

**Notes on the marine Haloveliinae
(Insecta: Heteroptera: Veliidae) of the Philippines,
with descriptions of four new species, identification key,
and classification of all species of *Haloveloides* ANDERSEN, 1992**

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Abstract

Taxonomic and distributional notes on the marine Haloveliinae (Veliidae) of the Philippine Islands are presented. Four species of *Haloveloides* ANDERSEN, 1992 are newly described: *Haloveloides anderseni* sp.n. from Camarines Sur in South Luzon, *H. fluvialis* sp.n. from Western Samar, *H. gapudi* sp.n. from Zambales in Central Luzon, and *H. hirsutus* sp.n. from Poro of the Camotes Islands. Distribution data of four other species of the Haloveliinae are added, with new island records for *Halovelvia bergrothi* from Marinduque and Biliran, for *Halovelvia esakii* from Marinduque, for *Halovelvia lannae* from Ponson of the Camotes Islands, and for *Haloveloides chrystiae* from Coron of the Calamianes Islands. Notes on habitats are reported. In the genus *Haloveloides* three species groups (*H. papuensis* -, *H. cornutus* -, and *H. femoralis* group) are defined, of which two groups (*H. cornutus* - and *H. femoralis* group) are endemic in the Philippine Islands. A key to all species of the genus *Haloveloides* is presented.

Key words: Heteroptera, Veliidae, Haloveliinae, *Halovelvia*, *Haloveloides*, new species, new record, species group, systematics, distribution, key, check-list, endemic, Philippines.

Zusammenfassung

Taxonomische und zoogeographische Bemerkungen zu den marinen Haloveliinae (Veliidae) der Philippinen werden zusammengefaßt. Vier Arten der Gattung *Haloveloides* ANDERSEN, 1992 werden neu beschrieben: *Haloveloides anderseni* sp.n. aus Camarines Sur in Süd-Luzon, *H. fluvialis* sp.n. aus West-Samar, *H. gapudi* sp.n. aus Zambales in Mittel-Luzon sowie *H. hirsutus* sp.n. von der zu den Camotes gehörenden Insel Poro. Verbreitungsdaten weiterer vier Arten der Haloveliinae werden gemeldet, mit neuen Inselnachweisen für *Halovelvia bergrothi* von Marinduque und Biliran, für *Halovelvia esakii* von Marinduque, für *Halovelvia lannae* von der zu den Camotes gehörenden Insel Ponson sowie für *Haloveloides chrystiae* von der zu den Calamianes gehörenden Insel Coron. Notizen zu den Lebensräumen der Arten werden mitgeteilt. Innerhalb der Gattung *Haloveloides* werden drei Artengruppen (die *H. papuensis*-, die *H. cornutus*- und die *H. femoralis*-Gruppe) definiert; zwei davon, die *H. cornutus*- und die *H. femoralis*-Gruppe, gelten als für die Philippinen endemisch. Ein Bestimmungsschlüssel zu allen *Haloveloides* Arten wird präsentiert.

Introduction

Studies on the marine Gerrormorpha of the Philippines are still scarce due to the lack of sufficient collecting. Eight genera, which belong to three families, regularly inhabit

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marine or brackish habitats in the Philippine archipelago: *Hermatobates* (Hermatobatiidae); *Halovelilia*, *Haloveloides*, *Xenobates* (Veliidae: Haloveliinae); *Stenobates*, *Halobatopsis*, *Pseudohalobates* (Gerridae: Trepobatinae); and *Halobates* (Gerridae: Halobatinae). Preferences of habitats of some genera have been recently published by ANDERSEN & WEIR (1999). Although the Philippines are particularly rich in Gerromorpha and seem to have a high rate of endemism even in marine taxa, many of the marine species are only reported from a very few localities or a single place, which is often the type locality. Also those expeditions, which have been carried out during the "Philippine Water Bug Inventory Project" (see GAPUD & ZETTEL 1999), have primarily concentrated on limnic habitats to demonstrate the unique and strongly endangered fauna of Philippine streams. Only recently, more attention has been paid to coastal habitats. It is sad to observe, that the very valuable habitats along the Philippine sea coasts are steadily dwindling: Mangroves have been destroyed dramatically by making firewood and for shrimp farming all over Southeast Asia during the last twenty years. Illegal dynamite fishing is still destroying the coral reefs. Pollution of the sea – caused by increasing settlement along the shores, shipping, inflow of polluted rivers, and uncontrolled tourism – especially affects the pleuston. Probably many of the species here listed would be regarded as endangered, if more knowledge on their distribution and their ecological requirements would be known. The author hopes that this paper will encourage Philippine national and local authorities to save the habitats of the endemic coastal species.

The Philippine marine Haloveliinae of the genera *Halovelilia* BERGROTH, 1893 and *Haloveloides* ANDERSEN, 1992 have been revised by ANDERSEN (1989a, b, 1992), who has presented data on seven Philippine species, and later-on by ZETTEL (1998), who has contributed descriptions of further three species and additional records from the Philippines. For the first time ANDERSEN (2000) has recorded two species of the genus *Xenobates* ESAKI, 1930 from the Philippine Islands; more Philippine species, mostly collected in the frame of the "Philippine Water Bug Inventory Project", will be described by the same author and are not considered in the present paper.

This study presents descriptions of four new species of *Haloveloides* and some additional new records of species of *Haloveloides* and *Halovelilia*, mostly from the author's collections during the last five years. The genus *Haloveloides* is subdivided into three species groups, and a key to all species is presented.

Material and methods

Material studied consists mostly of dry mounted, but also of alcohol preserved specimens. They are deposited in the following institutions or private collections:

Acronyms of repositories:

CNTN	Coll. N. Nieser, Tiel, The Netherlands	USNM	United States National Museum, Washington, U.S.A.
CZW	Coll. H. & S.V. Zettel, Vienna, Austria	ViSCA	Natural History Museum, Department of Plant Protection, Visayas State College of Agriculture, Baybay, Leyte, Philippines
NHMW	Naturhistorisches Museum, Vienna, Austria	ZMUC	Zoological Museum, University Copenhagen, Denmark
PPCC	Coll. P.P. Chen, Beijing, China		
UPLB	Museum of Natural History, University of the Philippines, Los Baños, Philippines		

The specimens have been studied with a Leica Wild M10 binocular microscope; studies on male genitalia have been done with an Olympus BX40 microscope. Drawings have been prepared with the help of a camera lucida fixed to these microscopes. Measurements (either in millimetres or as the ratio of two lengths) refer to the holotype, or to a randomly selected female paratype, respectively. Range of body length (measured from apex of head to apex of abdomen) refers either to all specimens available or to a minimum of ten randomly selected specimens of each sex. The following abbreviations of leg segments are used: FL - foreleg, ML - middle leg, HL - hind leg; Fe - femur, Ti - tibia, Ta - tarsus. Measurements of lengths of antennomeres and leg segments are given relative to the length of antennomere 2 or to the length of metatibia respectively (the length of which is stated in millimetres). The term "connexivum" is used for the edge (or "connection") of sternites and laterotergites, and not for the combination of the laterotergites.

Genus *Haloveloides* ANDERSEN, 1992

General remarks: ANDERSEN (1992) erected the genus *Haloveloides* for a group of species neither fitting the characteristics of *Halovelia* (as defined by ANDERSEN 1989a) nor those of *Xenobates* (diagnosis in ANDERSEN & WEIR 1999, and ANDERSEN 2000). Obviously, *Haloveloides* has its centre of radiation in the Philippine archipelago, from where at present ten species are known. Nine species are considered to be Philippine-endemic, only *H. brevicornis* occurs also in Sulawesi and the Moluccas. From other countries so far only three further species are reported: *Haloveloides sundaensis* is known from the Sunda Shelf areas and is the only Oriental species; *H. papuensis* and *H. browni* have a distribution from New Guinea to the Solomon Islands. Most species inhabit river mangroves or other intertidal zones of running waters, some species coral reef flats (ANDERSEN 1992, 2000; ZETTEL 1998, and this study).

