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# *Urocorthylus* gen.n.: a remarkable monotypical scolytine genus from northern Vietnam (Coleoptera: Curculionidae: Scolytinae)

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**Abstract**

*Urocorthylus*, a new scolytine genus (Coleoptera: Curculionidae: Scolytinae), including a single new species, *U. hirtellus*, from northern Vietnam, is described and figured. The new species is considered to be a strongly deviating representative of the subtribe Corthylina LECONTE, 1876, previously thought to be nearly exclusively American.

**Key words**: Coleoptera, Curculionidae, Scolytinae, bark beetles, ambrosia beetles, *Urocorthylus*, *Gnatharus*, Corthylini, Corthylina, taxonomy, new species, Vietnam.

## Introduction

There have been many changes in the higher-level systematics of bark- and ambrosia-beetles since WOOD'S (1986) reclassification of the genera of Scolytidae. First, it has become widely accepted that Scolytinae form only a subfamily within the Curculionidae (CROWSON 1955, KUSCHEL 1995, MARVALDI et al. 2002). Second, although WOOD'S (1986) monograph gave very important insights into the systematics of scolytines, it did not cover the whole variety of bark and ambrosia beetles, partly due to unnecessary synonymization of valid genera, and partly due to the great number of yet undescribed species present in tropical areas. Since WOOD (1986), at least three recent scolytine genera, namely *Dryoxylon* BRIGHT & RABAGLIA, 1999, *Pseudips* COGNATO, 2000 and *Amphiscolytus* MANDELSHTAM & BEAVER, 2003, previously included in other taxa, have been described and validated. One more new genus, *Allothenemus* BRIGHT & TORRES, 2006, for the previously unknown species *Allothenemus minutus* BRIGHT & TORRES, 2006 has been described very recently. The current paper describes a new monotypic genus of Scolytinae, from a previously unknown Vietnamese species that is remarkable because it represents the Corthylina (sensu WOOD 1986) – a lineage thought previously to be exclusively American (with the exception only of the genus *Gnatharus* WOOD & YIN, 1986).

## *Urocorthylus* gen.n.

TYPE-SPECIES: *Urocorthylus hirtellus* sp.n.

DESCRIPTION: Body of moderate size for Scolytinae, 2.4 mm long in the only species known, rather stout, covered with long, whitish, hair-like setae (Fig. 1–3). Head concealed under pronotum, not seen from above. Eyes large, broad, slightly emarginate anteriorly near the antennal insertion, nearly twice as long as wide, rather finely facetted. Antenna geniculate, with 3-segmented funiculus, consisting of three gradually diminishing cup-shaped tranverse segments (Fig. 4). Club large, compressed, devoid of sutures and septae, densely and uniformly pubescent, except for triangular area at base (Fig. 4). Scapus devoid of unusual features and with only few hair-like setae. Pronotum sloping downwards in anterior portion and with distinct transverse

impression just behind middle. Summit near middle of pronotum. Sides of pronotum arched rather evenly anteriorly, without distinct subapical constriction (Fig. 1, 3). No distinct teeth at anterior pronotal margin. Anterior portion of pronotum covered by numerous small transverse asperities, posterior third simply punctate. Lateral sides of pronotum impressed due to concave pleura, and lateral margins of pronotum subacute in posterior 2/3 of its length (Fig. 2). No indication of fine raised line at base and sides of pronotum. Scales completely absent both on pronotum and elytra. Anterior margin of elytra unmodified, neither elevated, nor crenulated. Metepisterna nearly completely covered by elytra. Declivity rather steep, bearing pointed, rather large tubercles. Elytral apex acuminate, forming distinct, blunt and nearly symmetrical process. Procoxae contiguous, of spherical form, partly divided anteriorly by wide triangular prosternal process. Meso- and metacoxae separated. Protibia not flattened, armed by 3–4 unsocketed denticles on anterior margin. Meso- and metatibiae similar to protibia. Tarsi with third segment simple, not bilobed, rather long. Abdomen horizontal. Genitalia not studied.


