

Passalidae (Col.).

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The Passalidae collected by H. Sauter in Formosa belong, with one or possibly two exceptions, to common and widely distributed species. But in spite of this they are of considerable interest from a zoogeographical point of view, for the island where they were found must lie very near the border of the region in which the family occurs, and only one species of Passalid had been recorded from it before Sauter's material came to be examined. The identity of even this species is somewhat uncertain. It was collected by Fruhstorfer at Ke-Lung, c. 3500 ft., and Zang (1905, p. 100) has suggested its identity with *Ceracupes fronticornis* Westwood. Heller has, however, since described from Formosa a new species of the same genus from Sauter's collection, under the name *Ceracupes arrowi* (1911, p. 256), and it is highly probable that the two are identical.

The only species of Passalidae known to occur north of Formosa are *Auritulus patalis* (Lowis) from Japan, and *Cylindrocaulus bucerus*, Fairmaire, from Moupin in western China. These two species are remarkably aberrant members of the sub-family Aulacocyclusinae (1913, pt. 3), the more ordinary members of which are widely distributed in the Indo-Australian Region, from the Himalayas southwards and eastwards to Australia. The genus *Ceracupes* is also an aberrant member of this sub-family, but is less abnormal than are the Chinese and Japanese genera. As it occurs in the Himalayas, Burma, Tonkin and Formosa, it is intermediate geographically, as well as in some respects structurally, between its normal and abnormal relatives.

Ceracupes arrowi is evidently rare, as are also the other species of the genus; and as no long series have yet, so far as is known, found their way into any collection, it is probable that specimens live singly or in pairs. The three remaining species collected by Sauter, on the other hand, form large colonies. Each of these species, as I have defined them (1913, pt. 4), is extremely variable both in size and in structure; but insects from a single colony seem usually to be much more uniform than is the species as a whole. As a result of this, each species has received a large number of names — in one instance I have been compelled regard over twenty named forms provisionally as one (1913, pt. 6). It is quite possible that a number of these forms are really permanent, and deserve recognition at least as distinct varieties or sub-species; but unless new characters

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can be found, with the help of which they can be more sharply separated one from another than they have been hitherto, it seems to me most improbable that we shall learn much more about them, until the colony, rather than the individual, is taken as the unit of study.

At present this is impossible, for separate colonies have never yet been collected as such; and it is greatly to be desired that collectors in different parts of the Indo-Australian Region, and probably in America and Africa as well, should collect as many whole colonies of Passalids as possible, taking care to keep them distinct one from another.

I have identified such of Sauter's specimens as I have seen as follows.

Ceracupes arrowi Heller.

Localities: Kosempo, Hoozan.

This species appears to be confined to Formosa. The horn formed by the fusion of the central tubercle with the anterior margin of the head is very variable in length, in this as in other species of the genus. Its dorsal surface is, however, always more nearly parallel-sided than in the closely allied *C. fronticornis* Westwood.

Aceraius grandis (Burm.) subsp. *hirsutus* Kuwert.

Localities: Kosempo; Polisha; Le-hi-ku; Chip-Chip; Lake Candidius; Fuhosho; Hoozan; Sokutsu, Banshoryo District; Kankau; Taihorin, Taihorinsho; Suisharyo.

Aceraius grandis occurs in all parts of the Oriental Region except India and Ceylon; the northern race *hirsutus* is found in the Continent of Asia north of the Malay Peninsula, and in South Palawan; further south than this it is replaced by the southern race.

All the specimens from Formosa have the hair on the elytra extremely short and close; the puncturing of the elytra is also that typical of the northern race.

Leptaulax dentatus (Fabricius), s. str.

Localities: Kosempo; Chikutoge; Taihorin; Taihorinsho; Hoozan; Fuhosho; Polisha; Chip-Chip; Sokutsu, Banshoryo District; Suisharyo.

This species occurs throughout the Oriental Region and eastwards to Australia. All the specimens from Formosa are quite normal.

Leptaulax bicolor (Fabricius), s. str.

Localities: Kosempo; Polisha.

This species appears to be as widely distributed as the last. All the specimens from Formosa have the sides of the pronotum less

closely punctured than is usually the case in *L. bicolor*, but in the present unsatisfactory state of our knowledge I do not think it at all desirable to describe them as new.

List of Literature referred to.

1883. Lewis, G. „Lucanidae of Japan.“ Trans. Ent. Soc. London 1883, p. 333—342. pl. XIV.
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 1913. Gravely, F. H. „An Account of the Oriental Passalidae“ Mem. Ind. Mus. III (in the press).

Trigonalidae II (Hym.).

Von Embrik Strand (Berlin).

In „Ent. Mitteilungen“ Bd. II, Nr. 4 (1913), p. 97 habe ich über die von Herrn Sauter dem Deutschen Entomologischen Museum gesandten Trigonaliden von Formosa berichtet und die eine Art, woraus diese Ausbeute bestand, als neu beschrieben unter dem Namen *Poecilogonalos fasciata* Strd. Seitdem sind zwei weitere Trigonaliden unter den Beständen des Museums aufgefunden worden, und zwar eine *Poecilogonalos pulchella* Westw. von Taihorin Anfang Juli, während das zweite Exemplar, das von Sokutsu, Banshoryo-Distr., Anfang Juli, stammt, mit *Taeniogonalos Sauteri* Bisch. (cf. Archiv f. Naturg., 1912, A. 2, p. 151) so nahe verwandt ist, daß man beide für conspezifisch hätte halten müssen, wenn die beiden Exemplare verschiedenen Geschlechts gewesen wären. Das mir vorliegende Exemplar ist aber ein ♀ und da auch die Type von *Taeniog. Sauteri* ein ♀ sein soll, so können die vorhandenen Unterschiede nicht sexuell sein.

Die neue Art, die ich *Taeniogonalos pictipennis* n. nenne, ist erstens viel größer als *Taeniog. Sauteri*: Körperlänge 10 mm, Flügellänge 9 mm, und weicht dann noch durch folgendes ab:

Fast das ganze Tegument kann als matt bezeichnet werden; schwach glänzende Partien finden sich jedoch auf den Mesopleuren, Stutz des Mediansegments, Oberseite des ersten Abdominalsegments