

## H. Sauter's Formosa-Ausbeute.

*Planipennia* II<sup>1)</sup>, *Megaloptera* and *Mecoptera*.

By Esben Petersen, Silkeborg.

(With 15 figures.)

It was with great interest, that I worked out for Deutsch. Entom. Mus. a fine collection of Neuropterous insects, collected in Formosa by H. Sauter. The collection contained a great number of specimens, and several very interesting species were found together with twelve new and undescribed ones.

*Planipennia*.*Myrmeleonidae*.*Myrmeleon formicarius* Lin.

Linné, Systema Nat. Ed. XII, pag. 914.

A small male-specimen was present. Anping, 7. VII. 1912. The species is also known from Japan.

*Nesoleon sauteri* nov. spec.

♀. Labrum dark brown with yellow lateral margins. Apex of mandibles dark brown. Maxillary palpi yellow with the outer side of the apical joint pale brown. Face yellowish; a brownish black band between the antennae, proceeding downwards below the base of them as a V. The vertex with several blackish brown spots. Antennae as long as the head and prothorax together; the basal joint pale brown, the second darker, the third and following brown, becoming darker towards the club, which is rather broad and oblong. Thorax yellow; prothorax dorsally with three brown longitudinal stripes and with a blackish brown one below the lateral margins. Meso- and metathorax with several stripes and dots at the sides and with a broad, brown median stripe, enclosing a narrow, abrupted, yellowish longitudinal line. Abdomen yellow with a blackish brown longitudi-

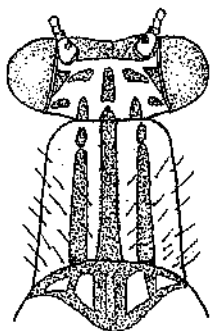


Fig. 1.  
Head and prothorax  
of *Nesoleon sauteri* ♀.



Fig. 2  
*Nesoleon sauteri* ♀.

<sup>1)</sup> *Planipennia* I in „Entomol. Mitteil.“ I, 1912, p. 197.

nal stripe on the dorsum and one at each side. Legs yellowish with small black dots and dark brown bristles. The tibiae and tarsal joints with blackish brown apices, and the fore and intermediate tibiae with a larger blackish dot before the middle on the outer side. The spurs and claws light brown. Wings hyaline; the longitudinal nervures yellowish white, blackish banded. Pterostigma orange. A brownish streak along the outer series of gradate veins in the fore wing.

Length of body 30 mm; fore wing 29 mm; hind wing 26 mm.

One female from Anping, 7. VII. The species has some likeness to *Nesoleon outianini* Mac Lachl. from Turkestan and Caucasus.

*Glenuroides communis* Okam.

Okamoto, Wien. Ent. Zeit. XXIX, 1910, pag. 295, Fig. 4.

Of this species, described from Japanese specimens, is present a male from Taihorin 7. V. 1911.

As far as I know, it is the first record of that species from Formosa. In Deutsch. Ent. Mus. is present another male from Kago-shima, Japan, 7. IX. 1911 (H. Sauter leg.).

*Hagenomyia asakurae* Okam.

*Myrmeleon Asakurae* Okamoto, Wien. Ent. Zeit. XXIX, 1910, pag. 297.

*Baliga asakurai*, Navas, Revue Russe d'Entom. XII, 1912, pag. 110.

A very fine series is present. 25 specimens from Kosempo, 7. VII. 1912; 1 ♂ from Kankau, VI, 1912; 1 ♀ from Anping 7. VII.

*Hagenomyia sagax* Walk.

*Myrmeleon sagax* Walker, Cat. Neur. Ins. Brit. Mus. 1858, p. 382.

*Baliga nitens* Navas, Revue Russe d'Entom. XII, 1912 p. 111. Of this species, known from the Malayan Isles and from China, are present 2 ♂ from Kankau, VIII, 1912.

