

## DRYOPIDAE:

# II. Description of *Ceradryops matei* sp.n. from Hong Kong, and synonymical note on the genus *Uenodryops* SATÔ

(Coleoptera)

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### Abstract

The genus *Ceradryops* (Coleoptera: Dryopidae) is recorded from China for the first time. *Ceradryops matei* sp.n. is described from Hong Kong (China). The new species was collected in a hygropetric habitat. *Uenodryops* SATÔ is proposed as a junior synonym of *Ceradryops* HINTON.

**Key words:** Coleoptera, Dryopidae, *Ceradryops*, *Uenodryops*, new species, new synonymy, Hong Kong, China, Nepal.

### Introduction

*Ceradryops* HINTON is probably the most enigmatic genus currently classified in the family Dryopidae. HINTON (1937) based the description of the genus on a single damaged female from southern India. The type species, *C. punctatus* HINTON, was reported subsequently also from Sri Lanka by DELÈVE (1973) and JÄCH (1984).

SATÔ (1981) described another very similar genus, *Uenodryops*, from the Himalaya. The possible synonymy of *Ceradryops* and *Uenodryops* already was mentioned by LAWRENCE et al. (1999).

The purpose of this paper is to provide the description of a new species of *Ceradryops* from Hong Kong and to clarify the taxonomic relationship between *Ceradryops* and *Uenodryops*.

### Material and methods

Metric characters were measured using a Wild M3Z with ocular grid. Separate labels are indicated by backslashes.

#### Acronyms:

NIHML The Natural History Museum, London, UK

NMW Naturhistorisches Museum Wien, Austria

NSMT National Science Museum, Tokyo, Japan

AW anterior pronotal width

EL elytral length, length along suture from anterior margin of scutellum to elytral apices

EW elytral width (maximum width combined)

MW maximum width

PL pronotal length along midline

PW posterior pronotal width

TL distance measured in dorsal view from anterior margin of head to elytral apices

[HW] hand written

[P] printed

***Ceradryops* HINTON, 1937**

*Ceradryops* HINTON 1937: 79. Type species: *Ceradryops punctatus* HINTON, 1937.

*Uenodryops* SATÔ 1981: 54 (syn.n.) Type species: *Uenodryops himalayanus* SATÔ, 1981.

We are working currently on a detailed revision of the genus *Ceradryops* (BOUKAL & KODADA, in preparation). Here we review only the most important characters that justify the synonymy of *Ceradryops* and *Uenodryops*.

HINTON (1937) illustrated the antenna of *C. punctatus* as three-segmented; dissection of several specimens from southern India and Sri Lanka invariably showed five-segmented antennae. SATÔ (1981) separated *Uenodryops* from *Ceradryops* by the following characters: "antennae 6-jointed, maxillary palpi 3-jointed, each side of discal area on mesosternum [apparently meaning metaventrite] carinate, and abdomen provided with a median carina on the 1st sternite and with a tubercle on the 5th". However, the maxillary palpi of *C. himalayanus* are four-segmented as in other Dryopidae including *Ceradryops*; the more or less distinct carina on ventrite 1 and the conspicuous tube-like cluster of setae on ventrite 5 (interpreted as a tubercle by SATÔ 1981) are present in all species of *Ceradryops*. The number of antennomeres varies within the genus from five (*C. punctatus*) to six (*C. himalayanus*, *C. matei* sp.n.). Finally, we regard the presence of short admedian carinae on the metaventrite only as a specific character; moreover it is present in *C. punctatus* and absent in *C. matei* sp.n. To conclude, our examination of the type species of *Ceradryops* and *Uenodryops* reveals that both taxa are congeneric.

***Ceradryops himalayanus* (SATÔ, 1981) comb.n.**

*Uenodryops himalayanus* SATÔ 1981: 55.

**Type locality:** Nangarpa, Sindhu District, Bagmati Zone, Nepal.

**Type material:** Holotype ♂ (NSMT): "Nungarpa, 2000m Sindhu, NEPAL Nov. 11, 1979 M. Sato leg. [P] \ Slide No. [P] 9 [HW] Nepal [HW] M.SATO, 1980 [P] \ Holotype *Uenodryops himalayanus* M. Satô, 1981 [all HW] Det. M.SATO 1981 [P]". We were not able to examine the slide-mounted aedeagus.

