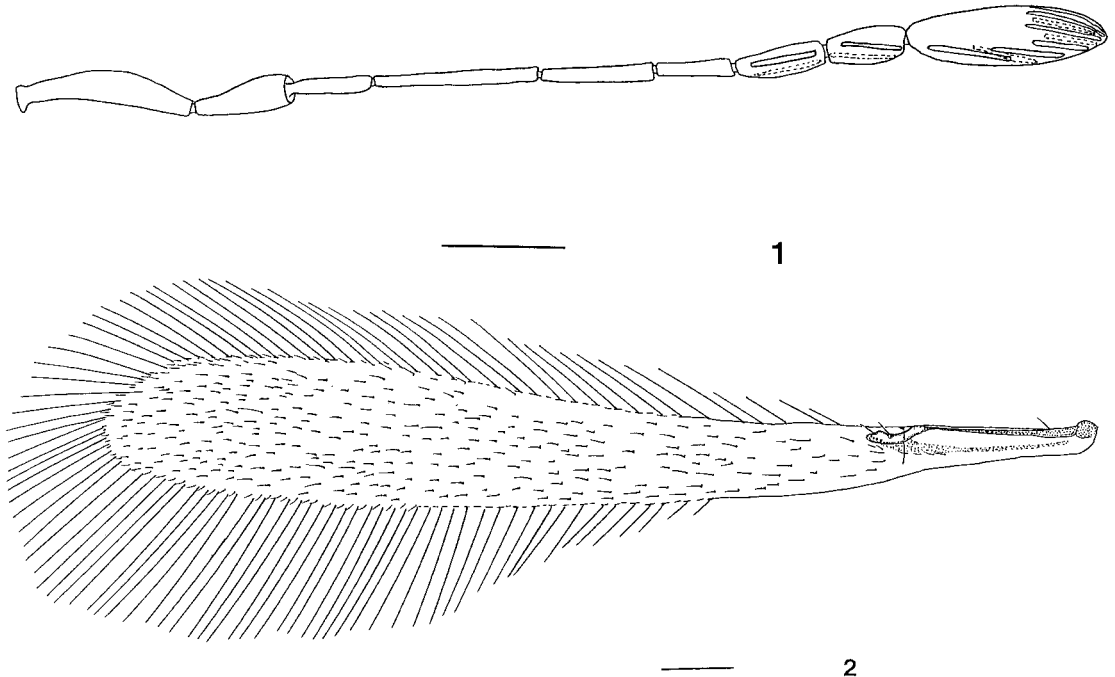
Comments. The original description of this species is adequate and well-illustrated. Here we provide drawings of the antenna (Fig. 1) and forewing (Fig. 2) of *K. discrepans* because Ogloblin's illustrations are incomplete.

KALOPOLYNEMA (*KALOPOLYNEMA*) *EMA* (SCHAUFF AND
GRISSELL), **COMB. NOV.**
(Figs. 3, 4)

Polynema ema Schauff and Grissell, 1982: 530-533.
Type locality: Etherton Pond, 3 mi. N. of Pomona, Jackson Co., Illinois, USA.

Types. Holotype female and numerous paratypes (USNM and CNCI), examined.

Other material examined. CANADA, Ontario, Ottawa, Montfort hospital wood, VII-1994, J. R. Vockeroth (1 ♀, CNCI). USA. Florida: Alachua Co., Gainesville: 1-5-I-1976, E. E. Grissell (1 ♀, FSCA); 26-IX-5.XII-1986, D. B. Wahl (2 ♀♀, CNCI); 14-IV-1987, CNC Hym. Team (1 ♀, CNCI); 23-II-2.VI-1988, D. B. Wahl (2 ♀♀, CNCI). Citrus Co., 30 km N Homosassa, Ozello Trail, 14-IV-1992, L. Masner (1 ♀, CNCI). Collier Co., Fakahatchee Strand State Park, 13-XI-1998-15-I-1999, M. Owen (1 ♀, CNCI). St. Johns Co., Fort Caroline, 13-X-1980, L. Masner, B. Bowen (1 ♀, CNCI). Georgia, Liberty Co., St. Catherines I., 22-27-VIII-1995, A. Sharkov (1 ♀, UCRC). Massachusetts, Hampden Co., Westfield, 30-IX-1992, J. R.



Figs. 1 and 2. *Kalopolyntema* (*Kalopolyntema*) *discrepans* Ogloblin, female. Fig. 1. Antenna (paratype). Fig. 2. Forewing (holotype). Scale bars = 0.1 mm.

