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A review of the Oriental genera *Scironocoris* KORMILEV, 1957 and *Dimorphacantha* USINGER & MATSUDA, 1959, with description of three new species (Heteroptera, Aradidae)

Ernst HEISS

Abstract

MONTEITH (1997) synonymized the Oriental genus *Dimorphacantha* USINGER & MATSUDA 1959 with *Scironocoris* KORMILEV 1957, at that time including 5 species each (KORMILEV & FROESCHNER 1987), and described *Scironocoris australis* sp. nov.

HEISS (1999) had shown that both genera are distinct, but the taxonomy of the assigned species remained unclear. Now the examination of type specimens of all species of both genera lead to the following results: *Scironocoris armigerus* KORMILEV 1957 = *papuasicus* KORMILEV 1971, syn. nov.; *Scironocoris usingeri* (BLOETE 1965) = *malayensis* KORMILEV 1983, syn. nov.; the assignment of *Dimorphacantha usingeri* BLOETE 1965 to *Scironocoris* as proposed by MONTEITH (1997) is confirmed; *Dimorphacantha distincta* USINGER & MATSUDA = *luchti* (KIRITSHENKO 1959), syn. nov., for which a lectotype is designated.

Dimorphacantha latispina sp. nov from Nias, *D. monteithi* sp. nov. from Sumatra and *D. philippinica* sp. nov. from the Philippines are described as new. Keys and habitus illustrations are given for both genera and all species. The unique metapleural spines and selected genital structures are figured.

Zusammenfassung

MONTEITH (1997) hat die orientalische Aradidengattung *Dimorphacantha* USINGER & MATSUDA 1959 mit *Scironocoris* KORMILEV 1957 synonymisiert, welche je 5 Arten enthielten (KORMILEV & FROESCHNER 1987) und beschrieb *Scironocoris australis* sp. nov.

HEISS (1999) zeigte, daß beide Gattungen zurecht bestehen, jedoch der taxonomische Status der jeweils zugeordneten Arten unklar war. Die Untersuchung der Typen aller Arten, welche als *Scironocoris* und *Dimorphacantha* beschrieben wurden, hat zu nachstehendem Ergebnis geführt: *Scironocoris armigerus* KORMILEV 1957 = *papuasicus* KORMILEV 1971, syn. nov.; *Scironocoris usingeri* (BLOETE 1965) = *malayensis* KORMILEV 1983, syn. nov.; die Zuordnung von *Dimorphacantha usingeri* BLOETE 1965 zu *Scironocoris*, wie von MONTEITH (1997) vorgeschlagen, wird bestätigt; *Dimorphacantha distincta* USINGER & MATSUDA = *luchti* (KIRITSHENKO 1959), syn. nov., für welche ein Lectotypus designiert wird.

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Dimorphacantha latispina sp. nov. von Nias, *D. monteithi* sp. nov. von Sumatra und *D. philippinica* sp. nov. von den Philippinen werden als neu beschrieben.Für beide Gattungen und alle Arten werden Bestimmungsschlüssel gegeben und Habitusbilder sowie Abbildungen der ungewöhnlichen Metapleuraldornen und einiger Genitalstrukturen vorgelegt.

K e y w o r d s : Heteroptera, Aradidae, Mezirinae, *Scironocoris*, *Dimorphacantha*, new species, synonymy, lectotype, Oriental Region.

Introduction

Most of the species known to date assigned to the genera *Scironocoris* and *Dimorphacantha* were described from unique specimens. They were represented either by a brachypterous or subbrachypterous (*S. armigerus* KORMILEV 1957, *S. baliensis* KORMILEV 1972, *S. bellicosus* (KORMILEV) 1957, *S. malayensis* KORMILEV 1983, *D. usingeri* BLOETE 1965) or a macropterous morph (*S. obscurus* KORMILEV 1971, *S. papuasicus* KORMILEV 1971, *D. distincta* US. & MATS. 1959, *D. luchti* (KIRITSHENKO 1959), *D. borneensis* KORMILEV 1986). None of the species was yet been reported to occur in both morphs.

The striking morphological modifications in shape and stucture of the pronotum, scutellum and hemelytra (caused by reduction thereof) make identification difficult and led to misinterpretations in the past. MONTEITH (1997) synonymized the two genera, but according to HEISS (1999) both genera deserve generic status and are distinguished by given sets of characters.

In an attempt to clarify the problems involved, the types of all described species were investigated, and the results are presented here.

Measurements were taken with a micrometer eyepiece and are given in millimeters or units (40 units = 1 mm).

Terms used for alary development:

brachypterous - only reduced corium present without a vestige of membrane (e.g. *Scironocoris baliensis* ♂, *S. usingeri* ♀)

subbrachypterous - reduced corium but vestige of membrane on outer apical margin present (e.g. *Scironocoris armigerus* ♀)

submacropterous - membrane of hemelytra abbreviated, not completely covering the tergal plate (e.g. *Dimorphacantha latispina* n.sp♂, D. *monteithi* n.sp.♂ ♀)

macropterous - membrane fully developed, completely covering the tergal disk (e.g. *Scironocoris obscurus* ♀, *S. bellicosus* ♂ ♀, *Dimorphacantha distincta*)

Type repositories:

BMNH	Museum of Natural History, London, Great Britain
BPBM	Bernice P. Bishop Museum, Honolulu, Hawaii, USA
CEHI	Collection E. HEISS, Innsbruck, Austria
HNHM	Hungarian Natural History Museum, Budapest, Hungary
QDMB	Queensland Museum, Brisbane, NSW, Australia

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MCSN	Museo Civico di Storia Naturale „Giacomo Doria", Genova, Italy
NHRS	Naturhistoriska Riksmuseet, Stockholm, Sweden
RMNH	Nationaal Natuurhistorisch Museum, Leiden, The Netherlands
USNM	United States National Museum of Natural History, Washington D.C., USA
ZMAS	Zoological Institute, Russian Academy of Sciences, St. Petersburg, Russia

This paper presents generic diagnoses, keys to genera and species, additional data for known species and detailed descriptions of new species. The type specimens of all species are figured. New records for some of the rarely collected species are given.

Key for the separation of *Scironocoris* - *Dimorphacantha*

1 (2) Pronotum without distinct prehumeral lateral projections; anterolateral lobes of pronotum usually rounded or at most angular, with a pronounced conelike (brachypt. or subbrachypt.) or rounded (submacropt. or macropt.) sublateral elevation; posterior lobe anterolaterally rounded or moderately raised in macropterous morphs. Rostral groove open posteriorly.

Antennae shorter, less than 2x as long as width of head.

Males only with small spines, females with a polished tubercle, both situated mesad the line connecting the outer margins of meso- and metacoxae; brachypterous, subbrachypterous or macropterous.

New Guinea, Australia, Indonesia (Bali), Malaysia (NW Borneo) ..... *Scironocoris*

2 (1) Pronotum with distinct, in brachypterous species reduced subhumeral lateral projections; anterolateral lobes of pronotum angularly produced laterally, sublateral elevation flat or moderately rounded; posterior lobe anterolaterally with distinct processes of different shape. Rostral groove closed in all but one species (*philippinensis* n.sp.), its posterior margin strongly elevated.

Antennae longer, distinctly more than 2x as long as width of head.

Males with distinctly larger subapical spines, females with a polished knob, both situated laterad the line connecting the outer margins of meso- and metacoxae; macropterous or brachypterous.

Sumatra, Java, Borneo, Philippines, Malaysia, South China ..... *Dimorphacantha*

Scironocoris KORMILEV 1957

KORMILEV 1957a: 401 (descr.); USINGER & MATSUDA 1959: 193 (listed); KORMILEV 1971: 7, 8, 26 (key); KORMILEV & FROESCHNER 1987: 191 (cat.); MONTEITH 1997: 54 (diagn., syn.); HEISS 1999: 76 (key, syn.).

Type species: *Scironocoris armigerus* KORMILEV, 1957a: 402, fig. 17,18.

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D i a g n o s i s : MONTEITH (1997) has already given an excellent brief diagnosis of *Scironocoris* for which - due to the recognition of *Dimorphacantha* as a distinct genus (HEISS 1999) - a few additions are given.

R e d e s c r i p t i o n : Of smaller size, 4.9-6.5 mm. Brachypterous, subbrachypterous or macropterous. Rostrum as long as head, rostral groove always open posteriorly. In brachypterous and subbrachypterous morphs anterior lobe of pronotum with distinct sublateral pronounced elevations and posterior lobe anterolaterally raised, without prehumeral lateral processes. In macropteres sublateral elevations less developed, posterior lobe not anterolaterally raised and also lacking lateral processes. Scutellum roundly inflated or with a moderately elevated longitudinal median ridge.

Exposed abdomen of shortwinged forms with large, anteriorly expanded tergal plate comprising also middle portion of mediotergite (mtg) II, separated by an arched sulcus from lateral portions of mtg II. Dorsal external laterotergites (deltg) II + III fused, deltg II -VI with a prominent longitudinal carina at middle, which is connected with a shorter one along posterior margin. Tergite VII raised medially in all morphs, delimited by a curved transverse ridge posteriorly.

Venter with a small metapleural spine in male or a small glabrous tubercle in females, both situated mesad the connecting line of the outer lateral margins of meso- and metacoxae. Metapleural scent gland canal straight, reaching laterally reflexed corium. Spiracles II - VII ventral and not visible, VIII lateral and visible from above.

Legs with subapical ventral spines on all femora; claws with long setiform pseudopulvilli.

Parameres with two transverse carinae on concave inner face (Fig. 16 A-D). Spermatheca of female of simple structure with a subspherical bulb, a pump region and a short membraneous non-dilated duct (Fig. 24).

D i s c u s s i o n : *Scironocoris* shares the femoral spines on all femora only with the Oriental genera *Dimorphacantha* US. & MATS. 1959 and *Neartabanus* HEISS 1999. From the first it is distinguished by the set of characters given in the key. *Neartabanus* lacks the metapleural tubercles or spines and has rugose ovate depressions on sternite VII in male.

The genus also seems to be related to *Artabanus* STÅL 1865, which can be recognized at once by the stridulatory file on hind tibiae, lacking in all three abovementioned genera.

Scironocoris armigerus KORMILEV 1957 (Fig. 1-2)

Scironocoris armigerus KORMILEV 1957a: 401, fig. 17-20 (descr. subbrachypt. ♀); HEISS 1999: 77, fig. 1-2.

Scironocoris australis MONTEITH 1997: 56, fig. 5J, 19, 20J-N (descr. subbrach ♂ ♀, syn. HEISS 1999: 78, sub. *australicus* (lapsus!)).