**Differential diagnosis:** *Ceradryops himalayanus* can be distinguished from *C. punctatus* and *C. matei* by: (1) distinctly longer and wider body; (2) dense dorsal vestiture; (3) finer and sparser punctuation of dorsal surface; and (4) form and proportions of male genitalia. *Ceradryops matei* sp.n. differs also in the absence of the distinct sublateral step-like pronotal sulcus.

**Redescription of holotype:** Small and slender, TL 1.92 mm, MW 0.92 mm. Body subparallel-sided, moderately convex dorsally; vestiture consisting of numerous long erect setae arising from bottom of round large punctures and of very dense short prone setae arising from small sockets. Long setae ca. as long as tarsomeres 1 – 4 combined, short setae ca. 0.2 times as long as long setae.

Head including eyes 0.53 mm wide. Frons and vertex weakly convex, nearly flat, punctate, punctures nearly as coarse as facets, separated by ca. 0.5 – 1.5 puncture diameter; interfacetal setae long, longer on posterior than on anterior half (dorsal view). Antenna six-segmented, not reaching posterior margin of eye. Maxillary palpus four-segmented, segments 1 – 3 subequal in length.

Thorax. Pronotum: PL 0.45 mm; AW 0.58 mm; PW 0.75 mm; MW across posterior third 0.80 mm; disc moderately convex dorsally; sides feebly arcuate, converging more strongly anteriorly than posteriorly; lateral carinae feebly raised; sublateral step-like sulcus distinct along entire length, subparallel in posterior half, arcuate and feebly converging in anterior half (dorsal view); anterior angles moderately protruding, broadly rounded; posterior angles not protruding, obtuse; anterior margin nearly straight; posterior margin feebly trisinuate; punctuation similar to that on head, rather dense. Prosternum 0.24 mm long in front of procoxae; prosternal process narrow,

0.08 mm wide, 0.19 mm long, subparallel-sided, depressed mesally, apex acute. Mesoventrite short, with deep median cavity. Metaventrite 0.41 mm long, flat along midline; longitudinal groove (discrimen) feebly impressed, entire; posterolateral portion convex; surface structure concealed by very dense pubescence; admedian carinae present approximately in anterior half of metaventrite. Procoxae separated by 0.08 mm, mesocoxae by 0.17 mm and metacoxae by 0.08 mm. Elytra 1.42 mm long, EW 0.92 mm, ca. 3.1 times as long as pronotum, ca. 1.5 times as long as wide, widest slightly anterior of middle; feebly convex dorsally, gradually deflected along posterior third; humeri weakly protruding; apices moderately produced ventrad, acute; lateral edge narrow, feebly protruding anteriorly, inflected at level of metacoxa; elytral punctation similar to that on pronotum, except punctures more loosely spaced, apical punctures smaller and rather vaguely impressed; epipleura subequal in width nearly to apices. Length of profemur 0.45 mm, mesofemur 0.45 mm and metafemur 0.44 mm long, each widest near midlength. Protibia 0.36 mm long, widest near midlength; mesotibia 0.35 mm long, moderately bent, widest near midlength, narrower than pro- and metatibia; metatibia 0.38 mm long, widest slightly distal of midlength. Tarsomeres 1 – 4 subequal in length, tarsomere 5 as long as combined lengths of preceding tarsomeres; claws longer than half of terminal tarsomere, narrow, moderately curved.

Abdomen with midline length of ventrites 1 – 5 equal to 0.23/0.12/0.10/0.10/0.19 mm; abdominal intercoxal process subtriangular, longer than wide, apex rounded, medial carina prominent along entire length of ventrite 1; ventrite 5 medially with conspicuous cluster of setae; posterior margin with shallow, moderately wide medial emargination. Aedeagus long and slender; phallobasis about 2.7 times as long as paramere, curved near middle; parameres short and weakly bent ventrad; apex of penis surpassing parameres. Ovipositor: valvifer about 3.4 times as long as coxite, with longitudinal baculi; coxites narrowed posteriorly (descriptions of aedeagus and ovipositor based on illustrations from SATÔ 1981).