*Hagenomyia brunneipennis* nov. spec.

Labrum, face, labial and maxillary palpi orange-yellow. Mandibles with black apices. A broad streak between the eyes pitchy brown; the part below the base of the antennae shining; the upper part not glossy but rugose. The vertex much raised, brown, punctuated and with a longitudinal median impressed line, not punctuated. Antennae as long as head, pro- and mesothorax together, black; the club faintly indicated; the 1<sup>st</sup> and 2<sup>nd</sup> joints with narrow, yellowish brown tip. Prothorax about half as long as broad, brownish haired.

Pro-, meso- and metathorax and basal part of abdomen light greyish brown, yellowish haired. The underside of thorax and the coxae yellowish brown; the venter of abdomen greyish pale brown becoming darker towards apex, yellowish haired. The five terminal segments dorsally blackish, dark haired and with narrow, pale brown hind borders. Tibiae and tarsi blackish; hind femora yellowish brown with a slight indication of a darker band a little before apex; fore and intermediate femora blackish on the overside in the apical half. 1<sup>st</sup> tarsal joint as long as 2<sup>nd</sup> and 3<sup>rd</sup> together; 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> of the same length; 5<sup>th</sup> nearly as long as the 4 others. Spurs a little longer than 1<sup>st</sup> tarsal joint. Wings yellowish brown; the greater part of nervures darker than the membran. The branches of radial sector and the greater part of those arising from the upper cubitus together with the adjoining cross veins paler than the membran. The apex of the media in fore wing together with the adjoining cross veins dark brown. The pterostigma yellowish white.

Length of body 49 mm; fore wing 58 mm; hind wing 60 mm.

One specimen, ♂, from Kosempo. 7. VII. 1911.

I can not follow Navas in making new genera for the Asiatic species of the genus *Hagenomyia*. I have before me long series of *Hagenomyia* (Myrmeleon) *micans*, *H. asakurae* and *H. sagax*, and in the shape and nervation of wings they agree very well with the African species, *H. tristis* and *H. luctuosa*. When Navas (Revue Russe d'Entom. XII, 1910 p. 110) in his description of the new genus *Baliga* with *H. asakurae* as type, writes „Calcaria anteriora primo tarsorum articulo breviora“ and „sectore radii multo ultra ramum obliquum cubito orto“, it is not correct. Likewise is the short intercalar nervure in the radial area behind the pterostigma of no generic value, as it is not present in all specimens. In *H. asakurae* and *H. brunneipennis* some of the cross veins in the radial area of fore wing are crossed before the radial fork, and in *H. micans* the same sometimes takes place.

#### *Ascalaphidae.*

#### *Glyptobasis brunnea* nov. spec.

Labrum and face reddish brown; the lower part of the eye with a narrow yellowish margin. Forehead and basal joint of antennae greyish brown, densely longhaired. Vertex and occiput orange coloured with a narrow and dark transverse stripe above the antennae. The basal joints (4-5) of antennae yellowish; the rest blackish; the club broad and shortly haired. The antennae not serrate at the base.

Thorax pale chocolate-brown with a broad orange median stripe on the dorsum and with an oblique stripe on each side. The orange-coloured scutellum with two short brownish stripes. Thorax brownish, densely longhaired. Abdomen blackish. The 2<sup>nd</sup>—7<sup>th</sup> segments have dorsally a narrow, orange-coloured hind margin, and on each of the 3<sup>rd</sup>—8<sup>th</sup> segments is found an oblong, median, orange-coloured spot, nearly as long as the segment. Legs brownish, spurs and claws blackish. The wings with a yellowish brown tinge, which is very strong at the apex. The nervures brownish, and the pterostigma blackish brown with 6 cross veins.