Scironocoris papuasicus KORMILEV 1971: 26, 27 (descr. macropt. ♀), **nov. syn.**

M a t e r i a l e x a m i n e d : Holotype ♀ subbrachypt. labelled „ N. Guinea \ Biró 96"; „Friedrich- \ Wilh.-hafen", HMNH (see HEISS 1999). ♂ ♀ subbrachypt. (vestiges of membrane partly broken) „Papua: Fly R. \ Olsobip, 700- \ 1150m, 23.8.69"; „J.& M. Sedlacek \ Collectors \ Bishop", CEHI. ♂ ♀ subbrachypt. „West Claudie R. \ Iron Range, N. Qld. \ 29-30.IX.1974

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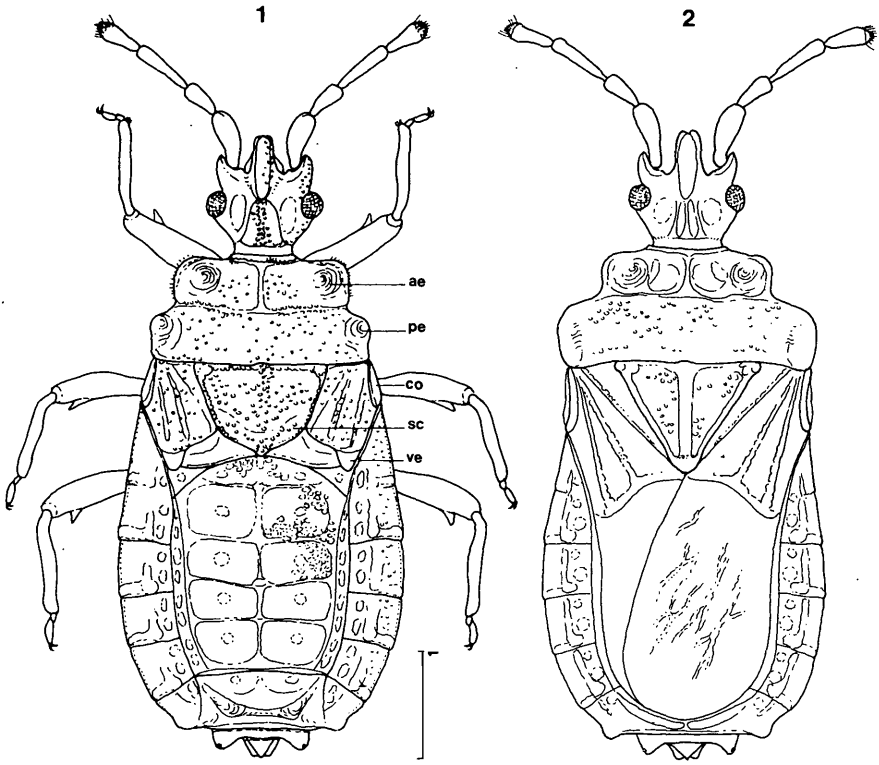

Fig. 1 - 2 *Scironocoris armigerus*. 1 - holotype subbrachypt. ♀, dorsal view; 2 - macropt. ♀ (holotype of *S. papuasicus*), dorsal view. Abbreviations: ae sublateral elevation of anterior pronotal lobe; pe anterolateral process of posterior lobe; co reflexed base of corium; sc scutellum; ve vestige of membrane in subbrachypt. specimens. Scale 1 mm.

\ G. B. Monteith \ Rainforest" (paratypes of *S. australis*), CEHI. ♀ macropt. „Mt. Lamington Dist., \ Northern Division \ Papua July 1927 \ C. T. Mc Namara" (holotype of. *S papuasicus*), BPBM.

Examination of the macropterous female holotype of *S. papuasicus* has shown that, besides known variations in some body structures such as pronotum, scutellum and corium, no substantial differences to *armigerus* can be ascertained. Therefore it is regarded as the macropterous morph of *armigerus* and synonymized with the latter.

D i s t r i b u t i o n : Only known from Papua New Guinea (Map 1).

B r i e f d e s c r i p t i o n : Subbrachypterous ♂ ♀ and and macropterous ♀ known to date.

H e a d : About as long as wide. Clypeus reaching 1/2 of antennal segment I, genae only slightly produced over apex of clypeus. Antennae 1.6 - 1.8 x (subbrachypt.) - 1.9 x (macropt.) as long as width of head. Postocular tubercles lacking. Vertex with 2 longitudinal ridges of larger granules, bearing stiff bristles.

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P r o n o t u m : Subbrachypt. : Anterolateral lobes rounded, sublateral elevation cone - like, pronounced; subhumeral elevations distinct, rounded and less prominent. Macropt. : Sublateral elevations smaller, rounded; humeri of posterior lobe slightly raised but without a particular elevation.

S c u t e l l u m : Subbrachypt. : Semicircular with narrowed apex, surface humped, coarsely granulate. Macropt. : Triangular with a longitudinal median ridge, lateral margins carinate; surface raised toward base, granulate.

H e m e l y t r a : Subbrachypt. : Corium short, as long as scutellum, with small vestiges of a membrane; lateral borders carinate at base, reflexed. Corium and membrane fully developed in macropterous morph.

A b d o m e n : Ovate, lateral margins of fused deltg II + III straight, of IV - VI slightly curved, VII with a round projecting lobe. In subbrachypteres metanotum and fused mediotergite I partly visible. Tergal plate flat, surface deeply punctured. In macropteres the tergal plate is covered by the membrane which reaches 1/2 tergite VII.

V e n t e r : Metapleural spine small and conical in male, reduced to a small tubercle in female (Fig. 17 A-D).

L e g s : Rather slender, femoral spines small, pointed.

G e n i t a l s t r u c t u r e s : Male paramere similar to that of *bellicosus* (Fig. 16 A-D); spermatheca of female as in Fig. 24.

M e a s u r e m e n t s : Holotype ♀, subbrachypt. Length 5.6 mm; head width / length 42 / 42; pronotum w / l 78 / 40; scutellum w / l 48 / 32; relative length of antennal segments I : II : III : IV = 22 : 14 : 22 : 17; ratio antennae to width of head 1.78; to width of abdomen 103.

D i s c u s s i o n : The type species of the genus can be recognized by the set of characters given in the key.

Scironocoris baliensis KORMILEV 1972 (Fig. 3-4)

Scironocoris baliensis KORMILEV 1972: 577, fig. 8 (descr. subbrachypt. ♂); KORMILEV & FROESCHNER 1987: 191 (cat.); MONTEITH 1997: 56 (listed).

M a t e r i a l e x a m i n e d : Holotype ♂, brachypt., labelled „ Java: Bali I. \ Dajan Daun \ 29.III.1965"; „J. Winkler \ Collector \ Bishop", BPBM. 3♂ 2♀ brachypt. „Indonesien - Bali \ Gg. Catur - Bergwald \ Env. Bratansee 1500m \ 26 XI 99 E. Heiss", CEHI, QDMB.

D i s t r i b u t i o n : Only the two above mentioned records from Bali are known to date, where it was found in the reduced remaining tropical mountain forest only (Map 2).

B r i e f d e s c r i p t i o n : Only brachypterous morph known. Basic body structures and texture as in *armigerus*, but of larger size and subparallel abdomen. Genae distinctly producing over clypeus, diverging. Rounded anterolateral lobes of pronotum slightly produced anteriorly, subhumeral elevations rounded, knob - like. Corium short, its posterior margin rounded, not covering fused metanotum + mtg I, lateral margin carinate and expanded laterally.

Tergal plate raised along midline, highest on mtg II and IV. Posteroexterior angles of deltg V - VI slightly produced and rounded, forming a larger rounded lobe in deltg VII. (listed);

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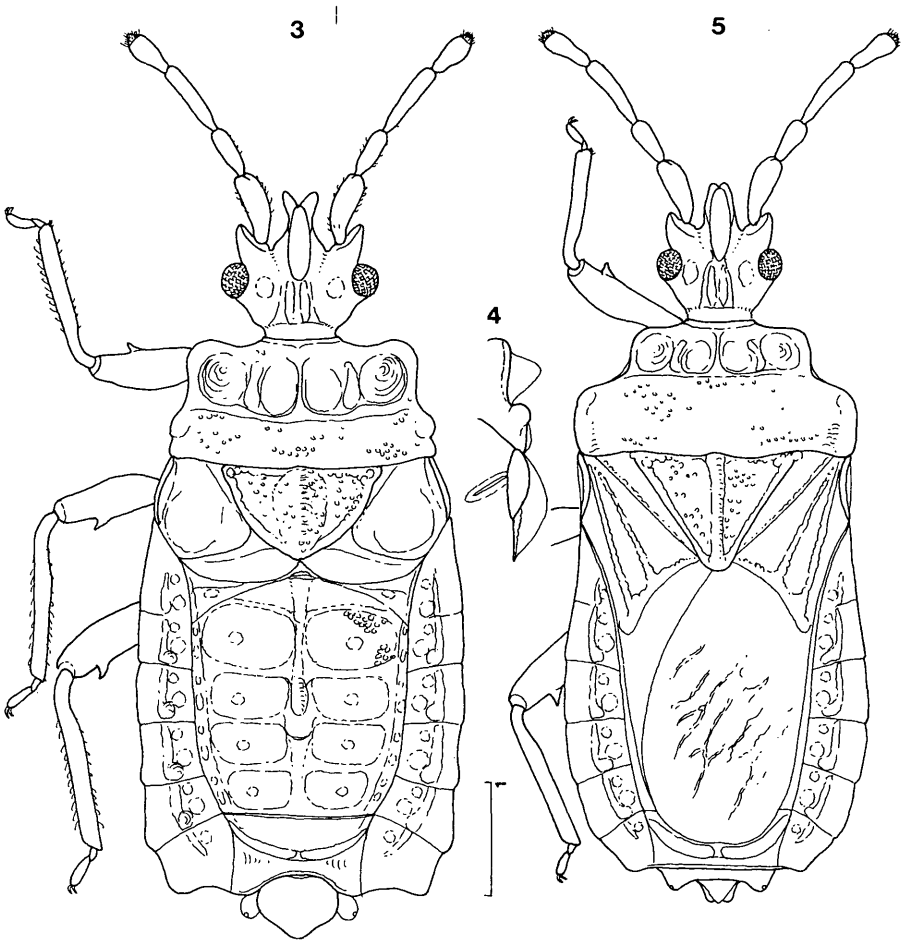

Fig. 3 - 5 *Scironocoris* spp. 3 - *S. baliensis*, holotype brachypt. ♂, dorsal view; 4 - ditto, lateral view; 5 - *S. obscurus*, holotype macropt. ♀, dorsal view. Scale 1 mm.

Metapleural spine small but pointed (Fig. 19 A-B). Pygophore globular, pearshaped, paratergites VIII reaching 2/3 of pygophore.

Measurements: Holotype ♂ subbrachypt. Length 6.5 mm; head w / l 55 / 54; pronotum w / l 92 / 44; scutellum w / l 56 / 32; antennal segments I : II : III : IV = 26 : 17 : 27 : missing; width of abdomen across tg IV 112. Variation in size: ♂ 6.2 - 6.5 mm, ♀ 6.3 - 6.7 mm.