**Distribution:** Currently known only from Nepal.

### *Ceradryops matei* sp.n.

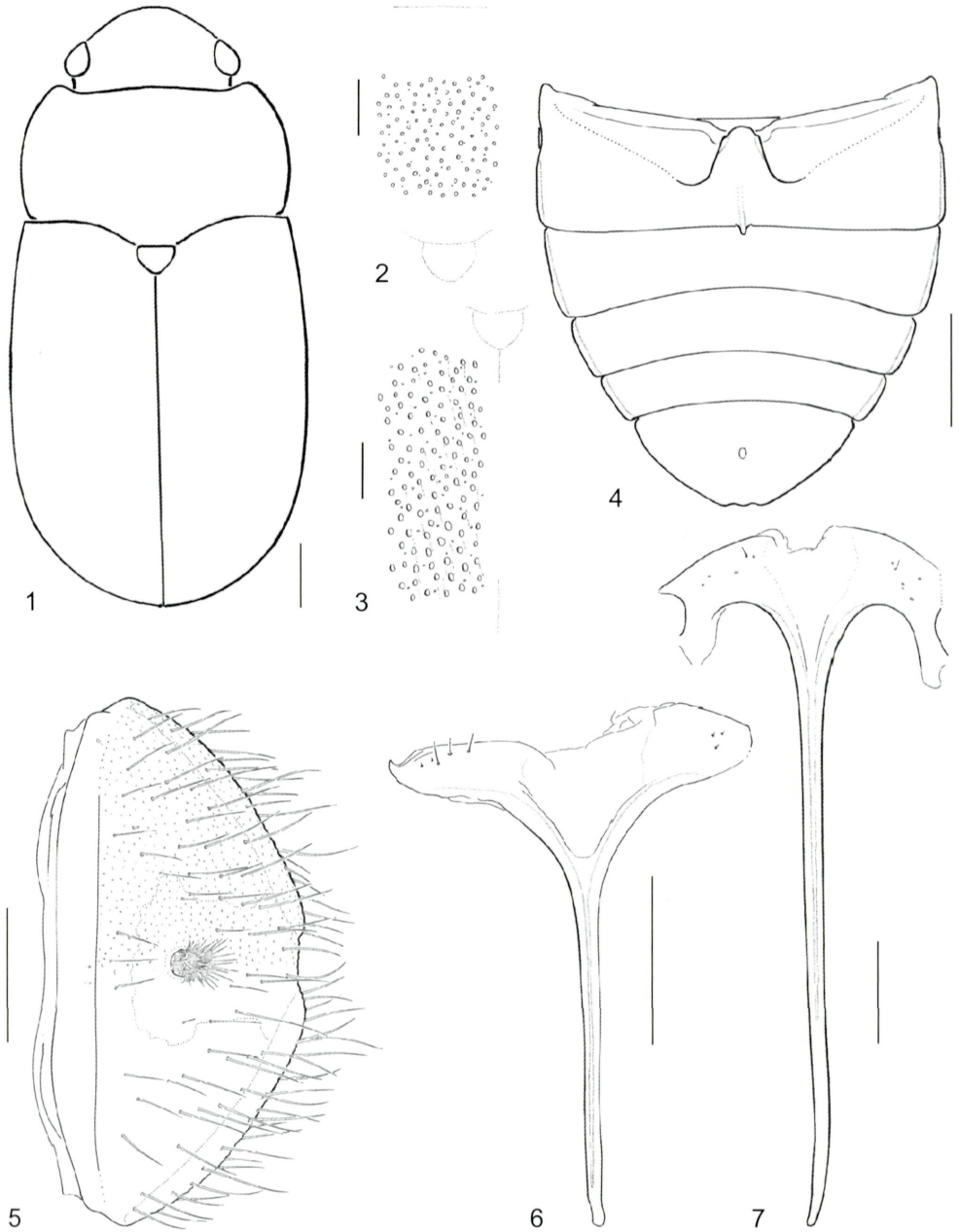
**Type locality:** Jardine's Lookout, Hong Kong, China.

