Ph. Calvert, H. Osborn, N. Banks, H. C. Fernald, E. D. Ball, E. Lutz etc.

Zum ersten Mal nach dem Krieg hat sich somit eine große Zahl von Wissenschaftlern aus den politisch verschiedentlichst eingestellten Ländern der Welt zusammengefunden, um im deutschen Interesse ein internationales Standesgefühl zu beweisen: Mir ist kein ähnlicher Fall in der zoologischen Wissenschaft bekannt! Aber auch die internationalen Absagen sprechen eine deutliche Sprache; je eine stammt aus den Entente-, den neutralen und Zentral-Mächten (um diese *termini technici* aus der Kriegszeit zu verwenden). Trotzdem sind alle 3 in ihren Ideengängen identisch; die betreffenden Herren haben nur aus verwaltungstechnischen Bedenken nicht gezeichnet, weil sie glaubten, daß Ausländer vielleicht kein Recht hätten, an ein deutsches Ministerium in Angelegenheit einer internen, deutschen Sache zu schreiben. Ich kann diesen Gedankengang zwar verstehen, doch muß ich ihn verwerfen. Wenn man internationale Kongresse zusammenbringt, um international alle Fragen der Entomologie zu erörtern; wenn man zu solchen Kongressen Delegierte von allen möglichen fremden Ministerien und Behörden zusammenruft; wenn solche Kongresse all diese Delegierten bitten, auf ihre heimischen Behörden in bestimmtem Sinne zu wirken, dann beweist man damit, daß die Wissenschaft das Recht hat, jenseits der politischen Grenzen der eigenen Heimat ihr Haupt zu erheben. Wenn man so manches Mal in den letzten Jahren zur Feier von Jubiläen berühmter Entomologen international Circulare versandt hat (auch an Behörden, Korporationen etc.), um in fremden Ländern um Teilnahme zu bitten, dann beweist man gleichfalls, daß die entomologischen Geschicke der Heimat ein Recht auf das Echo vom Ausland haben. Was für einen Sinn hat es da, wenn man bei einer derartig objektiven Frage wie die der Dresdner Kustoden-Stelle nationale Schwierigkeiten entdeckt?

Doch — die paar Ausnahmen bestätigen nur das beginnende nationale und internationale Standesbewußtsein; darum wollen wir uns seiner freuen: Es gibt nur eine entomologische Wissenschaft in der Welt, und die kennt keine Grenzpfähle! —

H. Sauter's Formosa collection: *Sapromyzidae* (Dipt.).

by J. R. Malloch, Washington (D. C.).

(with 2 figures).

In this paper are included records of some species previously unknown to occur in Formosa and descriptions of 21 new species not included in the papers on the Sauter collection published in the Annals

of the Hungarian National Museum several years ago by Dr. K. Kertesz. I have in hand a paper dealing with the Oriental species of Sapromyzidae which I hope to publish in the Philippine Journal of Science and in this I will include keys to all the species known to me from that region, including those dealt with in the present paper.

Dr. Horn submitted the Fromosan material about two years ago but I have delayed reporting upon it until I could examine authentic material of the species described by Dr. J. C. H. de Meijere, and as I have now been able to do so through the kindness of that author I now present the data contained in this paper and am preparing the other manuscript in which all those species are relegated to their proper genera according to the most recent work on the family.

Subfamily *Celyphinae.*

I am not inclined to consider this group as a distinct family. The members are very similar to Sapromyzinae, differing essentially in the structure of the scutellum, which is very much enlarged, convexly swollen above, and as long as the abdomen. The other distinguishing characters consist of the absence of strong bristles on the pleura, scutellum, and dorsum of thorax. The head is very similar to that of many Sapromyzids but te frontal bristles are weak and much less numerous, usually only the verticals being distinct, and the postverticals are present or absent, when present they are convergent at apices. The structure of the antennae is much as in the group containing *Pachycerina* Macquart, but in two of the genera the arista is very much widened, leaf-like, and only a variable amount of the apical portion is slender. There is a recurrence of this charakter in Sampromyzidae, though not so markedly emphasised. There are three genera of the subfamily which may be distinguished as below.