Discussion: This species is recognized by its large size, the subparallel body and the structure of pronotum and scutellum.

Scironocoris bellicosus (KORMILEV 1957) (Fig. 6-13, 16 A-D, 18 A-B)

Rustem bellicosus KORMILEV 1957b: 41, Fig. 3-6, subbrachypt. ♀ (syn. with *Scironocoris* by HEISS 1999: 79); USINGER & MATSUDA 1959: 193 (listed); HOBERLANDT 1974: 27

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(LISTED); KORMILEV & FROESCHNER 1987: 189 (cat.); MONTEITH 1997: 55 (suspected synonymy).

Scironocoris bellicosus HEISS 1999: 79 (nov. comb.).

The holotype and unique specimen known to date bears a label „Persia" which is undoubtedly mislabelled (HEISS 1999). A small series of *Scironocoris* from the Malaysian province of Sarawak in Borneo, which share all essential characters of this species are regarded as belonging to the same taxon. This series comprises brachypterous, subbrachypterous (but vestige broken) and macropterous morphs of both sexes, showing the whole range of modifications associated with alary dimorphism. Additional specimens from peninsular Malaysia correspond to those from Sarawak.

Material examined: Holotype ♀ subbrachypt. „Persia", USNM. 1♂ 1♀ macropt., 1♂ 1♀ brachypt., 1 ♂ subbrachypt. „Malaysia - Sarawak \ Skrang River \ 30 km upstream \ 15.II.92 Heiss", CEHI. 1♀ brachypt. „Sarawak \ Kapit Umg. \ II.92 Leconte", CEHI. 1♀ macropt. „Malaysia: Selangor \ Hutan Kanching \ 20 km N Kuala Lumpur \ 18.8.1993 leg. Schuh", CEHI. 1♀ brachypt. „Malaysia: Pahang \ Tioman Island \ Kg. Tekek Umgebg. \ 15.-26.7.1992 \ leg. R. Schuh", CEHI. 1♀ brachypt. „Malaysia: Pahang \ Tioman Island \ Umg. Kampung Tekek \ 16.-24.7.1993 lg. Schuh", CEHI. 1♀ macropt. „Malaysia, Perak\ Banjar Titi Wangsa Mts. \ Mt. Korbu, 1600-1700 m \ 9.-15.I.99 P. Čechovsky", CEHI. 1♀ macropt. „W Malaysia, Kelantan \ 10 km W of Dabong \ Jelawan Jungle \ 150-300 m \ lgt. S. Bečvar", CEHI.

Distribution: Peninsular Malaysia (Perak, Kelantan, Selangor), Tioman Island (56 km east of peninsular coast) and Sarawak in Borneo (Map 2).

Brief description: Brachypterous, subbrachypterous and macropterous.

Very closely related to *armigerus* but of smaller size, less rounded and more subparallel abdomen and with wider and shorter pronotum with lower rounded sublateral elevations. Macropteres are smaller and more parallel than (sub)brachypteres, the reduction of pronotal elevations and modification of scutellum is concurrent with the macropterous state.The posterior margin of truncate corium is longer in brachypterous ♂ than in *armigerus* and produced over posterior margin of fused metanotum and mtg.I.

Metapleural spine reduced and small (Fig. 18 A-B), showing no differences between (sub)brachypt. and macropt. forms.

Pygophore large and globular, pear - shaped.

Measurements: Holotype ♀ subbrachypt. Length 5.75 mm; pronotum width 1.9 mm; abdomen width 2.4 mm (sec. KORMILEV 1957b). Variation in size of material examined: brachypt. ♂ 5.3 mm, ♀ 5.5 mm; macropt. ♂ 4.9 - 5.0 mm, ♀ 5.4 - 5.7 mm.

Brachypt. ♂ - ♀ (Sarawak) Length 5.3 - 5.5 mm, head w / l 43 / 48 - 40 / 44; pronotum w / l 74 / 32 - 72 / 32; scutellum w / l 46 / 30 - 48 / 34; antennal segments I : II : III : IV = 22 : 13 : 22 : 18 - 19 : 12 : 19 : 16.5, ratio antennae to width of head 1.74 - 1.66; abdomen width 88 - 92. Macropt. ♂ -♀ (Sarawak - Selangor) Length 4.9 - 5.7 mm; head w / l 36 / 39 - 38 / 41; pronotum w / l 78 / 38 - 88 / 46; scutellum w / l 44 / 34 - 52 / 38; antennal segments I : II : III : IV = 18 : 11 : 17 : 16 - 20 : 12 : 20 : 15, ratio antennae to width of head 1.72 - 1.76; abdomen width 74 - 92.

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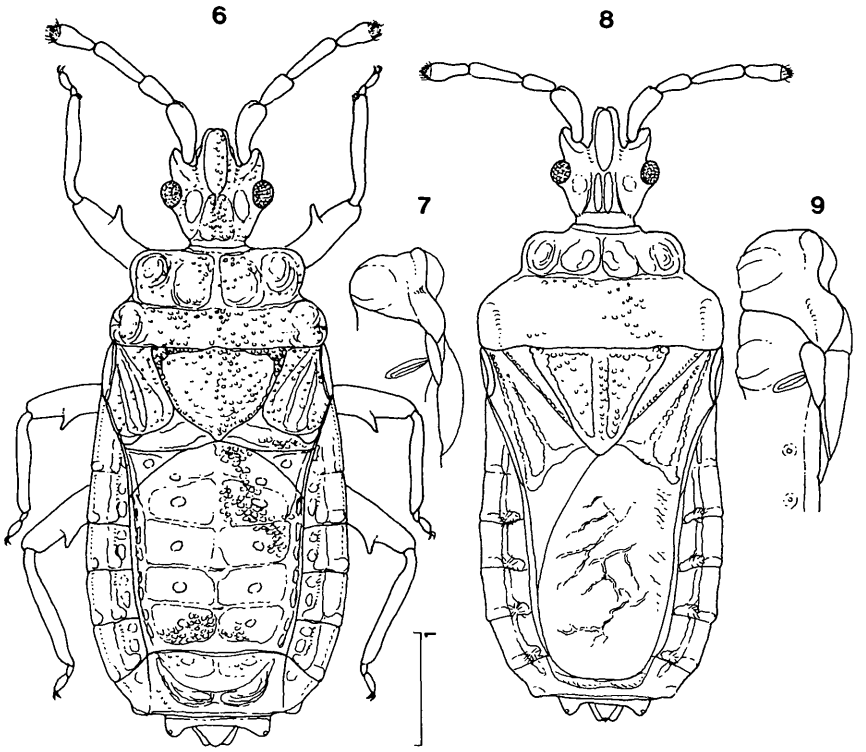

Fig. 6 - 9 *Scironocoris bellicosus*. 6 - holotype, subbrachypt. ♀, dorsal view; 7 - ditto, lateral view; 8 - macropt. ♀, dorsal view. Scale 1 mm.

Discussion: *S. bellicosus* is the smallest species of the genus and can be recognized by its size and the slender habitus.

Scironocoris obscurus KORMILEV 1971 (Fig. 5)

Scironocoris obscurus KORMILEV 1971: 26, Fig. 17-18 (descr. macropt. ♀); KORMILEV & FROESCHNER 1987: 191 (cat.); MONTEITH 1997: 55; HEISS 1999: 78 (suspected syn.).

Material examined: Holotype ♀ macropt. „New Guinea: NE \ Karimi 1080 m \ 13.VII 1963"; „J. Sedlacek \ Bishop", BPBM.

Distribution: New Guinea, Papua (Map 1).

The holotype and unique specimen known to date resembles *papuasicus* (= macropt. *armigerus*), also occurring in Papua. However it is distinguished from the latter by larger size, longer antennae and more subparallel abdomen with obliterating longitudinal carinae on deltg II - VI. Only further material will clarify the relationship to other species.

Measurements: Holotype ♀ macropt. Length 6.2 mm; head w / l 44 / 47; pronotum w / l 98 / 46; scutellum w / l 60 / 40; antennal segments I : II : III : IV = 25 : 16 : 26 : 20; ratio antennae to width of head 1.98; width of abdomen 106.

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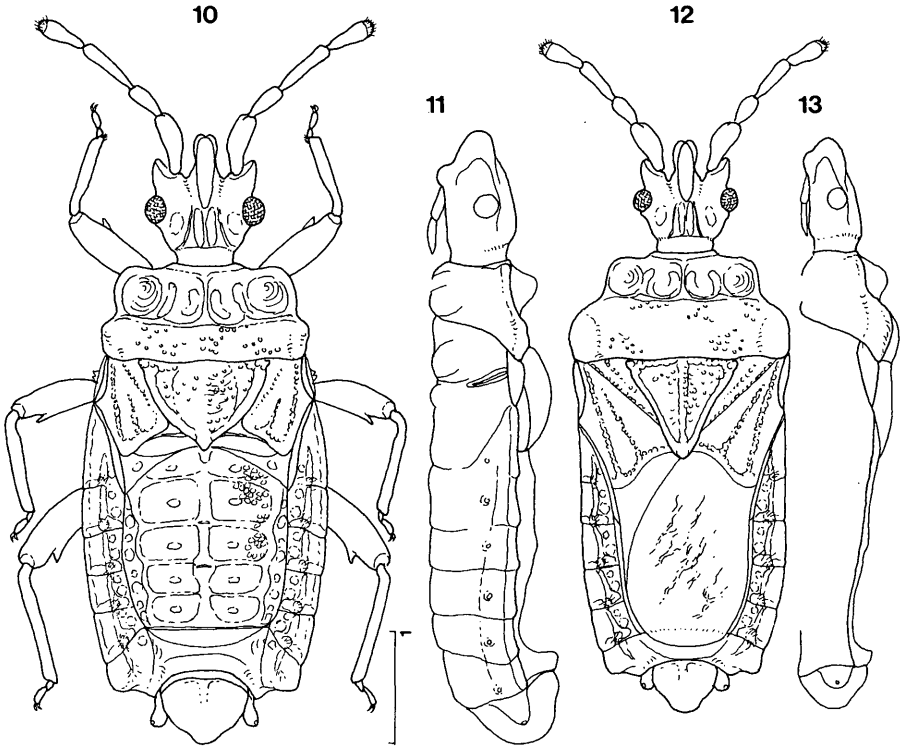

Fig. 10 - 13 *Scironocoris bellicosus*. 10 - brachypt. ♂, dorsal view; 11 - ditto, lateral view; 12 - macropt. ♂, dorsal view; 13 - ditto, lateral view. Scale 1 mm.

