Elytra, *Tokyo*, **35**(1): 91–95, May 30, 2007

A New Species of the Genus *Synapsis* (Coleoptera, Scarabaeidae) from Laos

Teruo OCHI

Kôfûdai 5–21–6, Toyono-chô, Toyono-gun, Osaka, 563–0104 Japan

and

Masahiro KON

School of Environmental Science, The University of Shiga Prefecture,
Hassaka-chô 2500, Hikone, Shiga, 522–8533 Japan

Abstract A new species of the genus *Synapsis* is described from Laos under the name of *S. satoi* sp. nov. It resembles *S. tridens* SHARP but can be distinguished from the latter by having the pronotal anterior angle with four teeth.

Up to the present, 21 species of the genus *Synapsis* (Coleoptera, Scarabaeidae) have been known from the Palearctic and Oriental Regions (BALTHASAR, 1963; KRÁL, 2002; KRAJCIK, 2006). Recently, we have had an opportunity to examine a strange *Synapsis* specimen from Laos. This form is somewhat similar to *S. tridens* but distinct from the latter as well as any other known congeners in several external characters. In the present paper, we are going to describe the new species of *Synapsis* from Laos, and to dedicate it to the late Dr. Masataka SATÔ, who was an eminent figure in the Japanese coleopterology.

Synapsis satoi OCHI et KON, sp. nov.

(Figs. 1–2)

Length: 29.5 mm; width: 16.3 mm (n=1).

Body moderate-sized, broadly oval, not so strongly convex; dorsal side entirely glabrous, subopaque; ventral side partly clothed with brown hairs; metasternum almost glabrous; abdomen with each sternite also glabrous. Colour black, with mouth parts and palpi blackish brown to reddish brown; antennae with club segments brownish black.

M a l e. Head widely transverse, subtriangular anteriad in outline; clypeus deeply incised at the middle, with either side of the incision strongly reflexed and roundly lobed; clypeal margin distinctly reflexed and broadly bordered, a little sinuous on each side of

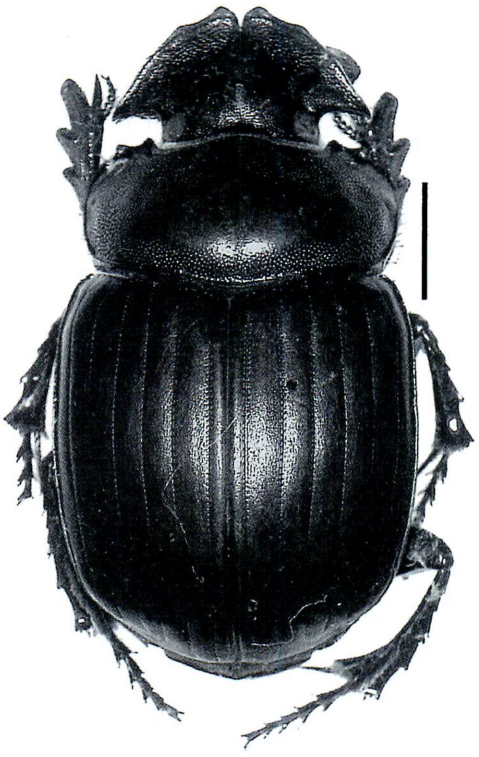

Fig. 1. Habitus of *Synapsis satoi* sp. nov., holotype, male, scale, 5 mm.

the round lobes, obtusely angulate a little prior to clypeo-genal junction; clypeo-genal suture distinctly defined; gena fairly strongly produced laterad as a prolonged subtriangular process, sharply pointed and very slightly tumid at apex, extending not clearly beyond inner second tooth of pronotal anterior angle; ocular canthus somewhat developed, occupying half length of eye; frons strongly produced upwards as a subconical tubercle at the middle whose apex is rounded; vertex slightly and transversely depressed at the middle a little behind frontal tubercle; surface a little shining, densely covered with short transverse wrinkles on anterior half, the wrinkles changing into granules on posterior half except for vertexal median portion which is clearly sparsely granulate.

Pronotum moderately convex, fairly transverse, about 1.9 times as wide as long ($n=1$), with a fine shallow longitudinal groove along midline; anterior margin bisinuate, broadly bordered; lateral margins gently rounded at the middle, a little sinuous in front, clearly bordered; anterior angles each with four teeth, the innermost one strong and obtuse, the inner second one also strong, rather pointed, a little spaced from the inner first, the third and fourth ones smaller and obtuse; posterior angles obtuse; base obtusely angulate at the middle, finely bordered throughout; disc with median portion clearly and transversely raised in basal half as a smooth and shining area, gently declivous forwards,

Fig. 2. Male genitalia of *Synapsis satoi* sp. nov., holotype, male, scale, 1 mm; left lateral view (left); dorsal view (right).

the declivity bearing a transverse prominence at the middle whose anterior edge is obtuse, short and slightly curved; lateral carina joining lateral margin in front and behind; surface a little shining, densely covered with round distinct granules except for postero-median shining and smooth area and antero-median tubercle, the granules becoming obviously sparser near anterior angles.

Elytra a little wider than long, about 1.1 times as wide as long (n=1); disc moderately convex, each with ten striae, the 1st to 7th striae extending from base to near apex between sutural margin and lateral costa, the 8th to 10th also extending from base to near apex between lateral costa and lateral margin, the 1st and 10th, the 2nd and 9th, and the 3rd and 8th clearly joined at apex, the 4th and 5th, and the 6th and 7th not distinctly joined at apex; all striae finely but distinctly grooved, with fine ridges on both sides, each ridge forming a dotted line; strial punctures weak and indistinct; intervals very slightly convex, opaque, irregularly and longitudinally micro-wrinkled or micro-sculptured.

