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Ancyronyx ERICHSON: new faunistic records, and description of a new species from Sulawesi (Indonesia) (Coleoptera: Elmidae)

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Abstract

Ancyronyx hjarnei sp.n. (Coleoptera: Elmidae) is described from Sulawesi (Indonesia). New faunistic records are provided for *Ancyronyx acaroides* GROUVELLE (Myanmar, Vietnam, Java, Sabah, Brunei), *A. malickyi* JÄCH (Laos, Peninsular Malaysia, Sabah), *A. procerus* JÄCH (Vietnam, Brunei), and *A. sarawacensis* JÄCH (Sabah). A revised key to the species of *Ancyronyx* ERICHSON is presented.

Key words: Coleoptera, Elmidae, *Ancyronyx*, key, new species, Sulawesi, Indonesia.

Introduction

The Riffle Beetle genus *Ancyronyx* ERICHSON is most remarkable for its morphology and its disjunct distribution pattern (see JÄCH 1994): dorsal surface with aposematic colouration; pronotum with transverse groove; prosternum not or very feebly produced anteriorly; posterior prosternal process wider than long; coxae widely separated, close to lateral margin of body, pro- and mesocoxae therefore visible from above; legs enormously long, distinctly longer than body length (hence they were named Spider Riffle Beetles, see JÄCH 1993), claws large and toothed.

Due to its remarkable general appearance, a separate tribe, Ancyronychini, has been erected for *Ancyronyx*. However, phylogenetic analyses have not been carried out so far and the relationships to other elmid genera remain totally unknown.

Seven species and one subspecies have been described until today (see JÄCH 1993, 1994). These are distributed in North America (*A. variegatus* GERMAR) and in the Oriental Region (*A. acaroides acaroides* GROUVELLE, *A. acaroides cursor* JÄCH, *A. johanni* JÄCH, *A. malickyi* JÄCH, *A. procerus* JÄCH, *A. sarawacensis* JÄCH, and *A. schillhammeri* JÄCH).

Numerous smaller species with distinctly less pronounced characteristics (i.e., inconspicuous colouration, shorter legs, smaller claws) have been collected in Southeast Asia, especially in the Philippines, recently. Probably, these species belong to *Ancyronyx* as well.

However, the new species from Sulawesi described herein is a typical representative of this remarkable genus for it is provided with very long legs, large claws and conspicuous aposematic colouration.

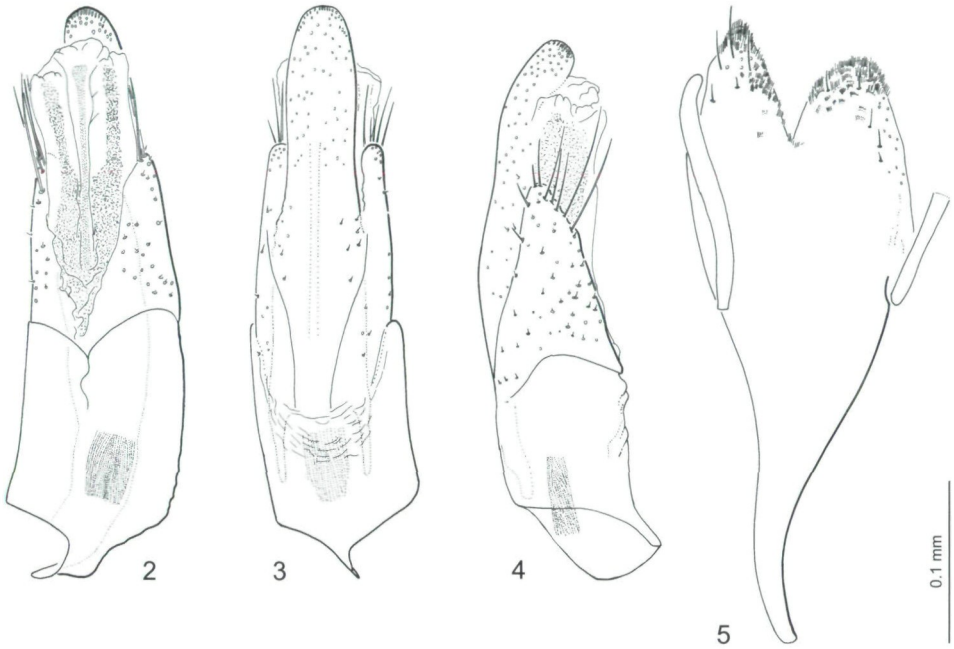
All specimens examined are deposited in the Naturhistorisches Museum Wien, Austria.