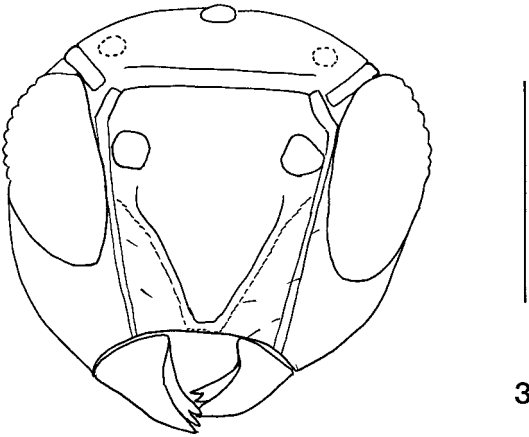


Fig. 3. *Kalopolyntema (Kalopolyntema) ema* (Schauff and Grissell). Head (frontal view), female (Gainesville, Florida, USA).

Vockeroth, pan trap in *Typha* sp. (1 ♀, CNCI). Maryland, Prince Georges Co., Laurel, Patuxent Wildlife Research Center, 22-25-VI-1980, L. Masner (1 ♀, 1 ♂, CNCI). Virginia, Louisa Co., 4 mi. S Cuckoo, 28-VII-11-VIII-1988, J. Kloke, D. R. Smith (1 ♀, USNM).

Diagnosis. This species can be distinguished from the type species of the genus, *K. discrepans*, and from the newly described *K. poema* by char-

acters given in the key. Other distinguishing characters of both *K. ema* and *K. poema* females include the absence of longitudinal sensilla on F5 and F6 and the presence of 7 longitudinal sensilla on the clava. The mesosoma of *K. ema* is very short and compact, shorter than the gaster. The propodeum in this species has a complete median carina in the male and a broken carina in the female (Illinois specimens); in the female specimens from Florida and Georgia the propodeum is either almost smooth or with a weak trace of a broken median carina only. The petiole is about 2 × as long as wide; subrectangular in dorsal view and produced into a tooth ventrally (best seen in lateral view).

Here we provide an illustration of the head in frontal view (Fig. 3) to show the presence and configuration of subantennal grooves on the face. Also illustrated are the male genitalia (Fig. 4) which are very similar to those in many *Polynema* species. These illustrations supplement the figures in Schauff and Grissell (1982).

Distribution. As seen from "Other material examined" above, new distribution records since Schauff and Grissell (1982) are from Canada (Ontario) and USA (Florida, Georgia, Massachusetts, Virginia); it probably will be found to occur throughout the range of its host (Schauff and Grissell 1982).

Host. The lily (water-lily) planthopper, *Megamelus davisii* Van Duzee (Homoptera: Delphacidae).

Comments. This species was introduced in 1941 from Michigan into Honolulu, Oahu Island, Hawaii, under the incorrect name *Polynema ciliata* (Say) (its nomenclatural history was discussed by Schauff and Grissell (1982)), and successfully established there on local populations of the water-lily planthopper (Zimmerman 1948). The likelihood that *K. ema* is also able to parasitize eggs of other *Megamelus* species is very high.

KALOPOLYNEMA (KALOPOLYNEMA) POEMA S. TRIAPITSYN AND BEREZOVSKIY, SP. NOV.
(Figs. 5, 6)

Types. Holotype female (CNCI). On card, labeled: 1."ARGENTINA: Buenos Aires Prov., Hurlingham Lab., 18.xi.1999. Ex. *Megamelus* sp. on *Eichhornia crassipes*"; 2. "*Kalopolyntema (Kalopolyntema) poema* S. Triapitsyn & Berezovskiy HOLOTYPE ♀". Paratype female (CNCI) on slide, same data as the holotype except the date is 19-XI-1999.

Description. Female. Color. Brown except scape, pedicel, legs, and petiole light brown; distal tarsomeres slightly darker than other leg segments; eye pink.

Head. Width 223, round in frontal view; face with distinct, narrow subantennal grooves and with several symmetrical rows of small setae; torulus slightly above mid level of eye. Vertex