Key to the Genera.

1. Arista very slightly widened at base, the widest part not more than one-fourth as wide as third antennal segment; vertex rounded, the postvertical bristles absent . . . *Paracelyphus* Bigot
— Arista very conspicuously widened on more than its basal half, leaf-like its greatest width almost, or quite, as great as that of third antennal segment 2
2. Vertex rounded, postvertical bristles absent or represented by a pair of minute fine hairs . . . . . *Celyphus* Dalmann
— Vertex sharply margined, and slightly raised behind ocelli, postvertical bristles absent or present, sometimes very well developed . . . . . *Spaniocelyphus* Hendel

Celyphus obtectus Dalm. I have before me one specimen which

evidently is the same form as that recorded as the above species by Prof. Hendel, but I am inclined to consider that it does not belong to *obtectus*. The color is a uniform yellow testaceous without any indication of metallic blue suffusion. I have not seen a specimen of what I take to be true *obtectus* from Formosa.

Celyphus difficilis (sp. n.): Uniform pale testaceous yellow, without metallic blue tinge on dorsum. Very similar in all respects to *obtectus* but the abdominal sternites are much wider and narrower than in the female of that species as shown in Figures 1 and 2. It is desirable that the male hypopygia be carefully examined to discover other characters for distinguishing the species. — Length, 5 mm.

Fig. 1.

Fig. 2.

Type, Taihoku, Gai-So-Kai, V, 1914.

Genus Spaniocelyphus Hendel.

This genus was originally erected for the reception of two species from Formosa, *scutatus* Wiedemann and *stigmaticus* Hendel, the first being the genotype. I have before me a long series of specimens of the species evidently recorded as *scutatus* by Hendel but after a careful examination of this, including dissection of the hypopygia of the males of it and the East Indian species, I have arrived at the conclusion that Formosan species is distinct from the true *scutatus*.

Spaniocelyphus formosana (sp. n.): Practically indistinguishable from *scutatus* Wiedemann except by the structure of the hypopygium of the male. In the new species the apical hinged part of the superior forceps is short and almost boot-shaped, while in *scutatus* this is slender, tapered apically, and more than twice as long as its basal width on the exposed part. There are other distinctions in the internal or unexposed portions of the hypogypium also which are figured in another paper on this group which will be published elswhere. — Length, 3—4 mm.

Type, allotype, and 20 paratypes, Macuyama; five paratypes, Hokuto.

Spaniocelyphus stigmaticus Hendel. I have three specimens of this species before me. The much shorter, smooth, scutellum, with its microscopics dense pile, readily separates this species from the foregoing one and any other member of the genus so far seen by me.

Locality, Tao Tsui Kutsu, V. 1914.

Subfamily Sapromyzinae.

The new genera listed herein are included in a key to genera of

the Oriental region which I purpose including in the paper above referred to which will be published in the Philippine Journal of Science.

Genus Melanopachycerina nov.

Generic characters. — Close to *Lauxania* Latr.; and *Lauxaniella* Malloch, but the anterior pair of fronto-orbital bristles is curved inward and situated far before, and in line with, the posterior pair, and the fore femur has an anteroventral preapical comb of short black bristles. The thorax has 1+3 pairs of dorsocentrals and 2 sternopleurals. From *Pachycerina* Macquart it is distinguished by the presence of two sternopleurals, presutural dorsocentrals, and the fore femoral comb. The ocellar and postvertical bristles are long, and the basal antennal segment is elongated and haired below at apex.

Genotype, *Pachycerina leucochaeta* de Meijere.

Melanopachycerina leucochaeta (de Meijere): I have seen the type specimen of this from Java, and before me there is one specimen from Tao Tsui Kutsu, Formosa, V, 1914. It appears probable to me that *Camptoprosopella albiseta* Hendel belongs to this genus, though from the description it appears to be a distinct species from the above.

This genus is close to *Poecilohacterella* Tonnoir and Malloch from New Zealand, but the latter has no fore femoral comb, the propleural bristle minute, or almost lacking instead of long and strong, the face less markedly convex, and the arista pubescent.

