

# Notes on Caribbean Phymatidae (Hemiptera: Heteroptera)

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New descriptive and distributional data are presented for Ambush bugs from the Dominican Republic: *Phymatocoris iviei* gen. nov., spec. nov. and *Lophoscutus hispaniolensis* spec. nov. New records are given for *Phymata interjecta* Dudich, 1922, *Lophoscutus confusus* Kormilev, 1989, and *L. ypsilon* Kormilev, 1990. Keys are given for the American genera of Macrocephalinae, and for the Caribbean species of the genus *Lophoscutus*.

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## Introduction

The motive for this paper was the opportunity offered by Dr M.A. Ivie to study a lot of 28 Phymatidae, collected by him in the Dominican Republic, among which is a very interesting specimen of a new macrocephaline species, for which we propose to raise a new genus.

Figures given in the equations represent units of the ocular micrometer each corresponding to 0.04 mm.

## Subfamily Phymatinae

### *Phymata interjecta* Dudich, 1922.

*Phymata marginata* Fabricius, var. *interjecta* Dudich, 1922: 164.

*Phymata interjecta*; Kormilev, 1962: 288, 375.

Material.— **Dominican Republic**, Pedernales prov., M. Ivie, Philips & Johnson: El Aceitillar, 35 km NNW Cabo Rojo, 1250-1430 m 20-23.viii.1988, 5 ♂♂, 2 ♀♀; 13.5 km NNW Cabo Rojo, 140 m, flight intercept trap, 21.viii-10.ix.1988, 1 ♂.

## Subfamily Macrocephalinae

### *Lophoscutus confusus* Kormilev, 1989

*Lophoscutus confusus* Kormilev, 1989: 61.

Material — **Dominican Republic**, Pedernales prov., 24 km N Cabo Rojo, 610 m, wet forest, 19.viii.1988, M. Ivie, Philips & Johnson, 1 ♀. A male specimen described as a paratype of this species actually belongs to the next species, *L. ypsilon* Kormilev, 1990.

### ***Lophoscutus ypsilon* Kormilev, 1990**

*Lophoscutus ypsilon* Kormilev, 1990: 223.

Material.— **Dominican Republic**, Pedernales prov., El Aceitillar, Las Abejas, 35 km N Cabo Rojo, 1250-1430 m, 23-26.viii.1988, M. Ivie, Philips & Johnson, 13 ♂♂, 4 ♀♀.

### ***Lophoscutus hispaniolensis* spec. nov.**

(fig. 1)

Material.— Holotype, ♀, **Dominican Republic**, Pedernales prov., 13.5 km N Cabo Rojo, 140 m, flight intercept trap, 21.VIII-10.IX.1988, M. Ivie, Philips & Johnson. Deposited at the National Museum of Natural History, Washington.

Female.— Elongate ovate; head roughly granulate on upper side, less laterally; pronotum almost smooth on fore lobe, finely punctured elsewhere; abdomen with sparse, fine granulation on connexivum and venter; pleurae finely punctured and crenate on fore border of propleuron and lower border of metapleuron; fore femora sparsely granulate on disc and serrate on upper border.

Head.— median line longer than its width across eyes (23:17); clypeus with a longitudinal row of granules; preocular border shorter than postocular border (6:10); ocelli placed nearer to the eyes than to hind border of the head. Antennae short, 1.28 times as long as width of head across eyes. Relative length and width (°) of antennal segments I to IV are: 7(3):3(0.75):4(25):7.75(5). Relative length of labial segments I to III, 13:10:5.

