

Two new species of *Ranatra* FABRICIUS from Southeast Asia

(Insecta: Heteroptera: Nepidae)

N. Nieser*

Abstract

Two species of *Ranatra*, *R. akoitachta* sp.n. from Ambon (Moluccas, Indonesia) and *R. odontomeros* sp.n. from Northeast Thailand, are described as new and compared with related species.

Key words: Nepidae, *Ranatra*, new species, Indonesia, Thailand.

Zusammenfassung

Zwei Arten der Gattung *Ranatra*, *R. akoitachta* sp.n. aus Ambon (Molukken, Indonesien) und *R. odontomeros* sp.n. aus Nordost-Thailand, werden neu beschrieben und mit verwandten Arten verglichen.

Going through the Ranatrinae in the collections of the Naturhistorisches Museum Wien (NHMW), partly within the framework of preparing keys to the water bugs of Thailand (which will be edited in the newsletter "Amemboa" by the NHMW), the following two undescribed species of the genus *Ranatra* FABRICIUS, 1790, were encountered. As the keys to Thai water bugs are not supposed to contain descriptions of new species and the Ambon species does not fit in a current project it was decided to describe them separately.

Thanks are due to Dr. H. Zettel for permission to study the Asian Ranatrinae in the collections of the NHMW.

Measurements are in mm, the anterior and posterior lobes of the pronotum are measured along median longitudinal line and separated by the transverse groove which is interrupted medially. The distal and proximal parts of the fore femur are separated by a line through the apex of the larger central tooth perpendicular on the longitudinal axis of the femur. The prothoracic pit is located ventrally near posterior margin.

Depositories: NHMW Naturhistorisches Museum, Wien, Austria; NCTN Nieser collections, Tiel, The Netherlands.

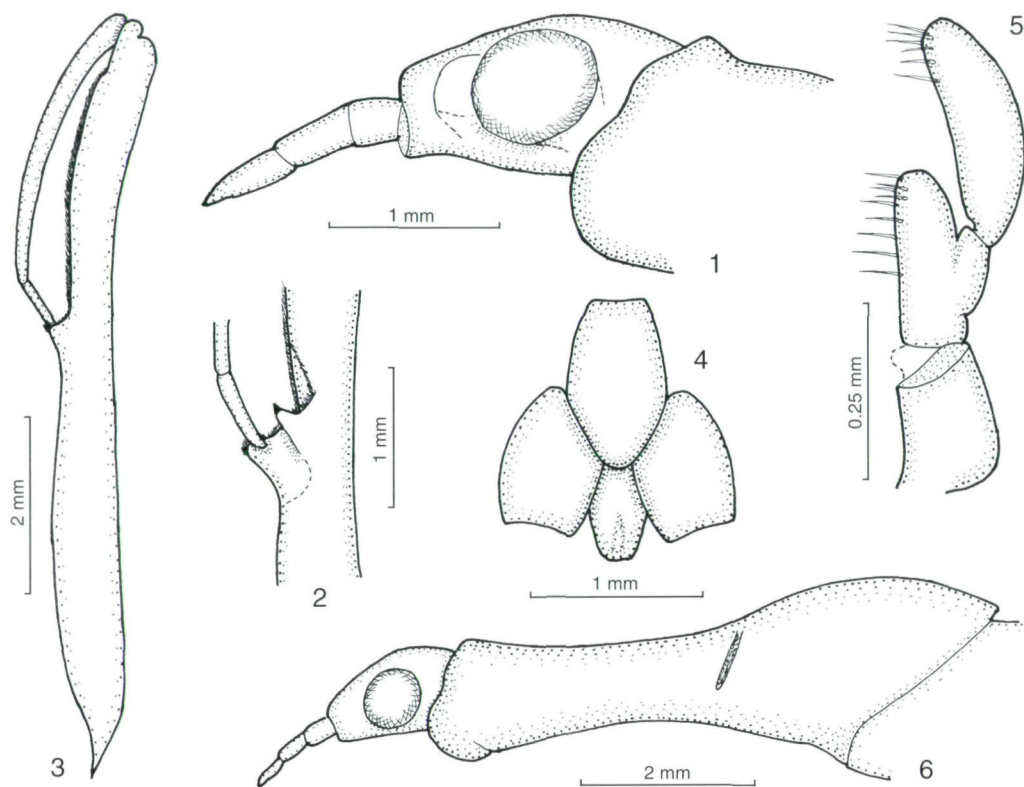
Ranatra akoitachta sp.n.

(Figs. 1 - 8)

Type material. Holotype (♂): INDONESIA: Maluku, Amboina, 1859, leg. Dr. Doleschal (NHMW). Paratype: 1 ♂ (siphon lacking), same data as holotype (NCTN).