Systematics: ANDERSEN (1992) has presented the relationships of seven species of *Haloveloides* in a cladogram based on nine "apomorphic characters". The monophyly of *Haloveloides* seems to be proven by three characteristics [Andersen's characters 1 - 3]. The proper use of two other features, however, is here doubted: (1) There is no proof of the homology of the apical spine [Andersen's character 9] or tubercle of the *H. papuensis* group (Fig. 5) and the subapical tubercle [Andersen's character 5] of the *H. cornutus* group (Figs. 1 - 3). (2) The relatively short antennomere 3 (versus antennomere 2) of the species of the *H. papuensis* group has been regarded as apomorphic [Andersen's character 7], although it is similarly developed in the other two marine genera *Halovelia* and *Xenobates*; ANDERSEN (1992) did not state the outgroup used for his cladogram. If, however, the long antennomere 3 is regarded to be a synapomorphy of the *H. cornutus* - and *H. femoralis* group, and the subapical versus the apical tubercle are regarded a convergency (as preferred by the author), the two species groups, which are endemic in the Philippines, would be more closely related to each other. This is also supported by the fact that species of these groups show close affinities to intertidal zones of running waters, while species of the *H. papuensis* group are usually found in exposed marine shore habitats like coral reef flats (LANSBURY 1989, ANDERSEN 1992, and personal observations). Both phylogenetic analyses, however, separate the genus into the three distinct species groups:

1) *Haloveloides papuensis* group: *Haloveloides brevicornis* ANDERSEN, 1992, *H. browni* (LANSBURY, 1989), *H. chrystiae* ZETTEL, 1998, *H. papuensis* (ESAKI, 1926), *H. sundaensis* ANDERSEN, 1992.

Diagnosis: length of antennomere 3 less than 1.5 times length of antennomere 2 (Figs. 8 - 11); prothrochanter of male with apical spine or tubercle (Fig. 5); profemur of male evenly and weakly thickened (Fig. 5); protibia of male subapically with 4 - 8 spinous hairs (Fig. 5); metafemur of male not or moderately incrassate, with maximum width close to base; venter of male with median carina posteriorly reaching sternite 6; paramere long, curved, with acute apex; tergite 8 of female with more or less evenly distributed long pilosity (Fig. 38).

Distribution: from Thailand to the Solomon Islands.

2) *Haloveloides cornutus* group: *Haloveloides anderseni* sp.n., *H. cornutus* ANDERSEN, 1992¹, *H. danpolhemi* ANDERSEN, 1992, *H. fluvialis* sp.n., *H. gapudi* sp.n.

Diagnosis: length of antennomere 3 more than 1.5 times length of antennomere 2 (Fig. 12); prothrochanter of male with subapical tubercle or edge (Figs. 1 - 3); profemur of male with proximal concavity and distinctly thickened beyond middle (except indistinct in *H. anderseni* sp.n.) (Figs. 1 - 3); protibia of male either with short row of 5 - 10 spinous hairs (in *H. cornutus* and *H. gapudi* sp.n., Fig. 3) or with spine-like group of hairs (in *H. anderseni* sp.n., *H. danpolhemi*, and *H. fluvialis* sp.n., Figs. 1 - 2); metafemur of male not or weakly incrassate, with maximum width close to base (except in *H. anderseni* sp.n.); venter of male with median hump, carina or tubercle posteriorly at most reaching sternite 5, sternite 6 - 7 with medial impression lined by erect hairs (Figs. 25 - 27); paramere curved, either short and with rounded apex (in *H. anderseni* sp.n., *H. danpolhemi*, and *H. fluvialis* sp.n., Figs. 15, 18) or medium sized and with acute apex (in *H. cornutus* and *H. gapudi* sp.n., Fig. 21); tergite 8 of female without long, erect pilosity (Figs. 33 - 35).

Distribution: endemic to the Philippines.

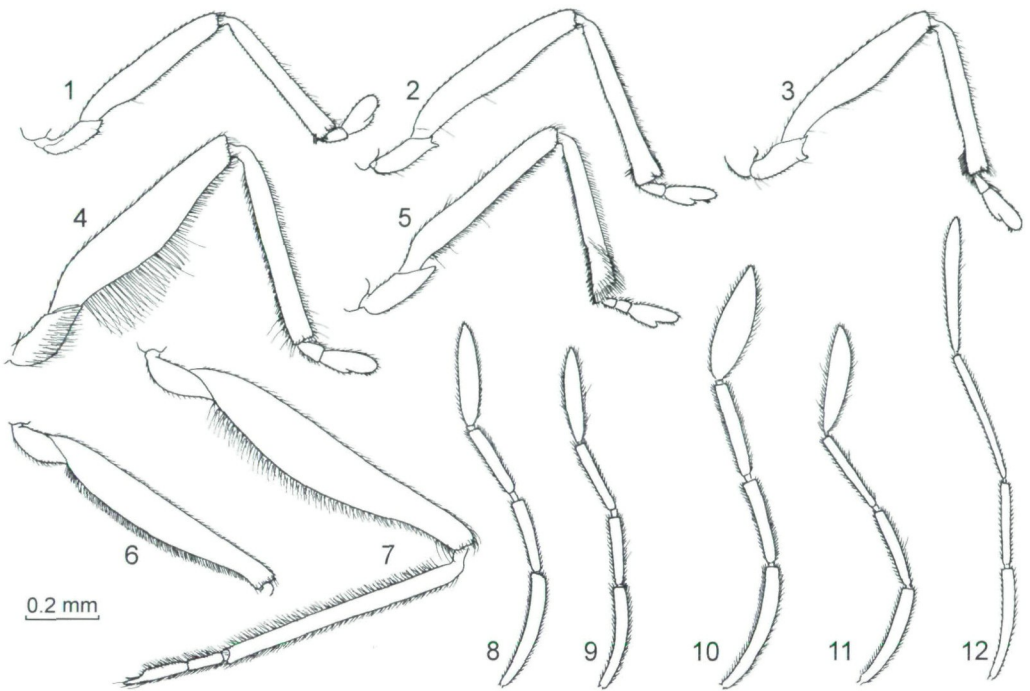
Notes: Within this group, *H. cornutus* + *H. gapudi* sp.n. and *H. anderseni* + [*H. danpolhemi* + *H. fluvialis* sp.n.] form two distinct clades based on the armature of protibia and the shape of the paramere.

3) *Haloveloides femoralis* group: *Haloveloides femoralis* ANDERSEN, 1992, *H. hirsutus* sp.n., *H. lansburyi* ZETTEL, 1998.

Diagnosis: length of antennomere 3 more than 1.5 times length of antennomere 2; prothrochanter of male without spine or tubercle (Fig. 4); profemur without proximal concavity, more or less thickened beyond middle (Fig. 4); protibia of male with scattered spinous hairs (Fig. 4); metafemur of male moderately to strongly incrassate, with maximum width close to middle of length (Figs. 6 - 7); venter of male with median swelling at most reaching sternite 4 (Fig. 28); paramere short, straight, bar- or club-shaped (e.g., Fig. 24); tergite 8 of female with long erect pilosity antero-medially (Figs. 36, 37).

Distribution: endemic to the Philippines.

¹ The original spelling (ANDERSEN 1992) is "*Haloveloides cornuta*". According to Articles 30.1.4.4. and 34.2. of the International Code of Zoological Nomenclature (Fourth Edition, 1999) the species name has to be changed to *Haloveloides cornutus*.



Figs. 1 - 12: (1 - 5) Left foreleg of male, ventral aspect: (1) *Haloveloides anderseni* sp.n., (2) *H. fluvialis* sp.n., (3) *H. gapudi* sp.n., (4) *H. hirsutus* sp.n., (5) *H. chrystiae*; (6) left metafemur of male of *H. lansburyi*, ventral aspect; (7) left hind leg of male of *H. hirsutus* sp.n., ventral aspect; (8 - 12) left antenna, dorsal aspect: (8) *H. chrystiae*, male, (9) *H. chrystiae*, female, (10) *H. sundaensis*, male, (11) *H. sundaensis*, female, (12) *H. gapudi* sp.n., male.