Thorax.— Length of pronotum along median line shorter than maximum width across lateral angles (30:45). Anterior border evenly sinuate; anterolateral angles almost rectangular; anterolateral borders of fore lobe straight, divergent backwards and finely crenulate; anterolateral borders of hind lobe weakly convex; lateral angles rectangular; posterolateral borders of hind lobe firstly convex, then sinuate; posterior border convex. Disc of fore lobe inflated, with a minute pit medially; disc of hind lobe weakly depressed medially and sublaterally; carinae thin, gently curved and divergent backwards, reaching hind border of pronotum; posterior angles rounded. Scutellum longer than its maximum width at level of junction of connectiva V and VI (70:32), reaching end of abdomen; median carina thin, reaching hind border, anteriorly enlarged and depressed; basal half of the disc with a triangular, posteriorly truncated light spot, not reaching lateral borders and posteriorly reaching level of hind border of connexivum III; disc densely and finely punctured. Fore wings reaching end of scutellum; corium reaching hind border of connexivum IV. Fore femora longer than their maximum width (30:18).

Abdomen.— Median line longer than its maximum width across segment III (65:57.5); posterolateral angles of connexiva not protruding; hind border of connexivum VIII slightly cut out medially; venter raised medially on segment III, then sloping.

Colour.— General colour creamy yellow; hind lobe of pronotum and scutellum, with exception of basal triangular spot, infusate.

Measurements.— Total length 4.88 mm; width of pronotum 1.80 mm; width of abdomen 2.30 mm.

Note.— This species can easily be separated from other *Lophoscutus* species by the triangular light spot on the scutellum.

Etymology.— The name of the species refers to the Caribbean island Hispaniola of which the Dominican Republic is a part.

### *Phymatocoris* gen. nov.

Type species: *Phymatocoris iviei* spec. nov.

Habitus elongate rhomboid.

Head.— Head long and narrow, more than twice as long as its width across eyes; antennae short, only slightly longer than the head, second segment longest, third shortest, in state of repose bent downwards from its second joint and placed into canals formed by bucculae along the labium, reaching slightly behind the eyes; antennal segment I three times as long as thick; II one and a half times as long as I; III shortest, less than half as long as I; IV fusiform, slightly shorter than I. Eyes protruding, placed in the middle of the sides of the head. Ocelli almost equidistant from eyes and posterior border of the head. Preocular borders slightly sinuate, postocular borders straight. Jugae obliquely cut out medially, forming a long cleft anteriorly; genae acutely produced forwards but not reaching the tip of the jugae; bucculae forming three flaps each, the first two very short, the third as long as the first two together, not reaching the hind border of the head.

Thorax.— Pronotal length less than its maximum width across the lateral angles; fore lobe long and narrow, its anterior border sinuate, anterior angles acute, directed anteriorly; lateral borders of fore lobe almost straight and crenulate; the disc granulate. Hind lobe strongly widening, forming lobes, cut out in the middle, directed up and forward; posterolateral borders firstly convex then sinuate; posterior angles minute; posterior border rounded; posterior lobe three times depressed longitudinally; carinae slightly divergent, anteriorly set with one large, and several smaller granulae, reaching hind border of pronotum inwardly of the posterior angles. Scutellum long, tongue-shaped, slightly longer than abdomen; lateral borders sinuate on basal half, and convex apically; median carina raised basally, reaching hind border of scutellum; disc roughly punctured, more densely in the middle of the scutellum. Hemelytra not reaching tip of abdomen; corium reaching hind border of connexivum V. Fore legs small, coxae long, cylindrical, trochanters free, separating coxae and femora; these narrow at base, strongly dilated towards apex; fore tibiae thin, with minute fore tarsi. Middle and hind legs normal.

Abdomen.— Median line shorter than maximum width across lateral angles, the latter rounded; lateral borders widening from II to III, then receding; maximum width across segment III; posterolateral angles of the connexivum II produced; segment II with very narrow, III and IV with wide ultraconnexiva; connexivum III rounded and produced far beyond connexivum IV; posterior border of VIII slightly cut out medially. Venter with a thin median carina.