Description: Dimensions (the holotype is the smaller specimen). Length 22.8 - 24.6, respiratory siphon 17.1, width of head 2.3 - 2.4, width of an eye 0.70 - 0.75, interocular

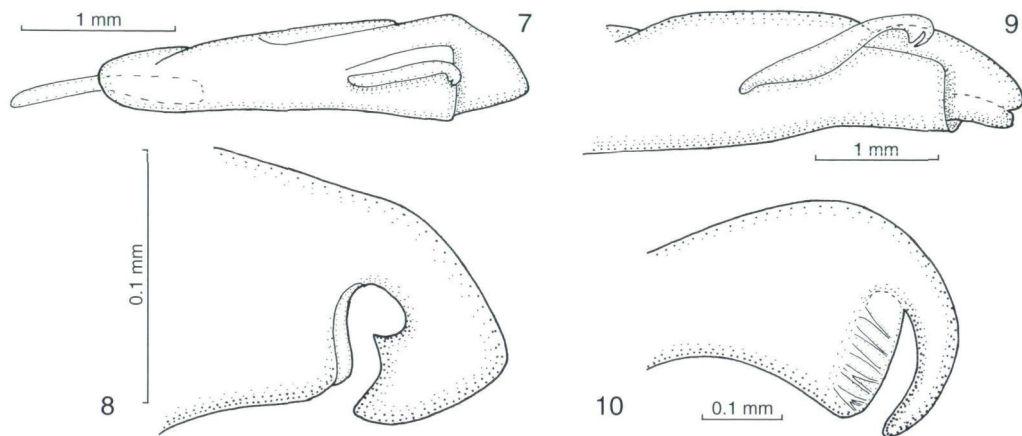
* Dr. Nico Nieser, Htg. Eduardstr. 16, 4001 RG Tiel, The Netherlands.



Figs. 1 - 6: *Ranatra akoitachta* sp.n., ♂♂ (1 - 3: holotype, 4 - 6: paratype): (1) head in lateral view, (2) detail of fore femur, (3) fore femur and tibia, (4) metasternum and metacoxae, (5) antenna, (6) head and pronotum in lateral view.

space 0.90; pronotum anterior width 1.78 - 1.80, humeral width 2.4 - 2.9, along median line length of anterior lobe 3.3 - 3.5, length of posterior lobe 2.1 - 2.5, total length 5.4 - 6.0; fore leg, length of coxa 4.9 - 5.1, femur length of distal part 3.2 - 3.4, length of proximal part 4.3 - 4.9; middle leg, length of femur 9.0, length of tibia 10.3 - 10.4; hind leg, length of femur 9.3, length of tibia 10.4 - 10.5.

Clypeus higher than lorum, clypeoloral sulcus broad and shallow, lorum not clearly separated from inner margin of eyes. Vertex slightly raised between eyes (Fig. 1), with an incipient tubercle in the paratype. Antenna as in Fig. 5. Pronotum unicolorous or posterior lobe slightly lighter, finely punctuate, more densely so on posterior lobe, anterior lobe about 1.5 times as long as posterior lobe, transverse groove strongly developed, posterior lobe inflated (Fig. 6). Prosternum with a pair of sublateral longitudinal grooves; anteriorly an indistinct median carina not reaching the transverse groove; laterally with a pair of low rounded ridges converging posteriorly toward the prothoracic pit. Mesosternum rounded and shining. Metasternum (Fig. 4) anteriorly depressed, posteriorly with a short median carina or elongate tubercle. Distance between posterior coxae slightly less than between intermediate coxae (0.5/0.65). Hemelytra just reaching beyond tergite six. Fore femur (Figs. 2, 3) yellowish to light brown with irregular



Figs. 7 - 10: *Ranatra akoitachta* sp.n., paratype, ♂: (7) genital capsule, (8) apex of paramere. *Ranatra odontomeros* sp.n., holotype, ♂: (9) apical part of genital capsule, (10) apex of paramere.

darker spots, bidentate, proximal part 1.3 - 1.4 times as long as distal part. Middle and hind legs unicolorous, middle and hind tibiae about equally long, slightly longer than femora. Hind femur reaching halfway sixth abdominal segment. Genital capsule Fig. 7, paramere Fig. 8.

