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***Strongylovelia seyferti* sp. n. (Heteroptera: Veliidae:
Haloveliinae) from Waleakodi, Kepulauan Togian, first
record of the genus for the Sulawesi area**

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Abstract: *Strongylovelia seyferti* sp.n. from Waleakodi Island (Kepulauan Togian) is the first species of *Strongylovelia* ESAKI 1924 known from the Sulawesi area, Indonesia. It is a morphologically isolated species of an Oriental phylogenetic clade, which is widely distributed from Sri Lanka to the Philippines.

Key words: Veliidae, Haloveliinae, *Strongylovelia*, new species, Waleakodi, Togian Islands, Sulawesi, Indonesia.

Introduction

Strongylovelia ESAKI 1924 is a genus of the Haloveliinae, which contains very small limnic species with peculiar large yellow marks on the thorax. Notes on the morphology and ecology of some species of *Strongylovelia* have been provided by LANSBURY & ZETTEL (1997). So far fifteen species are described from Taiwan (1 species), the Philippines (8), Borneo (4), New Guinea (1), and New Britain (1); and several undescribed species are known from Sri Lanka, India, Southeast Asia (Thailand, Vietnam, Peninsular Malaysia, and Singapore), Sumatra, and Sulawesi (ESAKI 1924, 1926, LUNDBLAD 1933, POLHEMUS 1979, MURPHY 1990, LANSBURY 1993, YANG & KOVAC 1995, YANG et al. 1997, LANSBURY & ZETTEL 1997, ANDERSEN et al. 2002, ZETTEL 2003, Thirumalai, in prep.; and unpublished data). This paper presents the descriptions of the single species, which is known from the Sulawesi area.

Methods and terminology have been described by LANSBURY & ZETTEL (1997) and ZETTEL (2003).

***Strongylovelia seyferti* sp.n. (Figs. 1-4)**

Type material: holotype (apterous ♀) and paratypes (12♂♂, 12♀♀ apterous, 1♂ macropterous) with labels "INDON. Sulawesi\ Togian Inseln, Dolong [Waleakodi Island, S 00°14' E 122°11']\ 3.2.1995\ lg. Seyfert & Graindl(59)", deposited in the Natural History Museum Vienna.

Description of apterous female: body length 1.64-1.72 mm (measured from apex of head to tip of proctiger, long setae on connexival corners not included); body width 0.82-0.85 mm; body tear-shaped, slender (Fig. 1); colour slightly variable: holotype (Fig. 1) black except head along dorsal eye margin with yellowish orange marks,

mesonotum (except anterior margin and posterior corners), prosternum, mesosternum, mesopleura, metapleura, and sternite 2 pale yellow, and most of sternite 7 and gonocoxa 1 obscure yellowish; between pleurae and nota of meso-metathorax with black band, which not reaching anterior margin; antennomere 1 yellowish, 2-4 blackish brown; legs basally yellowish, distal parts of femora dark brown, mesofemur, tibiae (except yellowish base of protibia) and tarsi blackish brown; in lightest paratypes sternites 3-6 (or only sternites 3 and 6) laterally with small, obscure, yellowish dots; in darkest paratypes meso-metanotum anteriorly with broad, black mark and posterolateral corners with black marks more extended; in one specimen these two marks nearly confluent; mes- and meta-cetabula with brownish or blackish marks; extent of dark colouration of legs slightly variable.

Median pronotal length 0.4 times eye length; dorsum of thorax with very short, decumbent pilosity; mesothorax laterally with dense row of long black hairs; posterior corners of meso-metanotum with acute apex, with some very long setae (Fig. 2); sternites 2 and 3 laterally with few relatively short, whitish, erect hairs; connexiva and sternites 4-7 with short, greyish pilosity, without tufts of curved hairs, except on strongly produced posterior corners of sternite 7 with very long, caudad directed, black setae (Figs. 2, 3); laterotergites (covered by sternites) and dorsal areas of sternites directed mediad, covering large areas of tergites; tergites (as far as visible) with short, greyish pubescence, except tergite 7 medially with relatively long, black, dorsoposteriad directed crest, and posterior two thirds of tergite 6 with similar, but shorter pilosity (Fig. 3); protibia with long black setae; ventral pilosity on mesofemur and metafemur semierect, in distal half denser and slightly longer.