Ancyronyx hjarnei sp.n.

TYPE LOCALITY: 20 km northeast of Bantimurung, southern Sulawesi, Indonesia.

TYPE MATERIAL: **Holotype** ♂: "INDONESIA S – SULAWESI 20 km NE BANTIMURUNG 30. iii. 1999, at light BEČVÁŘ & ZÁBRANSKÝ lgt.".

Fig. 1: Habitus of *Ancyronyx hjarnei*.



Figs. 2 – 5: *Ancyronyx hjarnei*, 2-4) aedeagus, 5) spiculum gastrale.

DESCRIPTION: Habitus as in Fig. 1. Length (pronotum + elytra): 1.9 mm; (incl. head): 2.15 mm. Body form elongate, subparallel, convex.

Colouration (Fig. 1): yellowish; labrum brown posteriorly, clypeus dark brown; narrow area around eyes, posterior part of frons, and remainder of head black; lateral parts of pronotum, incl. a narrow basal strip, and hypomera black; scutellum black; elytra black except large X-shaped macula, apex, and lateral margin; lateral parts of metathorax dark brown to black.

Plastron not examined, hardly visible with stereoscopic microscope.

Labrum transverse, anterior margin more or less straight, lateral margin rounded; surface faintly micropunctate and superficially shagreened. Clypeus transverse; surface faintly micropunctate and superficially shagreened. Frontoclypeal suture straight, not distinctly impressed. Surface of frons densely micropunctate with small glabrous tubercles. Eyes distinctly protruding, with distinctly more than 100 facets visible in dorsal view. Antennae 11-segmented, slender, approximately as long as pronotum. Gula subtriangular, gular sutures distinct.

Prothorax slightly wider than long. Pronotum anteriorly attenuate; anterior margin strongly arcuate; margin between pronotum and hypomera not distinctly developed; hypomera visible from above; anterior transverse groove moderately deeply impressed and evenly arcuate; distinctly vaulted posterior to transverse groove; postero-lateral oblique grooves shallow; surface of pronotum granulately punctate, impressions micropunctate. Prosternum and prosternal process transverse; posterior margin of prosternal process almost truncate, inconspicuously produced medially.

Scutellum more or less pentagonal, very slightly longer than wide; glabrous. Elytra elongate (length/width: 1.7), approximately 2.5 times as long as pronotum; more or less parallel-sided in anterior two thirds; with ten rows of punctures between suture and lateral margin, and with a short row of ca. six scutellary punctures, forming a short accessory stria; strial punctures large, deeply impressed; interstriae slightly convex, impunctate and glabrous; lateral gutter of elytra very narrow; humeri prominent; elytral apices more or less conjointly rounded. Mesoventrite very short, strongly transverse, very slightly impressed medially, more strongly impressed sublaterally.

Hind wings present, fully developed; venation not examined. Metaventrite very large, with a shallow narrow longitudinal median groove (discrimen); rather distinctly impressed near anterior corners; surface more or less glabrous, very faintly punctate.

Legs longer than body; pro- and mesocoxae very large, clearly visible from above; claws very well developed, base of each claw with three teeth, two of which are rather prominent.

Abdomen with five visible ventrites.

Spiculum gastrale (Fig. 5) 470 µm long.

Aedeagus (Figs. 2 - 4): Total length: 420 µm. Median lobe long and slender, slightly attenuate in apical 0.3 (dorsal view), slightly curved ventrad (lateral view); dorsal surface with inconspicuous longitudinal median ridge extending from apical 0.25 to basal 0.25; lateral basal apophyses moderately long and slender; ventral sac well developed, distinctly plicate, with weakly sclerotized, thin fibula very slightly widened apically; ejaculatory duct distinctly speckled from base to apex; corona well developed, in repose situated near base of phallobase. Parameres distinctly shorter than penis, subtriangular (lateral view), more or less distinctly contiguous basoventrally; dorsal margin slightly emarginate; apex with ca. five moderately long bristles, especially along apico-ventral margin. Phallobase approximately as long as parameres.