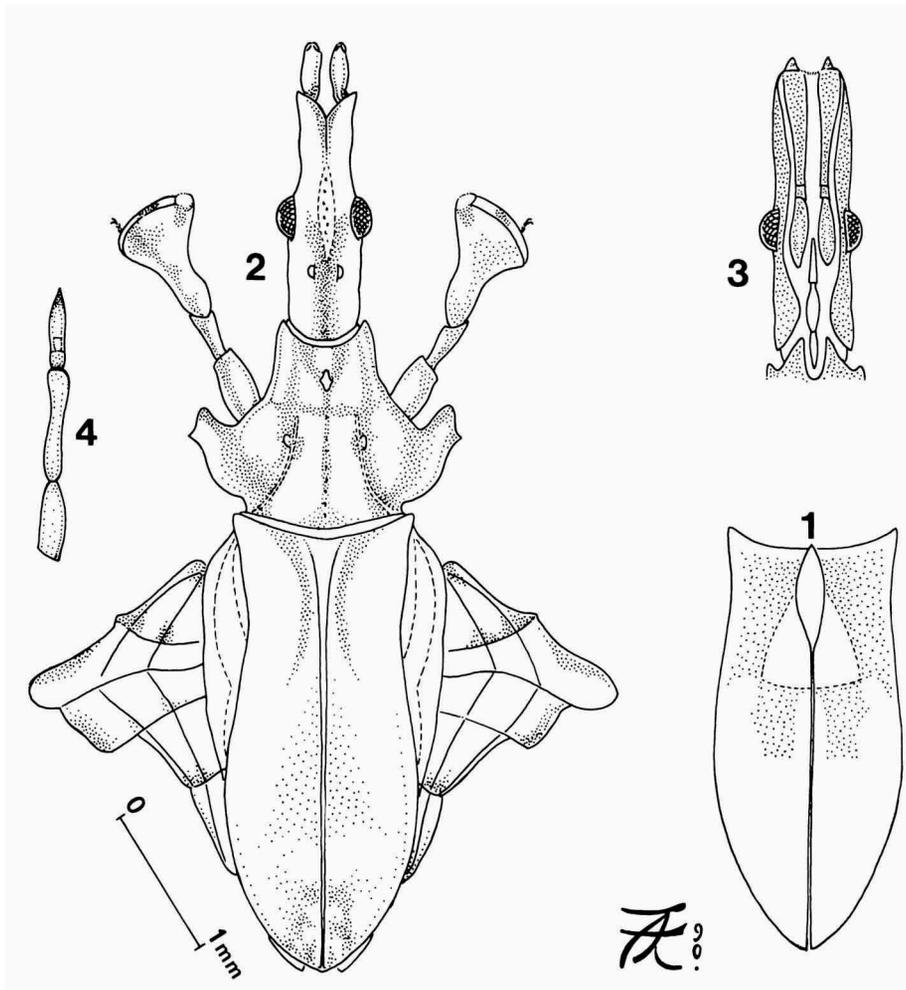


Fig. 1. *Lophoscutus hispaniolensis* spec. nov., ♀, scutellum. Figs. 2-4. *Phymatocoris iviei* gen. nov. & spec. nov., ♀. 2, dorsal aspect of type specimen; 3, head, ventral aspect; 4, antenna.

*Phymatocoris* is somewhat similar to *Agdistocoris* Kormilev, 1962a, from India, having similar construction of the antennae, but its bucculae are forming canals for the reception of the antennae at rest, like in *Glossopelta* Handlirsch, 1897. The abdominal segments II to IV have ultraconnexiva, so far not known in Macrocephalinae. The fore tarsi are similar to those from *Extraneza* Barber, 1939, from Puerto Rico, but much smaller.

***Phymatocoris iviei* spec. nov.**  
(figs. 2-4)

Material.— Holotype, ♀, Dominican Republic, Pedernales prov., 24 km N Cabo Rojo, 610 m, wet for-

est at light and night beating, 21.viii.1988, M. Ivie, Philips & Johnson, deposited in the collection of the National Museum of Natural History, Smithsonian Institution, Washington, D.C.

Female.— Length 5.8 mm, pale yellow with brown and whitish spots.

Texture.— Head and fore lobe of pronotum densely granulate; hind lobe of pronotum densely punctured; scutellum roughly punctured basolaterally, finer elsewhere; corium very finely punctured; abdomen granulate on the connexiva; propleuron granulate, denticulate on fore border; mesopleuron granulate on fore and lower borders; metapleuron smooth; abdomen sparsely granulate.

