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Two new species of *Notosacantha* CHEVROLAT from Sumatra (Coleoptera: Chrysomelidae: Cassidinae)

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ABSTRACT. *Notosacantha matsuzawai* n. sp. and *N. dohrni* n. sp., both from Sumatra, are described and illustrated.

Key words: entomology, taxonomy, new species, *Coleoptera*, *Chrysomelidae*, *Cassidinae*, *Notosacantha*, Sumatra.

The genus *Notosacantha* CHEVROLAT with c. 240 described species is one of the most speciose genera within *Cassidinae*. Most are endemics of Madagascar and the Philippines, only 27 species were recorded from insular part of Oriental Region except the Philippines (SPAETH 1933, BOROWIEC 1999, BOROWIEC and ŚWIĘTOJAŃSKA 1999, ŚWIĘTOJAŃSKA and BOROWIEC 1999). In the material studied recently I found two new species from Sumatra (Indonesia). Their descriptions are given below.

Notosacantha matsuzawai n. sp.

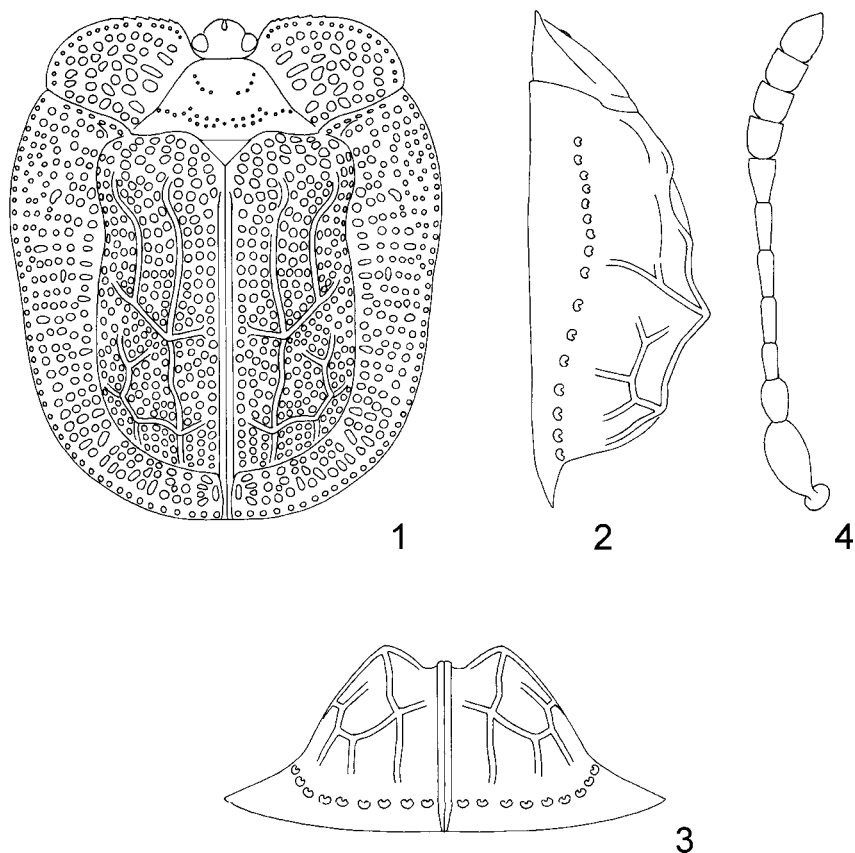
ETYMOLOGY

Dedicated to Haruo MATSUZAWA (TAKIZAWA), an excellent Japanese chrysomelidologist, who collected this interesting species.