***Haloveloides anderseni* sp.n.** (Figs. 1, 13 - 15, 25, 29, 33)

Holotype (♂): "Philippinen: Luzon, \ Camarines Sur, Lagonoy, \ San Sebastian, 10.2.2001 \ leg. H. Zettel (268a)" (UPLB); **paratypes**: 12 ♂♂, 8 ♀♀, same label data as holotype (CZW, NHMW, UPLB, ZMUC).

Description:

Male: Size: body length 1.45 (1.44 - 1.51) mm; body width 0.65 mm; length of mesotibia 1.05 mm; length of second antennomere 0.21 mm.

Colour: blackish; head dorsally yellowish to brownish (anteriorly darker), but blackish along inner eye margins and midline; medial posterior margin of pronotum yellowish orange; sides of thorax more or less brownish; ventral sides of head and thorax yellowish to light brown, of abdomen blackish brown; antenna and legs black, except base of antennomere 1, coxae, trochanters (except mesotrochanter apically), and base of profemur yellow; pubescence greyish, with distinct patches of dense silverish pubescence medially on mesonotum and laterally (in some specimens medially confluent) on tergites 2 - 3 (- 4), and indistinct scattered silverish pubescence on pronotum, medially on metasternum and tergite 1, and all over tergites 4 - 7.

Structural characteristics: body fusiform; head length about 0.6 times head width across eyes; eye width 0.27 times head width; relative lengths of antennomeres (antennomere 2 = 1): 1.4 : 1 : 1.8 : 1.8; antennomere 1 as long as head length and slightly thinner than weakly thickened antennomere 4; relative lengths of leg segments (mesotibia = 100): FL: Fe 48, Ti 43, Ta 4+13; ML: Fe 124, Ti 100, Ta 42+31; HL: Fe 63, Ti 54, Ta 6+13; foreleg (Fig. 1): protrochanter subapically with small, in some specimens sharp, edge, but without distinct tubercle; profemur without proximal concavity, with maximum width in middle of length; protibia subapically with distinct spine-like structure consisting of spinous bristles; metafemur hardly incrassate, with maximal width in basal third and subequal to maximum width of mesofemur (ca. 1.0); venter with high hump medially on metasternum, low median carina on sternites 2 - 4, and median impression on sternites 5 - 8 (Fig. 25); mesosternum laterally and metasternum medially with long, greyish yellow, posteroventrad directed pubescence; sternites 2 - 4, and sternites 5 - 7 along medial groove with shorter, ventrad directed pubescence; pygophore ovate, in postero-caudal corners without modified pilosity (Fig. 13); proctiger elongate, with laminate sides (Fig. 14); paramere short, relatively slender, curved, with blunt apex, cucumber-shaped, with long setae (Fig. 15).

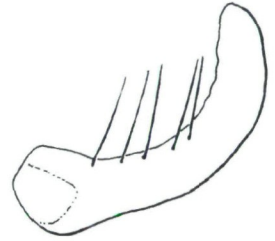
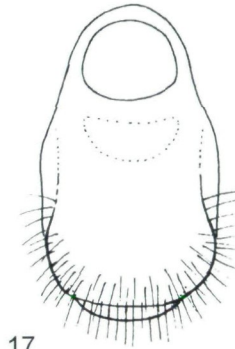
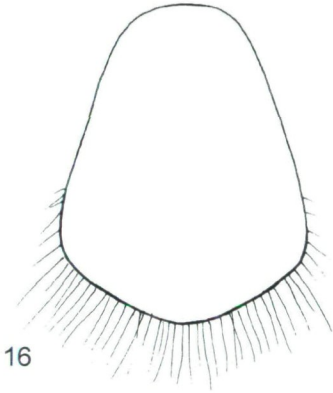
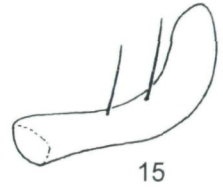
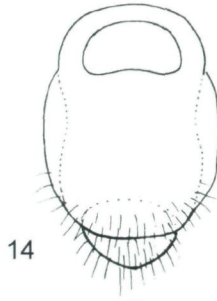
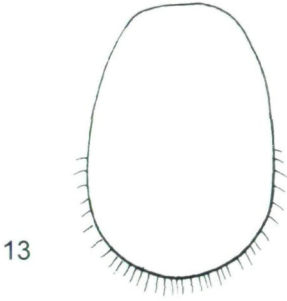
Female: Size: body length 1.76 (1.71 - 1.81) mm; body width 0.84 mm; length of mesotibia 1.30 mm; length of second antennomere 0.20 mm.

Colour as in male, except profemur yellowish with infuscated apex, and orange lateral stripe extended onto connexiva until segment 7; pubescence similar as in male, except mesonotum with pair of circular, silverish hair patches (in some specimens medially confluent), and long pilosity described below.

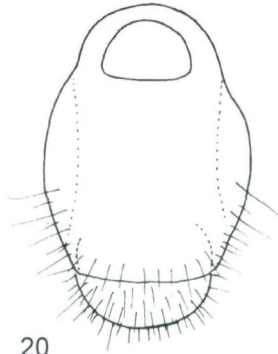
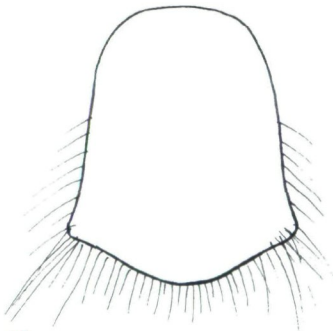
Structural characteristics: body rhomboid, abdomen relatively broad (Fig. 29); third antennomere 1.7 times as long as antennomere 2; relative lengths of leg segments (mesotibia = 100): FL: Fe 43, Ti 40, Ta 4+12; ML: Fe 119, Ti 100, Ta 44+28; HL: Fe 59, Ti 49, Ta 6+13; legs without modifications; abdominal venter simple; connexiva evenly converging until segments 6, subparallel on segment 7, terminating in rounded apex; laterotergites 2 - 4 sloping dorsolaterad, 5 - 7 subvertical, 5 - 7 with long, black, mediad directed hairs; metanotum and tergites 1 - 3 with more or less developed median ridge; tergites 5 - 6 distinctly impressed; tergite 7 posteromedially with short process set with long, black, posterodorsad directed hairs (Fig. 29); metanotum laterally and sternites 2 - 5 dorsally with erect pilosity (Fig. 29); abdomen otherwise without long pilosity; tergite 8 and proctiger directed posteroventrad, covering major part of gonocoxae (Fig. 33).

Comparative notes: Males of *H. anderseni* sp.n. can be immediately recognized by the strongly pronounced hump on the metasternum (Fig. 25). The female of *H. anderseni* sp.n. bears plenty of erect pilosity on the metanotum and the abdomen (Fig. 29), which is lacking in other species of both, the *H. femoralis* - and the *H. cornutus* group. The absence of a distinct tubercle on the protrochanter of the male (Fig. 1), the general shape of profemur and metafemur of the male, and the ratio of mesotibia and mesotarsus of

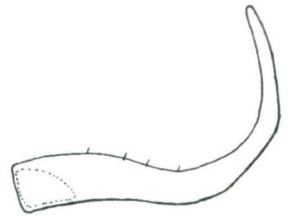
Figs. 13 - 24: Genitalia of males: (13 - 15) *Haloveloides anderseni* sp.n., (16 - 18) *H. fluvialis* sp.n., (19 - 21) *H. gapudi* sp.n., (22 - 24) *H. hirsutus* sp.n.; (13, 16, 19, 22) pygophore, ventral view; (14, 17, 20, 23) proctiger, dorsal view; (15, 18, 21, 24) left paramere, lateral view.