Scironocoris usingeri (BLOETE 1965) (Fig. 14-15)

Dimorphacantha usingeri BLOETE 1965: 15, Fig.12 (descr. brachypt.♀); KORMILEV & FROESCHNER 1987: 191 (cat.)

Scironocoris usingeri MONTEITH 1997: 55 (comb. nov.)

Scironocoris malayensis KORMILEV 1983: 454 (descr. brach ♀), **nov. syn.**

M a t e r i a l e x a m i n e d : Holotype ♀ brachypt. (of *usingeri*) „W. Java 700 m \ Mt. Megamendung, 21.X.1951 \ A. M. R. Wegner", RMNH. Holotype ♀ subbrachypt. (of *malayensis*, antennae missing) „Malaya: \ Perak \ Distant Coll. \ B. M. 1911-383"; „Perak \ Doherty", BMNH.

Examination of both holotypes confirms the assignment to *Sciocoris* as proposed by MONTEITH 1997, but proved that the two taxa are conspecific, BLOETE's name having priority.

D i s t r i b u t i o n : The only known specimens are from Western Java and Perak in peninsular Malaysia (Map 2).

B r i e f d e s c r i p t i o n : Brachypterous. Body strongly ovate, with coarse granulation and scattered pilosity on body and appendages.

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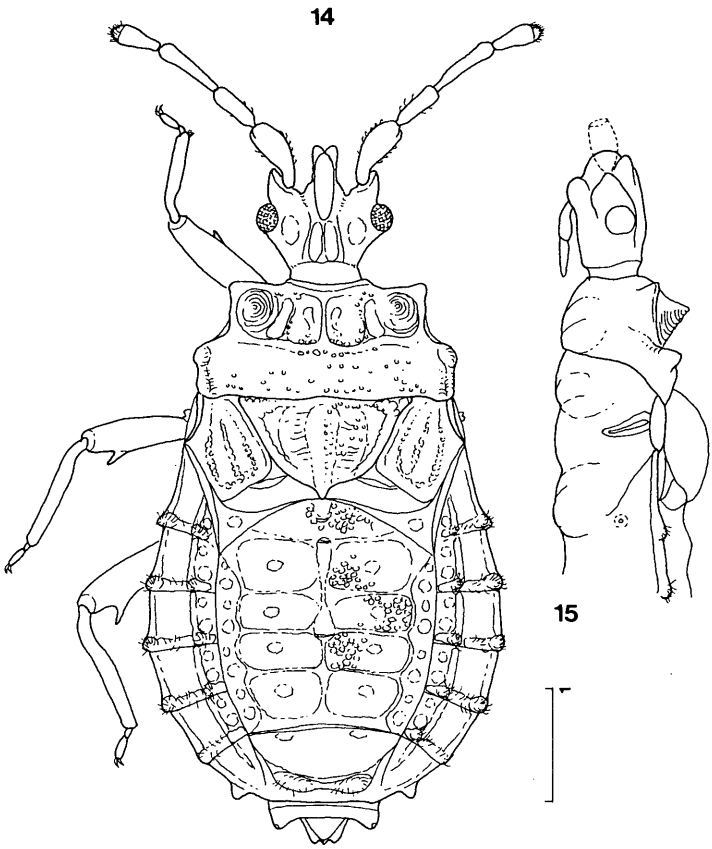

Fig. 14 - 15 *Scironocoris usingeri.* 14 - holotype, brachypt. ♀, dorsal view; 15 - ditto, lateral view. Scale 1 mm.

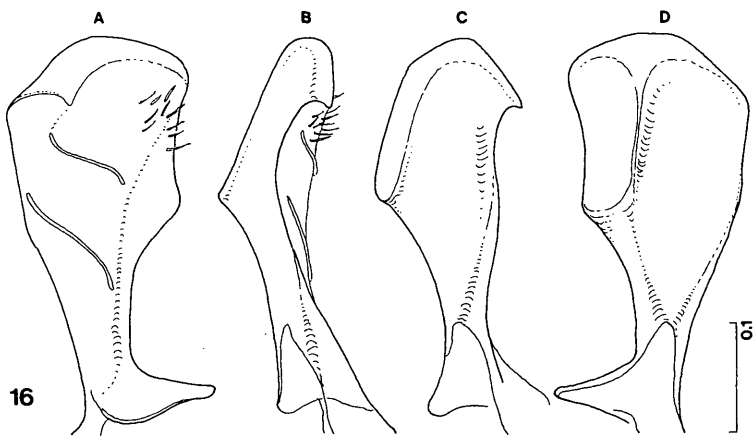

Fig. 16 A-D *Scironocoris bellicosus*, paramere in different positions. Scale 0.1 mm.

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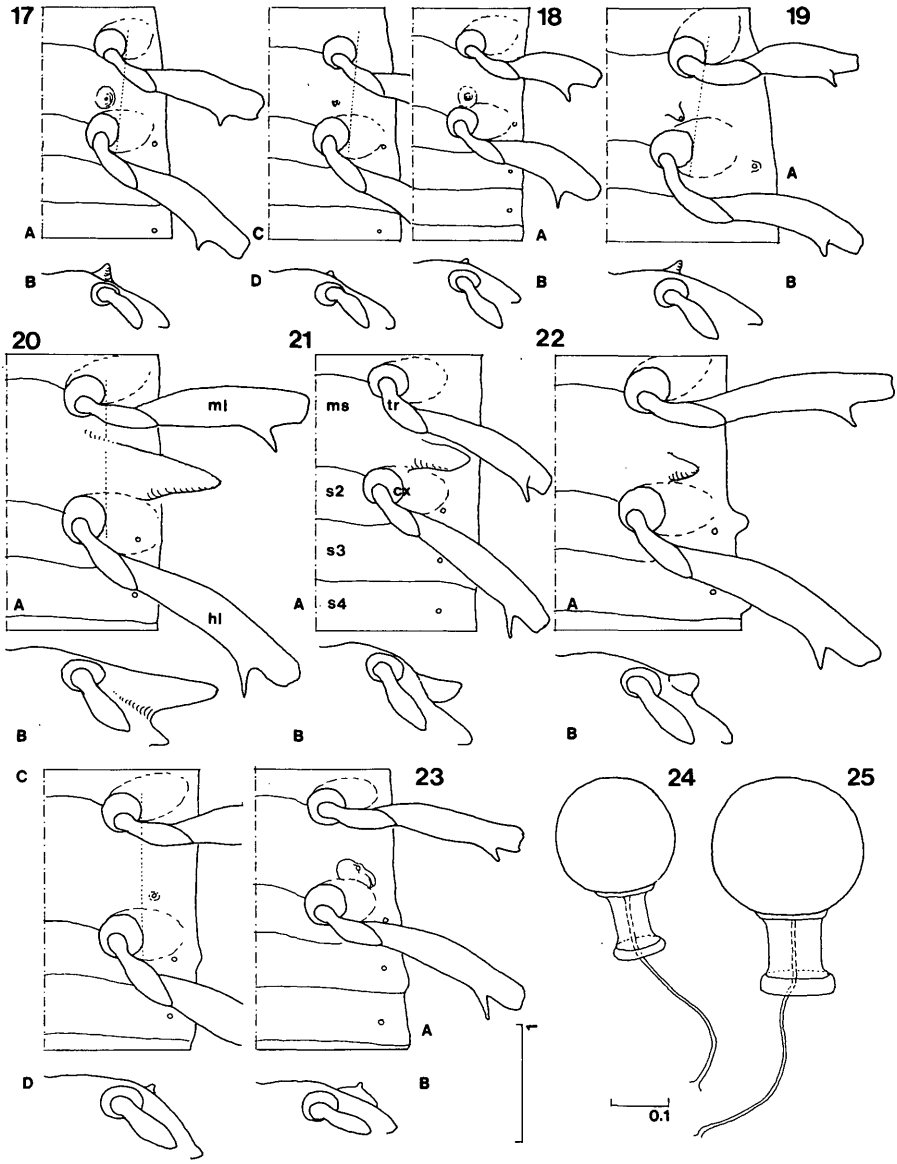

Fig. 17 - 25. 17 A - 23 A - Metapleural spine / tubercle of *Scironocoris* and *Dimorphacantha*, ventral view; 17 B - 23 B - ditto, caudal view; 17 A-B - *S. armigerus* ♂; 17 C-D - *S. armigerus* ♀; 18 A-B - *S. bellicosus* ♂; 19 A-B - *S. baliensis* ♂; 20 A-B - *D. distincta* ♂; 20 C-D - *D. distincta* ♀; 21 A-B - *D. philippinica* sp. nov. ♂; 22 A-B - *D. latispina* sp. nov. ♂; 23 A-B - *D. monteithi* sp. nov. ♂; 24 - 25 spermatheca. 24 - *Scironocoris bellicosus*; 25 - *Dimorphacantha distincta*. Abbreviations: cx coxa; hl hind leg; ml middle leg; ms metasternum; s2, s3, s4 sternites II, III, IV; tr trochanter. Scale 1 mm (17 - 23), 0.1 mm (24 - 25).

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H e a d : Wider than long; genae with rounded apex produced over clypeus. Antennae about 1.8 x as long as width of head.

P r o n o t u m : Anterolateral lobes nearly rectangular with rounded apex, slightly produced anteriorly. Sublateral elevations cone - like and prominent, adjacent callosities flat. Subhumeral elevation knob - like, rounded; humeri laterally raised .

S c u t e l l u m : Large, semicircular with narrowly rounded posteriorly produced apex. Surface roundly inflated, transversely rugose and granulate.

H e m e l y t r a : Corium abbreviated, its truncate posterior margin not exceeding the posterior border of fused metanotum + mtg I; lateral margin carinate and reflexed. Surface with granulate longitudinal carinae.

A b d o m e n : Lateral margins strongly convex, posteroexterior angles of deltg II - VI knob - like, produced, beset with setae, that of deltg VII not elevated and forming a rounded lobe. Fused metanotum + mtg I exposed; tergal plate at least as wide as long and elevated along midline. Venter with a small glabrous tubercle corresponding in position and size to those of females of all other species. Metapleural scent gland canals straight, visible from above.

M e a s u r e m e n t s : Holotype ♀ brachypt. Length 6.1 mm; head w / l 47 / 40; pronotum w / l 92 / 40; scutellum w / l 58 / 36; antennal segments I : II : III : IV = 26 : 18 : 24 : 18; ratio antennae to width of head 1.83; abdomen width 124.