Figs. 1–2: *Urocorthylus hirtellus* sp.n., habitus, photograph, 1) dorsal view, 2) lateral view.

### *Urocorthylus hirtellus* sp.n.

TYPE LOCALITY: Northern Vietnam, Vinhphu Province, Tamdao.

TYPE MATERIAL: **Holotype** (sex unknown) (Zoological Institute RAS, St. Petersburg, Russia): "Vietnam, mountains nearby Tamdao [Vinhphu Province], h=900 m, 5.09.1963 [5.IX.1963], leg. Kabakov [O.N. Kabakov] [full label in Russian, in O.N. Kabakov's handwriting]".

ADDITIONAL MATERIAL EXAMINED: none.

DESCRIPTION: In addition to features assumed to be generic, the new species can be described by the following set of characters. Body 2.4 mm long, 2.7x as long as wide (Fig. 1, 3). Elytra deep bluish black, pronotum yellowish red, head dark brown, antennae and legs paler than pronotum, ventral side yellowish red.

Frons deeply and rather densely and coarsely punctate, with indefinite median longitudinal elevation above epistoma and longitudinal rugosities in central part (Fig. 5). Frontal surface between punctures faintly shining. Hair-like setae on frons rather long, but not numerous, all of even length. Pronotum 1.1x as long as wide, appearing more elongate due to gradual narrowing anteriorly. Posterior third of pronotum densely and evenly punctate. Between asperities and punctures, pronotum smooth, shining and without signs of reticulation. Surface of pronotum covered by thin hair-like setae of different lengths, including very long ones, mostly forwardly directed in asperate portion of pronotum.

Elytra of same width as pronotum, rather short, 1.5x as long as pronotum (Fig. 1, 3). Elytral disc shining, without reticulation, with even and dense punctation consisting of small points, without any indication of striae and interstriae. Declivity rather steep, slightly flattened, beginning at posterior third of elytra (Fig. 6). Suture at declivity elevated and armed by four rather large tubercles, and four pointed tubercles of same size with apices oriented downwards on third interstriae; second interstriae widely impressed. Whole surface of elytra, including declivity, covered by dense whitish recumbent hair-like setae and additionally with extremely long thin and flexible hair-like setae on disk and especially at sides of elytra. Some of these hair-like setae nearly as long as 3/4 width of elytra (Fig.1, 3). Color photographs of the new species will be available at http://www.zin.ru/Animalia/Coleoptera/eng.

DIAGNOSIS: Within the subtribe Corthylina LECONTE, 1876, *Urocorthylus* forms a distinct genus differing from all other taxa by the extremely long pronotal and elytral vestiture and other more important characters. It can be easily separated from the only known indigenous South-East Asian corthyline *Gnatharus* WOOD & YIN, 1986, which has a 4-segmented antennal funicle, an antennal club showing two slightly procurved sutures, the elytral declivity divaricate from the middle, and an unusual sexually dimorphic pronotum. The antennae of *Urocorthylus* are unique within the subtribe Corthylina. Species of *Gnathotrichus* EICHHOFF, 1869 and *Gnathotrupes* SCHEDL, 1951 can be easily distinguished from *Urocorthylus* by the 5-segmented antennal funicle, and an antennal club with 2–3 clearly marked sutures. In the speciose and variable genera *Amphicranus* ERICHSON, 1836, *Tricolus* BLANDFORD, 1905, *Monarthrum* KIRSCH, 1866, and also in *Glochinocerus* BLANDFORD, 1904, and *Metacorthylus* BLANDFORD, 1904, the club always has two sutures clearly indicated; in addition in all these genera, except *Glochinocerus* and *Metacorthylus*, the elytral apex is usually divaricate and often explanate. In all other known genera of Corthylina (*Corthylus* ERICHSON, 1836, *Microcorthylus* FERRARI, 1867, *Corthycyclon* SCHEDL, 1951, *Brachyspartus* FERRARI, 1867 and *Corthylocurus* WOOD, 1966), the antennal funicle is reported to be mono-segmented and the prosternal process absent, i.e. not extended between the procoxae (WOOD 1986).