Genus Lauxaniella Malloch.

There is a series of specimens of a species which I consider belongs to this genus in the material before me. No Old World species of the genus has hitherto been reported, the known species all being from the New World.

The genus is quite similar to *Lauxania*, but has only one sternopleural bristle. The basal segment of the antennae is elongate and haired below at apex, while the third segment is over four times as long as wide, and the anterior orbitals are directed backward.

Lauxaniella tenuicornis (sp. n.): Male and female. — Glossy black. Frons entirely shining, a little less highly polished in centre than on sides; sides of occiput and the parafacials white dusted, the latter velvety black when seen from certain angles; antennae black, basal two segments brownish; arista and its hairs white. Legs pitchy black, bases of mid and hind tibiae usually slightly pale, tarsi testaceous, apices of fore pair darkened. Wings yellowish hyaline, veins pale. Squamae and fringes fuscous. Halteres yellow, knobs black.

Frons nearly half of the head width, smooth, without obvious hairs, the orbits not well differentiated; anterior orbitals shorter than posterior

pair; ocellar and postvertical bristles well developed; face quite noticeably convex in profile, polished, with a transverse impression above mouth; basal antennal segment shorter than second, third about seven times as long as wide, entire antenna longer than height of head; arista with rather dense hairs, the longest of which are longer than width of third antennal segment. Thorax with two unequal pairs of presentellar dorsocentrals, and about six series of intradorsocentral hairs. Superior forceps of male hypopygium slender, tapered apically. Fore femur without an anteroventral preapical comb; preapical dorsal bristle present on all tibiae, very weak and short on hind pair. Inner cross vein close to middle of discal cell; penultimate section of fourth vein not over half as long as ultimate section. — Length, 3,5—4 mm, exclusive of antennae.

Type, male, Kankau, Koshun, 1912. Allotype and 11 paratypes, Tao Tsui Kutsu, V, 1914.

Genus *Paralauxania* Hendel.

This genus is represented in the material from Formosa by one specimen of the genotype I have recorded two other species of the genus from Australia but up to the present the genus otherwise has been unknown from any region except the Palearctic.

Paralauxania albiceps (Fallen): A very distinct species of a testaceous yellow color, readily known by the white dusted face and frons, which are conspicuous when the head is seen from certain angles. There is but one orbital bristle on each side of frons, while in the other two species which I have referred here there is usually a microscopic hair at the place where the usual anterior bristle is present.

Locality, Daitotei, VI, 1914.

Genus *Sauteromyia* nov.

Generic characters. — Postvertical bristles lacking; ocellars minute; anterior orbitals incurved; profile of head slightly sinuate in front; face sharply keeled above, not much receding; parafacials and cheeks without median hairs; third antennal segment pointed; arista pubescent. In other respects similar to *Trigonometopus* Meigen. — Genotype, the following species.

Sauteromyia alboapicata (sp. n.): Female.—Testaceous yellow, slightly shining. Head with a black spot over ocelli and another between base of each antenna and eye, a faint dark mark on each side on interfrontalia anteriorly, a dark line on each parafacial suture, and another on vertical central keel of face; arista fuscous. Thorax with six faint reddish vittae; pleura with a dark median vitta; scutellum broadly brownish centrally. Abdomen with a large brownish spot on each tergite

above, and a black spot on each lateral margin. Wings whitish hyaline, veins pale, third and fourth longitudinal veins and both cross veins dark brown and slightly suffused with fuscous, a faint dark cloud beyond outer cross vein extending from second to fourth veins causes the white apex of the wing to appear rather conspicuous. Legs entirely testaceous. Halteres yellow.

Frons a little over one-third of the head width, and slightly longer than wide, haired anteriorly. Thorax with only two series on intradorsocentral hairs; anterior sternopleural present. Abdomen tapered apically. Legs as in *Trigonometopus* species. Wings narrow; inner cross vein close to middle of discal cell; ultimate section of fourth vein but little longer than penultimate; outer cross vein about half its own length from apex of fifth vein. — Length, 4 mm.

