

Descriptions of two new species of *Ancyronyx* ERICHSON (Insecta: Coleoptera: Elmidae)

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Abstract

Two new species of *Ancyronyx* ERICHSON (Coleoptera: Elmidae) are described: *A. raffaelacatharina* (Sulawesi), and *A. sphiemarie* (Philippines).

Zusammenfassung

Ancyronyx raffaelacatharina (Sulawesi) und *A. sphiemarie* (Philippinen) (Coleoptera: Elmidae) werden beschrieben.

Key words: Coleoptera, Elmidae, *Ancyronyx*, new species, Sulawesi, Philippines, Sibuyan.

Introduction

Eight species and one subspecies of the Riffle Beetle genus *Ancyronyx* ERICHSON are known so far (see JÄCH 1993, 1994, 2003). However, at least ten undescribed species were discovered in the Philippines and in Indonesia over the last ten years. Most of these species are rare with more or less restricted distributions, being usually confined to single islands.

Two remarkably colourful species, one from the small Philippine island of Sibuyan, and one from Sulawesi, are described herein.

NMW Naturhistorisches Museum Wien

CZW Coll. Zettel, Wien

Ancyronyx sphiemarie sp.n.

TYPE LOCALITY: Small stream at foot of Mt. Guiting-guiting, flowing through secondary forest, near Lambigan Falls, E of Magdiwang, W of Silum, northern part of Sibuyan Island, Philippines.

TYPE MATERIAL: **Holotype** ♂ (NMW): "PHILIPPINEN: Romblon Prov. Sibuyan, E Magdiwang W Silum, Lambigan Falls, 21.11.1994, leg. H. Zettel (69)". **Paratypes:** 18 exs. (NMW: 5 exs., CZW: 13 exs.), same data as holotype.

DESCRIPTION: Habitus as in Fig. 1. Length (pronotum + elytra): 1.05 – 1.25 mm; (incl. head): 1.20 – 1.40 mm. Body form elongate, oval, convex.

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Colouration (Fig. 1): dark brown to black; maxillary palpi and antennae yellowish, apically darkened; pronotum with lateral whitish glabrous circular or semicircular patch (with few tiny black dots) in anterior 0.25; elytra with four pairs of elongate oval yellow patches (see Fig. 1): three admedian pairs and one sublateral pair; subhumeral area usually brownish; legs yellowish, but coxae, trochanter, basal half and apical tip of femora, basal half and apical tip of tibiae and apices of tarsomeres more or less distinctly dark brown or black.

Plastron not examined, hardly visible with stereoscopic microscope.

Labrum transverse, anterior margin more or less straight, lateral margin very slightly arcuate; surface glabrous, very sparsely micropunctate. Clypeus transverse; surface more or less glabrous. Frontoclypeal suture arcuate. Surface of frons rugosely punctate and densely micropunctate, matt. Eyes distinctly protruding, with ca. 40 facets visible in dorsal view. Antennae 11-segmented, slender, approximately as long as pronotum. Gula subtriangular, lateral margins very deeply impressed.

Prothorax approximately as long as wide. Pronotum anteriorly and posteriorly attenuate; anterior margin strongly arcuate; ridge between pronotum and hypomera not distinctly developed; hypomera visible from above; anterior transverse groove moderately deeply impressed and evenly arcuate; postero-lateral oblique grooves shallow and inconspicuous; area between postero-lateral oblique grooves distinctly vaulted, forming a small gibbosity. Surface of pronotum granulately punctate, impressions densely micropunctate, but anterior patches totally glabrous, median gibbosity and anterior margin of postero-lateral oblique grooves almost glabrous. Prosternum and prosternal process transverse; posterior margin of prosternal process almost truncate, slightly produced medially.

Scutellary shield more or less pentagonal, very slightly wider than long, glabrous. Elytra elongate (length/width: ca. 1.5), approximately 2.3 times as long as pronotum; more or less oval, acuminate posteriorly; with ten rows of punctures between suture and lateral margin; striae punctures moderately large, deeply impressed; interstriae slightly convex, impunctate and glabrous; yellow patches without punctures, totally glabrous, slightly vaulted; lateral gutter of elytra very narrow; humeri small and inconspicuous; elytral apices almost conjointly rounded. Mesoventrite very short, strongly transverse, distinctly impressed medially and posterolaterally, anterolaterally with distinct groove for reception of procoxa.

Hind wings reduced. Metaventrite very large, strongly impressed medially.

Legs at least as long as body; pro- and mesocoxae very large, clearly visible from above; claws very well developed, base of each claw with two teeth, distal one more prominent than basal one.