DISCUSSION: The structure of the pronotum and elytra places *Urocorthylus* into the Scolytinae and not the Hylesininae sensu WOOD (1986). The presence of mucronate elytra in the new

species might suggest placement in the tribe Micracini; but characters associated with the elytral declivity are among the least phylogenetically informative for generic-level relationships (HULCR et al. 2007). Mucronate elytra may be found in several other tribes of Scolytinae including Xyleborini and Diamerini. Much more important features for generic placement are characters of the antenna: the funiculus is multisegmented in Micracini (with 6–7 segments, except for *Miocryphalus* SCHEDL, 1939 with a 5-segmented funiculus) and the club is never enlarged as in *Urocorthylus* and in many American Corthylina. In the new genus, the metepisterna are largely covered by the elytra, which suggests placement of *Urocorthylus* either into the tribe Cryphalini LINDEMANN, 1876 or the tribe Corthylini LECONTE, 1876. Our decision to place the new genus into the Corthylini, and within it in the subtribe Corthylina, is based on the similarity of the new species' habitus to the Asian corthyline *Gnatharus*, the small number of funicular segments and presence of the large antennal club without septa or sutures. Quite atypical for Corthylina is the long elytral pubescence observed in *Urocorthylus*: in Corthylina the pubescence is strongly reduced and usually limited to the declivity. However, this feature alone is not sufficient to exclude placement of *Urocorthylus* into Corthylina.

Previously, only two representatives of the subtribe Corthylina LECONTE, 1876 were reported from outside the Americas, namely *Monarthrum meuseli* (REITTER, 1905) from Sajan Mts. in northern Asia (MANDELSHTAM 2000) and *Gnatharus tibetensis* WOOD & YIN, 1986 from Tibet. Whereas the former species is very closely related to American representatives of *Monarthrum* KIRSCH, 1866 and its finding in Siberia may be due to introduction or an old labelling mistake, the latter species is clearly the relict of American Corthylina indigenous for Asia. Importantly there are no new reports of *Monarthrum meuseli* from Siberia after its description, whereas *Gnatharus tibetensis* has been recently collected in moderate numbers in northern Thailand (R.A. Beaver, unpublished). The discovery of *Urocorthylus hirtellus* supports the idea that there are highly differentiated genera of Corthylina in the Old World. For a long time, only the genus *Pityophthorus* EICHHOFF, 1864 of the Corthylini was thought to be shared by the Old and New Worlds; rather recent findings of *Pseudopityophthorus* (WOOD & YIN 1986) and *Pityotrichus* (MANDELSHTAM et al. 2006) in Asia, as well as the current finding, demonstrate that there are more such links between the Asian and American scolytine faunas. So now, not only the tribe Corthylini, but the most highly differentiated subtribe Corthylina have been demonstrated to be common to both America and Asia.

DISTRIBUTION: Known only from the type locality.

ECOLOGY: Nothing is known about the biology and host plants of the new species.

ETYMOLOGY: The generic name is a combination of the Greek root "uro", indicating presence of a tail and referring to the presence of the projection at the elytral apex in the new species, and the generic name *Corthylus*. The generic name *Corthylus* in its turn originates from the Greek root "cort", meaning "bark", so the combination of two Greek roots in the new generic name *Urocorthylus* gives a hint of possible relations with the tribe Corthylini. The specific epithet "hirtellus" originates from the Latin root "hirt" indicating pubescence, which is enormously long and dense in the new species.

