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The rhinoceros on the cover presents a nearly complete specimen of the Pleistocene *Coelodonta antiquitatis*, excavated in the layers of ozocerite in Starunia (Eastern Carpathians), 1929. This unique exhibit is shown in the Natural History Museum (Institute of Systematics and Evolution of Animals), Cracow.

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Faunistical notes on *Amemboa* ESAKI (*Heteroptera: Gerridae*) from Laos and Viet Nam, with description of a new species

Herbert ZETTEL

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ZETTEL H. 1998. Faunistical notes on *Amemboa* ESAKI (*Heteroptera: Gerridae*) from Laos and Viet Nam, with description of a new species. Acta zool. cracov., **41**(2): 169-172.

Abstract. *Amemboa* (s.str.) *laotica* sp.n. is described from Laos and compared with the closely related *A. cristata* POLHEMUS & ANDERSEN, 1984. *Amemboa* (s.str.) *javanica* LUNDBLAD, 1933, *A.* (s.str.) *speciosa* POLHEMUS & ANDERSEN, 1984, and *A. (Amemboides) velaris* POLHEMUS & ANDERSEN, 1984, are newly recorded from Laos, and *A. (Amemboides) perlata* POLHEMUS & ANDERSEN, 1984, is newly recorded from Laos and Viet Nam.

Key words: *Gerridae*, *Amemboa*, new species, new records, Laos, Viet Nam.

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The genus *Amemboa* ESAKI, 1925, presently unites 27 Oriental water strider species in two subgenera. All species are small and very uniform in external features, but show excellent diagnostic characters in male genitalia and grasping armatures on the male foreleg. Species are usually found in small shaded pools on the banks of streams.

Amemboa was taxonomically revised by POLHEMUS & ANDERSEN (1984). Since then, a few species have been described from Thailand, Viet Nam, and Borneo (ZETTEL 1995, ZETTEL & CHEN 1996, 1997). ZETTEL & CHEN (1996) listed nine species from Viet Nam; a tenth species is recorded in this paper. Twelve species are known from Thailand (POLHEMUS & ANDERSEN 1984, ZETTEL & CHEN 1997). Only two species have been recorded from Laos so far: *Amemboa* (s.str.) *horvathi* ESAKI, 1926, has been described from a single female from "Annam, Laos", but as females of most species of the subgenus *Amemboa* are presently not distinguishable, the identity of *A. horvathi* must remain uncertain (see POLHEMUS & ANDERSEN 1984). The second species is *Amemboa (Amemboides) sexualis* POLHEMUS & ANDERSEN, 1984, a very distinct species, which up to now is only known from the type specimens collected in three different sites in Laos.

The present paper gives new records for five additional species from Laos, one of which is undescribed, and a new record for one species from Viet Nam, which is based on recently studied specimens.

Specimens are deposited in the Natural History Museum Vienna, if not otherwise mentioned.

The author thanks Lubos DEMBICKY (Brno), Petr PACHOLATKO (Brno), Harald SCHILLHAMMER (Vienna), and Dr. Peter SCHWENDINGER (Innsbruck), who collected the specimens, and Prof. Dr. William D. SHEPARD (Sacramento) for a linguistic review.

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Amemboa (s.str.) laotica sp.n. (Figs 1-5)

H o l o t y p e (♂, apterous): "Laos: Saravan Prov. \ Tat Lo Waterfall & Resort\ 370 m, 28.12.1996\ leg. P. SCHWENDINGER"; paratypes: 1 ♂, 4 ♀♀ (apterous), same locality labels.

D e s c r i p t i o n o f a p t e r o u s f o r m. Measurements (in mm): body length 4.3-4.4 (♂♂), 4.3-4.6 (♀♀); width of head at eyes 0.92-0.94 (♂♂), 0.90-0.96 (♀♀); maximum width at mesacetabula 1.44-1.54 (♂♂), 1.52-1.60 (♀♀).

C o l o u r: yellowish to brownish; dorsal black colour pattern of head pronotum, and abdomen as in figures 22 or 23, of meso- and metanotum as in figures 21 or 22 in POLHEMUS & ANDERSEN (1984); in ventral view, male with proacetabula, broad anterior-lateral stripes and posterior-medial stripe on mesonotum, metasternum; sternites 2-7 blackish; female with proacetabula, broad anterior-lateral stripes and a longitudinal stripe along sternites blackish; antenna blackish, segment 1 (and 2) yellowish or brownish; legs yellowish, tarsi brownish, profemur in most specimens with a brownish stripe on posterior face.