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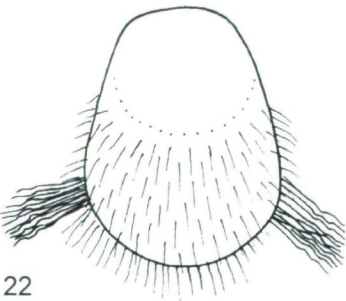
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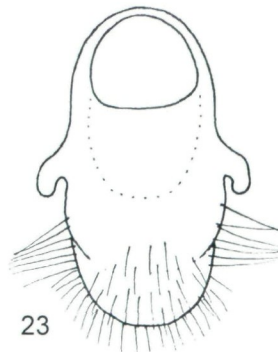
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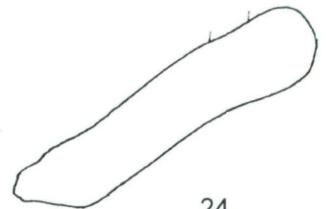
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0.2 mm



0.1 mm



22

23

24

the female, may tempt to place *H. anderseni* sp.n. into the *H. femoralis* group. However, under more careful examination, a small edge on the protrochanter of the male is visible, and the spine-like group of stout spines on the protibia (Fig. 1), the deep impression on sternites 5 - 7 (Fig. 25), as well as the shape of the paramere of the male (Fig. 15) make clear that *H. anderseni* sp.n. is closely related with the clade *H. danpolhemi* + *H. fluvialis* of the *H. cornutus* group. These three taxa are the smallest species of *Haloveloides*.

Distribution: Luzon: Camarines Sur.

Habitat: Found during high tide in a small stream running through a village, about 30 m from the sea.

Etymology: This species is named after Prof. Dr. Nils Møller Andersen (Copenhagen) in recognition of his outstanding contributions to the knowledge on the Gerromorpha of the world, including his excellent revision of *Haloveloides*.

Haloveloides fluvialis sp.n. (Figs. 2, 16 - 18, 26, 30, 34)

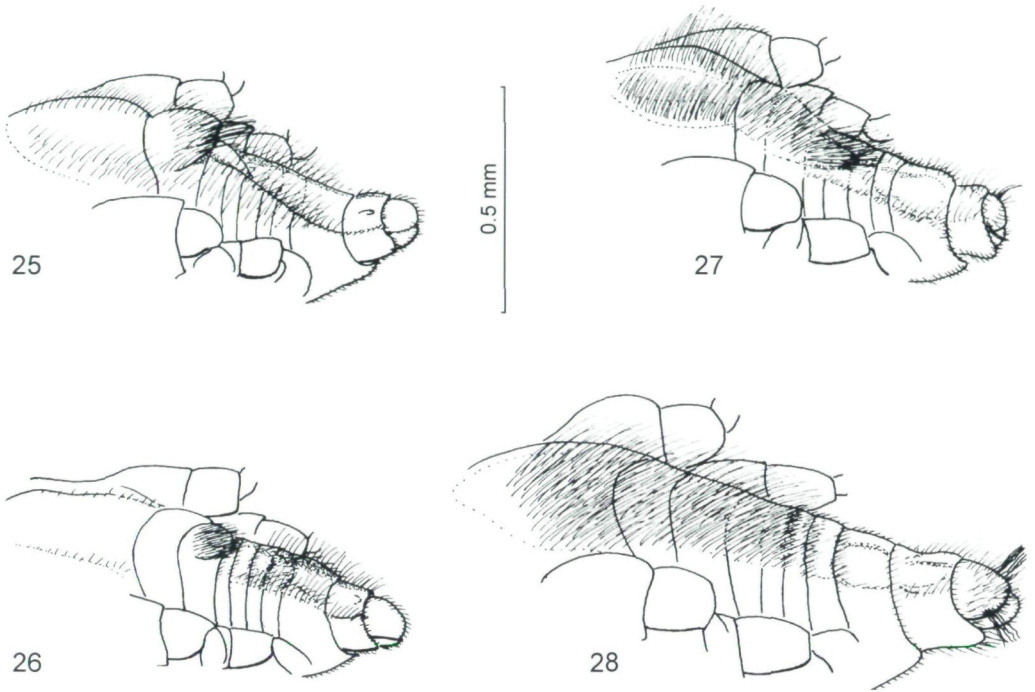
Holotype (♂): "Philippinen: W. Samar\ E Basey, Sohoton NP, \ Sohoton River, 29.1.2000\ leg. H. Zettel (221a)" (UPLB); **paratypes:** 15 ♂♂, 19 ♀♀, same label data as holotype (NHMW, UPLB, ViSCA, ZMUC, PCC).

Description:

Male: Size: body length 1.50 (1.46 - 1.51) mm; body width 0.65 mm; length of mesotibia 1.32 mm; length of second antennomere 0.26 mm.

Colour: brown, head anteromedially and along inner eye margins, thoracic nota, acetabula laterally, and tergites blackish infuscated; vertex and hind margin of pronotum medially yellowish orange; acetabula ventrally yellowish; antenna and legs brownish black, except base of antennomere 1, coxae, trochanters (except mesotrochanter apically), and base of profemur yellow; pubescence greyish, with distinct patches of dense silverish pubescence medially on mesonotum and laterally (in some specimens medially confluent) on tergites 2 - 3, and indistinct scattered silverish (in some specimens tending to golden) pubescence on pronotum and tergites 4 - 7.

Structural characteristics: body fusiform; head length about 0.6 times head width across eyes; eye width 0.27 times head width; relative lengths of antennomeres (antennomere 2 = 1): 1.4 : 1 : 1.8 : 1.7; antennomere 1 as long as head length and as wide as antennomere 4; relative lengths of leg segments (mesotibia = 100): FL: Fe 47, Ti 43, Ta 4+11; ML: Fe 123, Ti 100, Ta 43+30; HL: Fe 65, Ti 57, Ta 5+13; foreleg (Fig. 2): protrochanter with subapical tubercle close to apex; profemur with proximal concavity, with maximum width slightly beyond middle of length; protibia subapically with distinct spine consisting of group of spinous bristles; metafemur slender, with maximal width close to base and slightly smaller than maximum width of mesofemur (ca. 0.9); venter without median carina, but sternite 2 medially with small tubercle bearing patch of long, golden, posteroventrad directed pilosity; sternites 3 - 8 with distinct median impression, deepest on sternite 7, lined with not very long, medioventrad directed hairs on sternites 3 - 7 (Fig. 26); pygophore without hair tufts, posteriorly with long pilosity (Fig. 16); proctiger elongate, with laminate sides (Fig. 17); paramere relatively small and slender, strongly curved, with several long setae, with apex bluntly rounded (Fig. 18).



Figs. 25 - 28: Venter of male, lateroventral view: (25) *Haloveloides anderseni* sp.n., (26) *H. fluvialis* sp.n., (27) *H. gapudi* sp.n., (28) *H. hirsutus* sp.n.

Female: Size: body length 1.94 (1.86 - 1.99) mm; body width 0.90 mm; length of mesotibia 1.54 mm; length of second antennomere 0.25 mm.

Colour and pubescence similar as in male except profemur yellowish with infuscated apex, and silverish hair patches on thoracic nota indistinct or lacking.

Structural characteristics: body rhomboid, relatively slender (Fig. 30); third antennomere 1.65 times as long as antennomere 2; relative lengths of leg segments (mesotibia = 100): FL: Fe 42, Ti 40, Ta 4+12; ML: Fe 115, Ti 100, Ta 46+31; HL: Fe 62, Ti 51, Ta 5+12; legs without modifications; abdominal venter simple; connexiva strongly and evenly converging, nearly meeting each other at right-angled apices (Fig. 30); laterotergites nearly vertical; tergite 7 posteromedially with narrow tuft of long, black, posterodorsad directed hairs (Fig. 34); abdomen otherwise without any long pilosity; tergite 8 and proctiger directed posteroventrad, covering major part of gonocoxae (Fig. 34).