**Type material:** **Holotype** ♂ (NMW): "CHINA [P], Hong Kong Isl. [P], Jardine's Lookout [P], 26 [HW] April 200[P]1[HW] wet, rocky outcrop [HW] Leg. J.F. Maté [P]". **Paratypes** (NMW, NIIML): 1 ♂, 2 ♀♀ (dry mounted specimens), with same data as holotype; 2 ♀♀ (+ 4 exs. currently deposited in alcohol, NMW, NMHL).

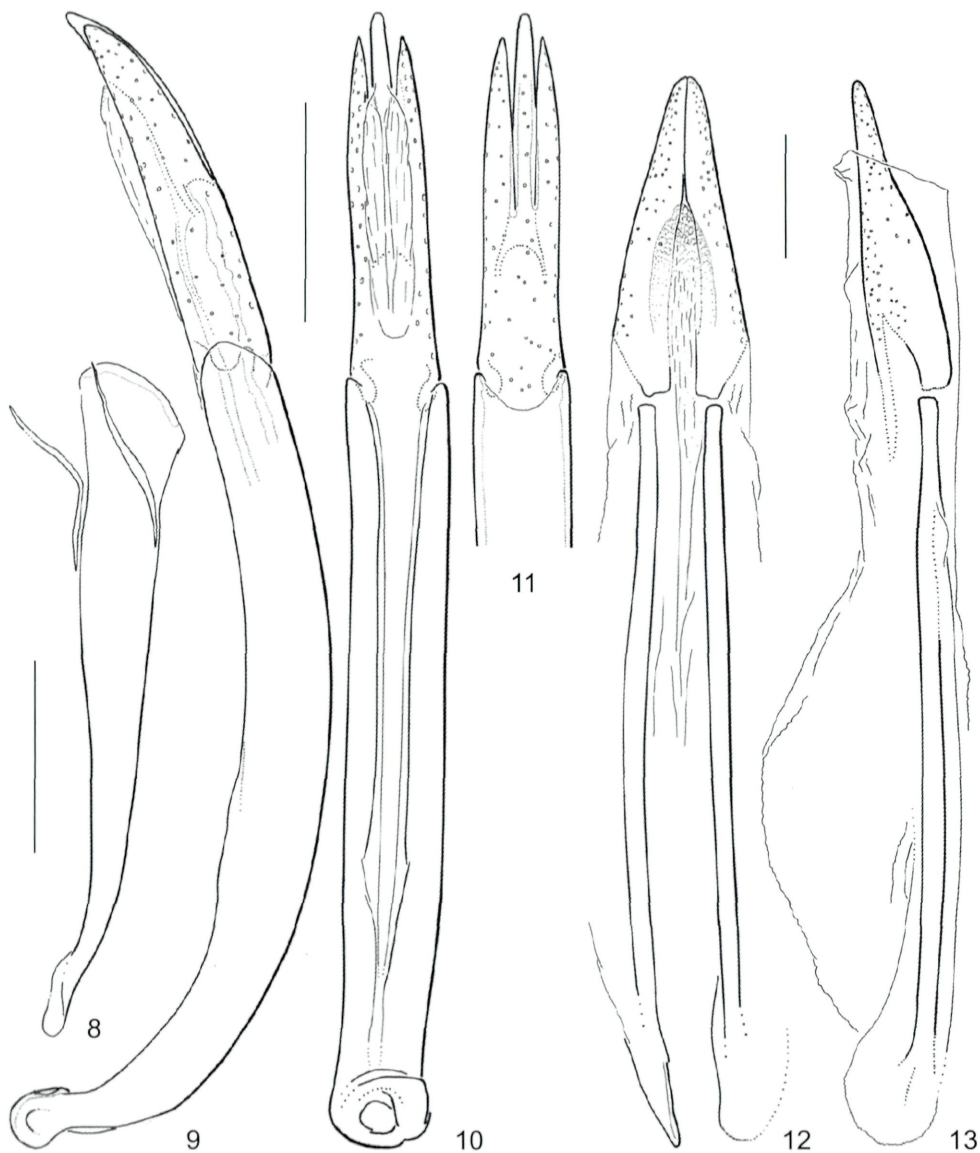
**Additional material:** 1 ♀ (NMW), same data as holotype, head, pronotum and left elytron absent.