DIAGNOSIS

It belongs to the species group characterised by the following characters: body short-oval to circular, elytral costae complete, principal tubercle not

tuberculiform with four costae, basal tubercle without connection to humeral costa, apical costa complete, anterior and posterior branch of dorsal in principal tubercle converging in the same point, furca interna short, not connected with lateral costa of principal tubercle, humeral costa in anterior half curved outwards, and costa ultima complete. The group comprises 9 species, very similar and difficult to correct identification. *N. brookei* (SP.), *N. corporaali* (SP.) and *N. bioculata* (WAG.) differ in elytral disc entirely black, the last two species also in partly black explanate margin of elytra (in *N. matsuzawai* elytral disc is partly, and explanate margin completely yellow); these three species have also higher elytral tubercles. *N. quadra* (SP.) differs in smaller size, length below 4.3 mm (in *N. matsuzawai* length 6.0 mm) and elytral outline in 1/5 length almost angulate (in *N. matsuzawai* sides of elytra slightly rounded). *N. shishona* CHEN et ZIA and *N. excelsa* (SP.) differ in maculate explanate margin of elytra (immaculate in



1-4. *Notosacantha matsuzawai*: 1 - dorsal view, 2 - lateral view, 3 - hind view, 4 - antenna

N. matsuzawai). *N. taeniata* (F.) is at first glance very similar, but differs in slightly pentagonal elytra with sides much converging posterad and explanate margin of elytra with median impunctate window (in *N. matsuzawai* body is less pentagonal and explanate margin of elytra without impunctate window); both species are separated geographically, *N. taeniata* occurs only in the Philippines (its record from Ceylon was based on mislabelled specimen, records from Indonesia - on misidentified specimens of *N. rufa*). *N. rufa* (WAG.) and *N. sarawacensis* (SP.) are the most similar. They differ in stouter, almost circular body (L/W ratio below 1.15, in *N. matsuzawai* 1.20) and distinctly higher elytral tubercles. Body colouration of *N. matsuzawai* is unique, no species of the group has a black pattern of elytral disc forming a large U-shaped figure.

DESCRIPTION

Length: 6.0 mm, width: 5.0 mm, width of pronotum: 4.1 mm, length/width ratio: 1.20. Body short-oval, only slightly rounded (fig. 1).

Head, pronotum, scutellum, and explanate margin of elytra yellow, disc of pronotum slightly darker yellow than explanate margin. Disc of elytra yellow with black elongate U-shaped spot around sides, the spot occupies area between humeral and apical costae and marginal row of elytra, only on principal tubercle dark colour extending up to the top of the tubercle. Also area between anterior half of dorsal costae slightly darkened. Explanate margin of elytra yellow, its external part gradually paler, no pale window or darker spots. Costae and tops of tubercles mostly yellow. Ventrites, legs and antennae uniformly yellow.

Head with moderately large frontal plate, converging in triangle, with shallow apical cleft.

Pronotum broad with maximum width at base, sides regularly rounded. Disc with row of small punctures along base and with few small punctures before middle. Explanate margin with large, mostly round pores, only in area close to disc pores slightly elongate, disposed regularly. Only anterior margin of pronotum close to median emargination slightly serrate.

Base of elytra only slightly wider than base of pronotum. Elytral disc with complete set of costae and low tubercles (figs 1, 2). Basal, subbasal and apical tubercles almost equal, very low and distinctly lower than principal tubercle. Principal tubercle c. twice wider than high, with sharp top and four costae. Dorsal costa complete, anterior branch at base and in the middle, and posterior branch in the middle slightly curved towards suture. Anterior and posterior branch of dorsal costa at top of principal tubercle converging in a point. Suture branch of principal tubercle runs obliquely anterad, extending to second row of punctures. Lateral branch of principal tubercle complete, runs obliquely anterad, extending to submarginal row of punctures. Apicosutural costa runs obliquely anterad, extending to second row of punctures, apicolateral costa complete (fig. 3), bifurcate apically, with equal furca interna and furca externa, and complete, distinct costa ultima and costa terminalis. Furca interna not extending to lateral

branch of principal tubercle. Humeral costa distinct, its anterior half slightly curved outwards. No transverse costa between anterior branch of dorsal and humeral costae. Puncturation between costae coarse, distance between punctures smaller than puncture diameter. Puncturation of explanate margin as coarse as on disc, disposed regularly, no impunctate windows. In posterior half of explanate margin puncturation have tendency to group in shallow, radial grooves.

Antennae slim with distinct 5-segmented club. Pedicle c. 2.2 times longer than club. Second antennal segment elongate, c. 1.7 times longer than wide, segment 7 slimmer than segments of club but distinctly wider than segments of pedicle, segment 8 as wide as long, segments 9 and 10 slightly wider than long (fig. 4).