Comparative notes: *Haloveloides fluvialis* sp.n. belongs to the *H. cornutus* group and is closely related with *H. danpolhemi*, with which it shares the general structures of the foreleg and the genitalia of the male. Differences between these two species are obvious: In *H. danpolhemi* the venter of the male bears a narrow median carina, but in *H. fluvialis* sp.n. only a dimple on sternite 2 (Fig. 26); the tubercle of the prothorax of the male is close to the apex in *H. fluvialis* sp.n. (Fig. 2), but more subapically in *H. danpolhemi*; the paramere of *H. fluvialis* sp.n. (Fig. 18) is more curved than in *H. danpolhemi*; and

the connexiva of the female of *H. danpolhemi* are posteriorly widely separated, but close to each other in *H. fluvialis* sp.n. (Fig. 30).

Distribution: Western Samar.

Habitats: This species has been collected in lentic areas of the Sohoton River in front of the Sohoton Cave, several kilometres from the sea, and the river consists of freshwater. However, local people told the author that the water becomes brackish during (spring) tides. *Haloveloides fluvialis* sp.n. has been collected with species of the veliid genera *Strongylovelia*, *Pseudovelia*, and *Xiphovelia*.

Etymology: The name derives from the Latin adjective *fluvialis*, meaning "fluvial", and refers to the extraordinary habitat, where this species has been discovered.

***Haloveloides gapudi* sp.n.** (Figs. 3, 12, 19 - 21, 27, 31, 35)

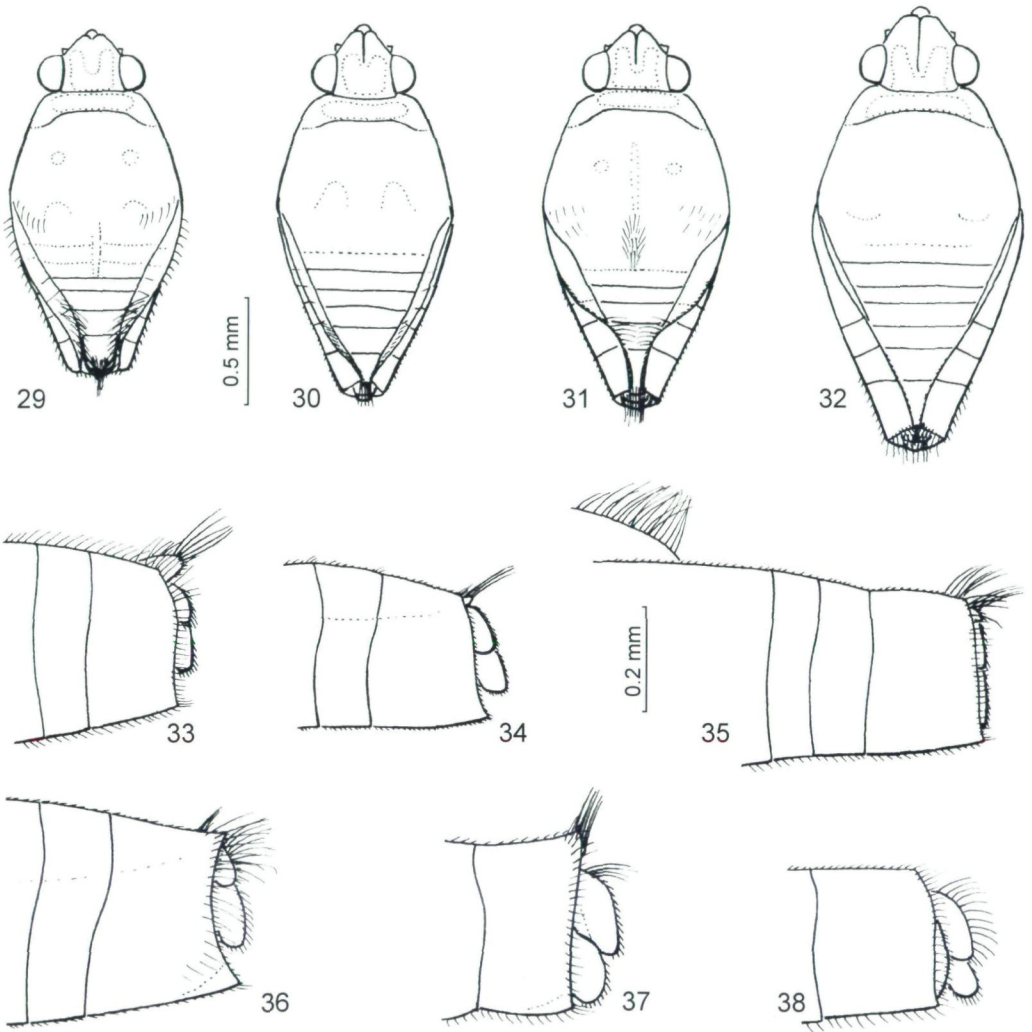
Holotype (♂): "Philippinen: Luzon, \ Zambales, Subic Bay\ Triboa Mangrove, 7.12.\ 2000, leg.H.Zettel (260)" (UPLB); **paratypes:** 5 ♂♂, 7 ♀♀, same label data as holotype (NHMW, UPLB); 2 ♀♀ "ZAMBALES: SBFR\ Triboa Mangrove\ 13Apr97 VPG/MS" (UPLB).

Description:

Male: Size: body length 1.60 (1.54 - 1.61) mm; body width 0.70 mm; length of mesotibia 1.18 mm; length of second antennomere 0.24 mm.

Colour: blackish, large, broad, u-shaped mark on vertex, medial posterior margin of pronotum, and irregular, in width varying stripe on meso- and metapleura yellowish orange; ventral sides of head, of prothorax, and of all acetabula yellowish; mesosternum, metasternum, and abdominal sternites more or less brownish; antenna and legs black, except base of antennomere 1, coxae, trochanters (except mesotrochanter apically), and base of profemur yellow; pubescence greyish, with distinct patches of dense silverish pubescence medially on mesonotum and laterally (often medially confluent) on tergites 2 - 3, and indistinct scattered silverish pubescence on pronotum, medially on metasternum and tergite 1, and all over tergites 4 - 7.

Structural characteristics: body fusiform; head length about 0.6 times head width across eyes; eye width 0.23 times head width; relative lengths of antennomeres (antennomere 2 = 1): 1.4 : 1 : 1.75 : 1.6; antennomere 1 as long as head length and slightly thinner than the weakly thickened antennomere 4 (Fig. 12); relative lengths of leg segments (mesotibia = 100): FL: Fe 53, Ti 45, Ta 4+12; ML: Fe 128, Ti 100, Ta 44+30; HL: Fe 68, Ti 57, Ta 7+13; foreleg (Fig. 3): protrochanter with subapical tubercle distinctly removed from apex; profemur with proximal concavity, with maximum width slightly beyond middle of length; protibia subapically with distinct row of 5 - 8 spinous bristles; metafemur hardly incrassate, with maximal width close to base and subequal to maximum width of mesofemur (ca. 1.0); venter with median carina, narrow and keel-like on sternites 3 - 5, broad and tumescent on sternite 2, from there anteriad continued as two very low ridges onto meta- and mesosternum; this whole structure with long, golden, posteroventrad directed pilosity (anteriorly distinctly parted) (Fig. 27); sternites 6 - 7 with shallow median impression, sternite 8 flatt; pygophore bell-shaped, in posterocaudal corners with small, indistinct tufts of thin hairs (Fig. 19); proctiger elongate, with laminate sides (Fig. 20); paramere relatively short, very slender, strongly curved, with very short setae, with acute apex (Fig. 21).