R a t i o o f l e n g t h s o f a n t e n n a l s e g m e n t s as 1.1 : 1 : 1.1-1.15 : 1.45-1.6 in male, 1.2-1.3 : 1 : 1.1-1.2 : 1.65-1.9 in female; lengths of leg segments in relation to length of mesofemur (= 100): male: profemur 37, protibia 34, protarsus 5+8, mesotibia 72, mesotarsus 29+12, metafemur 93, metatibia 40, metatarsus 15+12; female: mesotibia 67, mesotarsus 21+12, metafemur 87, metatibia 33, others as in male.

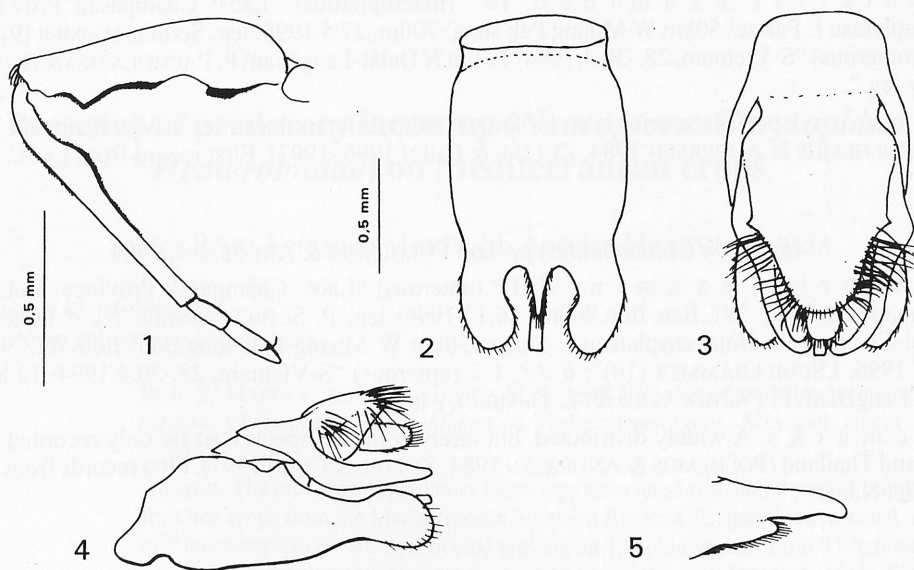
Mesonotum of male medianly 1.8-1.9, of female 2.7-3.0 times as long as the large pronotum. Profemur of male (Fig. 1) with two distinct black hair patches (one smaller, but more prominent patch basally and one elongated patch in distal half), which are separated by a distinct excavation; protibia of male with a thickening covered by short dark erect hairs (Fig. 1); fore leg of female simple. Laterotergites 2-5 more or less fused in both sexes, sutures in females more indicated than in males.

Male genitalia (Figs 2-5): segment 8 large; pygophore broad, distally with three processes of about same length (two broad, mediad curved lateral processes and one slender median process, which is apically slightly truncate and subapically with a second, hairy, ventral tip, Figs 2, 5). Proctiger with long, relatively slender, mediad curved, apically slightly hooked lateral arms; medial part of proctiger distally set with thick black bristles (Fig. 3, 4). Parameres reduced.

Female terminalia: connexival margin of sternite 7 evenly down-curved, without prominent hairs, but with thin whitish pubescence; tergite 8 laterally with numerous dark hairs, with concave hind margin; proctiger with short yellow pubescence.

M a c r o p t e r o u s f o r m: unknown.

C o m p a r a t i v e n o t e s a n d d i s c u s s i o n. *Amemboa laotica* sp.n. is closely related to *A. cristata* POLHEMUS & ANDERSEN, 1984, from Thailand, Viet Nam and West Malaysia and *A. incurvata* POLHEMUS & ANDERSEN, 1984, from West Malaysia and Sumatra. All three species share the presence of one proximal and one distal hair patch on the male profemur and the strongly produced posterolateral corners of the pygophore. *Amemboa laotica* sp.n. mainly differs by the thin, truncate median process of the pygophore, which has ventro-subapically a hairy tip. The process is bifid and this tip is absent in the other species. The profemur is of same structure as in *A. cristata*, but somewhat thicker. The protibia has a thicker, but less sharp tubercle than in *A. cristata*. The posterolateral corners of the pygophore are strongly extended, but this character may rarely occur to a lesser degree also in *A. cristata*, as figured by POLHEMUS & ANDERSEN (1984: fig. 94) after a specimen from West Malaysia, Johore, Gunong Pulai (ANDERSEN, in litt.). *Amemboa laotica* sp.n. shares with *A. cristata* the long antennal segment 4 of females (1.6-1.7 times as long as segment 3 in *A. cristata*, 1.5-1.6 times in *A. laotica* sp.n.) which distinguishes it from *A. horvathi*



Figs. 1-5: *Amemboa* (s.str.) *laotica* sp.n., holotype, ♂ : (1) foreleg (coxa and trochanter omitted); (2) pygophore, ventral view; (3) genital segments 9-10, dorsal view; (4) genital segments 9-10, lateral view; (5) median process of pygophore, lateral view.