DIFFERENTIAL DIAGNOSIS: Externally, *Ancyronyx hjarnei* can be easily distinguished from all other known species by its distinctive colour pattern, especially by the legs being entirely yellowish. The aedeagus of *A. hjarnei* somewhat resembles *A. malickyi*, from which it can be distinguished by the larger size and by the conspicuously speckled ejaculatory duct.

DISTRIBUTION: So far known only from the type locality.

ETYMOLOGY: Named for Hjarne Briese, Lippstadt (Germany).

New faunistic records

Ancyronyx acaroides GROUVELLE

M Y A N M A R: KACHIN: 2 exs.: River Ma Kyaw Wa, 27°18.90'N 97°22.93'E, ca. 480 m a.s.l., 30.V./1.VI.1999, leg. H. Schillhammer & R. Schuh.

V I E T N A M: 4 exs.: 15 km SW Bao Loc, 11°27'N 107°43'E, 900 m a.s.l., 22.-24.IV.1995, leg. P. Pacholátko & L. Dembický; 8 exs.: 40 km NW An Khe, Buon Luoi, 14°10'N 108°30'E, 28.III.-12.IV.1995, leg. P. Pacholátko & L. Dembický.

M A L A Y S I A: SABAH: 22 exs.: River Kuamut, Kampung Pisang Pisang, 3.-4.VII.1996; 1 ex.: Crocker Range, Taman Bandukan, Bingkor, 6.-7.VII.1996; 4 exs.: River Saupi, ca. 7 km S Sapulut, ca. 500 m a.s.l., 17.V.2001, leg. J.F. Kočiam.

B R U N E I: 4 exs.: Belalong Forest, Temburong, Apan, 500 m a.s.l., leg. A. Foggo.

I N D O N E S I A: JAVA: 4 exs.: Gunung Halimun, 5 km W Cipedey, ca. 1000 m a.s.l., 22.VIII.1994, leg. R. Schuh.

First record for Myanmar, Vietnam, Java, Sabah, and Brunei.

Ancyronyx malickyi JÄCH

LAOS: 1 ex.: Viangchan, Phou Khao Khouay, Nam Leuk, near Tad Leuk Waterfall, at light, 200 m a.s.l., 1.-8.VI.1996, leg. H. Schillhammer.

M A L A Y S I A: PERAK: 1 ex.: 25 km NE Ipoh, Banjaran Titi Wangsa Mountains, 6.-12.V.2001, leg. P. Čechovský; SABAH: 1 ex.: Sipitang, Mendolong, 14.IV.1988, leg. S. Adebratt.

First record for Laos, Peninsular Malaysia (Perak), and Sabah.

Ancyronyx procerus JÄCH

V I E T N A M: 5 exs.: 40 km NW An Khe, Buon Luoi, 14°10'N 108°30'E, 28.III.-12.IV.1995, leg. P. Pacholátko & L. Dembický.

B R U N E I: 3 exs.: Belalong Forest, Temburong, Apan, 500 m a.s.l., VII.2000, leg. A. Foggo.

First record for Vietnam and Brunei.

Ancyronyx sarawacensis JÄCH

M A L A Y S I A: SABAH: 92 exs.: River Kuamut, Kampung Pisang Pisang, 3.-4.VII.1996; 5 exs.: River Saupi, ca. 7 km S Sapulut, ca. 500 m a.s.l., 17.V.2001, leg. J.F. Kočiam.

First record for Sabah.

Key to species of *Ancyronyx*

The key presented below is based on a key to species of *Ancyronyx* published by JÄCH (1994) which has been revised to accommodate *A. hjarnei*.

1 Elytral margin finely serrate (denticulate) in posterior fifth. Hind wings reduced in most specimens. Aedeagus (see JÄCH 1994: Fig. 1). Eastern Nearctic Region ..... ***variegatus***

\- Elytral margin smooth, without any denticles (most species), or hardly noticeably serrate (one species from Borneo). Only fully winged specimens known so far. Aedeagi as in Figs. 2 - 4, and in JÄCH (1994: Figs. 2 - 9). Eastern Oriental Region, incl. Wallacea..... 2

2 Distal apex of femora yellowish (see Fig. 1, and JÄCH 1994: Figs. 26, 27). Aedeagi as in Figs. 2 - 4 and in JÄCH 1994: Figs. 2, 3): sides of penis straight or slightly emarginate, never strongly produced; apices of parameres with moderately long setae. Laos, Thailand, Peninsular Malaysia, Sumatra, Borneo, Mindoro, Sulawesi 3