Figs. 29 - 38: (29 - 32) Habitus of female, dorsal aspect, appendages removed: (29) *Haloveloides anderseni* sp.n., (30) *H. fluvialis* sp.n., (31) *H. gapudi* sp.n., (32) *H. hirsutus* sp.n.; (33 - 38) terminalia of female, lateral view: (33) *H. anderseni* sp.n., (34) *H. fluvialis* sp.n., (35) *H. gapudi* sp.n., (36) *H. hirsutus* sp.n., (37) *H. lansburyi*, (38) *H. christyae*.

Female: Size: body length 1.88 (1.88 - 2.00) mm; body width 0.87 mm; length of mesotibia 1.37 mm; length of second antennomere 0.22 mm.

Colour as in male, except profemur yellow with infuscated apex, and yellowish orange lateral stripe extended onto connexiva until segment 6 or 7; pubescence similar as in male, except mesonotum with pair of circular, silverish hair patches, and long pilosity described below.

Structural characteristics: body rhomboid, relatively slender (Fig. 31); third antennomere 1.7 times as long as antennomere 2; relative lengths of leg segments (mesotibia =

100): FL: Fe 45, Ti 40, Ta 4+12; ML: Fe 120, Ti 100, Ta 43+32; HL: Fe 65, Ti 52, Ta 6+13; legs without modifications; metanotum medially with large tuft of long black hairs (Fig. 35), laterally with some hairs; abdominal venter simple; connexiva strongly converging at segments 5 - 6, subparallel on segment 7 (Fig. 31), terminating in rounded apex; laterotergites 2 - 4 sloping dorsolaterad, 5 - 6 vertical, 7 sloping mediodorsad, 6 - 7 with long, black, mediad directed hairs; tergite 7 posteromedially with tuft of long, black, posterodorsad directed hairs (Fig. 35); abdomen otherwise without any long pilosity; tergite 8 and proctiger directed ventrad, covering major part of gonocoxae (Fig. 35).

Comparative notes: *Haloveloides gapudi* sp.n. belongs to the *H. cornutus* group and is closely related with *H. cornutus*. The most obvious difference is found in females: The metanotum of *H. gapudi* sp.n. bears a large tuft of hairs (Fig. 31, 35), which is lacking in *H. cornutus*; and the pilosity on the laterotergites 6 - 7 of *H. gapudi* sp.n. is long and erect, but inconspicuous in *H. cornutus*. Males can be most securely differentiated by the pilosity on the postero-caudal corners of the pygophore: in *H. gapudi* sp.n. relatively short, weakly curved setae form an inconspicuous tuft (Fig. 19), but in *H. cornutus* very long and curved setae form a dense tuft; the ventral tumescence of *H. cornutus* is slightly higher and posteriorly more abruptly ending than in *H. gapudi* sp.n. (Fig. 27).

Distribution: Luzon: Zambales.

Habitats: *Haloveloides gapudi* sp.n. has been collected in the Triboa Mangrove along a small stream in Subic Base, but has not been found along the seashore at the mouth of the stream.

Etymology: Dedicated to the leading Philippine entomologist Prof. Dr. Victor P. Gapud (UP Los Baños), who discovered this species in 1997.

Haloveloides hirsutus sp.n. (Figs. 4, 7, 22 - 24, 28, 32, 36)

Holotype (♂): "Philippinen: Camotes Isl., Poro Isl., Tudela, St. Arthur\ Bukilat Cave, 26.2.2001\ leg. H. Zettel (279)" (UPLB); **paratypes:** 20 ♂♂, 38 ♀♀, same label data as holotype (NHMW, UPLB, ViSCA, ZMUC, NCTN, PPCC).

Description:

Male: Size: body length 2.04 (1.99 - 2.08) mm; body width 0.87 mm; length of mesotibia 1.37 mm; length of second antennomere 0.31 mm.

Colour: blackish; head dorsally yellowish to brownish (anteriorly darker), but blackish along inner eye margins and midline; medial posterior margin of pronotum yellowish orange; sides of thorax more or less brownish; ventral sides of head, of prothorax, and of all acetabula yellowish; mesosternum, metasternum, and abdominal sternites (light) brownish; antenna and legs blackish brown, except base of antennomere 1, coxae, and trochanters (apically infuscated) yellow; pubescence brownish, with distinct patches of dense silverish pubescence medially on mesonotum and laterally (often medially confluent) on tergites 2 - 3, and indistinct scattered silverish or golden pubescence on pronotum and tergites 4 - 7.

Structural characteristics: body fusiform; head length about 0.7 times head width across eyes; eye width 0.24 times head width; relative lengths of antennomeres (antennomere

2 = 1): 1.4 : 1 : 1.55 : 1.5; antennomere 1 as long as head length and as wide as antennomere 4; relative lengths of leg segments (mesotibia = 100): FL: Fe 53, Ti 46, Ta 4+13; ML: Fe 127, Ti 100, Ta 38+28; HL: Fe 70, Ti 57, Ta 6+13; foreleg (Fig. 4): protrochanter without modification; profemur without proximal concavity, with obvious, very long (maximum 1.1 times femur width), erect pilosity in proximal three fifths; protibia in distal third with (often interrupted) row of approximately 11 - 15 spinous bristles; mesofemur basally incrassate, close to base with long (maximum 0.6 times femur width) erect pilosity continuously becoming shorter towards apex; metafemur strongly incrassate, with maximal width close to middle and larger than maximum width of mesofemur (ca. 1.2), with relatively long (maximum ca. 0.3 femur width), suberect pilosity (Fig. 7); venter with broad medial tumescence from mesosternum to sternite 5 bearing long, golden, posteroventrad directed pilosity; sternites 6 - 8 hardly impressed (Fig. 28); pygophore ovate, in postero-caudal corners with distally very characteristically undulate bristles (Fig. 22); proctiger slender, at sides with small, curved processes (Fig. 23); paramere small, short, club-shaped, distally slightly widened, apically rounded (Fig. 24).

Female: Size: body length 2.16 (2.12 - 2.21) mm; body width 0.104 mm; length of mesotibia 1.54 mm; length of second antennomere 0.28 mm.

Colour as in male, except profemur yellowish brown and yellowish orange lateral stripe more distinct and extended onto connexiva until segment 7; pubescence similar as in male, except scattered silverish pubescence on mesonotum restricted to pair of patches, and long pilosity described below.

Structural characteristics: body rhomboid, relatively slender (Fig. 32); third antennomere 1.5 times as long as antennomere 2; relative lengths of leg segments (mesotibia = 100): FL: Fe 47, Ti 42, Ta 4+12; ML: Fe 121, Ti 100, Ta 40+28; HL: Fe 65, Ti 52, Ta 6+13; legs without modifications; abdominal venter simple; connexiva strongly, but evenly converging until right-angled apex (Fig. 32); laterotergites 2 - 5 vertical, 6 - 7 sloping mediodorsad, all without obvious erect pilosity; sternite 7 along posterolateral margin with some long hairs; tergite 7 posteromedially with narrow tuft of long, black, postero-dorsad directed hairs; tergite 8 with long, black, erect pilosity (antero-)medially (Fig. 36); abdomen otherwise without any long pilosity; tergite 8 and proctiger directed ventrad, covering major part of gonocoxae (Fig. 36).

Comparative notes: *Haloveloidea hirsutus* sp.n. clearly belongs to the *H. femoralis* group (as defined above) and differs distinctly from all other species of *Haloveloidea* in the long pilosity on the legs (especially on the profemur) and the venter of the male (Figs. 4, 7, 28). The male has a strongly thickened metafemur (Fig. 7) like the male of *H. femoralis* and differs by this characteristic from *H. lansburyi*. The female does not have the straight dorsad directed tufts of hairs on connexiva 7 as present in *H. lansburyi* (comp. Figs. 36 and 37), but can hardly be distinguished from the female of *H. femoralis*, except that it is slightly larger and bears only a reduced silverish pilosity on the thoracic dorsum, which is restricted to a pair of weakly delimited patches on the disk of the mesonotum.

Distribution: Poro Island (Camotes group).