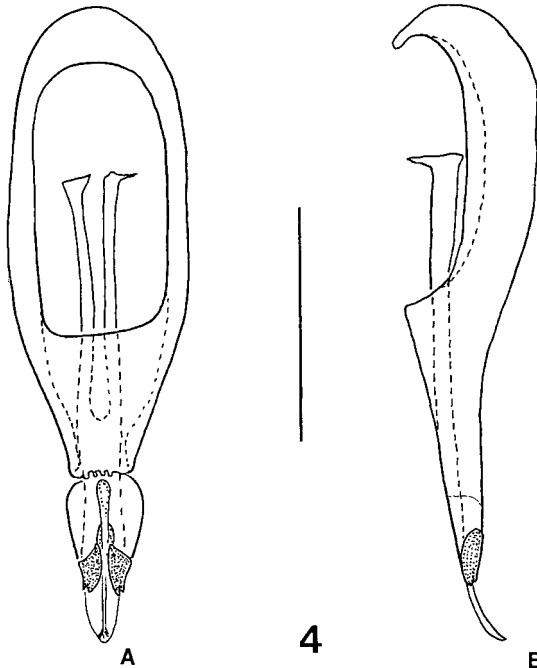
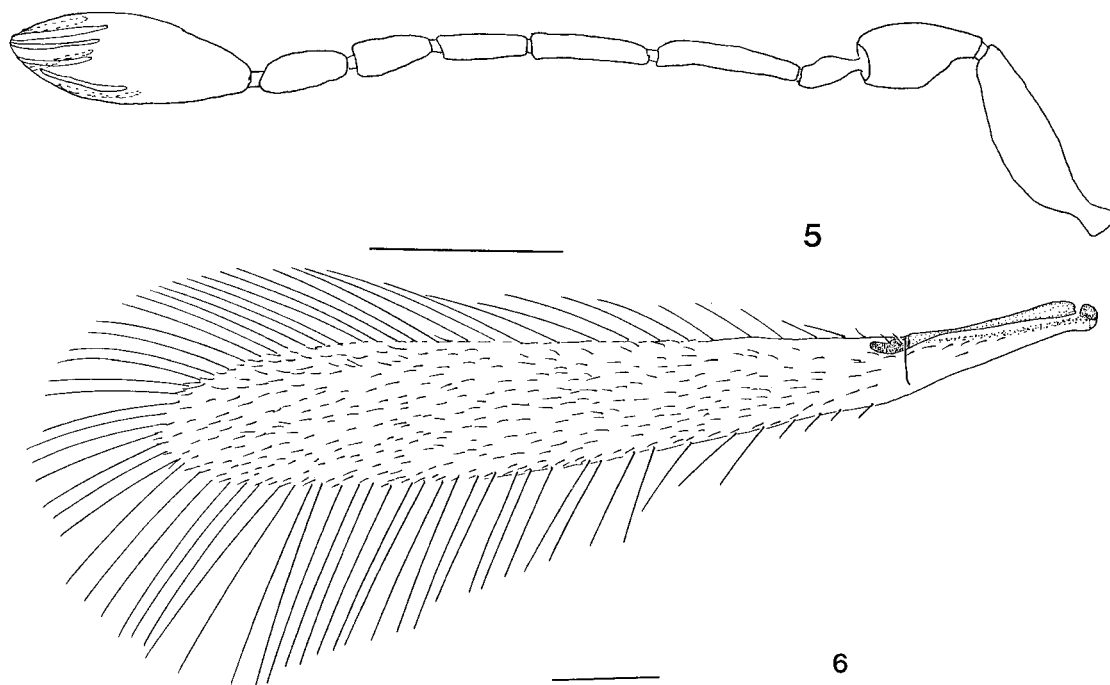


Fig. 4. *Kalopolyntema (Kalopolyntema) ema* (Schauff and Grissell). Genitalia, male (Laurel, Maryland, USA). A. Dorsal view. B. Lateral view. Scale bars = 0.1 mm.



Figs. 5 and 6. *Kalopolynema (Kalopolynema) poema* S. Triapitsyn and Berezovskiy, sp. nov., female (paratype). Fig. 5. Antenna. Fig. 6. Forewing. Scale bars = 0.1 mm.

rounded, with fine sculpture, ocelli in very obtuse triangle. Mandible tridentate.

Antenna (Fig. 5) shorter than body, sparsely setose except clava more densely setose. Radicle not fused with scape, the scape smooth, 3.4 x as long as wide; pedicel pear-shaped, longer than wide, much longer than F1; all funicle segments longer than wide, F1 the shortest and F2 the longest, F3 longer than F4, F5 markedly shorter than F4 and slightly shorter than F6, all funicle segments without longitudinal sensilla; clava 2.6 x as long as wide, with 7 longitudinal sensilla, all of them subapical.

Mesosoma. Pronotum very short, divided mediolongitudinally; pronotum, mesoscutum, axilla, and frenal area of scutellum with conspicuous cellulate sculpture; mesoscutum wider than long; scutellum about as long as wide and as long as mesoscutum, scutellar sensilla close to anterior margin of scutellum, frenal line with small foveae; metanotum strap-like; propodeum smooth, without median carina.