In lateral aspect abdomen slightly upcurved (Fig. 3); in dorsal aspect shape of abdomen (except inserted part of tergite 1) slender sub-triangular (distinctly longer than wide) and with all sternites broadly visible (Figs. 1, 2); connexiva basally strongly converging, then curved and subparallel in posterior half; laterotergites not visible at all; connexivum of segment 7 apically strongly produced (Fig. 3); all tergites without impressions, but medially more or less elevated; sutures, as far as present, straight; tergite 1 very large and deeply inserted between posterolateral corners of meso-metanotum, medially broadly fused with metanotum; tergites 2-7 partly covered by sternites; tergites 1-4 partly fused, but sutures between them at least laterally recognizable; visible part of tergite 5 slightly broader than long; tergite 8 covered by long crest of tergite 7; gonocoxa 1 large, plate-like, simple; proctiger narrow, directed posteroventrad (Fig. 3).

Description of apterous male: body length 1.02-1.08 mm; body width 0.62-0.69 mm; body relatively slender; colour similar as in female except sternites 3-7 completely black; terminalia obscure yellowish.

Median pronotal length 0.5 times eye length; black hairs laterally on mesothorax as in female; dorsum of body generally with very short pubescence, but tergites with rows of half-erect, black setae, which longest on tergite 7; hairs along connexiva long, about one-and-a-half times as long as median length of tergite 6; protibia externally and mesofemur and metafemur internally with thin black setae, metafemur additionally with several long, spiny setae; tergites 1-4 slightly convex, the following nearly flat; tergite 1 medially fused with metanotum; sutures between tergites 1-4 developed, but medially more or less widely reduced; tergite 5 about 6 times as wide as long; paramere slightly S-curved, distally strongly tapered, weakly twisted, hardly bent posteriad, and with scanty indentation, with apex appearing recurved (Fig. 4).

Description of macropterous female: body length 1.72 mm (measured from apex of head to tip of proctiger); body width 0.89 mm; length of forewing 1.5 mm; colour similar to that of apterous female; only sternite 2 with yellow mark; tergites 7 and 8 medially brownish; pronotum very large, with obtuse humeral corners, black, in posterior half with large, half-ovate, yellow mark; wings clearly surpassing tip of abdomen, blackish, with some indications of longitudinal veins in basal third, without distinct closed cells; connexiva almost straightly converging, with posterior connexival corners less produced and with slightly shorter black setae than of apterous female; laterotergites almost vertically positioned; tergites without basal longitudinal carinae, lacking any modifications, with evenly distributed, short, greyish pilosity, tergites 6 and 7 without crest, tergite 8 short, flat, somewhat shining, with some long black setae posteriorly; all sutures between tergites well developed.

Macropterous male unknown.

Comparative notes: *Strongylovelia seyferti* sp.n. belongs to the derived type of *Strongylovelia* with a fused and posteriorly deeply emarginated meso-metanotum (see LANSBURY & ZETTEL 1997: p. 54). This clade is distributed from Sri Lanka to the Philippines, whereas a second clade is known from New Guinea, New Britain, and Thailand (LANSBURY & ZETTEL 1997). The apterous female of *S. seyferti* sp.n. is easily distinguishable from most other species by the laterotergites and the lateral parts of the sternites curved mediad covering a major part of abdominal tergites (Figs. 1, 2). This feature is so far only described from *S. connexivum* LANSBURY & ZETTEL 1997, a species from Borneo. However, these two species are not closely related: In the apterous female of *S. connexivum* the posterolateral corner of the meso-metanotum is obtusely rounded and without any long pilosity and the tergite 1 is not deeply inserted in the meso-metanotum and has one pair of yellow marks, but in the apterous female of *S. seyferti* sp.n. the first structure is long and acutely triangular and with a tuft of long black setae, and tergite 1 is deeply inserted in the thorax and completely black. The crista consisting of suberect black hairs along the midline of tergites 6 and 7 of apterous females is unique among all described species of the genus. The male has a relatively slender body shape; the paramere differs from other species by its peculiarly modified apex (Fig. 4).

The new species does not seem to be closely allied to other described species. A strong affinity between species from the Philippines and Sulawesi – as observed, e.g., for some clades of the limnic genus *Rhagovelia* MAYR 1860 (Rhagoveliinae) and for marine Haloveliinae – cannot be confirmed for *Strongylovelia*, although the posterior corner of the meso-metanotum of *S. seyferti* sp.n. resembles that of most species of the *S. philippinensis* group. Because of the thoracico-abdominal junction of the apterous female, *S. seyferti* sp.n. cannot be placed in a close relationship with *S. formosa* ESAKI, 1924, *S. hirsutula* LANSBURY & ZETTEL 1997, *S. connexivum*, or the *S. esakii* species group. The simple structure of the anterior tergites of the apterous female (no impression, no lobe on the hind margin) and the short pilosity of the dorsum of the apterous male exclude *S. seyferti* sp.n. from the *S. philippinensis* species group.