D i s c u s s i o n : *Scironocoris usingeri* can be recognized at once by the strongly ovate abdomen and the angular anterolateral lobes of pronotum. The latter resemble those of *Dimorphacantha* species, but the short antennae and the position of the metapleural tubercle indicate that this taxon belongs to *Scironocoris.*

Key to species of *Scironocoris*

M a c r o p t e r e s:

1 (2) Larger, 6.2 mm, head distinctly longer than wide, longitudinal carinae on deltg II - VI obliterating (Papua N.G.). . . . . *obscurus* KORMILEV (♀)

2 (1) Smaller, at most 5.7 mm, longitudinal carinae on deltg II - VI distinct. 3

3 (4) Abdomen ovate, lateral margins convex (Papua N.G.) . . *armigerus* KORMILEV (♀)

4 (3) Abdomen elongate, lateral margins subparallel (Malaysia, Borneo) *bellicosus* (KORMILEV) (♂ ♀)

B r a c h y p t e r e s a n d s u b b r a c h y p t e r e s:

1 (2) Anterolateral lobes of pronotum rectangular, abdomen strongly expanded laterally and convex (Java, Malaysia) . . . . . *usingeri* (BLOETE) (♀ brachypt.)

2 (1) Anterolateral lobes of pronotum rounded, abdomen moderately convex or subparallel 3

3 (4) Larger, 6.2 - 6.7 mm, brachypterous, genae distinctly produced over clypeus, their apices diverging (Bali) . . . . . *baliensis* KORMILEV (♂ ♀ brachypt.)

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4 (3) Smaller, 5.3 - 5.75 mm, brachypterous or subbrachypterous, genae only slightly produced over clypeus, their apices rounded 5

5 (6) Abdomen ovate, lateral margins evenly convex (Papua N.G.)
armigerus KORMILEV (subbrachypt. ♀)

6 (5) Abdomen elongate, lateral margins subparallel in ♀, slightly convex in ♂ (Malaysia, Borneo) ..... *bellicosus* (KORMILEV) (♂ brachypt., ♀ subbrachypt.)

Dimorphacantha USINGER & MATSUDA 1959

USINGER & MATSUDA 1959: 255 (descr.); KORMILEV & FROESCHNER 1987: 135 (cat.); MONTEITH 1997: 54 (syn. with *Scironocoris*); HEISS 1999: 76 (gen. dist., key).

Type species: *Dimorphacantha distincta* USINGER & MATSUDA 1959: 256, Fig. 74.

Diagnosis: Middle sized species with lateral expansions on anterior and posterior lobe of pronotum. Rostral groove closed in all but one species (*philippinensis* sp. nov.). Distinguished from the closely related genus *Scironocoris* by the set of characters given in the key.

Although the original description is already very detailed, but based only on the type species, more information concerning the metapleural spines is now available. The unique large spine as present in the male of *distincta* is reduced to smaller ones in other species, but always present in the same position. Females bear a small glabrous tubercle only.

Parameres with two transverse carinae on concave inner face. Spermatheca of simple structure with spherical bulb with a pump structure and a rather short membraneous duct without dilatations. The same type of structures occur in the related genus *Scironocoris*.

The relationship to other genera is discussed with *Scironocoris*.

Dimorphacantha distincta USINGER & MATSUDA 1959 (Fig. 20 A-D, 25, 26-27, 38 A-D)

Dimorphacantha distincta USINGER & MATSUDA 1959: 256, Fig. 74 (macropt. ♂); KORMILEV 1971: 7, 8 (key); KORMILEV & FROESCHNER 1987: 135 (cat.).

Scironocoris distinctus MONTEITH 1997: 55 (comb. nov.)

Artabanus luchti KIRITSHENKO 1959: 187, Fig. 6 (descr. macropt. ♀)

Dimorphacantha luchti KORMILEV 1971: 26 (comb. nov.)

Scironocoris luchti MONTEITH 1997: 55 (comb. nov.), **nov. syn.**

Material examined: All specimens are macropterous. 2 ♂ 1 ♀ „Sandakan \ Borneo \ Baker" (same data as holotype!), CEHI; 1 ♀ „N. Borneo \ Bettotan \ nr. Sandakan \ Aug. 4.1927", CEHI. 1 ♀ „Borneo, Sabah \ Kinnabalu N.P.: Poring \ 500m, 29.XI - 2.XII 90 \ leg. W. Schawaller", Museum Stuttgart Germany. 1 ♂ „Malaysia, Borneo \ Sarawak, Sibu \ X 1975 lg. Heiss", CEHI. 1 ♂ „Malaysia, Borneo \ Sarawak, Belaga \ 15 III 90 A. Riedel", CEHI. 1 ♀ „Malaysia, Borneo Sabah \ Batu Punggul Resort env. \ 24.6.-1.7.96 vegetation debris and forest floor litter \ accumulated around large trees near river", CEHI. 1 ♀ „Indonesia, Borneo \ Kalimantan Timur Province \ waterfall and stream 11 km NE Samarinda

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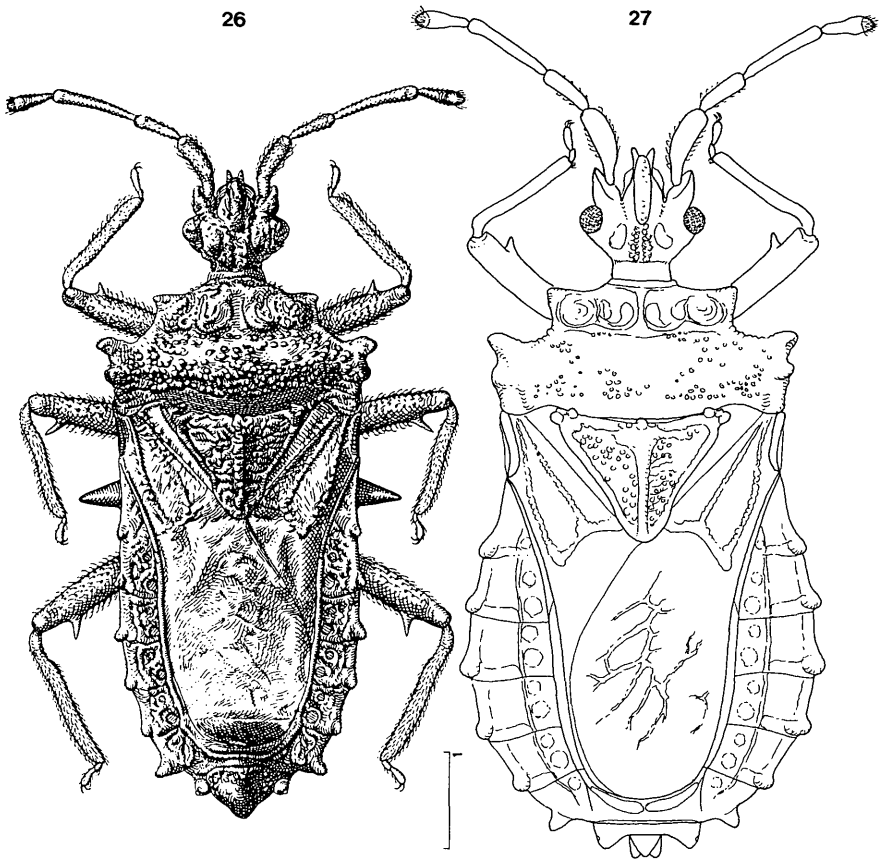

Fig. 26 - 27 *Dimorphacantha distincta*. 26 - holotype macropt. ♂, dorsal view (after USINGER & MATSUDA 1959); 27 - macropt. ♀, dorsal view (lectotype of *D. luchti*). Scale 1 mm.

\ CL 2091, VIII-27-85, J.T. and D.A. Polhemus", CEHI. 2 ♂ 1 ♀ „W. Malaysia, Pahang \ Banjaran Bnom Mts., 20 km S of \ Kampong Ulu Dong, 17.-23.4.1997 \ 1500-1900 m, P. Čechovsky leg.", CEHI. 1 ♀ „Malacca \ Perak", CEHI. 1 ♂ „Malaya \ Ulu Kelatan \ Fort Betis"; „XI.9.1961 light trap \ H. E. Mc Clure", CEHI.

1 ♀ „Sumatra", CEHI. 1 ♂ „Indonesia, Sumatera, Prov. Aceh - Selatan \ Bahbaraot 100 m \ July 83, Klapperich", CEHI. 3♂ „Indonesia \ Siberut Island, Umg. Kalopak \ III 1991 Bentler", CEHI. 1 ♂ „Mentawei \ Sipora \ Serainu V-VI 94 \ Modigliani, MCSN.

1 ♀ „Banjoewangi \ Java \ Lucht", syntype of *Artabanus luchti* KIRITSHENKO, here designated as lectotype, ZMAS. 1 ♀ „Java occident. \ Sukkabumi \ 2000' 1893 \ H. Fruhstorfer", NHRS. This specimen bears the label „*Artabanus* \ *luchti* n. sp. \ KIRITSHENKO det." in KIRITSHENKOs handwriting as the lectotype, but is not mentioned in the description.

Examination of the 2 female specimens identified by KIRITSHENKO as *Artabanus luchti* n.sp. and comparison with ♀ collected together with unmistakable ♂ of *distincta* proved them to be conspecific. Therefore *luchti* is regarded as the female of *distincta* and placed in synonymy to the latter.

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D i s t r i b u t i o n : Peninsular Malaysia through Sumatra and its offshore islands Siberut and Sipora (Mentawei Islands) to Java and Borneo. Is also reported from S. China (Yunnan) by LIU 1980: 177, but this record needs verification. The record from Philippines (Mindanao) by USINGER & MATSUDA 1959: 258 concerns *philippinica* sp. nov. described below. That from Sulawesi by KORMILEV 1983: 454 most probably also belongs to a different species, but only one female was available for study (Map 3).

USINGER & MATSUDA already gave an excellent description of both sexes with biometrical measures.

In the material examined the variation of body length ranges from 6.2 - 7.3 mm in ♂ and 7.2 - 7.7 mm in ♀ (US. & MATS.: HT ♂ 6.7, ♀ 7.2).

D i s c u s s i o n : This species is distinguished from other species by the particular shape and structure of pronotal expansions and in the male immediately by the long metapleural spines, which are visible from above.

Dimorphacantha borneensis KORMILEV 1986, stat. rest. (Fig. 28-29)

Dimorphacantha borneensis KORMILEV 1986: 256, Fig. 5 - 6 (descr. macropt. ♀); KORMILEV & FROESCHNER 1987: 135 (cat.)

Scironocoris borneensis MONTEITH 1997: 56 (comb. nov.)

M a t e r i a l e x a m i n e d : Holotype ♀ macropt. labelled „Malaysia: Sabah: \ Kinabalu National Park \ Headquarters area \ el. 1560 m, 6.Sept. 1983 \ G.F. Hevel & W.E. Steiner", USNM.

D i s t r i b u t i o n : The only known type specimen is from Sabah, Borneo (Map 3).

D e s c r i p t i o n : The description given by KORMILEV is detailed and sufficient. Male sex unknown.

KORMILEV does not mention the presence of a small glabrous metapleural tubercle, which is situated in the same position as in females of other species.