**Differential diagnosis:** *Ceradryops matei* can be distinguished from *C. punctatus* by: (1) numerous long interfacetal setae; (2) dorsal vestiture containing short prone setae and long erect setae; (3) sparser punctation of head and elytra; (3) absence of distinct sublateral step-like sulcus on pronotum; (4) form and proportions of male and female genitalia. Differences from *C. himalayanus* are discussed above.

**Description:** Small and slender; TL in ♂ 1.56 mm, in ♀♀ 1.62 – 1.79 mm; MW in ♂ 0.76 mm, in ♀♀ 0.75 – 0.96 mm (male and two mounted females housed in NMW measured). Body subparallel-sided (Fig. 1), moderately convex dorsally; vestiture of dorsal surface consisting of numerous long erect setae arising from bottom of some large punctures, and short and moderately sparse, prone setae arising from small sockets within and outside of large punctures. Long setae ca. as long as tarsomeres 1 – 4 combined, short setae ca. 0.2 – 0.4 times as long as long setae. Vestiture of ventral surface and legs similar to that of dorsum, long setae comparatively shorter and denser, short setae very dense.



Figs. 1 – 7: *Ceradryops matei* sp.n., 1) body outline, 2) punctation of pronotum, 3) punctation of elytra, 4) female abdomen in ventral view, 5) male ventrite 5, all short setae and sockets of short setae on left half omitted, 6) male sternite 8 in ventral view, 7) female sternite 8 in ventral view. Scales: Fig. 1: 0.16 mm; Figs. 2, 3, 5, 6, 7: 0.1 mm; Fig. 4: 0.2 mm.



Figs. 8 – 13: *Ceradryops matei* sp.n., 8) male segment 9 in ventral view, 9) aedeagus in lateral view, 10) same, ventral view, 11) apical half of aedeagus in dorsal view, 12) ovipositor in ventral view, 13) same, lateral view. Scale: 0.1 mm.

Head including eyes 0.45 mm wide in ♂ and 0.45 – 0.49 mm wide in ♀♀. Frons and vertex convex, deflected anteriorly, moderately densely punctate, punctures smaller than facets, separated by 1 – 2 puncture diameters; interfacetal setae long, conspicuous, longer posteriorly than anteriorly. Antenna reaching posterior margin of eye, six antennomeres developed.