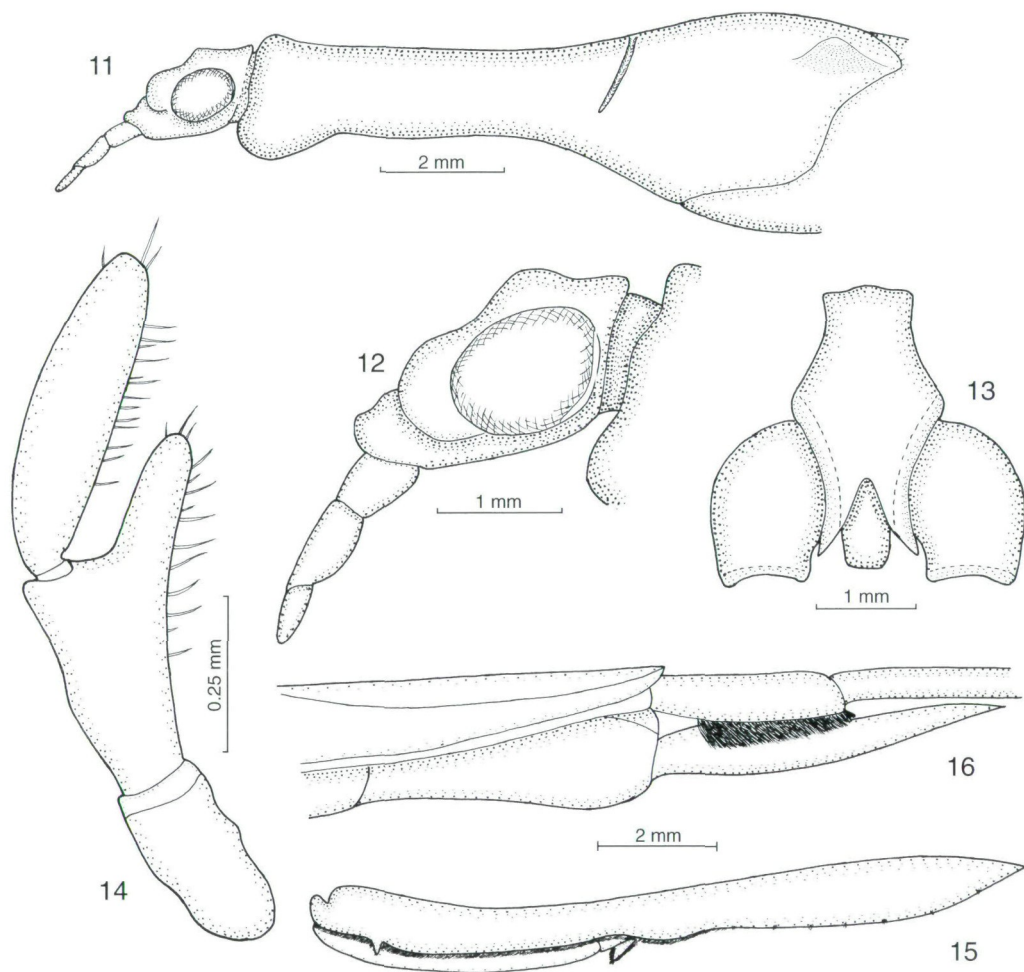
Etymology. Akoitachtos, Greek adjective meaning unnoticed, referring to the fact that it was over a century in the collection before recognized.

Comparative notes. The position of the teeth on the fore femur, distally of the middle and the middle and hind tibia of subequal length place this species in the the *R. filiformis*-group of LANSBURY (1972). Other characteristics such as the siphon shorter than body, fore femur with two teeth centrally and eye width less than interocular space are shared with the *R. varipes*-group (LANSBURY 1972) which is not very distinctly separated from the *R. filiformis*-group. The main distinguishing characteristic is the apex of the paramere which in other species of both these groups (with the exception of *R. varipes* STÅL, 1861, see below), has the opening between main body of paramere and the, relatively narrower, curved apical part wider (figs. 7, 8). In addition the anterior lobe of pronotum is about 1½ times as long as the posterior lobe whereas in other species of the *R.-filiformis*-group the anterior lobe is twice or more the posterior lobe. In the *R. varipes*-group this ratio is variable. In *R. varipes* the apex of the paramere has, at least in drawings (LANSBURY 1972), a somewhat similar form but it is twisted sideways whereas in *R. akoitachta* sp.n. the apex is curved in the longitudinal axis of the paramere. In addition the fore femur of *R. varipes* is somewhat more stoutly built, 10 times as long as its maximal width, in *R. akoitachta* sp.n. this ratio is 13.

Ranatra odontomeros sp.n.

(Figs. 9 - 16)

Type material. - Holotype (♂): THAILAND, Petchabun prov., Nam Nao N. P., Huei Ya Kruea, nr. Headquarter, 24 Nov. 1995, leg. H. Zettel (23) (NHMW). Paratypes: 2 ♀♀, same data as type (allotype NHMW, paratype NCTN); 1 ♂, NE-Thailand, 17 June [locality in Thai script] (Khon Kaen University, Faculty of Agriculture, Dept. of Entomology).