(segment 4 about 1.3 times as long as segment 3, according to the measurements presented by POLHEMUS & ANDERSEN 1984).

From the same locality as the type series, there is a single male which belongs to this, or to a further, undescribed species of this group, but which is apparently abnormally developed. It is larger (4.6 mm) and broader, with a slightly impressed mesonotum. The profemur and the protibia are very slender, the profemur with less developed hair patches. Abdominal segment 8 is posteroventrally depressed. The pygophore has two slender posterolateral processes which are more divergent than in *A. laotica* sp.n. and an asymmetrically shortened median process.

D i s t r i b u t i o n. Laos: Saravan Province.

E t y m o l o g y. This species is named after the country of its origin.

Amemboa (s.str.) *javanica* LUNDBLAD, 1933

M a t e r i a l e x a m i n e d. 4 ♂♂ 1 ♀ (apterous), 4 ♂♂, 5 ♀♀ (macropterous) "Laos: Saravan Prov. \ Tat Lo Waterfall & Resort \ 370 m, 28.12.1996 \ leg. P. SCHWENDINGER" (1 ♂, 1 ♀ deposited in Coll. P. P. CHEN, Beijing).

R e m a r k s. So far known from Java and South Thailand (POLHEMUS & ANDERSEN 1984), North and Northeast Thailand (ZETTEL & CHEN 1997), and Viet Nam (ZETTEL & CHEN 1996). A rarely collected species with scattered distribution. First record from Laos.

Amemboa (s.str.) speciosa POLHEMUS & ANDERSEN, 1984

M a t e r i a l e x a m i n e d. 1♂ (macropterous) "Laos: Champasak Prov.\ Bolavensplateau E Pak se\ 50km W Muang Pak song\ 700m, 27.5.1996\ leg. SCHILLHAMMER (9)"; 1♂ (macropterous) "S-Vietnam, 28.-30.4.1994\ 12 km N Dalat-LangBian\ P. PACHOLATKO & L. DEMBICKY leg."

R e m a r k s. This species is so far known from different localities in Viet Nam and Thailand (POLHEMUS & ANDERSEN 1984, ZETTEL & CHEN 1996, 1997). First record from Laos.

Amemboa (Amemboides) perlata POLHEMUS & ANDERSEN, 1984

M a t e r i a l e x a m i n e d. 1♂ (apterous) "Laos: Champasak Province\ Bolavens Plateau,nr.Tat Phan\ Wf.,Ban Itou,900m, 26.12.1996\ leg. P. SCHWENDINGER"; 1♂ (apterous) "Laos: Champasak\ Bolavensplateau E Pakse\ 50km W Muang Pak song,Ban\ Itou Wf., 900m, 28.5.\ 1996, l.SCHILLHAMMER (10)"; 6 ♂♂, 1 ♀ (apterous) "S-Vietnam, 28.-30.4.1994\ 12 km N Dalat-LangBian\ P. PACHOLATKO & L. DEMBICKY leg."

R e m a r k s. A widely distributed, but rarely collected species, so far only recorded from India and Thailand (POLHEMUS & ANDERSEN 1984, ZETTEL & CHEN 1997). First records from Laos and Viet Nam.

Amemboa (Amemboides) velaris POLHEMUS & ANDERSEN, 1984

M a t e r i a l e x a m i n e d. 1♂ (macropterous) "Laos: Champasak Province\ Bolavens Plateau,nr.Tat Phan\ Wf.,Ban Itou,900m, 26.12.1996\ leg. P. SCHWENDINGER".

R e m a r k s. ZETTEL & CHEN (1997) pointed out that *A. velaris* consists of allopatric subspecies and described the new ssp. *orientalis* from Viet Nam. The single male from Laos has the paramere similar to ssp. *orientalis*. Other characters (colour, size) cannot be compared with this subspecies which is typically only known in the apterous morph. The specimen from Laos has two very distinctive tufts of long black hairs posterolaterally in pygophore, which are not present in other specimens of this species. Therefore it may represent an undescribed subspecies, which may be proved if more material becomes available. First record from Laos.

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