Thorax: Pronotum widest across posterior 0.4 – 0.5, PL in ♂ 0.39 mm, in ♀♀ 0.39 – 0.45 mm; AW in ♂ 0.57 mm, in ♀♀ 0.50 – 0.55 mm; PW in ♂ 0.68 mm, in ♀♀ 0.65 – 0.74 mm; MW in ♂ 0.68 mm, in ♀♀ 0.67 – 0.75 mm; disc moderately convex dorsally; sides arcuate, converging more strongly anteriorly than posteriorly, moderately explanate; distinct sublateral step-like sulcus absent, position marked by shallow depressions anteriorly and posteriorly; anterior angles moderately protruding, not acute; posterior angles obtuse; anterior margin weakly sinuate; posterior margin feebly trisinate; punctation of disc (Fig. 2) similar to that on head, punctures denser and coarser laterally. Prosternum in front of procoxae longer than prosternal process; prosternal process long and narrow, subparallel-sided, with medial longitudinal depression and acute apex. Mesoventrite short, with deep median cavity. Metaventrite longer than prosternum; disc weakly depressed along midline, more strongly posteriorly than anteriorly, surface finely rugosely punctate; longitudinal groove feebly impressed, entire; surface with dense pubescence; admedian carinae absent. Distance between procoxae slightly shorter than MW of metafemur (0.08 mm), distance between mesocoxae nearly twice as wide as between procoxae, distance between metacoxae subequal to distance between procoxae. Elytra: EL in ♂ 1.01 mm, in ♀♀ 1.06 – 1.23 mm; EW ♂ 0.78 mm, in ♀♀ 0.75 – 0.96 mm; elytra in ♂ 2.6, in ♀♀ 2.7 – 2.8 times as long as pronotum (EL/PL); in ♂ 1.3, in ♀♀ 1.2 – 1.6 times as long as wide (EL/EW); widest slightly posterior of middle; feebly convex dorsally, gradually deflected along posterior third; humeri weakly protruding; apices moderately produced ventrad, acute; lateral edge narrow, feebly protruding anteriorly, strongly inflected (lateral view) at level of metacoxa; punctures coarser and denser than those on pronotum (Fig. 3), some lateral punctures confluent; epipleura widest anteriorly, from level of metacoxa subequal in width nearly to apices. Hind wings well-developed. Metatrochanter distinctly larger than pro- and mesotrochanter, with posterior margin angulate and projecting posteriorly. All femora subequal in length, ca. 0.8 times as long as PL, widest near midlength; mesofemur shortest, narrower than profemur. Protibia moderately shorter than profemur, mesotibia slightly shorter than protibia, metatibia subequal in length to protibia; all tibiae widest near midlength; mesotibia more or less distinctly bent. Tarsomeres 1 – 4 subequal in length, tarsomere 5 ca. as long as combined lengths of preceding tarsomeres, protarsi shortest; claws longer than half of tarsomere 5, narrow, moderately curved.

Abdomen (Fig. 4): midline length of ventrites 1 – 5 in ♂ equal to 0.15/0.10/0.10/0.09/0.18 mm, and to 0.17/0.12/0.10/0.09/0.19 mm in ♀ (measured in one cleared abdomen); abdominal intercoxal process subtriangular, longer than wide, apex rounded; medial carina of ventrite 1 less prominent, effaced anteriorly, projecting posteriorly; ventrite 5 with cluster of long setae near middle arising from a small round depression; posterior margin with shallow and moderately wide medial emargination in male, trisinate in female (Figs. 4, 5). Male genital segments: sternite 8 (Fig. 6) with anterior process thin, slightly longer than ventrites 4 and 5 combined; sternite 9 (Fig. 8) as long as sternite 8, asymmetrical, strongly sclerotized. Aedeagus 0.50 mm long; phallobasis long, strongly bent basally (Fig. 9), ventral longitudinal hiatus with distinct sclerite, latter connected with main portion of phallobasis by narrow membrane (Fig. 10); parameres fused dorsally along basal half (Fig. 11), 0.17 mm long, narrowed apically, apices acute (lateral view); penis with apex surpassing parameres, narrow (ventral view); membranous ventral sac moderately narrow, simple (ventral view). Female sternite 8 (Fig. 7) with median anterior process long and thin, moderately shorter than abdomen. Ovipositor (Figs. 12, 13) 0.85 mm long; valvifers (proximal portion) long, membranous, strengthened by two strongly sclerotized longitudinal baculi; coxites 0.26 mm long (ventral view), symmetrical, strongly sclerotized, not flattened, narrowed apically, without styli.

**Etymology:** Dedicated to Jason F. Maté, collector of the species.

**Biology and distribution:** Known only from Hong Kong, where it was collected in a hygropetric habitat with many *Drosera* plants in a suburban area. The rock had a fine layer of sediment and algae; the film of water was continuous and slowly flowing. The beetles were found in crevices, but were not hidden.

### Acknowledgements

We wish to thank S. Nomura (Tokyo) for providing us with the type material of *Uenodryops himalayanus*, and to J.F. Maté (London), M.A. Jäch (Vienna), and I. Ribera (London) for the material of *C. matei* sp.n. and information on the habitat. Manfred A. Jäch and F. Čiampor, Jr. read the manuscript, and their comments are gratefully acknowledged. This study was supported partly by the Slovak Scientific Grant Agency as a Project No. 1/7196/20.

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Autor(en)/Author(s): Kodada Jan, Boukal David S.

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