Wings. Forewing (Fig. 6) 7.3 x as long as wide; venation reaching slightly less than 1/4 length of wing; longest marginal cilia almost 2 x greatest width of blade; disc hyaline, more or less uniformly setose beyond venation. Hind wing disc hyaline, with setae only along margins; longest marginal cilia 6 x maximum width of blade.

Legs. Coxae smooth, metacoxa longer than petiole. Protibia with 5 conical sensilla.

Metasoma. Petiole subquadrate in dorsal view. Gaster longer than mesosoma. Ovipositor broadly rounded anteriorly, occupying more than 4/5 length of gaster, markedly exerted beyond its apex (exserted part of ovipositor about 0.6 x its total length in paratype); ovipositor/metatibia ratio 3.4:1.

Measurements ($n = 1$, taken from paratype except body and head lengths from holotype): Body: 792. Head: 117; mesosoma: 300; mesoscutum: 106; scutellum: 101; gaster: 546; ovipositor: 1010 (1123 in holotype). Antenna: scape (including radicle): 120; pedicel: 63; F1: 31; F2: 75; F3: 61; F4: 51; F5: 43; F6: 47; clava: 129. Forewing: 983/146; longest marginal cilia: 259. Hind wing: 792/16. Legs (given as coxa, femur, tibia, tarsus): fore: 92, 233, 233, 254; middle: 80, 194, 288, 292; hind: 118, 202, 318, 391.

Etymology. The new species name means "a poem" in Russian; the sole reason for choosing it is the fact that it rhymes with the name of the closely related species, *K. ema*.

Male. Unknown.

Diagnosis. This species is similar to *K. ema*. It differs mainly in the shape of the petiole, as indicated in the key, as well as in the shape of the marginal vein which is relatively shorter in *K. poema*. The female clava in *K. poema* is about 2.6 x as long as wide (2.1-2.2 x as long as wide in *K. ema*).

Distribution. Known only from the type locality in Hurlingham, Buenos Aires, Argentina.

Host. *Megamelus scutellaris* Berg (Homoptera: Delphacidae).

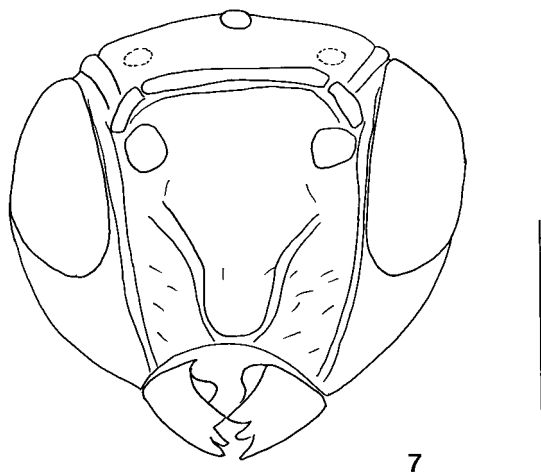
Comments. The material of the new species was sent to John T. Huber (CNCI) by Livy Williams, III (USDA-ARS, Stoneville, Mississippi). More detailed information on the identity of the host planthopper was provided to me recently, as a personal communication, by Alejandro Sosa (South American Biological Control Laboratory, USDA-ARS, Hurlingham, Buenos Aires, Argentina) who apparently was the actual collector of the two type specimens of *K. poema*. *Megamelus scutellaris* lives on water-hyacinth, *Eichhornia crassipes* (C. Martins) Solms-Loubach, in Argentina and has been studied there as a potential biological control agent against this aquatic weed. Should *M. scutellaris* ever be considered for establishment beyond its native range, caution must be applied to avoid an inadvertent introduction of its egg parasitoid, *K. poema*.

FLORIPOLYNEMA S. TRIAPITSYN AND BEREZOVSKIY,
SUBGEN. NOV.
(Figs. 7-10)

Type species: *Kalopolynema (Floripolynema) mizelli* S. Triapitsyn and Berezovskiy, **sp. nov.** Monobasic.

Diagnosis. Female clava with 7 longitudinal sensilla (Fig. 8); sculpture on scutellum anterior to frenal line as pronounced as on mesoscutum and frenal area of scutellum; propodeum with an incomplete median carina and with a dorsal elevation in the middle; marginal vein of the forewing with one (the distal) dorsal macrochaeta (Fig. 9); petiole in dorsal view cross-shaped, almost subquadrate (Fig. 10); female with ovipositor almost as long as body.

Description. Female. Head in dorsal view about as wide as mesosoma, oval in lateral view.



Figs. 7. *Kalopolynema (Floripolynema) mizelli* S. Triapitsyn and Berezovskiy, **sp. nov.**, female (paratype). Head (frontal view). Scale bars for Figs. 7-10 = 0.1 mm.