Figs. 11 - 16: *Ranatra odontomeros* sp.n., ♀♀ (11 - 13, 15, 16: allotype, ♀, 14: paratype, ♀): (11) head and pronotum in lateral view, (12) head in lateral view, (13) metasternum and metacoxae, (14) antenna, (15) fore femur and tibia, (16) apex of abdomen in lateral view.

Description: Dimensions. Length ♂ 34.0, ♀♀ 37.3 - 38.6, respiratory siphon ♂ 18.3, ♀♀ 18.9 - 19.0, width of head ♂ 3.30, ♀♀ 3.62 - 3.63, width of an eye ♂ 1.00, ♀♀ 1.10 - 1.15, interocular space ♂ 1.30, ♀♀ 1.30 - 1.42; pronotum anterior width ♂ 2.60, ♀♀ 2.78 - 2.95, humeral width ♂ 3.65, ♀♀ 3.97 - 4.25, along median line length of anterior lobe ♂ 6.1, ♀♀ 6.5 - 6.9, length of posterior lobe ♂ 3.3, ♀♀ 3.5 - 3.7, total length ♂ 9.4, ♀♀ 10.0 - 10.6; fore leg, length of coxa ♂ 7.0, ♀♀ 7.5 - 7.7, femur length of distal part ♂ 4.8, ♀♀ 4.9 - 5.0, length of proximal part ♂ 6.6, ♀♀ 7.0 - 7.1; middle leg, length of femur ♂ 14.7, ♀♀ 18.1 - 18.5, length of tibia ♂ 17.9, ♀♀ 17.7 - 18.6; hind leg, length of femur ♂ 18.3, ♀♀ 18.5, length of tibia ♂ 20.1, ♀♀ 20.7 - 22.2.

Lorum clearly separated from inner margin of eye and clypeus, clypeus higher than lorum. Vertex distinctly raised but tubercle incipient (Fig. 12). Eye narrower than interocular space.

cular space. Antenna as in Fig. 14. Fore femur about one fifth longer than pronotum. Anterior margin of pronotum ("collar") raised, anterior lobe of pronotum nearly twice as long as posterior lobe which has a pair of sublateral swellings caudally (Fig. 11). Scutellum 1.5 times or slightly more as long as broad, caudally with a V-shaped depression divided by a shallow median keel. Prosternum flattened, anteriorly with a rather indistinct median keel, prothoracic pit wide and shallow, anterior nodules on mesosternum vestigial. Mesosternum depressed, metasternum ventrally dilated, posteriorly emarginate (Fig. 13). Space between middle coxae distinctly larger than between hind coxae (1.0/0.8). Membrane reaching just beyond posterior margin of sixth tergite.

Legs annulated light and dark brown. Fore femur (Fig. 15) 1.2 times the median length of pronotum, with a large central tooth and a small additional apical tooth. Male operculum in ventral view elongate with a median keel and a rather sharp tip just reaching the base of respiratory siphon, in lateral view boat-shaped with a blunt tip. Genital capsule Fig. 9, paramere Fig. 10.

Female: sixth sternite distinctly dilate ventrally, operculum long reaching for half its length beyond apex of abdomen (Fig. 16).

Etymology: odontomeros, Greek composite noun meaning "toothed femur" referring to the small apical tooth on anterior femur.

Comparative notes. The emarginate posterior margin of metasternum, distance between middle coxae larger than between hind coxae, sixth sternite in female dilated ventrally and probably the small additional apical tooth on fore femur associate this species with the *R. gracilis*-group of LANSBURY (1972). It differs from the species in this group, however, by the lack of a distinct tubercle on vertex between eyes and the respiratory siphon being relatively longer, one third of body length in the other species, about half body length in *R. odontomeros* sp.n. Its paramere is somewhat similar to that of *R. gracilis* DALLAS, 1850, and *R. parmata* MAYR, 1865, both with wide distribution including North Thailand, which differ, apart from the characteristics mentioned above, by lacking a small apical tooth on fore femur. *Ranatra sulawesii sulawesii* NIESER & CHEN, 1991, and *R. s. sebui* NIESER & CHEN (in print) which seem to be associated to this group have the respiratory siphon approximately as long as body and lack the small apical profemoral tooth.

References

- LANSBURY, I. 1972: A review of the Oriental species of *Ranatra* FABRICIUS (Hemiptera - Heteroptera: Nepidae). – Transactions of the Royal Entomological Society of London 124: 287-341.
- NIESER, N. & CHEN, P.P. 1991: Naucoridae, Nepidae and Notonectidae, mainly from Sulawesi and Pulau Buton (Indonesia). – Tijdschrift voor Entomologie 134: 47-67.
- NIESER, N. & CHEN, P.P. (in print): Six new Nepomorpha from Sulawesi and Mindanao. – Tijdschrift voor Entomologie.