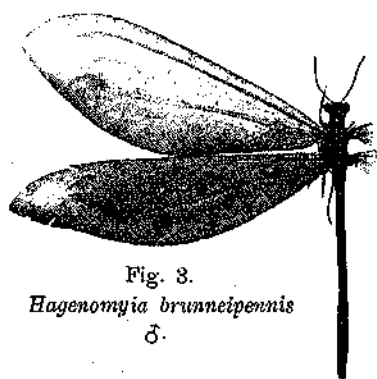


Fig. 3.  
*Hagenomyia brunneipennis*  
♂.



Fig. 4.  
*Glyptobasis brunnea*  
♀.

Length of body 33 mm; fore wing 39 mm; hind wing 35 mm; antennae 30 mm.

One specimen, a female, from Banshoryo-district, Sokutsu, VI. 1912, was present in the collection.

It is a fine species, easily known by the brown tinge on the wings, by its large size and by the dark brown apices of the wings. Two species more are known of the genus, both from Asia: *Gl. dentifera* Westw. (India) and *Gl. nugax* Walk. (Ceylon).

### *Suphalomitus formosanus* nov. spec.

Labrum and clypeus brown, face blackish, occiput yellowish, face and vertex densely haired with fine, long and black hairs. Eyes reddish brown. Antennae dark brown, paler near the base; all the joints with a narrow black band at the apex; the club broad and black. Thorax narrower than the head, dorsally blackish brown with a median, yellowish brown, longitudinal stripe; wing roots orange-coloured; sides and underside of thorax yellowish with a chocolate-brown triangular spot under the base of fore-wing. The colour of

pubescence on the dorsum of thorax dark brown, becoming greyish white on the venter.

Abdomen dorsally brownish black with the exception of a pale brown dorsal stripe on the four basal segments; the venter is strong yellow at the base, becoming more brownish towards the apex. The appendices anales very short. Legs black, blackish haired; the innerside of fore tibiae shortly dark brownish haired. Wings hyaline; all nervures black. The pterostigma dark brown with 4—5 cross veins.

Length of body

♂ 40 mm; fore wing 36 mm; hind wing 29 mm; antennae 27 mm.

♀ 35 mm; " " 38 mm; " " 31 mm; " 24 mm.

There are present 1 ♂ from Kankau (Koshun), IV. 1912 and 2 ♀♀ from the same locality, V. 1912.

The female is coloured as the male with the exception of the face, which is dark brown with paler eye-margin, but that is probably due to immaturity.



Fig. 5.  
*Suphalomitus*  
*formosanus* ♂.



Fig. 6.  
*Suphalasca*  
*umbrosa* ♂.

*Suphalasca umbrosa* nov. spec.

Labrum pale brown. Face and vertex densely haired with long greyish white hairs on the face and long greyish brown between the antennae and on the vertex. Antennae brown, darkest towards apex and dark annulated at the joinings; the club broad, excavated on the underside, which is paler of colour than the overside. Thorax almost as broad as the head, chocolate brown with yellowish dots on the venter and with indication of a longitudinal, yellowish brown, median streak on the dorsum. The colour of the pubescens greyish brown on the dorsum, whitish on the venter. Abdomen blackish brown; the three or four basal segments dorsally with a small lunate yellowish brown marking at each side and near to the hind margin, ventrally

with some small oblong yellowish brown markings. Legs with brown femora, which are whitehaired; tibiae (mostly black) and the black tarsi blackish haired; spurs and claws black. Wings with strong smoky-brown tinge (probably due to the maturity); nervures dark brown to blackish. Pterostigma very short, brownish black, with 3 or 4 cross veins.

Length of body 45 mm; fore wing 30 mm; hind wing 25 mm; antennae 28 mm.

One specimen, ♂ from Kankau (Koshun), V. 1912.

This species differs from the Asiatic, Malayan and Australian species of the genus by its long and slender abdomen, and it seems to be closely allied to the African species, *Suph. abdominalis* Mac Lachl.

#### *Helicomitus dicax* Walk.

Walker, Cat. Neur. Ins. Brit. Mus. 1853, pag. 423.