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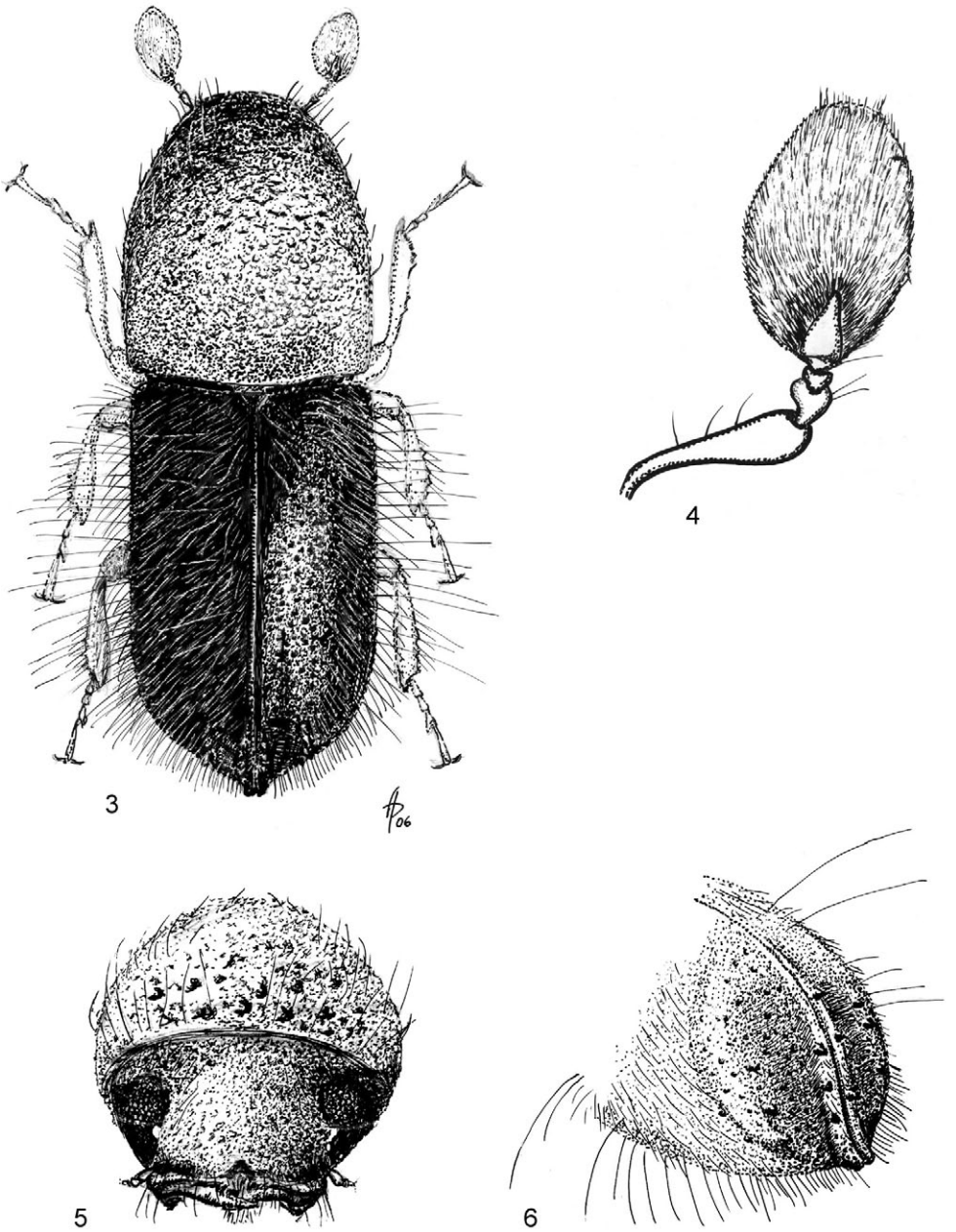


Figs. 3–6: *Urocorthylus hirtellus* sp.n., 3) habitus, 4) antenna, 5) head, 6) elytral declivity.

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