Distribution: Waleakodi, Kepulauan Togian, Sulawesi Tengah, Indonesia.

Etymology: Named after Mag. Franz Seyfert (Vienna), who made this most interesting discovery.

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Zusammenfassung

Die von der Insel Waleakodi (Togian Inseln) beschriebene *Strongylovelia seyferti* sp.n. repräsentiert die erste Art der Gattung *Strongylovelia* ESAKI 1924 aus dem Bereich der Sundainsel Sulawesi (Indonesien). Die morphologisch isoliert stehende Art gehört zu einer orientalischen, von Sri Lanka bis zu den Philippinen verbreiteten, Verwandtschaftsgruppe.

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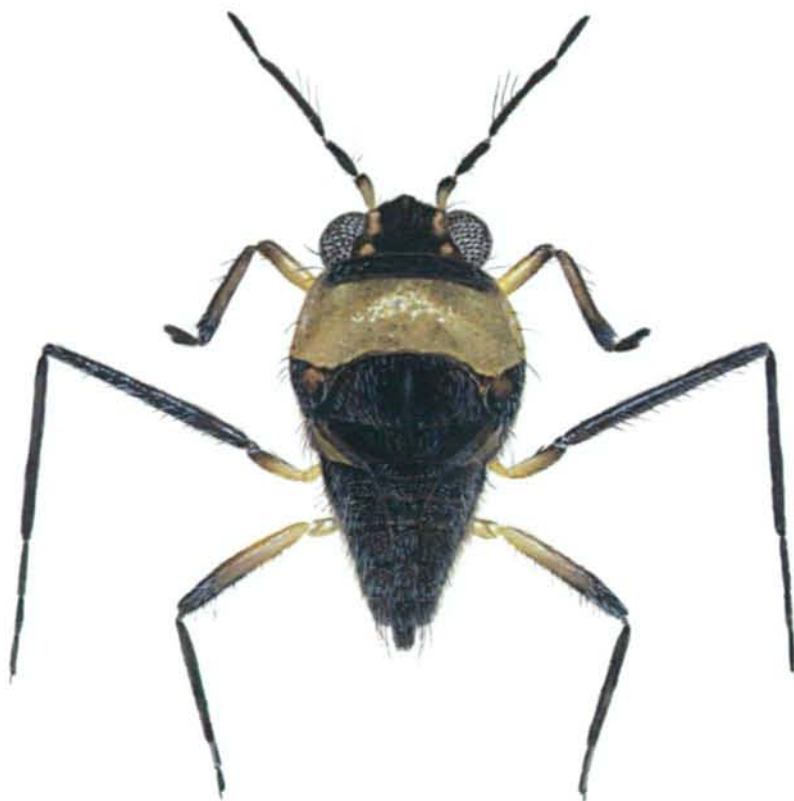
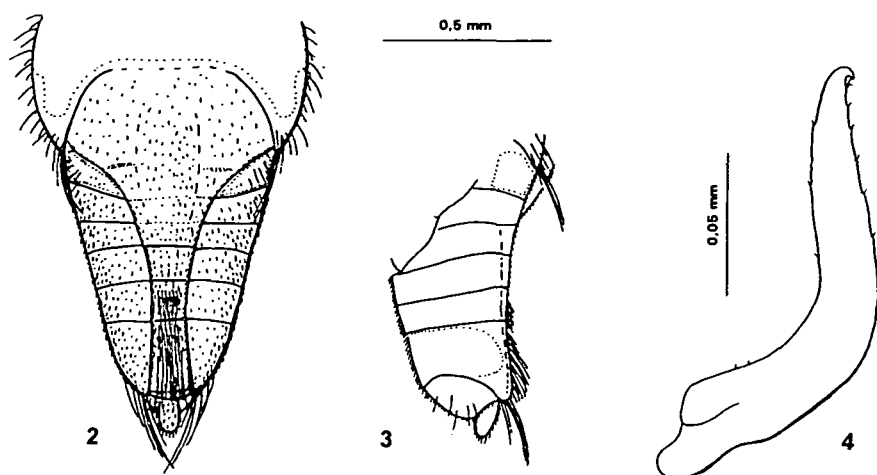


Fig. 1: *Strongylovelia seyferti* sp.n., female, holotype, habitus, dorsal aspect, M. Buch pxt.

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Figs 2-4: *Strongylovelia seyfertii* sp.n.: 1 – abdomen of apterous female, dorsal aspect; 2 – same, lateral aspect; 3 – left paramere of male, lateral aspect.

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