Colour.— Pale yellow with dark brown spots, white granulations and dark brown punctures. Head and fore lobe of pronotum dark brown medially, hind lobe mottled with brown; scutellum ivory, dark brown medially; corium with a few brown spots; connexivum II dark brown on posterolateral angles; III dark brown medially, IV to VII brown on posterior half; venter with dispersed dark brown spots; fore femora dark brown with yellow spots on basal half; fore tibiae and middle and hind legs with brown spots.

Measurements.— Total length 5.80 mm; width of pronotum 1.84 mm; width of abdomen 3.81 mm. Relative length and width of head, 40:17; of pronotum, 30:46; of scutellum, 75:32 (25 at base); of abdomen, 70:98; of fore femora, 22:10; of antennal segment I, 13:4; II, 19:4; III, 4:2; IV, 10:3. Relative lengths of the labial segments, 8:8:6.

Etymology.— It is a pleasure to dedicate this striking species to Dr M.A. Ivie, its collector.

### Discussion

The macrocephaline Phymatidae were up till now represented in the New World by only three genera, viz.: *Macrocephalus* Swederus, 1787, *Lophoscutus* Kormilev, 1951, and *Extraneza* Barber, 1939. The first two with numerous species, the last one with a single species. The new genus *Phymatocoris* we propose in this paper is somewhat related to *Agdistocoris* Kormilev, 1962a, from India, in having the antennae bent downwards from antennal segment II, and placed in repose in canals formed by the bucculae along the labium. The new genus is also related to *Extraneza* Barber from Puerto Rico, in having fore tarsi, though these are very minute. *Phymatocoris* has also some characters so far only observed in Phymatinae like the possession of ultraconnexiva on the connexiva II to IV as in *Phymata reticulata* Handlirsch, 1897, or *Phymata venezuelana* Kormilev, 1950.

### Key to the American genera of Macrocephalinae

1. Fore tibiae without tarsi ..... 2
- Fore tarsi present ..... 3
2. Pale spot on scutellum large, in the shape of a spearhead or lancet, sometimes threepronged posteriorly; parameres of the male with a subapical branch ..... *Macrocephalus* Swederus, 1787
- Pale spot on scutellum small, restricted to base of median carina; carina thin, reaching tip of scutellum, or lateral borders of abdominal segments III and IV produced into rounded lobes; parameres in the shape of a hook, lacking a sub-

- apical branch ..... *Lophoscutus* Kormilev, 1951
3. Antennal segment II one and a half times as long as I; bucculae forming canals for reception of antennae at rest; abdominal segments II to IV with ultraconnexiva ..... *Phymatocoris* gen. nov.
- Antennal segment II shorter than I; bucculae do not form such canals; abdominal segments II to IV without ultraconnexiva ..... *Extraneza* Barber, 1939