M e a s u r e m e n t s : Mesurements taken from the cleaned and remounted holotype differ slightly from those given in the original description: Length 8.9 mm; head w / l 58 / 55; pronotum w / l 102 (anterior) - 164 (posterior expansion) / 74; scutellum w / l 92 / 62; antennal segments I : II : III : IV = 37 : 26 : 45 : 23; ratio antennae to width of head 2.26; abdomen width across tergite IV 172.

D i s c u s s i o n : *Dimorphacantha borneensis* is one of the largest species of the genus and is distinguished by the fingerlike lateral projections of the posterior pronotal lobe.

Dimorphacantha latispina sp. nov. (Fig. 22 A-B, 30-32, 39 A-D)

H o l o t y p e : Submacropterous ♂ labelled „Sumatra, Nias \ Ombolata \ 15.II.1984 E. Saischek", CEHI. Paratypes 1♂ submacr. 1♀ macropt. with same data as holotype. 1♂ submacropt. „Sumatra \ Si - Rambé \ XII.90 - III.91 \ E. Modigliani", MCSN (Si - Rambé = Sirombu on Nias Island, pers. comm. P.v. Doesburg).

D i s t r i b u t i o n : The type material is from Nias Island west of Sumatra (Map 3).

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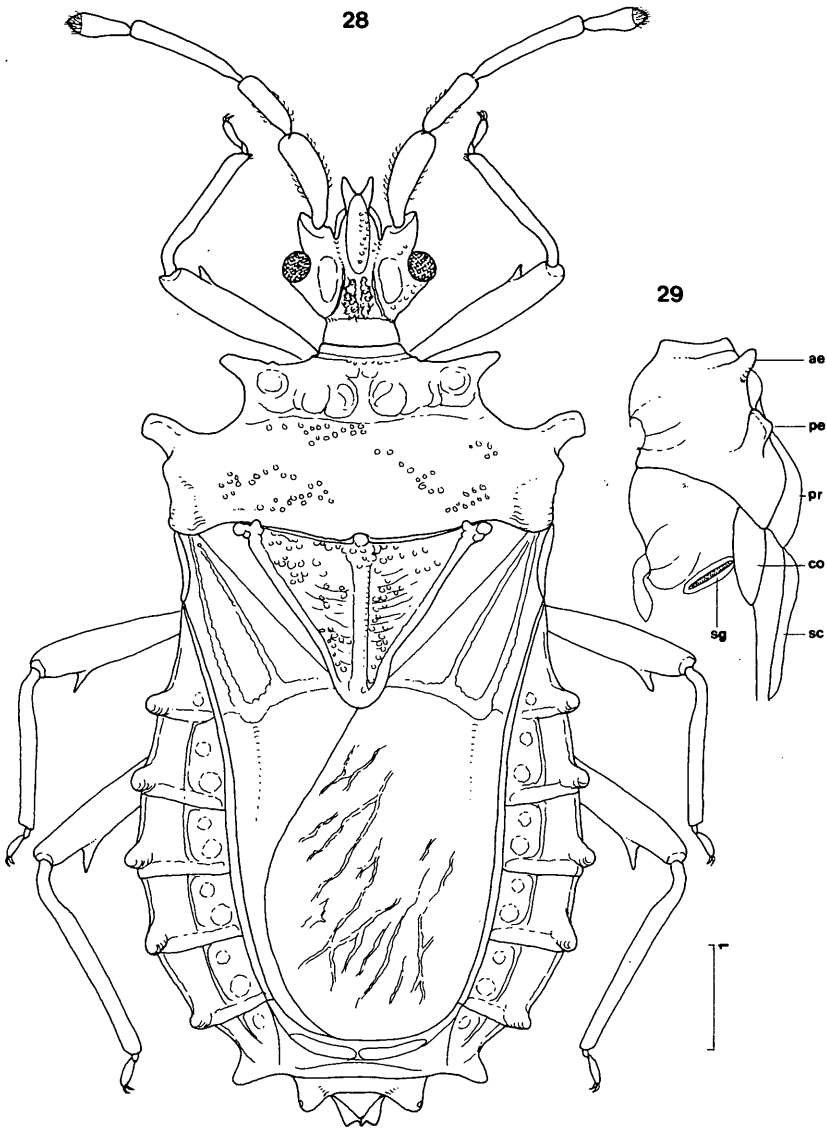

Fig. 28 - 29 *Dimorphacantha borneensis*. 28 - holotype macropt. ♀, dorsal view; 29 - ditto, lateral view. ae anterior process, pe posterior process, pr pronotum, co corium, sc scutellum, sg scent gland canal. Scale 1 mm.

D i a g n o s i s : Large species, dimorph. Distinguished by the angular anteriorly produced anterolateral pronotal lobes and the large lateral expansions of the posterior lobe.

D e s c r i p t i o n : Submacropterous male. Body elongate with coarse granulation and erect setae, particularly on posteroexterior lobes of deltg II - VII, legs and antennae. Visible tergal plate with flat punctures. Colour dark brown.

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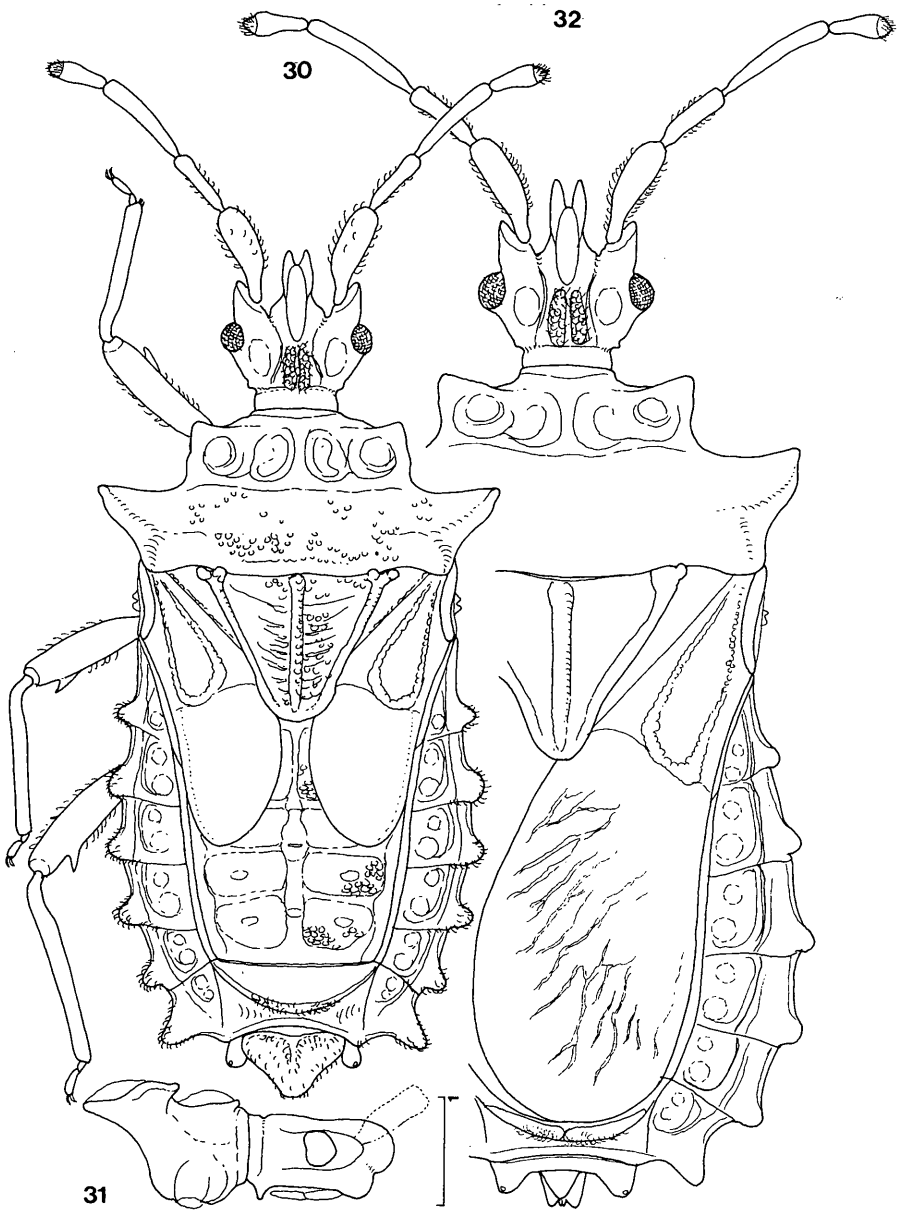

Fig. 30 - 32 *Dimorphacantha latispina* sp. nov. 30 - holotype, submacropt. ♂, dorsal view; 31 - ditto, head and pronotum lateral view; 32 - macropt. ♀, dorsal view. Scale 1 mm.

H e a d : Wider than long (54 / 51); genae distinctly produced over clypeus, their apices tapering and diverging toward apex. Antenniferous tubercles short and blunt. Antennae long and slender, segment I is the thickest, III thinnest and longest; relative length of segments

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I : II : III : IV = 35 : 24 : 37 : 21. Eyes semiglobose. Vertex with two longitudinal ridges of larger setigerous granules. Postocular portion converging toward collar. Rostrum shorter than head, rostral groove deep and closed posteriorly.

P r o n o t u m : More than twice as wide across posterior expansions as long (140 / 60). Anterior lobes narrower (74), subangular, slightly produced anteriorly. Sublateral elevations rounded, adjacent callosities flat with a longitudinal sulcus between them. Posterior lobe with large anterolateral expansions, disk dispersely granulate.

S c u t e l l u m : Triangular, wider than long (70 / 52); carinate lateral borders sinuate, apex broadly rounded. Disk with a longitudinal ridge, the surface transversely rugose, anterolateral angles formed by large granules.

H e m e l y t r a : Corium shorter than scutellum, anterolateral margin carinate and reflexed; disk with granular longitudinal veins. Membrane abbreviated and not overlapping, reaching posterior margin of mtg IV, veins obliterating.

A b d o m e n : Ovate, lateral margin of deltg II - VII curved, posteroexterior angles with large round lateral expansions, that of deltg VII larger and directed posteriorly. Tergal plate partly exposed. Metapleural spine distinctly developed (Fig. 22 A-B). Metapleural scent gland canal straight, laterally visible from above. Spiracles II - VII ventral, VIII terminal and visible from above.

L e g s : Long and slender. Femora with pointed subapical ventral spines, tibiae curved basally, protibial comb present.

M a l e g e n i t a l s t r u c t u r e s : Pygophore wider than long, constricted posteriorly. Paratergites VIII clavate, reaching 1/2 of pygophore. Parameres Fig.39 A-D.

E t y m o l o g y : Named after the conspicuous spiny lateral expansions of the pronotum; lateralis (latin) = lateral, spina (latin) = spine.