Abdomen with five visible ventrites.

Spiculum gastrale (Fig. 5) ca. 360 μm long.

Aedeagus (Figs. 3, 4): Total length: ca. 400 μm . Median lobe long and slender, acuminate apically (ventral view), slightly curved ventrad apically (lateral view); ventral sac slightly plicate, with numerous scale-like structures, and with weakly sclerotized, inconspicuous thin fibula; corona weakly developed, in repose situated between penile

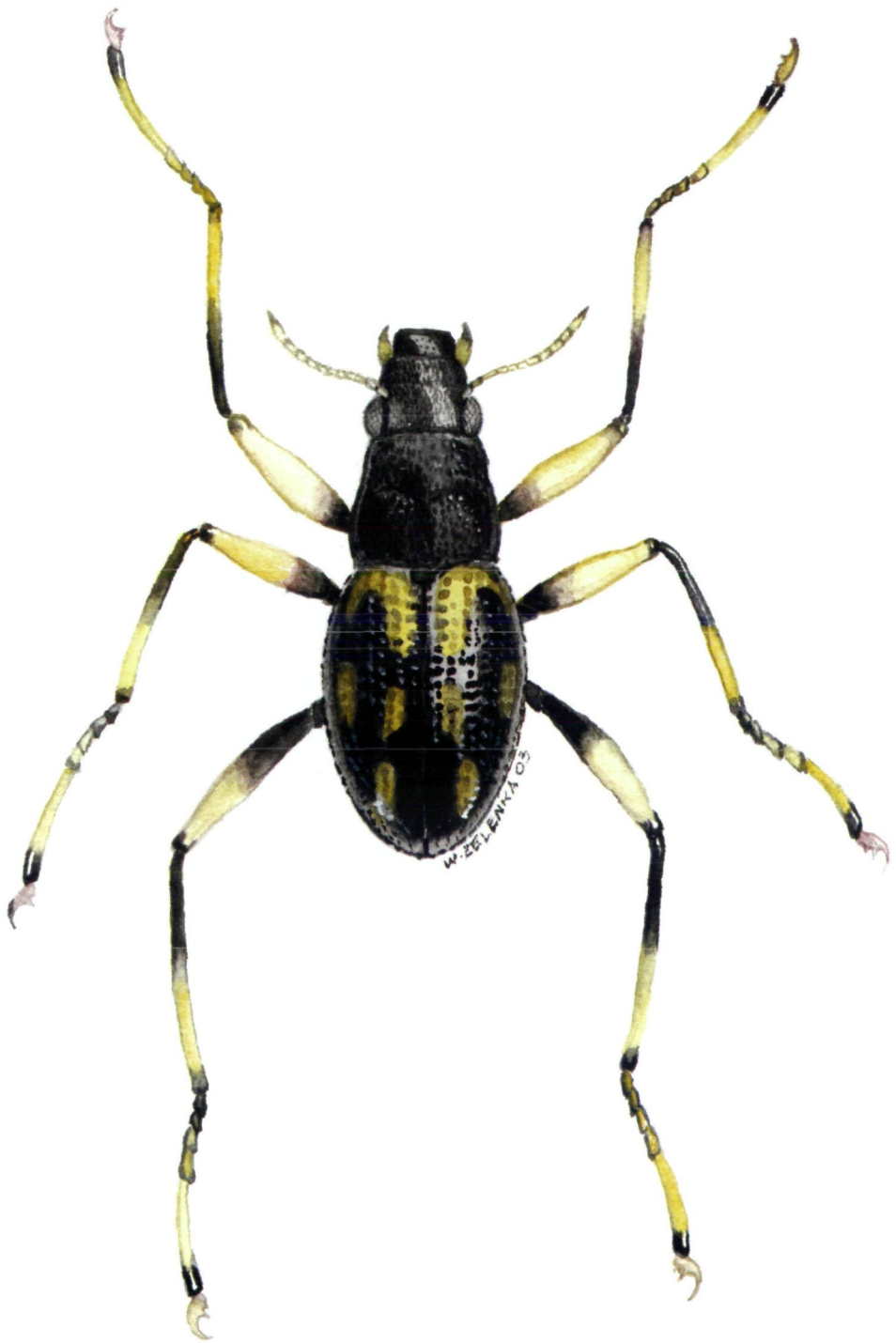


Fig. 1: Habitus of *Ancyronyx sophermarie*.

apophyses. Parameres distinctly shorter than penis, slender, in lateral view sinuate with apex acute and slightly curved dorsad; ventral margin sinuate; base not contiguous ventrally; apex with few short or very short setae. Phallobase approximately as long as wide, distinctly shorter than parameres.