TYPE MATERIAL

Holotype: [Indonesia]: „Derek, Sibolangit, N. Sumatra, 16.IX.1998, H. TAKIZAWA” (preserved in coll. H. MATSUZAWA (TAKIZAWA), Oyama, Japan).

Notosacantha dohrni n. sp.

ETYMOLOGY

Dedicated to Dr. H. DOHRN, former curator of the Stettiner Entomologischer Museum, who collected a part of type specimens during expedition the museum expedition to Sumatra in 1894.

DIAGNOSIS

It belongs to the species group characterised by the following characters: body short-oval to circular, elytral costae complete, principal tubercle not tuberculiform with four costae, basal tubercle without connection to humeral costa, apical costa complete, anterior and posterior branch of dorsal costa in principal tubercle converging in different points, and explanate margin of elytra without dark spots. The group comprises four species. *N. singaporica* (Sp.) and *N. ginpinensis* CHEN et ZIA differ in pronotal and elytral disc almost black (yellow in *N. dohrni*), *N. siamensis* (Sp.) differs in smaller size (length below 4.2 mm, in *N. dohrni* above 4.9 mm), body almost parallelsided (circular in *N. dohrni*), frontal plate truncate anteriorly (triangular in *N. dohrni*), and apical costa simple, without branches (with complete branches in *N. dohrni*). *Notosacantha sabahensis* BOR. et ŚWIĘT. is the most similar; it differs in higher elytral tubercles (in *N. dohrni* elytra is only costate, without distinct tubercles) and incomplete costa ultima, reduced to short fold not connected with apical costa (in *N. dohrni* costa ultima is complete, more or less distinctly connected with apical costa).

DESCRIPTION

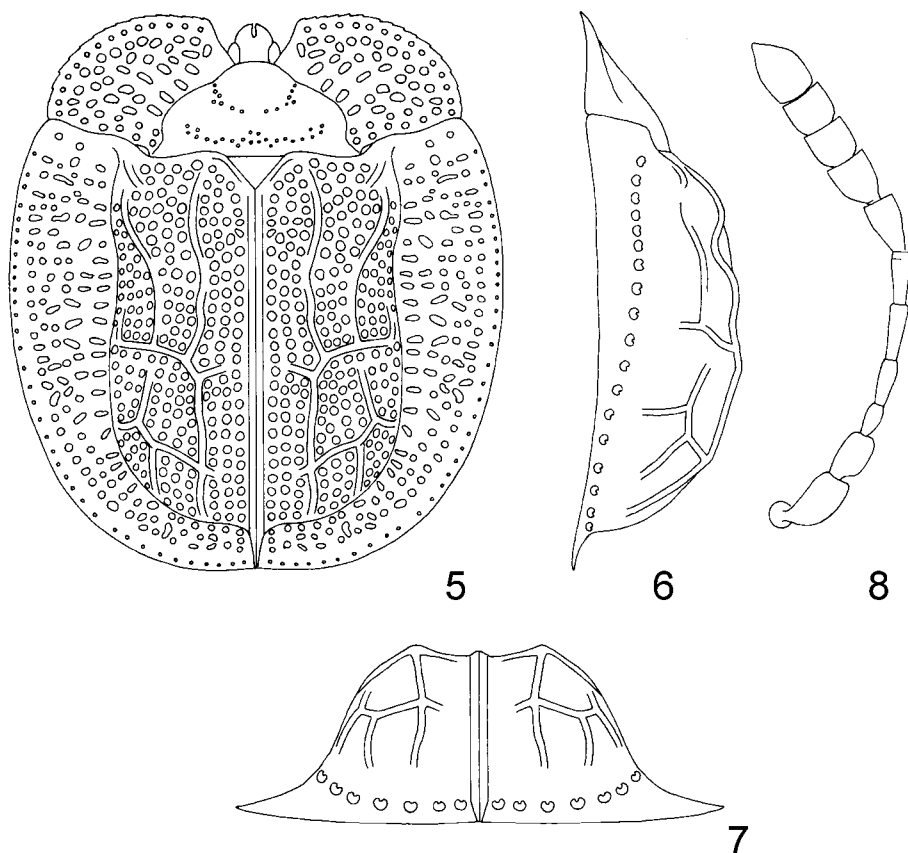
Length: 5.0-5.4 mm, width: 4.4-4.9 mm, width of pronotum: 3.7-4.0 mm, length/width ratio: 1.10-1.14. Body short-oval, slightly rounded (fig. 5).