F e m a l e : As in ♂, except: larger, sides of abdomen more convex; apex of segment IX exceeding tergite VIII in length; metapleural spine absent but a glabrous tubercle is present at the same position. Membrane fully developed, with anastomosing veins.

M e a s u r e m e n t s : Holotype ♂. Length 7.7 mm; ratio antennae / width of head 2.17; width of abdomen across tg IV 136. Paratype ♀. Length 9.3 mm; head w / l 63 / 61; pronotum w / l 172 / 72; scutellum w / l 96 / 66; antennal segments I : II : III : IV = 41 : 28 : 43 : 23; ratio antennae to width of head 2.14; abdomen width across tg IV 88, tg V 93.

Dimorphacantha monteithi sp. nov. (Fig. 23 A-B, 33-35)

H o l o t y p e : Submacropterous ♂ labelled „Sumatra \ Gg. Merapi b. 1600m \ Anf. VII 1979 C. Moser", CEHI. Paratypes : 2♂ 2♀ submacropt. with same data as holotype, CEHI, QDMB.

D i s t r i b u t i o n : To date known only from Central Sumatra (Map 3).

D i a g n o s i s : Medium sized, submacropterous. Distinguished from all other species by the structure and shape of the pronotal expansions and the male also by the distinct metapleural spine.

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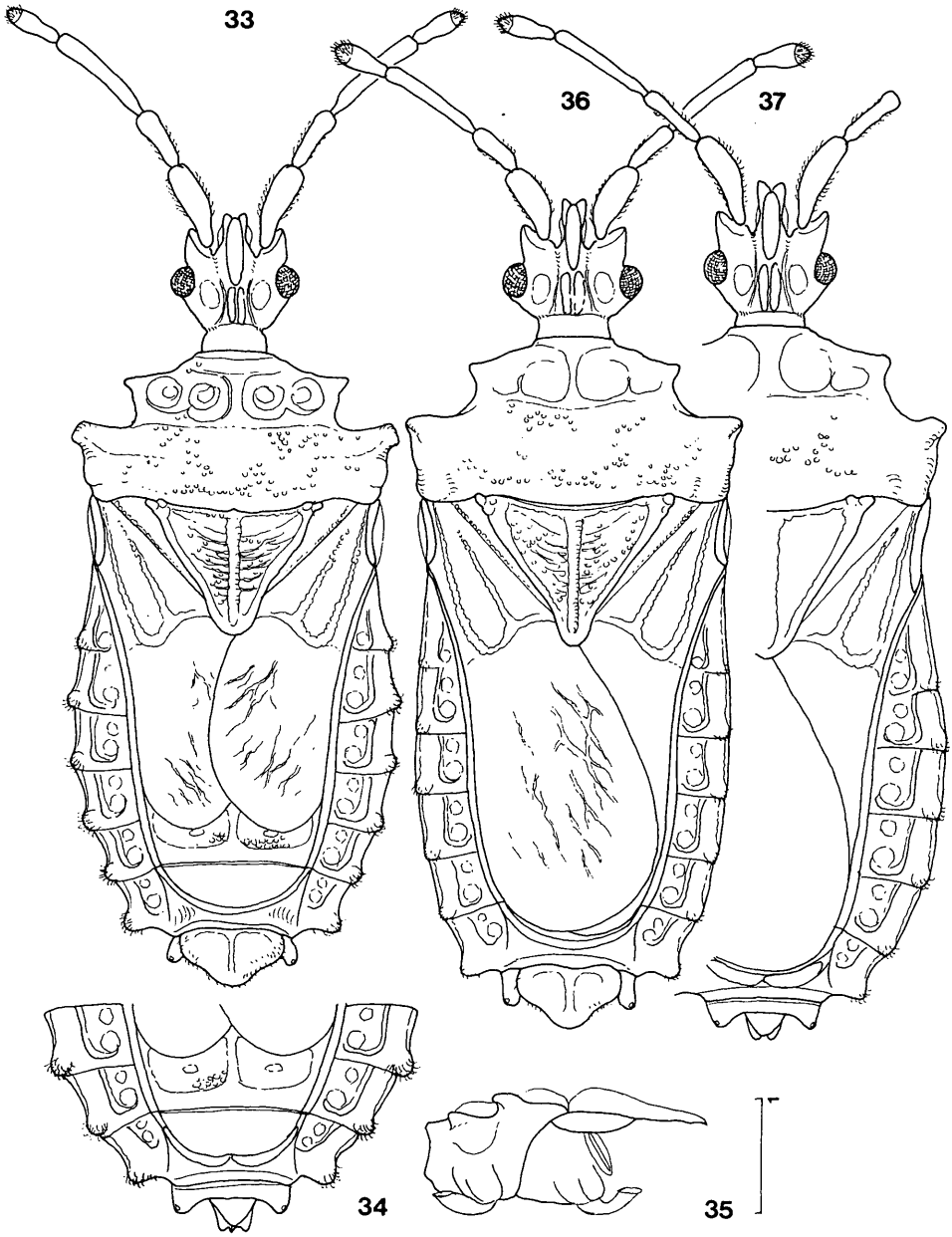

Fig. 33 - 37. 33 - *Dimorphacantha monteithi* sp. nov., holotype, submacropt ♂, dorsal view; 34 - ditto, submacropt. ♀, terminal segments, dorsal view; 35 - ditto, ♂ lateral view; 36 - *Dimorphacantha philippinica* sp. nov., holotype, macropt. ♂, dorsal view; 37 - ditto, macropt. ♀, dorsal view. Scale 1 mm.

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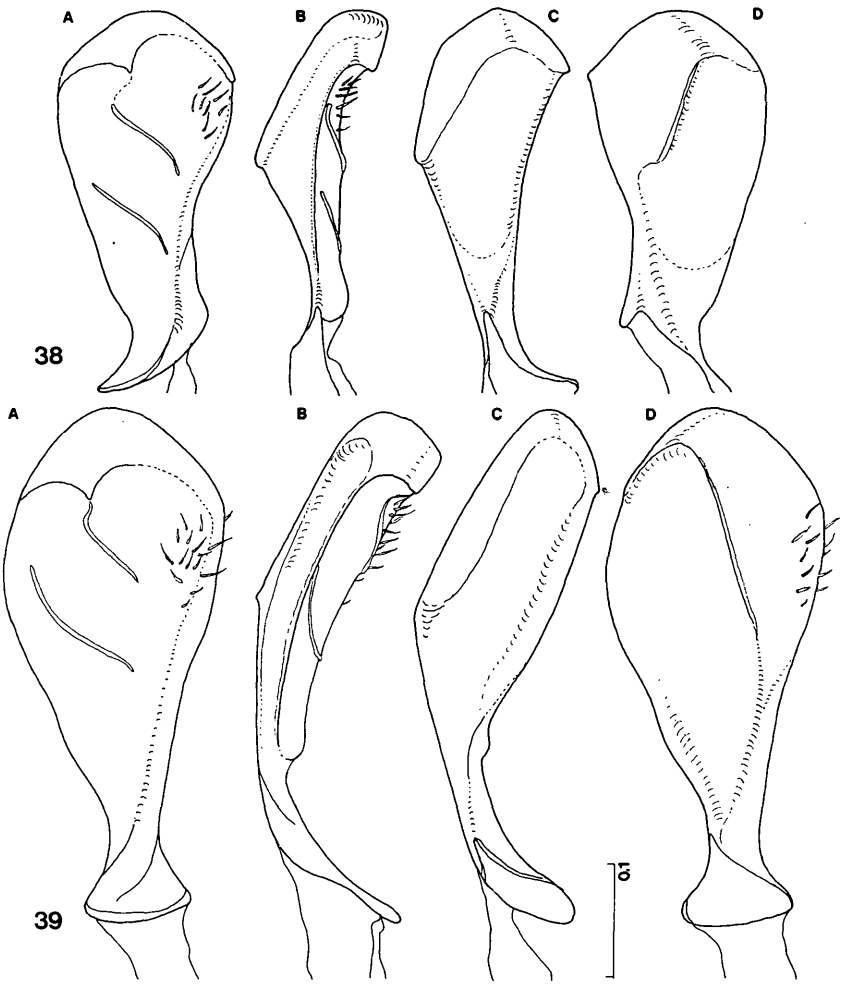

Fig. 38 - 39 Parameres in different positions. 38 A-D - *Dimorphacantha distincta*; 39 A-D - *Dimorphacantha latispina* sp. nov. Scale 0.1 mm.

D e s c r i p t i o n : Submacropterous male. Body elongate ovate, with coarse granulation and pilosity. Colour dark brown.

H e a d : Wider than long (46 / 41). Genae short, only slightly produced over clypeus, their apices rounded. Antenniferous tubercles short and blunt. Antennae very long and slender, antennal segments I : II : III : IV = 31 : 22 : 39 : 18. Vertex with two granular longitudinal ridges. Postocular portion strongly converging posteriorly. Rostrum shorter than head, rostral groove closed posteriorly.

P r o n o t u m : Twice as wide as long (112 / 56), anterior lobe narrower (72), angularly expanded laterally. Sublateral elevations only moderately raised and rounded, callosities flat. Posterior lobes with subrectangular expansions directed anterolaterad, disk coarsely granulate.

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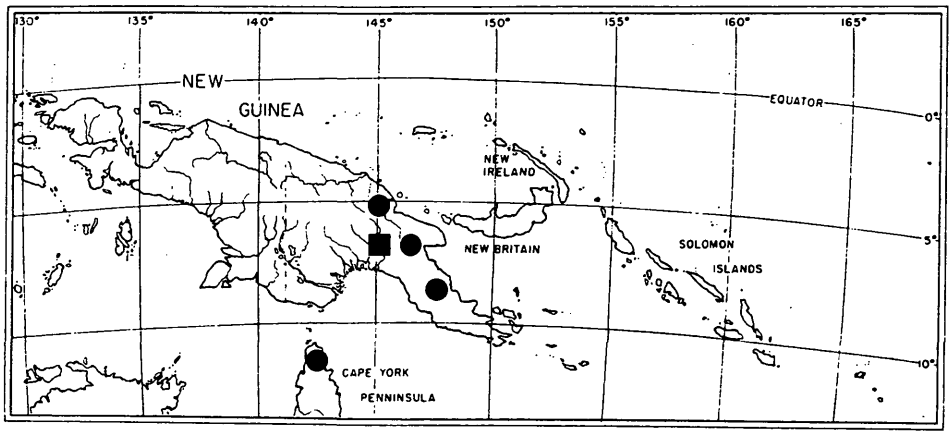

Map 1. Distribution of *Scironocoris* spp. *S. armigerus* (●); *S. obscurus* (■).

S c u t e l l u m : Triangular, wider than long (62 / 44), lateral borders carinate and sinuate, apex rounded. Disk with a longitudinal ridge, transversely rugose laterally.