### Key to the Caribbean species of *Lophoscutus* Kormilev, 1951

1. Anterior tibia with a small, retractile tarsus; carinae of pronotum with two (1 + 1) tubercles; Puerto Rico ..... *L. productus* (Barber, 1939)
  - Anterior tibia without tarsus; pronotal carinae with or without tubercles ..... 2
2. Carinae of pronotum with two (1 + 1) tubercles ..... 3
  - Carinae of pronotum without tubercles ..... 4
3. Entire body densely covered with setigerous spiculae; eyes pilose; Puerto Rico ..... *L. spiculissimus* (Barber, 1939)
  - Body not covered with spiculae, only with round granulation; eyes not pilose; Cuba ..... *L. rugosipes* (Guérin-Méneville, 1857)
4. Species at least 9 mm long ..... 5
  - Species 8 mm or less ..... 8
5. Body with setigerous tubercles; Cuba ..... *L. thoracicus* (Valdes, 1910)
  - Body only with simple granulations ..... 6
6. Lateral angles of pronotum acutely produced and with a secondary blunt tooth posteriorly; posterolateral angles of abdominal connexiva produced, forming a zic-zac border; Cuba ..... *L. balloui* (Bruner, 1926)
  - Lateral angles of pronotum slightly rounded, forming an obtuse angle; lateral borders of abdomen not zic-zac ..... 7
7. Species longer and narrower (♀), ratio of total length:width of abdomen, 2.2:1; Virgin Isl. (not South America! see Zimsen, 1964) ..... *L. crassimanus* (Fabricius, 1803)
  - Species shorter and wider (♀), said ratio about 1.8:1; Cuba ..... *L. julianus* (Bruner, 1951)
8. Body with very fine setigerous granulations; lateral angles of pronotum each forming two small teeth; Cuba ..... *L. kormilevi* (Zayas, 1966)
  - Body without setigerous granulations ..... 9
9. Head as long as pronotum on median line ..... 10
  - Head shorter than pronotum ..... 11
10. Species longer and narrower (♂), ratio of total length:width of abdomen, 3.25:1; antennal segment IV shorter than II + III together (13:14); head, pronotum and scutellum brown; Cuba ..... *L. alayoi* (Zayas, 1966)
  - Species shorter and wider (♂), ratio 3:1; antennal segment IV longer than II and III together (11:9); with yellow anterolateral border of pronotum and yellow spots on scutellum; Cuba ..... *L. acunai* (Bruner, 1946)
11. Antennae very strong and long, more than three times as long as width of head across eyes (60:18); Jamaica. .... *L. marmoratus* (Kormilev, 1966)
  - Antennae less strong, shorter, its length less than 2.5 x width of head ..... 12

12. Lateral angles of pronotum not cut out ..... 13  
 - Lateral angles of pronotum cut out or sinuate behind tip ..... 21
13. Species narrow, abdomen at most as wide as pronotum ..... 14  
 - Abdomen wider than pronotum ..... 15
14. Abdomen as wide as pronotum ( $\sigma$ ); Guadeloupe ..... *L. insularis* (Dudich, 1922)  
 - Abdomen much narrower ( $\sigma$ ); Guadeloupe ..... *L. dudichi* (Kormilev, 1949)
15. Antennae at least two times as long as width of head across eyes ..... 16  
 - Antennae shorter ..... 19
16. Slender species, three times as long as maximum width (5.6:1.8); basal spot on scutellum minute, reaching only level of connexivum II; Cuba .....  
 ..... *L. patriciae* (Zayas, 1966)  
 - Length less than 2.5 x width ..... 17
17. Basal spot of scutellum simple, reaching level of connexivum IV; Hispaniola .....  
 ..... *L. haitiensis* (Kormilev, 1987)  
 - Basal spot on scutellum not simple ..... 18
18. Species less than 5 mm long, ratio of total length:maximum width ( $\varphi$ ) more than 2:1 (2.12:1); basal spot of scutellum imposed on larger, triangular pale spot, reaching level of connexivum III; Hispaniola ..... *L. hispaniolensis* spec. nov..  
 - Species over 6 mm long, ratio length:width ( $\varphi$ ) less than 2:1 (1.76:1); abdomen cordate, longer ( $\sigma$ ) or shorter ( $\varphi$ ) than wide; scutellum with a basal spot, an irregular transverse band in the middle, and an irregular spot formed by granulation at the end, yellow; Hispaniola ..... *L. leucographus* (Westwood, 1841 )
19. Pronotum bicoloured: fore lobe orange, hind lobe dark brown; lateral borders of scutellum diverging in straight line until 3/4 of their length, then converging into an arc; Hispaniola ..... *L. pulcher* (Kormilev, 1981)  
 - Pronotum unicoloured, orange yellow or brown; lateral borders of scutellum sinuate on basal half ..... 20
20. Lateral borders of pronotum barely sinuate between lobes; scutellum with dispersed white granulation between punctures; Hispaniola .....  
 ..... *L. dominicanus* (Kormilev, 1983)  
 - Lateral borders of pronotum angularly sinuate between lobes; scutellum without a white granulation; Cuba ..... *L. pulchellus* (Westwood, 1841)
21. Species less than 6.5 mm long ..... 22  
 - Species larger, 6.5 mm or more ..... 24
22. Abdomen almost as long as wide ( $\varphi$ ); Puerto Rico .....  
 ..... *L. subproductus* (Kormilev, 1962)  
 - Abdomen always distinctly longer than wide ..... 23
23. Antennal segment IV only slightly longer than II + III ( $\sigma$ , 12.5:11.5); Leeward Islands ..... *L. geijskesi* Kormilev & van Doesburg, 1986  
 - Antennal segment IV distinctly longer than II + III ( $\sigma$ , 14:9); Puerto Rico .....  
 ..... *L. rideri* Kormilev, 1988
24. Abdomen shorter than its maximum width; connexiva II and III subfused; pronotum bicoloured: fore lobe and anterolateral border of hind lobe yellow, rest of hind lobe testaceous; basal yellow spot of scutellum ovate, St. Thomas; Virgin Islands ..... *L. virginensis* Kormilev, 1986  
 - Abdomen longer than its maximum width; connexiva II and III not subfused; if pronotum is bicoloured, then basal spot of scutellum rhomboid ..... 25