Habitat: Found in large numbers in the Bukilat Cave, a dimly illuminated stalactite cave with water connection to the sea.

Etymology: The named derives from the Latin adjective *hisutus*, means "shaggy" or "bristly" and refers to the long pilosity on legs and venter of the male.

***Haloveloides christyae* ZETTEL, 1998** (Figs. 5, 8, 9, 38)

Further material examined: 23 ♂♂, 28 ♀♀, numerous immatures "Philippinen: Palawan Pr.\ Coron Isl., west coast\ 4.2.1999\ leg. H. Zettel (172)" (UPLB, CZW, NHMW, ZMUC, PPCC); 1 ♀ "Albatros\ P.I. Exp.\ 1907-1908.", "Vanadino Hbr.\ Mindoro - P.I.", "July\ 23-08" (USNM); 1 ♀ "Albatros\ P.I. Exp.\ 1907-1908.", "Busin Hbr.\ Burias Id. - P.I.", "April\ 22-08" (USNM).

Notes: This species was previously only known from the type locality in Mindoro Oriental. The first record for the Palawan region is here presented from Coron Island. Specimens were aggregated between floating seaweeds in a coral rock area. The presence of this species on Burias Island (Bicol region) should be confirmed; it is based on the historical collection of a single female, but a second specimen collected from the Albatros expedition is from Mindoro. Presently the Burias record appears doubtful. *Haloveloides cristyae* and *H. brevicornis* are the Philippine species of the *H. papuensis* group.

Key to the species of *Haloveloides*

- | | | |
|---|--|--------------------------|
| 1 | Male. | 2 |
| - | Female. | 14 |
| 2 | Protrochanter simple, without edge, tubercle, tooth, or spine (Fig. 4); protibia distally with relatively long row of short spinous bristles difficult to recognize between pilosity (Fig. 4); paramere small, bar- or club-shaped (e.g., Fig. 24). (<i>H. femoralis</i> group). | 3 |
| - | Protrochanter usually with distinct tubercle, tooth, or spine (Figs. 2, 3, 5), rarely only with small edge (in <i>H. anderseni</i> sp.n.: Fig. 1), but then protibia with spine-like group of stout bristles (Fig. 1, 2); paramere curved, either long, slender, and with acute apex (Fig. 21), or relatively short and with rounded apex (Figs. 15, 18). | 5 |
| 3 | Metafemur weakly incrassate (Fig. 6), maximum width 1.1 times maximum width of mesofemur; venter only with short pilosity, with very large and deep impression on sternites 3 - 6. (Philippines). | <i>H. lansburyi</i> |
| - | Metafemur strongly incrassate (Fig. 7); venter with obvious, long pilosity, with relatively small and shallow impression on sternites 4 - 6 (Fig. 28). | 4 |
| 4 | Profemur with longest hairs subequal to femur width (Fig. 4); also mesofemur (at base) and metafemur (Fig. 7) with relatively long pilosity; long pilosity on venter anteriorly reaching mesosternum (Fig. 28); pygophore lateroapically with long, distally undulate bristles (Fig. 22). (Philippines). | <i>H. hirsutus</i> sp.n. |
| - | All femora only with short pilosity; long pilosity on venter anteriorly reaching metasternum, comparatively short; pygophore with relatively short, simply curved bristles. (Philippines). | <i>H. femoralis</i> |
| 5 | Antennomere 3 less than 1.5 times as long as antennomere 2 (Figs. 8, 10); abdominal venter with median carina reaching sternite 6; spine or tubercle on protrochanter apically (Fig. 5). (<i>H. papuensis</i> group). | 6 |

- Antennomere 3 more than 1.5 times as long as antennomere 2 (Fig. 12); abdominal venter without median carina on sternite 6; spine or tubercle on protrochanter subapically (e.g., Figs. 1, 3), but close to apex in *H. fluvialis* (Fig. 2). (*H. cornutus* group). 10
- 6 Antennomere 4 fusiform, much thicker than antennomere 1 (Fig. 10) (Thailand, Malaysia, Indonesia). *H. sundaensis*
- Antennomere 4 not fusiform, as thick as antennomere 1 or hardly thicker (Fig. 8). 7
- 7 Posterior surface of eye with white, felt-like pad; antenna short, approximately two thirds of body length. (Philippines, Indonesia). *H. brevicornis*
- Posterior surface of eye without pad; antenna usually long, approximately three fourths of body length (but relatively short in *H. browni*). 8
- 8 Venter with long erect whitish pilosity; protrochanter with long spine. (Papua New Guinea, Bismarck Islands, Solomon Islands). *H. browni*
- Venter with short, yellowish pilosity; protrochanter with relatively short tubercle (Fig. 5). 9
- 9 Body pubescence silverish to whitish; paramere very slender. (Philippines). ... *H. christyae*
- Body pubescence yellowish to brownish; paramere less slender. (Papua New Guinea, Bismarck Islands, Solomon Islands). *H. papuensis*
- 10 Protibia distally with short row of spinous hairs (Fig. 3); venter with very long, anteriorly parted pilosity (Fig. 27); pygophore posterolaterally with group of long hairs (Fig. 19); paramere slender, and apically very acute (Fig. 21). 11
- Protibia distally with spine-like group of densely set spinous hairs (Fig. 1, 2); pilosity of venter anteriorly not parted; pygophore posterolaterally without group of long hairs (Figs. 13, 16); paramere relatively broad, apically rounded (Figs. 15, 18). 12
- 11 Pygophore lateroapically with very obvious tuft of long, curved hairs; sternal carina posteriorly ending in small step. (Philippines). *H. cornutus*
- Pygophore lateroapically with some comparatively short, inconspicuous hairs (Fig. 19); sternal carina posteriorly ending without step (Fig. 27). (Philippines). *H. gapudi* sp.n.
- 12 Metasternum with very strongly raised hump posteriorly abruptly sloping down to much less raised sternite 2 (Fig. 25); protrochanter with small edge (Fig. 1). (Philippines). *H. anderseni* sp.n.
- Metasternum without such hump, medially either flat or part of a continuous carina (Fig. 26); protrochanter with distinct tubercle (Fig. 2). 13
- 13 Venter with narrow median carina; protrochanter with tubercle distinctly removed from apex; paramere weakly curved. (Philippines). *H. danpolhemi*
- Venter with small dimple on sternite 2 (Fig. 26); protrochanter with tubercle close to apex (Fig. 2); paramere distinctly curved (Fig. 18). (Philippines). *H. fluvialis* sp.n.
- 14 Antennomere 3 less than 1.5 times as long as antennomere 2 (Figs. 9, 11); tergite 8 with more or less evenly distributed, erect pilosity (Fig. 38). (*H. papuensis* group). ... 15
- Antennomere 3 at least 1.5 times as long as antennomere 2 (Fig. 12); tergite 8 either only with short pilosity (Figs. 33 - 35), or with conspicuous long pilosity anteromedially (Figs. 36, 37). 19