Face (Fig. 7) with narrow, distinct subantennal grooves; torulus slightly above mid level of eye, almost touching preorbital trabecula. Vertex rounded, with fine sculpture, ocelli in very obtuse triangle. Mandible tridentate.

Antenna (Fig. 8). Scape much longer than wide; pedicel longer than wide, funicle 6-segmented, all segments more or less cylindrical; clava entire, with 7 longitudinal sensilla.

Mesosoma. Pronotum divided mediolongitudinally, neck strongly wrinkled transversely, lobes of pronotal collar with fine cellulate sculpture. Mesoscutum, axilla, scutellum, and metanotum with conspicuous cellulate sculpture; mesoscutum a little longer than wide, with prominent notauli; scutellum shorter than mesoscutum, scutellar sensilla almost in the middle and far apart from each other, frenal line with small foveae; metanotum strap-like. Propodeum smooth, in dorsal view elevated posteriorly in the middle to form a ridge projecting beyond posterior margin and in lateral view forming almost a right angle (somewhat as in *Polynema (Dorypolynema) mendeli* Girault), with an incomplete median carina in distal half of propodeum; propodeal seta strong, near posterior margin; propodeal spiracle rounded.

Wings. Forewing (Fig. 9) relatively narrow; venation short, extending about $\frac{1}{4}$ length of wing, hypochaeta reaching posterior margin, marginal vein with one (the distal) dorsal macrochaeta and one short ventral seta at apex; disc hyaline, more or less uniformly setose beyond venation; longest marginal cilia about as long as greatest width of blade. Hind wing much shorter than forewing, typical for *Polynema*-group of genera.

Legs. Tarsi 4-segmented.

Metasoma. Petiole (Fig. 10) in dorsal view cross-shaped, almost subquadrate, attached posteriorly to gastral tergum; gaster projecting forward ventrally, almost reaching base of mesocoxa (best seen in lateral view); ovipositor long, almost as long as body, markedly exerted beyond its apex.

Male. Unknown.

Etymology. An arbitrary use of the first part of the word Florida, referring to the state where the new subgenus was found, combined with the generic name *Polynema*. Gender: neuter.

KALOPOLYNEMA (FLORIPOLYNEMA) MIZELLI
S. TRIAPITSYN AND BEREZOVSKIY, **SP. NOV.**
(Figs. 7-10)

Types. Holotype female (CNCI). On point, labeled: 1. "USA: Florida, Alachua Co., Gainesville, AEI, 23.ii.2.vi.1988, D. B. Wahl, FIT"; 2. "*Floripolynema mizelli* S. Triapitsyn & Berezovskiy HOLOTYPE ♀". Paratype female (UCRC). On slide, labeled: 1. "USA, Florida, Jefferson Co., Monticello, University of Florida Research &

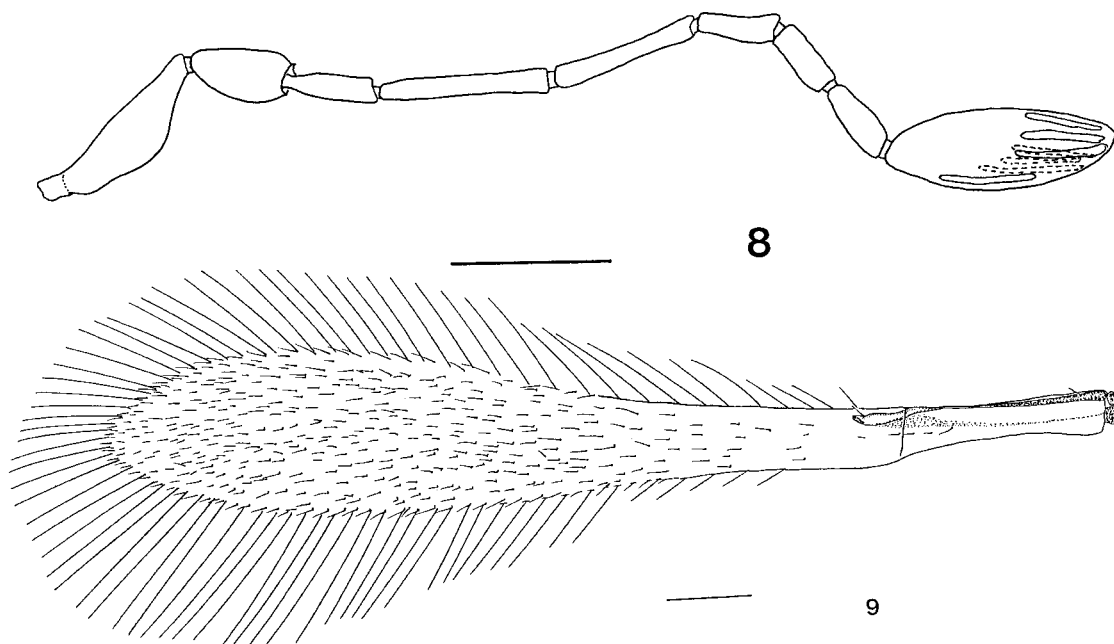


Fig. 8. Antenna. Fig. 9. Forewing.