H e m e l y t r a : Corium longer than scutellum, reaching posterior margin of deltg II; its base carinate and reflexed, veins granular. Membranes abbreviated but partly overlapping each other, reaching 1/2 of mtg VI; veins indistinct.

A b d o m e n : Ovate, lateral margins moderately convex. Posteroexterior angles of deltg II - VII roundly thickened and produced, largest in deltg VII. Visible part of tergal disk with deep flat punctures. Metapleural spine consisting of a large ovate base and a small spine (Fig. 23 A-B). Metapleural scent gland canal straight, laterally not visible from above.

L e g s : As in other species.

M a l e g e n i t a l s t r u c t u r e s : Pygophore transverse, nearly twice as wide as long, constricted posteriorly. Paratergites VIII small and clavate, reaching 1/2 of pygophore. Parameres basically as in *latispina*.

E t y m o l o g y : Dedicated to my friend G. B. Monteith in appreciation of his outstanding contributions to the Aradidae - fauna of Australia and generosity in sharing material.

F e m a l e : As in ♂, except: larger, abdomen more convex; apex of segment IX produced over tergite VIII; metapleural tubercle as in other species. Membrane slightly shorter.

M e a s u r e m e n t s : Holotype ♂. Length 6.9 mm; ratio antennae / width of head 2.39; width of abdomen across tg IV 134. Paratype ♀. Length 7.3 mm; head w / l 49 / 43; pronotum w / l 120 / 56; scutellum w / l 68 / 50; antennal segments I : II : III : IV = 32 : 24 : 40 : 20; ratio antennae to width of head 2.37; abdomen width 138.

Dimorphacantha philippinica sp. nov. (Fig. 21 A-B, 36-37)

H o l o t y p e : Macropterous ♂ labelled „Cuernos Mts. \ Negros, Baker", CEHI. Paratypes. 1 ♀ macropt. with data as holotype, CEHI. 1 ♀ macropt. „Davao \ Mindanao \ Baker", CEHI. 1 ♀ macropt. „Surigao \ Mindanao \ Baker", CEHI. 1 ♀ macropt. „P. I. Mindanao \ Lanao: Butig Mts.", „24 km NE of Butig \ 1000 m, 21.VI.1958", CEHI.

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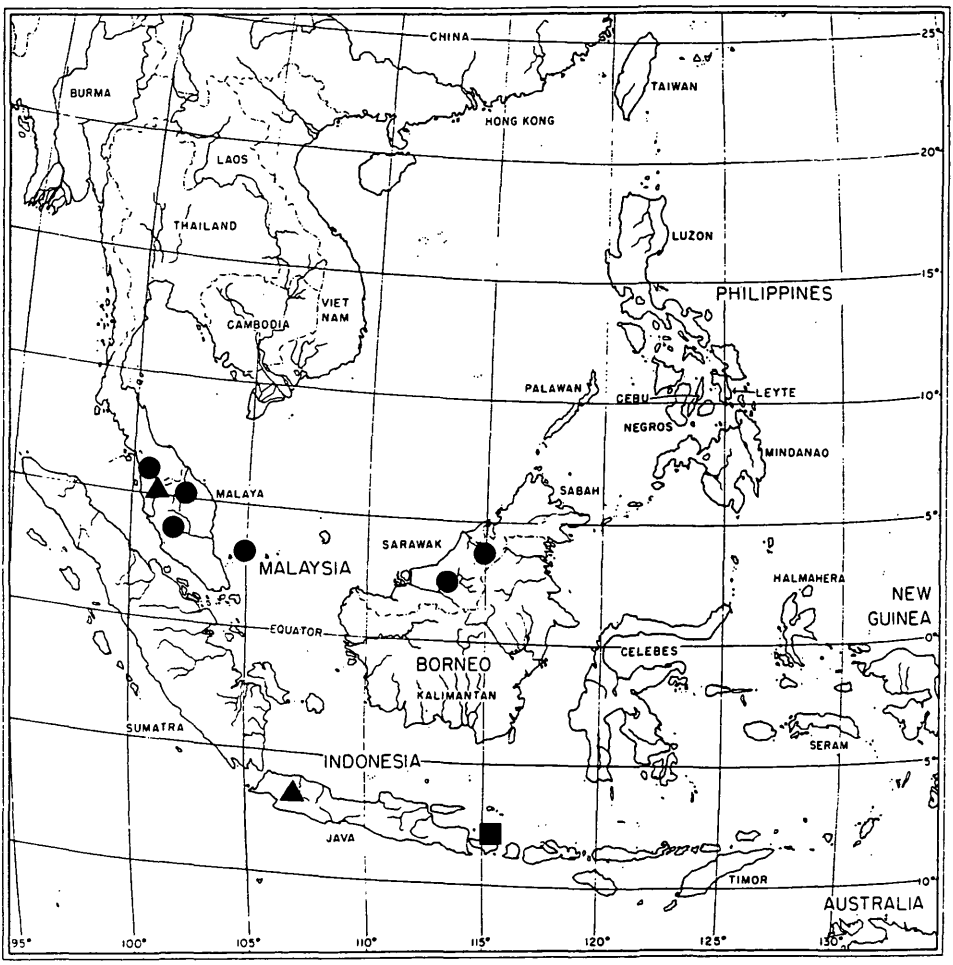

Map 2. Distribution of *Scironocoris* spp. *S. baliensis* (■); *S. bellicosus* (●); *S. usingeri* (▲).

D i s t r i b u t i o n : Philippines, Mindanao (Map 3).

D i a g n o s i s : Medium sized, macropterous. Resembles only *distinctus* in shape and structure of pronotal expansions, but posteroexterior angles of deltg II - VI are less well developed and not produced, the rostrum is as long as head and therefore the rostral groove is open posteriorly. The female is less convex than *distincta* and the male bears only a small metapleural spine.

D e s c r i p t i o n : Macropterous male. Body elongate with sparse granulation and pilosity as in other species. Colour dark brown.

H e a d : About as wide as long (47 / 46). Genae moderately produced over clypeus, tapering toward apex. Antenniferous tubercles short and blunt. Antennae long and slender, antennal segments I : II : III : IV = 30 : 20 : 37 : 20. Other structures as in *distinctus.*

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Map 3. Distribution of *Dimorphacantha* spp. *D. borneensis* (■); *D. distincta* (●); *D. latispina* sp. nov. (◑); *D. monteithi* sp. nov. (▲); *D. philippinica* sp. nov. (▲).

P r o n o t u m : Twice as wide as long (120 / 60), anterior lobe narrower (70), moderately expanded laterally with rounded apices. Sublateral elevations and callosities obliterating. Posterior lobes angularly produced, disk coarsely granulate.

S c u t e l l u m : Triangular, wider than long (72 / 50), carinate lateral border sinuate, apex narrowly rounded. Disk transversely rugose.

H e m e l y t r a : Corium slightly longer than scutellum, anterolateral border carinate and reflexed, disk with granular veins. Membrane fully developed reaching 1/2 of tergite VII, veins obliterating.

A b d o m e n : Elongate, lateral margin subparallel, posteroexterior angles of deltg II - VI weakly thickened but not protruding, VII with a rounded lobe. Metapleural spine rather large but laterally not visible from above. Metapleural scent gland canal not visible laterally.

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Legs: As in other species.

Male genital structures: Pygophore strongly transverse and constricted posteriorly. Paratergites VIII thin, reaching 2/3 of pygophore.

Etymology: Named after its origin, the Philippine Islands.

Female: As in ♂, except: larger, body more convex; anterolateral expansion of posterior lobe of pronotum sometimes more pronounced; tergite IX exceeding tergite VIII in length; metapleural glabrous tubercle as in other species.

Measurements: Holotype ♂. Length 67.2 mm; ratio antennae / width of head 2.28; width of abdomen across tg IV 110. Paratype ♀. Length 7.4 mm; head w / l 47 / 47; pronotum w / l 124 / 64; scutellum w / l 76 / 52; antennal segments I : II : III : IV = 32 : 23 : 40 : 21; ratio antennae to width of head 2.47; abdomen width 130. Range of size: ♂ 7.2 - 7.3 mm; ♀ 6.9 - 7.4 mm.

Key to species of *Dimorphacantha*

1 (2) Posteroexterior angles of deltg II - VI without laterally projecting expansions, rostral groove open posteriorly (Philippines) *philippinica* sp. nov. (macropt. ♂ ♀)

2 (1) Posteroexterior angles of deltg II - VI with distinct laterally projecting expansions, rostral groove closed posteriorly 3

3 (4) Posterior pronotal lobe with long finger like anterolateral expansions (Fig. 28) (Borneo) ..... *borneensis* KORMILEV (macropt. ♀)

4 (3) Posterior pronotal lobe not as Fig. 28, expansions of different shape 5

5 (6) Posterior pronotal lobe with large lateral expansions as Fig. 30, 32, genae long and produced (Sumatra - Nias Island) *latispina* sp. nov. (submacropt. ♂, macropt. ♀)

6 (5) Posterior pronotal lobe not as Fig. 30, 32, genae short and only slightly produced 7

7 (8) Macropterous, anterolateral lobe of pronotum subrectangular and produced anteriorly, posterior lobe as Fig. 26, 27, male with a long metapleural spine which is visible from above (Malaysia to Borneo, ? South China) *distincta* USINGER & MATSUDA (macropt. ♂ ♀)

8 (7) Submacropterous (♂) or macropterous (♀), anterolateral lobe of pronotum angularly expanded laterally, posterior lobe as Fig. 33, metapleural spine of male smaller as Fig. 23 A-B (Sumatra) *monteithi* sp. nov. (submacropt. ♂, macropt. ♀)

Catalogue of species

Sironocoris KORMILEV 1957

Rustem KORMILEV 1957 (synonymised by HEISS 1999: 77)

armigerus KORMILEV 1957a (Papua N. G.)

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australis MONTEITH 1997 (Australia) (synonymised by HEISS 1999: 78)

papuasicus KORMILEV 1971 (Papua N. G.) **nov. syn.**

baliensis KORMILEV 1972 (Bali)

bellicosus (KORMILEV 1957b) („Persia", mislabelled) (transferred from *Rustem* by HEISS 1999: 79)

obscurus KORMILEV 1971 (Papua N. G.)

usingeri (BLOETE 1965) (Java) (transferred from *Dimorphacantha* by MONTEITH 1997: 55)

malayensis KORMILEV 1983 (Malaysia) **nov. syn.**

Dimorphacantha USINGER & MATSUDA 1959

borneensis KORMILEV 1986 (Borneo)

distincta USINGER & MATSUDA 1959 (Borneo)

luchti (KIRITSHENKO 1959) (Java, Sumatra) (transferred from *Artabanus* by KORMILEV 1971: 26)

lectotype designated here, **nov. syn.**

latispina **sp. nov.** (Nias Island - Sumatra)

monteithi **sp. nov.** (Sumatra)

philippinica **sp. nov.** (Philippines)

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