Of this wide-spread species is present a large series of specimens; all collected at Anping, June, July and August 1912. Mr. H. Sauter remarks following about the species: „Anping 8. VII. 1912. Lampe. Bisher nur bei einem alten chinesischen Fort in der Nähe von Anping gefangen. Vielleicht Larven oder Puppen mit Sand von dort eingeführt“.

#### *Acheron trux* Walk.

Walker, Cat. Neur. Ins. Brit. Mus., 1853, pag. 432.

47 specimens from various localities: Kosempo, Kankau, Taihanroku, Taihorin, Hoozan, Anping and Sukutsu; May to October.

#### *Osmylidae.*

#### *Osmylus tuberculatus* Walk.

Walker, Cat. Neur. Ins. Brit. Mus. 1853, pag. 235.

8 ♂♂ from Alikang, VIII. 1910; 9 ♂♂, 1 ♀ from Kosempo 7. VII. 1911; 17 ♂♂ Sukutsu, V. 1912; 1 ♂ Kankau, IV. 1912; 1 ♂ Anping 7. VII.

With slight hesitation I refer the specimens to the species of Walker, as they agree very well with the short description. The species belongs to that group, in which the male has a tubercle on the hind border of the fore wing. The species described by Navas (Revue Russe d'Entom., XI, 1911, pag. 113, fig. 3) under the name *Lysmus nikkoënsis* is closely allied to this species and probably the same. The greater part of specimens before me have simple cross veins in the costal area, but some have a number of the cross veins forked as in the European species, *Osmylus maculatus*, and therefore

I think that the main character (simple cross veins in the costal area), upon which Navas has founded his genus *Lysmus*, can not hold good.

*Berotha puncticollis* Nav.

*Isoscelpteron puncticolle* Navas, Revue Russe d'Entom., XI, 1911, p. 112.

*Berotha puncticollis* Navas, Real Acad. Cienc. Art. Barc., 1912, p. 198.

19 specimens from Kosempo, 7. VII. 1911; 2 specimens from Sokutsu, V. 1911.

*Hemerobiidae.*

*Notiobiella maindronina* Nav.

Navas, Brotéria, Ser. Zool. Vol. IX, 1910, pag. 70, fig. 16.

Of this interesting species, described from specimens from India (Coromandel) are present 6 specimens from Auping 7. V., 4 specimens from Kankau V. 1912, 1 from Taihorin 7. V. 1911 and 1 from Kankau VI. 1912. Mr. H. Sauter says about the specimen from Kankau: „Kam zur Lampe; die anderen, früher datierten Exemplare, am Stamme des Banyan-Baumes“.

*Micromus sauteri* Peters.

Petersen, Entom. Mitteil., 1912, pag. 198.

1 ♂ from Anping, V. 1912, and 1 ♀ from Taihorin, 7. VII. 1911.  
(Schluß folgt.)

## Bemerkungen zur Flügeladerung der Plecopteren.

Von Fr. Klapálek, Karlin.

Mein werter Freund, Herr Dr. Ris, geht in seinen „Bemerkungen zur Morphologie der Perliden“<sup>1)</sup> auf die Deutung der Aderung der Plecopterenflügel, insbesondere der Hinterflügel, ein und berührt die Frage der Homologie gewisser Adern der Hinterflügel mit dem *Rs* und seinen Ästen im Vorderflügel. Die Sache hatte mich natürlich viel beschäftigt, und ich hätte schon lange mich gründlicher mit derselben befassen sollen, wenn mir die Zeit dazu ausreichen würde. Ich erlaube mir vorläufig meine Ansicht darüber zu veröffentlichen und würde mich freuen, wenn dieselbe geprüft und abgewiesen oder besser dokumentiert werden wird.

<sup>1)</sup> In dieser Zeitschrift II, Nr. 6, p. 183.