Education Center, 25.vii-12.viii.2000, R. Mizell, III. MT at forest edge"; 2. "*Floripolynema mizelli* S. Triapitsyn & Berezovskiy PARATYPE ♀".

Description. Female. Color. Head and mesosoma black; flagellum and gaster dark brown; scape, pedicel, wing venation, petiole, ovipositor sheath and external plate of ovipositor brown; legs light brown except base of metacoxa, apical half of mesotibia, metatibia, last tarsomeres of fore- and middle legs and metatarsus darker. Eye dirty pink.

Head. Width 241, face (Fig. 7) with several symmetrical rows of small setae. Ocellar setae small, inconspicuous.

Antenna (Fig. 8) much shorter than body, sparsely setose except clava more densely setose. Radicle almost fused with scape, scape smooth, about 3 x as long as wide; pedicel slightly longer than F1; F2 longest of funicle segments, F3 much longer than following funicle segments; F4 and F6 subequal in length (F5 slightly shorter); all funicle segments without longitudinal sensilla; F6 slightly wider than preceding funicle segments; clava 2.7 x as long as wide, with 7 longitudinal sensilla, 6 of them subapical.

Mesosoma. Lobe of pronotal collar with 5 setae; axilla small, with one weak seta; scutellum about as wide as long.

Wings. Forewing (Fig. 9) 6.5 x as long as wide; marginal + stigmal vein with 4 placoid sensilla at apex; longest marginal cilia 1.15 x greatest width of blade. Hind wing disc hyaline, with a few setae

in an incomplete row in distal half; longest marginal cilia 5 x maximum width of blade.

Legs. Coxae smooth, metacoxa much longer than gastral petiole. Protibia with 3 or 4 conical sensilla.

Metasoma. Petiole (Fig. 10) slightly wrinkled transversely in basal third and with a transverse

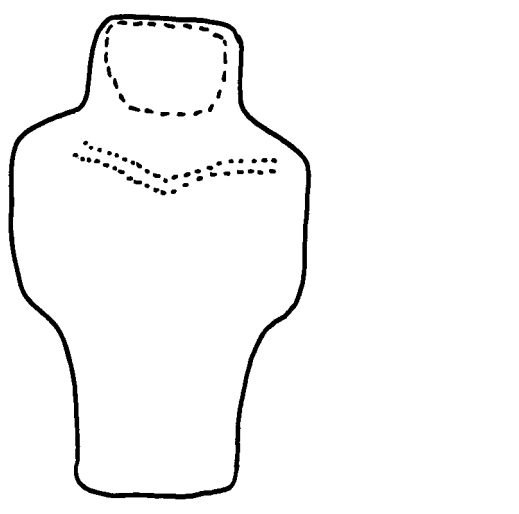


Fig. 10. Petiole (dorsal view).

10

carina ventrally. Ovipositor occupying the whole length of gaster, markedly exerted beyond its apex (by about $\frac{1}{3}$ total length of ovipositor); ovipositor/metatibia ratio 2.1:1.

Measurements ($n = 1$, paratype): Body (length of the dry-mounted specimen taken before slide-mounting): 1121. Head length (taken before slide-mounting): 168; mesosoma: 482; mesoscutum: 153; scutellum: 118; petiole: 92; gaster: 692; ovipositor: 1037. Antenna: scape (including radicle): 129; pedicel: 66; F1: 59; F2: 115; F3: 99; F4: 56; F5: 52; F6: 54; clava: 153. Forewing: 1200/185; longest marginal cilia: 212. Hind wing: 1001/21. Legs (given as coxa, femur, tibia, tarsus): fore: 128, 281, 321, 277; middle: 113, 256, 464, 307; hind: 153, 255, 491, 428.

Male. Unknown.

Etymology. The new species is named in honor of Russell F. Mizell, III, collector of one of the type specimens.

Distribution. Known only from the type localities in Florida.

Host. Unknown.

Comments. This species is one of the most beautiful of North American Mymaridae.