Body uniformly yellow, including ventrites, legs and antennae; in some specimens top of basal tubercle, or tops of basal, subbasal, principal and apical tubercles, anterior half of humeral costa, lateral branch of principal tubercle and apicolateral costa infuscate.

Head with moderately large, frontal plate, converging in triangle with shallow apical cleft.

Pronotum broad with maximum width at base, sides regularly rounded. Disc before middle with oblique row of small punctures, and along base with double row of punctures. Explanate margin with large, mostly round pores, disposed regularly, only in area close to disc pores slightly elongate. Anterior half of pronotal margin slightly serrate, posterior half slightly crenulate.

Base of elytra not or only slightly wider than base of pronotum. Elytral disc with complete set of costae and very low tubercles, appears costate but not



5-8. *Notosacantha dohrni*: 5 - dorsal view, 6 - lateral view, 7 - hind view, 8 - antenna

tuberculate (figs 6, 7), only basal tubercle slightly marked in profile. Dorsal costa complete, only anterior branch shortly broken between basal and subbasal tubercles. Anterior and posterior branch of dorsal costa of principal tubercle converging in different points. Sutural branch of principal tubercle runs obliquely anterad, extending to second row of punctures. Lateral branch of principal tubercle complete, runs obliquely anterad, extending to submarginal row of punctures (fig. 7). Apicosutural costa extremely short, extending only to third row of punctures. Apicolateral costa almost complete, bifurcate apically with costa terminalis and furca interna (fig. 8). No furca externa, furca interna not extending to lateral branch of principal tubercle. Costa ultima complete, connected with apicolateral costa, but sometimes anterior part of costa ultima slightly vanishing between puncturation. Humeral costa distinctly elevated in anterior half, but hardly marked or even almost invisible in posterior half. Anterior part of humeral costa distinctly bent outwards, ends below humeral tubercle. No transverse costa between humeral costa and anterior branch of dorsal costa. Puncturation between costae coarse, distance between punctures smaller than puncture diameter. Puncturation of explanate margin as coarse as on disc, disposed mostly regularly, no impunctate "window". Punctures in area close to margin of disc tend to form transverse pores.

Antennae slim with distinct 5-segmented club. Pedicle, c. 1.8 times longer than club. Second antennal segment elongate and broad, c. 1.5 times longer than wide, segment 8 as long as wide, segment 9 and 10 slightly wider than long (fig. 9).

TYPE MATERIAL

Holotype: [Indonesia]: "Sumatra, Soekerenda, Dr. H. DOHRN S." "var. ferruginea, det. SPAETH"; three paratypes: "DOHRN, Liangagas, Sumatra"; paratype: "E Sumatra, Riau prov., Bukit Tigapuluh N.P., 0°50'S 102°26'E, 18-25.I.2000, J. BEZDĚK" (holotype preserved at Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw, Poland, paratypes at Museum and Institute of Zoology, Polish Academy of Sciences, Warsaw, Poland, at Department of Systematic Zoology and Zoogeography, Wrocław University, Wrocław, Poland and in coll. J. BEZDĚK, Brno, Czech Republic).

REMARKS

F. SPAETH identified specimens from DOHRN's collection as "var. *ferruginea*"; the name is now synonym of *N. rufa* (WAG.), a species widespread in SE Asia, known from Vietnam, continental Malaysia, Sumatra, Java and Borneo. These pale forms are at first glance very similar to *N. dohrni* but *N. rufa* belongs to the species group with anterior and posterior branch of dorsal costa in principal tubercle converging in the same point. Elytral tubercles in all forms of *N. rufa* are distinctly higher than in *N. dohrni*.

ACKNOWLEDGEMENTS

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