Pygidium evenly and gently convex, somewhat opaque, transversely and finely wrinkled, a little densely covered with small vague granules. Prepisternum without excavation. Metasternum with a broad, rather distinct excavation along midline in posterior third; metasternal shield shining, glabrous, sparsely covered with fine vague

punctures; lateral portions rather shining though densely micro-reticulate, glabrous, sparsely covered with small but distinct granules. Abdomen with 2nd to 5th sternites shining, very sparsely covered with fine punctures. Metafemur with ventral side bearing a small tooth at basal third on posterior edge; ventral surface almost impunctate near anterior edge, a little densely covered with small transverse punctures near posterior edge in basal half; medial transverse carina along posterior edge occupying distal half though partly interrupted, intermittently clothed with long hairs. Protibia broad, with three external teeth; the 1st tooth broad, largest, the 2nd a little smaller than the 1st, the 3rd clearly smaller; terminal spur sharp and strong, a little curved outwards, nearly as long as the 1st tooth and also protarsal length not including tarsal claws. Mesotibia rather short, gradually dilated from base to apex, with five external teeth (including apical tooth); the penultimate tooth the largest and placed at about basal two-thirds; dorso-external side without distinct transverse carina. Metatibia elongate, strongly dilated towards apex, moderately incurved near apex; inner distal end not so strongly produced; lateral margin with seven external teeth (including apical tooth), the penultimate tooth the largest, located at about apical two-sevenths; dorsal side densely fringed with a tuft of long hairs along whole length.

Aedeagus moderate-sized, about 6.9 mm in total length; phallobase about 4.4 mm in length from lateral view, about 1.6 mm in apical width from dorsal view; parameres about 3.0 mm in length from lateral view, with dorsal lobes a little widely separated from each other than in *S. tridens*, dorsal membrane also a little broader than in *S. tridens*.

F e m a l e. Unknown.

Type series. Holotype, ♂, Laos – Myanmar border, Laos, VII–2003. The holotype is deposited in the collection of the National Science Museum, Tokyo (NSMT).

Distribution. Laos.

Etymology. The specific name is given to the memory of the late Dr. Masataka SATÔ.

Notes. The present new species is closely related to *S. tridens* SHARP from India, Myanmar and Thailand, but can easily be distinguished from the latter by the following character states: 1) the body clearly smaller (29.5 mm in length), whereas in *S. tridens*, it is larger (30.0–36.0 mm); 2) the head with the gena shorter, extending laterad not clearly beyond the inner second tooth of pronotal anterior angle, whereas in *S. tridens*, it is longer, fairly strongly produced laterad, clearly exceeding the inner second tooth of pronotal anterior angle; 3) the pronotal anterior angle with four teeth instead of being three; 4) the pronotum with a transverse prominence at the middle a little behind anterior margin whose anterior edge is short and slightly convex, whereas in *S. tridens*, it has a clearly larger prominence whose anterior edge is fairly long and strongly convex; 5) the metatibia is moderately incurved with its inner distal end not conspicuously produced, whereas in *S. tridens*, it is strongly incurved near the distal end and its inner distal end is conspicuously produced; 6) the parameres of male genitalia are different from those of *S. tridens* in the shape of dorsal lobes and dorsal membranes.

Specimen compared. *Synapsis tridens* SHARP: 1♂, Kalaw, 1,350 m in alt., Shan, Myanmar, 20–IX–2003, M. KON leg.

Acknowledgments

We wish to express our cordial thanks to M. FUJIOKA for literature. This study was supported in part by a Grant-in-Aid from the Japan Society for the Promotion of Science (No. 17405011).

要　　約

越智輝雄・近 雅博：ラオス産 *Synapsis* 属の 1 新種. —— ラオスから *Synapsis* 属の 1 新種を記載し，*Synapsis satoi* sp. nov. と名付けた. *Synapsis satoi* sp. nov. は *S. tridens* SHARP に似ているが，前胸背板の前角に 4 つの歯をもつことによって容易に区別される.

Postscript

The type depository of *Cyobius cheyi* OCHI, KON et KASHIZAKI, 2006, Elytra, Tokyo, **34**, p. 147.

Holotype: Male, Gomantong, near Sandakan, Sabah, Borneo, 21～23–II–2005, A. KASHIZAKI leg. The holotype is preserved in the collection of the Entomology Section, Sandakan Forest Research Center, Sepilok, Sabah, Malaysia.

References

BALTHASAR, V., 1963. Monographie der Scarabaeidae und Aphodiidae der palaearktischen und orientalische Region, **1**, 391 pp. Tschechoslowakischen Akademie der Wissenschaften, Prag.

KRAJCIK, M., 2006. The checklist of Scarabaeoidea of the World. 1. Scarabaeidae (Coleoptera: Scarabaeidae: Scarabaeinae). *Animma. x, Supplement* 3, 189 pp. Plzen, Czech Republic.

KRÁL, D., 2002. Dsitribution and taxonomy of some *Synapsis* species, with description of *S. strnadi* sp. n. from Vietnam (Coleoptera: Scarabaeidae). *Acta. Soc. zool. bohem.*, **66**: 279–289.

SHARP, D., 1875. Description of some new genera and species of Scarabaeidae from tropical Asia and Malaysia, Part I. *Coleopt. Hefte*, **13**: 33–54.