Ovipositor (Fig. 6): Total length: ca. 510 μm . Terminal segment (stylus) slender. Preapical segment (coxite) very long and slender; distal part distinctly elongate, with several short blunt sensilla, especially at apex, median margin pubescent; proximal part distinctly shorter than distal sclerite, with few short blunt sensilla in apical half. Basal sclerite (valvifer) approximately as long as main piece and terminal segment together.

Sexual secondary dimorphism: Elytral apices of females slightly more acuminate. Metaventral impression slightly wider in male.

VARIABILITY: Darkened area of antennae often reduced to apical half of apical antennomere. Elytra sometimes with a more or less distinctly developed yellowish sub-humeral patch. Size and gibbosity of yellowish elytral patches varies to some extent. In one of the paratypes, anterior admedian elytral yellowish patch divided transversely into two separate spots. Frontoclypeal suture distinct or obsolete.

DIFFERENTIAL DIAGNOSIS: On account of its most distinctive colour pattern *Ancyronyx sophermarie* can be easily distinguished from all other known species of the genus. Its legs are comparatively short. The aedeagus of *A. sophermarie* is characterized by its elongate shape and the scale-like structures of the ventral sac. Ovipositor distinctly more slender and more elongate than in any other described species.

DISTRIBUTION: So far known only from the type locality.

ETYMOLOGY: Named for Sophie Marie Schüssler, Bad Vöslau (Lower Austria).

Ancyronyx raffaelacatharina sp.n.

TYPE LOCALITY: Peruhumpenai Mts., ca. 50 km N of Wotu, Central Sulawesi, Indonesia.

TYPE MATERIAL: **Holotype** ♀ (NMW): "INDONESIA C – SULAWES [!] PERUHUMPENAI Mts. Res. ca. 50 km N of WOTU 17. iv. 1999 at light BEČVÁŘ & ZÁBRANSKÝ lgt". **Paratype** ♀ (NMW), same data as holotype.

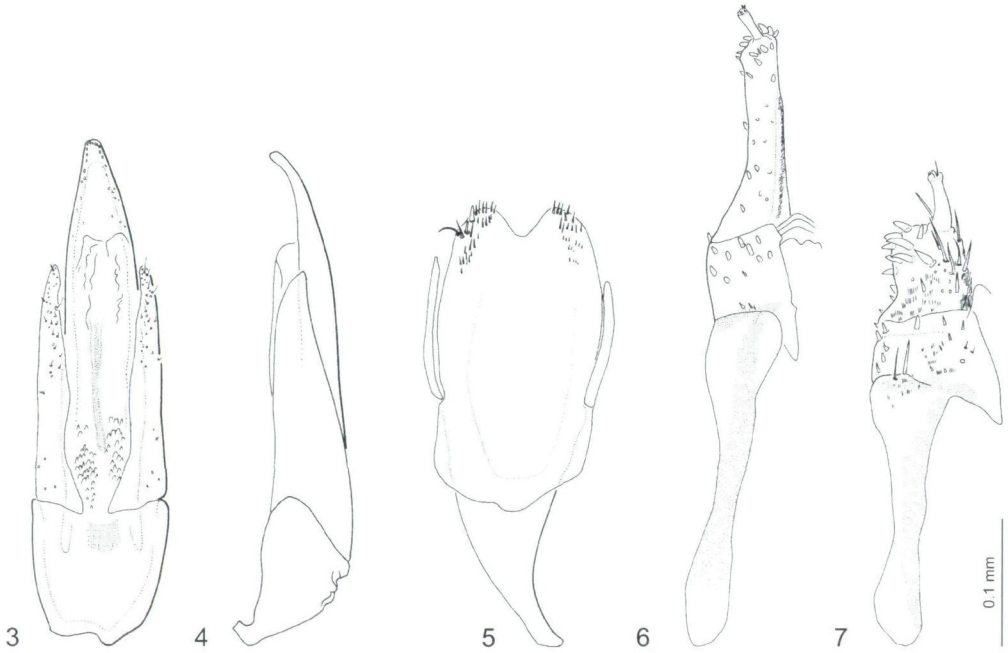
DESCRIPTION (female): Habitus as in Fig. 2. Length (pronotum + elytra): 1.9 – 2.0 mm (incl. head): 2.15 – 2.40 mm. Body form elongate, oval, convex.