25. Antennal segment IV distinctly shorter than II and III together (♀, 11:15); posterolateral angles of connexiva II and III protruding; Cuba ..... *L. israeli* (Zayas, 1966)
- Antennal segment IV distinctly longer than II + III, if it is only slightly shorter (♀, 12:13), then posterolateral angles of connexiva II and III not protruding ..... 26
26. Antennal segment IV slightly shorter than II & III together (♀, 12:13); scutellum more than twice as long as its maximum width (102:48); posterolateral angles of connexiva II and III not protruding; Hispaniola ..... *L. testaceus* (Kormilev, 1963)
- Antennal segment IV distinctly longer than II + III; scutellum at most two times as long as its maximum width ..... 27
27. Scutellum twice as long as its maximum width (40:20); pronotum bicoloured; basal spot of scutellum rhomboid; Cuba ..... *L. westwoodi* (Guérin-Méneville, 1857)
- Scutellum less than twice as long as its maximum width; pronotum not bicoloured; basal yellow spot different ..... 28
28. Antennae more than twice as long as the width of the head across the eyes (♂, 47.5:21); scutellum with an irregular basal spot and two (1 + 1) transverse spots at apical 1/3; Hispaniola ..... *L. confusus* Kormilev, 1989
- Antennae less than twice as long as width of head (♂, 20:12.5; ♀, 16:11.5); scutellum with an inverted basal Y-spot, and two (1 + 1) small spots on apical 1/3; Hispaniola ..... *L. ypsilon* Kormilev, 1990

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### References

- Barber, H.G., 1939. Hemiptera-Heteroptera (excepting the Miridae and Corixidae).— Scientific Survey of Porto Rico and the Virgin Islands, 14 (3): 263-441, 36 figs.
- Bruner, S.C., 1926. On the genus *Macrocephalus* in Cuba (Hemiptera-Heteroptera).— Mem. Soc. Cuba-Hist. nat. Felipe Poey 7: 55-61, 6 figs.
- Bruner, S.C., 1946. Cuban Phymatidae with the description of a new *Macrocephalus* (Hemiptera).— Ibid. 18 (1): 13-18, pl. 2 (6 figs.).
- Bruner, S.C., 1951. A new species of the genus *Macrocephalus* from Cuba (Hemiptera: Phymatidae).— Ibid. 20: 71-74, 1 fig.
- Dudich, E., 1922. Die Phymatiden des ungarischen National-Museums.— Ann. Hist.-Nat. Mus. nat. Hung. 19: 161-181, 8 figs.
- Fabricius, J.C., 1803. Systema Rhyngotorum etc: i-x + 314 pp.— Brunswick, Carolum Reichard.
- Guérin-Méneville, F.E., 1857. Ordre des Hémiptères Latr.— In: Ramon de la Sagra. Histoire physique, politique et naturelle de l'île Cuba: 358-424. Paris, A. Bertrand.
- Handlirsch, A., 1897. Monographie der Phymatiden.— Ann. K.-k. naturhist. Hofmus., Wien 12 (2): 127-230, 35 figs, pls iv-ix.
- Kormilev, N.A., 1949. A new species of the genus *Macrocephalus* Swederus (1787) from Brasil, and M.