GENUS *PLATYPOLYNEMA* OGLOBLIN
(Figs. 11, 12)

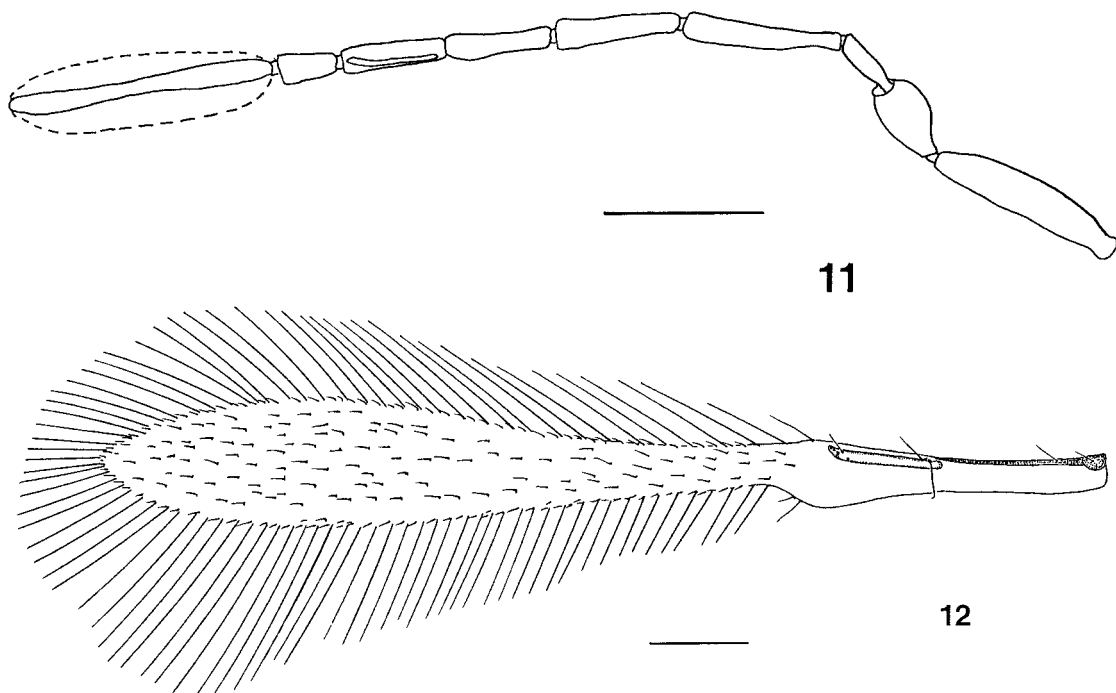
Platypolynema Ogloblin, 1960: 7; Ogloblin, 1967: 192; Yoshimoto, 1990: 73.

Type species: *Platypolynema cautum* Ogloblin, by monotypy and original designation.

Diagnosis. Head very large and high, markedly wider than mesosoma, with well-defined sub-antennal grooves; prosternum anteriorly "closed" by propleura; mesoscutum smooth, much longer than scutellum; forewing (Fig. 12) long and narrow, with a constriction of blade beyond venation; marginal vein long and with 2 dorsal macrochaetae; petiole in dorsal view subquadrate; female with ovipositor very long, acutely elbowed and strongly produced forward anteriorly beneath mesosoma.

Comments. Yoshimoto (1990) apparently overlooked the earlier description of the female of *Platypolynema* by Ogloblin (1967) and therefore it is included only in his key to the males of the New World genera of Mymaridae.

The biology of the single known species of *Platypolynema* is unknown. Like *Kalopolynema* species, it is quite possible that it is associated with some Auchenorrhyncha on plants near water.



Figs. 11 and 12. *Platypolynema cautum* Ogloblin, female (allotype). Fig. 11. Antenna. Fig. 12. Forewing. Scale bars = 0.1 mm.

PLATYPOLYNEMA CAUTUM OGLOBLIN
(Figs. 11, 12)

Platypolynema cautum Ogloblin, 1960: 8-9, figs. 12-16; Ogloblin, 1967: 192-194.

Type locality: Chacra "Yabebirí", San Ignacio, Misiones, Argentina.

Types. Holotype male (MLPA), examined; in good condition, mounted dorso-ventrally, with part of the left antenna missing. On slide, labeled: 1. "*Platypolynema cautum* [*dictynnum*—crossed out, this is a manuscript name] A. Ogl. ♂ Chacra Yabebirí, S. Ignacio, Mis. 11.III.1951 A. O.". Allotype female (MLPA), examined; pedicel and flagellum of the right antenna are missing. On slide, labeled: 1. "*Platypolynema cautum* A. Ogloblin ♀, Misiones, 2 de Mayo 20-XI-1964"; 2. (Mostly illegible, in pencil) "*Platypolynema* 2 de Mayo A. O. 15.XII.1964". We added the word "Allotype" to the first label in order to clearly mark this specimen as such.