Colouration (Fig. 2): yellowish; labrum brown posteriorly, clypeus dark brown; narrow area around eyes, posterior part of frons, and lateral parts of head black; pronotum and hypomera black; scutellar shield black; anterior elytral margin lateral of scutellar shield and a broad band across posterior elytral declivity brown to black; lateral parts of meso- and metathorax dark brown to black; anterior three ventrites more or less comprehensively darkened laterally.

Plastron not examined, very inconspicuous, hardly visible under stereoscopic microscope.



Fig. 2: Habitus of *Ancyronyx raffaelacatharina*.



Figs. 3 - 6: *Ancyronyx sophermarie*: 3) aedeagus, ventral view, 4) same, lateral view (outlines), 5) spiculum gastrale, ventral view, 6) ovipositor.
 Fig. 7: *Ancyronyx raffaelacatharina*: ovipositor.

Labrum transverse, anterior margin more or less straight, lateral margin rounded; surface faintly micropunctate and superficially shagreened. Clypeus transverse; surface slightly more strongly shagreened than labrum. Frontoclypeal suture almost straight, moderately deeply impressed. Frons rugosely punctate; strongly micropunctate, especially in posterior half. Eyes large, protruding, with distinctly more than 100 facets visible in dorsal view. Antennae 11-segmented, slender, slightly longer than pronotum. Gula subtriangular.

Prothorax wider than long. Pronotum anteriorly attenuate; anterior margin strongly arcuate, with narrow fringe of conspicuous translucent membranous cuticula; ridge between pronotum and hypomera not distinctly developed; hypomera visible from above; anterior transverse groove moderately deeply impressed and evenly arcuate; pronotum distinctly vaulted posterior to transverse groove; postero-lateral oblique grooves distinct; surface of pronotum coarsely punctate, impressions densely micropunctate and matt, interstices glabrous. Prosternum and prosternal process transverse; posterior margin of prosternal process almost truncate, inconspicuously produced medially.

Scutellar shield more or less pentagonal, very slightly longer than wide; glabrous. Elytra elongate (length/width: 1.7), approximately 2.8 times as long as pronotum; almost parallel-sided in anterior two thirds; with ten rows of punctures between suture and lateral margin, and with a short row of ca. 5 – 10 scutellary punctures, forming a short accessory stria; stria punctures large, deeply impressed; interstriae convex, impunctate or

superficially rugose; lateral gutter of elytra very narrow; humeri prominent; elytral apices separately rounded. Mesoventrite very short, strongly transverse, with distinct median impression in anterior half, with transverse groove behind anterior margin, and with distinct sublateral impression.

Hind wings present, fully developed; venation not examined. Metaventrite very large, with a shallow narrow longitudinal median groove (discrimen), and with shallow impression near anterior corners; surface more or less glabrous, superficially 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, increasing in size from basal to distal one.

Abdomen with five visible ventrites.

Ovipositor (Fig. 7): Total length: 370 μm . Terminal segment (stylus) slender. Preapical segment (coxite) short and stout; distal part slightly longer than wide, with numerous stout spines, especially near apical angle, and with numerous striae in basal half; median margin pubescent; proximal part about as long as distal sclerite, striae less apparent than on distal part of coxite. Basal sclerite (valvifer) approximately as long as main piece and terminal segment together, with a few striae near distal end.

VARIABILITY: Paratype with lateral pronotal margin very narrowly yellowish in basal 0.3; transverse black band across elytra larger.

DIFFERENTIAL DIAGNOSIS: Externally, *Ancyronyx raffaelacatharina* can be easily distinguished from all other known species by its distinctive colour pattern (yellow legs, black pronotum, broad black transverse band across yellow elytra). The ovipositor is characterized by its numerous striae on the distal part of the coxite.

DISTRIBUTION: So far known only from the type locality.

ETYMOLOGY: Named for Raffaella Catharina Schüssler, Bad Vöslau (Lower Austria).

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References

- JÄCH M.A., 1993: *Ancyronyx* (Coleoptera: Elmidae) - The Spider Riffle Beetle of the Malaysian Forest Rivers. – *Nature Malaysiana* 18 (3): 86-89.
- JÄCH M.A., 1994: A taxonomic review of the Oriental species of the genus *Ancyronyx* ERICHSON, 1847 (Coleoptera, Elmidae). – *Revue suisse de Zoologie* 101 (3): 601-622.
- JÄCH M.A., 2003: *Ancyronyx* ERICHSON: new faunistic records, and description of a new species from Sulawesi (Indonesia) (Coleoptera: Elmidae). – *Koleopterologische Rundschau* 73: 255-260.