- dudichi*, n.n. (Hemiptera, Phymatidae).— Rev. Ent., Brasil 20 (1-3): 583-588, 1 fig.
- Kormilev, N.A., 1951. Notes on neotropical Phymatidae. Diagnosis of new species (Hemiptera).— Ibid. 21 (3): 581-591.
- Kormilev, N.A., 1962. Revision of Phymatinae (Hemiptera, Phymatidae).— Philipp. J. Sci., Manila 89 (1960, 3-4): 287-486, 19 pls.
- Kormilev, N.A., 1963. Notes on American Phymatidae III (Hemiptera-Heteroptera).— Proc. ent. Soc. Wash. 65 (3): 215-226, 21 figs.
- Kormilev, N.A., 1966. On some Phymatidae from the Old and New Worlds (Hem. Heteroptera).— Eos, Rev. esp. Ent. 42 (1-2): 275-286, 2 figs.
- Kormilev, N.A., 1981. On some neotropical species of the genus *Macrocephalus* (Hemiptera: Phymatidae).— Sociobiol. 6 (2): 214-220, 2 figs.
- Kormilev, N.A., 1986. Notes on American Macrocephalinae with descriptions of two new species (Hemiptera: Phymatidae).— Pan-Pac. Ent. 62 (4): 303-310, 4 figs.
- Kormilev, N.A., 1987. Notes on North and Central American *Lophoscutus* spp. (Hemiptera: Phymatidae, Macrocephalinae).— Proc. ent. Soc. Wash. 89 (4): 701-705, 2 figs.
- Kormilev, N.A., 1988. Four new species of the genus *Lophoscutus* Kormilev, 1951, from Latin America (Hemiptera: Phymatidae, Macrocephalinae).— Eos, Rev. esp. Ent. 64 (1): 141-146, 5 figs.
- Kormilev, N.A., 1989. A new species of the genus *Lophoscutus* Kormilev from the Dominican Republic. — Mitt. münch. ent. Ges. 79: 61-63, 4 figs.
- Kormilev, N.A., 1990. Two new species of the genus *Lophoscutus* Kormilev, 1951 (Hemiptera, Phymatidae).— Revta. bras. Ent. 34 (1): 221-225, 2 figs.
- Kormilev, N.A. & P.H. van Doesburg, 1986. Notes on Phymatidae (Heteroptera).— Zool. Med., Leiden 60 (8): 113-127, 11 figs.
- Swederus, N. S., 1787. Et nytt genus, och femtio nya species af Insekter beskrifne.— Vet.-Akad. nya Handl. 8: 181-201.
- Valdés Ragués, P., 1910. Clasificación Gundlach de Hemipteros Cubanos, conforme a los ejemplares que existen en el museo del Instituto de 2a. enseñanza de la Habana.— An. Acad. Cienc. Med., Fis. nat. Habana 44: 425-446.
- Westwood, J.O., 1841. Observations upon the hemipterous Insects composing the genus *Syrtis* of Fabricius, or the family Phymatites of Laporte, with a monograph of the genus *Macrocephalus*.— Tr. ent. Soc. London 3: 18-28, pl. 2.
- Zayas, F. de, 1966. La familia Phymatidae (Hemiptera) en Cuba, con adición de cinco especies nuevas y un nuevo registro.— Poeyana (Ser. A) 32: 1-30, 7 figs (pls.).
- Zimsen, E., 1964. Hemiptera: 281-354. In: The type material of J. C. Fabricius: 1-656.— Copenhagen.

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