Other material examined. ARGENTINA, Misiones: Dos de Mayo, 6-XII-1964, A. A. Ogloblin (1 ♂, MLPA). Parque Nacional Iguazú, Cantera,

200 m, 8-XII-1990-6-I-1991, S. & J. Peck (1 ♂, CNCI).

Distribution. Province of Misiones, Argentina.

Host. Unknown.

Comments. The holotype male is labeled slightly differently on the slide from what was indicated by Ogloblin (1960): the date of the collection is 11-III-1951 instead of 12-III-1953. However, there is no doubt that this specimen is indeed the holotype as it perfectly matches Ogloblin's illustrations. In fact, many type specimens from Ogloblin's collection of Mymaridae are not marked as such and often the label data on the slides contradict the published information.

The original description of the holotype male of this species and the follow-up description of the allotype female are sufficient for its recognition. Here we provide drawings of the antenna (note that the clava is collapsed) (Fig. 11) as well as of the forewing (Fig. 12), taken from the allotype female of *P. cautum*.

KEY TO THE NEW WORLD GENERA RELATED TO *KALOPOLYNEMA*

1. Face without distinct subantennal grooves converging from toruli to margin of clypeus, at most with slight depressions; petiole more or less cylindrical, usually much longer than wide. *Polynema* Haliday s. l.
- Face with distinct subantennal grooves converging from toruli to margin of clypeus (Figs. 3, 7); petiole subquadrate, subrectangular, or cross-shaped (Fig. 10), at most 2 × as long as wide 2
2. Head typical in size for the group, about as wide as mesosoma; forewing without narrowing of the blade beyond venation, marginal vein relatively short (Figs. 2, 6, 9). *Kalopolyntema* Ogloblin
- Head very large and high, markedly wider than mesosoma; forewing with a narrowing of the blade beyond venation, marginal vein relatively long (Fig. 12). *Platypolynema* Ogloblin

ACKNOWLEDGMENTS

We thank John T. Huber (CNCI) for the loan of specimens, valuable advice, and review of the manuscript, Russell F. Mizell, III (University of Florida, North Florida Research and Education Center, Quincy, Florida) for maintaining a Malaise trap in Monticello, Florida, and providing us with material, Patricio Fidalgo (CONICET, San Miguel de Tucumán, Tucumán, Argentina) for making specimens of the type species of *Kalopolyntema* and *Platypolynema* available for study, and Michael E. Schauff (USNM) for access to the type series of *Polynema ema*.

REFERENCES CITED

- ANNECKE, D. P., AND R. L. DOUTT. 1961. The genera of the Mymaridae Hymenoptera: Chalcidoidea. Entomol. Mem., Rep. South Africa Dept. Agric. Tech. Serv., 5: 1-71.
- GIBSON, G. A. P. 1997. Chapter 2. Morphology and terminology, pp. 16-44. In G. A. P. Gibson, J. T. Huber and J. B. Woolley (eds.). Annotated keys to the gen-

- era of Nearctic Chalcidoidea (Hymenoptera). NRC Research Press, Ottawa, Ontario, Canada. 794 pp.
- HUBER, J. T. 1997. Chapter 14. Mymaridae, pp. 499-530. In G. A. P. Gibson, J. T. Huber and J. B. Woolley (eds.). Annotated keys to the genera of Nearctic Chalcidoidea (Hymenoptera). NRC Research Press, Ottawa, Ontario, Canada. 794 pp.
- OGLOBLIN, A. 1960. Los representantes nuevos de la tribu Polynematini de la República Argentina (Hymenoptera, Mymaridae). Neotropica, 6 (19): 1-11.
- OGLOBLIN, A. A. 1967. Mimáridos nuevos de Argentina (Hymenopt. Mymaridae). Acta Zool. Lilloana, 22: 183-196.
- SCHAUFF, M. E., AND E. GRISELLE. 1982. Nomenclatural notes on *Polynema* (Hymenoptera: Mymaridae), with description of a new species. Proc. Entomol. Soc. Washington, 84 (3): 529-534.
- YOSHIMOTO, K. 1990. A review of the genera of New World Mymaridae (Hymenoptera: Chalcidoidea). Flora & Fauna Handbook No. 7, Sandhill Crane Press, Inc., Gainesville, Florida. 166 pp.
- ZIMMERMAN, E. C. 1948. Insects of Hawaii. Volume 4. Homoptera: Auchenorrhyncha. University of Hawaii Press, Honolulu. 268 pp.