- 15 Posterior surface of eye with white, felt-like pad; antenna short, approximately half of body length. (Philippines, Indonesia). *H. brevicornis*
- Posterior surface of eye without pad; antenna usually long, approximately six tenth of body length (but relatively short in *H. browni*). 16
- 16 Antennomere 4 fusiform, distinctly thicker than antennomere 1 (Fig. 11) (Thailand, Malaysia, Indonesia). *H. sundaensis*
- Antennomere 4 not fusiform, not or hardly thicker than antennomere 1 (Fig. 9). 17
- 17 Laterotergites 6 - 7 with short pilosity (Fig. 38); body pubescence silverish to whitish; metanotum without medial hair tuft. (Philippines). *H. christyae*
- Laterotergites 6 - 7 with long, erect pilosity; body pubescence yellowish to brownish; metanotum with small medial hair tuft. 18
- 18 Sides of thorax with dense, long, erect pilosity; mesonotum usually with one large, shallow impression posteriorly. (Papua New Guinea, Bismarck Islands, Solomon Islands). *H. papuensis*
- Sides of thorax only with some sparse long, erect hairs; mesonotum usually with pair of round, shallow impressions close to midline. (Papua New Guinea, Bismarck Islands, Solomon Islands). *H. browni*
- Notes: The distinction of females of these two species is not yet satisfactorily solved, because populations of both species show considerable variability over their large distribution areas.
- 19 Tergite 8 anteromedially with long pilosity (Figs. 36, 37). (*H. femoralis* group). 20
- Tergite 8 only with short pilosity (Figs. 33 - 35). (*H. cornutus* group). 22
- 20 Hair tufts on connexiva 7 and tergite 7 directed dorsad (Fig. 37). (Philippines). ...
..... *H. lansburyi*
- Hair tufts on connexiva 7 and tergite 7 directed posteriad (Fig. 36). 21
- 21 Body length 2.12 - 2.21 mm; scattered silverish pilosity on thoracic dorsum restricted to pair of weakly delimited patches on disk of mesonotum. (Philippines).
..... *H. hirsutus* sp.n.
- Body length 1.80 - 2.02 mm; silverish (or golden) pilosity on thoracic dorsum varying, usually widely distributed. (Philippines). *H. femoralis*
- 22 Laterotergites (5 -) 6 - 7 with long, mediad directed hairs (Figs. 29, 31); metanotum medially or laterally with long erect pilosity (Figs. 29, 31). 23
- Laterotergites 5 - 7 at most with short, suberect hairs; metanotum without erect pilosity. 24
- 23 Dorsal areas of sternites 2 - 5 with erect pilosity; metanotum posteromedially without tuft of long hairs (Fig. 29); tergites 5 - 6 impressed; tergite 7 with apical process (Fig. 33). (Philippines). *H. anderseni* sp.n.
- Dorsal areas of sternites 2 - 5 without erect pilosity; metanotum posteromedially with very obvious tuft of long, erect hairs (Figs. 31, 35); tergites 5 - 6 not impressed; tergite 7 without apical process (Fig. 35). (Philippines). *H. gapudi* sp.n.
- 24 Connexiva apically widely separated from each other; posterior margin of tergite 7 wide, with row of long hairs. (Philippines). *H. danpolhemi*

- Connexiva posteriorly strongly convergent; posterior margin of tergite 7 narrow, with median tuft of hairs (Fig. 30). 25
- 25 Posterior margin of tergite 7 with relatively broad tuft of numerous hairs; latero-tergites 6 - 7 with relatively short, erect hairs (Philippines). *H. cornutus*
- Posterior margin of tergite 7 with narrow tuft of a few hairs (Fig. 30, 34); latero-tergites 6 - 7 without erect hairs (Fig. 30) (Philippines). *H. fluvialis* sp.n.

Genus *Halovelgia* BERGROTH, 1893

General remarks: The genus *Halovelgia*, commonly named "Coral Bugs", has an Indo-Pacific distribution. *Halovelgia* has been comprehensively revised by ANDERSEN (1989a, b). Additional contributions to the knowledge of Pacific species have been published by ZETTEL (1998), ANDERSEN & WEIR (1999), and ANDERSEN (2000).

***Halovelgia bergrothi* ESAKI, 1926**

Further material examined: 1 ♀ "Philippinen: Marinduque\ 7 rd.km SW Boac, coast\ (S Laylay), 13.2.1998\ leg. H. Zettel (136)" (NHMW); 1 ♂ "Philippinen: Biliran\ 3 km N Almeria, Agta\ Beach, 12.-14.3.1998\ leg. H. Zettel (159)" (CZW).

Notes: This widely distributed species is common in the Philippine Islands. First records from Marinduque and Biliran.

***Halovelgia esakii* ANDERSEN, 1989**

Further material examined: 7 ♀♀ 8 ♂♂ "Philippinen: Marinduque\ 7 rd.km SW Boac, coast\ (S Laylay), 13.2.1998\ leg. H. Zettel (136)" (NHMW, UPLB); 4 ♂♂, 3 ♀♀ "ZAMBALES: IBA\ BEACH (ROCKY) 13 MAY 1977\ A.A.BARROSO" (UPLB).

Notes: *Halovelgia esakii* is a widely distributed species and common in the Philippine Islands. First record from Marinduque.

***Halovelgia lannae* ANDERSEN, 1989**

Material examined: 4 ♂♂, 4 ♀♀ "Philippinen: Camotes Isl.\ Ponson Isl., Pilar,\ debris on sea, 28.2.2001\ leg. H. Zettel (288)" (NHMW, UPLB).

Notes: This species is recorded from West Malaysia, Singapore, Java, North Borneo, and the Philippine islands Mindanao and Palawan; habitats are intertidal coral reefs and rocky coasts (ANDERSEN 1989a). Examined specimens from Ponson Island have been collected in a habitat which is unusual for *Halovelgia*: about 100 m offshore between floating debris, together with *Halobates calyptus* HERRING, 1961 (Gerridae). Although this circumstance might be very occasional and probably caused by a typhoon, which occurred two weeks before collecting, it may also be one reason for the wide distribution of this species. First record from the Camotes Islands.

***Halovelia* sp.**

Material examined: 1 ♀ "Philippinen: Surigao d.N.\ Hiktop Isl., S + SW coast \5.2.2000\ leg. H. Zettel (227)" (NHMW).

Notes: Using the key by ANDERSEN (1989a), the single female keys out at *H. heron* ANDERSEN, 1989 or *H. fijiensis* ANDERSEN, 1989 described from Australia and Fiji, respectively. It most likely belongs to an undescribed species.

Check-list of the marine Haloveliinae of the Philippine Islands***Halovelia* BERGROTH, 1893***Halovelia bergrothi* ESAKI, 1926

Palawan; Mindoro: Oriental; Luzon: "Port Binanga"; Marinduque; Panay: Antique; Siquijor; Biliran; Mindanao: Davao; (Vietnam; Papua New Guinea; Solomon Isl.; New Caledonia; Mariana Isl.; Caroline Isl.; Marshall Isl.; Samoan Isl.)

Halovelia esakii ANDERSEN, 1989

Palawan; Mindoro: Oriental; Luzon: Zambales; Marinduque; Panay: Antique; Mindanao: Zamboanga del Sur; (Indonesia: Sumbawa, Sulawesi, Irian Jaya; Solomon Isl.; West Caroline Isl.)

Halovelia lannae ANDERSEN, 1989

Camotes: Ponson; Mindanao; Palawan (Singapore; Malaysia: West; Indonesia: Java)

Halovelia sumaldei ZETTEL, 1998

Bohol (endemic)

Haloveloides* ANDERSEN, 1992Haloveloides anderseni* sp.n.

Luzon: Camarines Sur (endemic)

Haloveloides brevicornis ANDERSEN, 1992

Palawan (Indonesia: Sulawesi, Moluccas)

Haloveloides christyae ZETTEL, 1998

Mindoro, Busuanga (endemic)

Haloveloides cornutus ANDERSEN, 1992

Luzon (endemic)

Haloveloides danpolhemi ANDERSEN, 1992

Palawan (endemic)

Haloveloides femoralis ANDERSEN, 1992

Cebu, Palawan (endemic)

Haloveloides fluvialis sp.n.

Samar: Western Samar (endemic)

Haloveloides gapudi sp.n.

Luzon: Zambales (endemic)

Haloveloides hirsutus sp.n.

Camotes: Poro (endemic)

Haloveloides lansburyi ZETTEL, 1998

Camiguin (endemic)

Xenobates* ESAKI, 1927Xenobates argentatus* ANDERSEN, 2000

Mindanao: Zamboanga del Sur; Palawan; (Malaysia, Thailand)

Xenobates murphyi ANDERSEN, 2000

Cebu (Singapore, Malaysia)

Xenobates spp.

Cebu, Camotes, Leyte, Mindanao

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