\- Distal apex of femora at least partly black (see JÄCH 1994: Figs. 23 - 25, 28). Aedeagi as in JÄCH (1994: Figs. 4 - 9): sides of penis straight or strongly produced; apices of parameres without moderately long setae. Myanmar, Vietnam, Peninsular Malaysia, Borneo, Sumatra, Siberut, Java, Bali. 5

3 Legs entirely yellowish (Fig. 1). Aedeagus as in Figs. 2 - 4; ejaculatory duct speckled. Sulawesi. ..... ***hjarnei***

\- Legs yellowish and black (see JÄCH 1994: Figs. 26, 27). Aedeagi (see JÄCH 1994: Figs. 2, 3); ejaculatory duct not speckled. Laos, Thailand, Peninsular Malaysia, Sumatra, Borneo, Mindoro. 4

4 Body colouration (see JÄCH 1994: Fig. 27) predominantly yellow, middle of pronotum and middle of frons always yellow. Aedeagus as in JÄCH (1994: Fig. 2): sides of penis straight; parameres tapering towards apex, with only about three setae. Laos, Thailand, Peninsular Malaysia, Sumatra, Borneo..... ***malickyi***

\- Body colouration (see JÄCH 1994: Fig. 26) predominantly black. Aedeagus as in JÄCH (1994: Fig. 3): sides of penis slightly emarginate; parameres widening apically, with numerous setae. Mindoro. ..... ***schillhammeri***

5 Pronotum entirely or partly black anterior and posterior to transverse groove; middle of elytra yellowish or black along suture (see JÄCH 1994: Figs. 24, 25). Siberut, Borneo..... 6

- Pronotum dark brown or black anterior to transverse groove, but always yellowish posterior to transverse groove; middle of elytra always yellowish or brown along suture (see JÄCH 1994: Figs. 23, 28). Myanmar, Vietnam, Peninsular Malaysia, Borneo, Sumatra, Java, Bali. 7

6 Pronotum almost entirely black or dark brown, only its front margin narrowly yellow; scutellum black; middle of elytra always dark brown (or black) along suture (see JÄCH 1994: Fig. 24). Aedeagus (see JÄCH 1994: Fig. 7): sides of penis strongly produced. Siberut..... ***johanni***

- At least area of hind angles of pronotum always yellowish; scutellum yellowish or brown (see JÄCH 1994: Fig. 25). Aedeagus (see JÄCH 1994: Fig. 8): sides of penis straight. Borneo..... ***sarawacensis***

7 2.4 - 2.8 mm long. Habitus elongate (see JÄCH 1994: Fig. 28). Scutellum black or dark brown. Surface of pronotum rugosely granulate. Aedeagus (see JÄCH 1994: Fig. 9): sides of penis very slightly emarginate, parameres inconspicuous. Vietnam, Borneo..... ***procerus***

- 1.8 - 2.1 mm long. Habitus oval (see JÄCH 1994: Fig. 23) oval. Scutellum yellowish. Surface of pronotum smooth or punctate, never rugose. Aedeagi (see JÄCH 1994: Figs. 4 - 6): sides of penis strongly produced, apex of parameres (ventral aspect) strongly produced towards middle. Myanmar, Vietnam, Peninsular Malaysia, Borneo, Sumatra, Java, Bali..... 8

8 Aedeagus (see JÄCH 1994: Figs. 4, 5): penis with apex slightly shorter, sides more straight. Myanmar, Vietnam, Peninsular Malaysia, Borneo, Sumatra, Java ..... ***acaroides acaroides***

- Aedeagus (see JÄCH 1994: Fig. 6): penis with apex slightly longer, its sides slightly emarginate. Bali..... ***acaroides cursor***

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Zusammenfassung

Ancyronyx hjarnei (Coleoptera: Elmidae) aus Sulawesi (Indonesien) wird beschrieben. Ein adaptierter Bestimmungsschlüssel zu den Arten der Gattung *Ancyronyx* ERICHSON ist inkludiert. Neue faunistische Nachweise werden für *A. acaroides* GROUVELLE (Myanmar, Vietnam, Java, Sabah, Brunei), *A. malickyi* JÄCH (Laos, Malaiische Halbinsel, Sabah), *Ancyronyx procerus* JÄCH (Vietnam, Brunei), und *A. sarawacensis* JÄCH (Sabah) gemeldet.

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