Type, Hokuto, XII, 1912.

It appears to me certain that *Trigonometopus sauteri* Hendel belongs to this genus. If so it may be separated by the dark apices of the tibiae, lack of white apex to wings, and several other characters.

Trigonometopus submaculipennis (sp. n.): Female. — Head clay yellow; rons with three complete fuscous vittae, the middle one widened behind, covering ocellar region, and connecting with lateral stripes, and slightly widened again at middle, the lateral vittae extending along inner margins of orbits; a faint dark spot on upper part of face below each antenna, and a deep black one between each antenna and eye; occiput dark on upper half in centre and on sides, the cheek on upper posterior part fuscous; antennae and palpi yellow; arista dark, paler at base. Thorax fuscous, slightly grey dusted, with three complete narrow testaceous vittae which extend the entire length of mesonotum and over disc of scutellum, two sublateral interrupted vittae, and the notopleural suture testaceous; pleura with a pale vitta on upper margin of sternopleura, and a short one from base of wing to halteres. Abdomen in type shrunken so that t is not possible to determine its exact color, but the general tone is brownish testaceous to fuscous. Legs including coxae testaceous. Wings brownish along entire costa, the dark color extending to middle of submarginal cell, where it is separated from three fainter clouds on apical section of third vein by a hyaline line, the apical two clouds on third vein connecting with a still fainter one on apical two-thirds of ultimate section of fourth vein; both cross veins distinctly clouded. Halteres testaceous, knobs dark brown.

Frons about 1.5 as long as wide, quite copiously black setulose on anterior half, the anterior pair of orbital bristles about midway from posterior ocelli to anterior margin; black parafacial spot bare, no hairs on parafacials below; face receding below, mouth edge in profile slightly

behind anterior margin of eye; third antennal segment rather narrowly rounded at apex; arista with very short regular pubescence; marginal hairs on cheek weak except posteriorly. Thorax with four series of intradorsocentral hairs, three well developed postsutural dorsocentrals, and but one sternopleural. Preapical dorsal bristle on all tibiae quite long and strong; mid tibia with one apical ventral bristle. Inner cross vein not over three-sevenths from apex of discal cell; ultimate section of fourth vein fully 1.5 as long as penultimate. — Length, 4.5 mm.

Type, Taihoku, 1912.

Trigonometopus brunneicosta (sp. n.): Female. — Very similar to the preceding species, but the frons is narrower, lacks the three vittae, being only slightly darker in centre, and is more extensively haired; the pleural color is more preponderantly yellow behind, the abdominal tergites are narrowly fuscous on hind margins, and the wings have a brown costal cloud which gradually diminishes in intensity to fourth vein. Otherwise as the preceding species. — Length, 4.75 mm.

Type, Paroe, nordl. Palawan-Distr., X, 1912.

Genus *Minettia* Robineau-Desvoidy.

I present below descriptions of some species of the genus. These species will be included in a synoptic key which I intend to publish as part of the paper on the family already referred to herein.

Minettia tubifera (sp. n.): Male and female. — Head reddish brown, darker on sides of frons anteriorly, a spot between each antenna and eye, the ocellar region, sides of face except parafacials, and on its lower margin, clypeus, and palpi, black; antennae reddish testaceous; occiput fuscous, grey dusted. Thorax fuscous, reddish on humeri, anterior and lateral margins of mesonotum, grey dusted over all, on part of pleura and metanotum, the dorsum more densely so. Abdomen black, thinly grey dusted. Legs testaceous, coxae and femora fuscous. Wings yellowish hyaline, veins pale. Halteres yellow.

Anterior orbitals about half as long as ocellars; frons without fine hairs; arista with the longest hairs not as long as width of third antennal segment; face flat. Thorax with anterior of postsutural dorsocentral bristles a little shorter than second pair, and about as far from suture as posterior pair is from hind margin; intradorsocentral hairs in at least eight series; prescutellar acrostichals strong; several of the hairs on lower anterior part of mesopleura quite long and strong. Male hypopygium with a stout tube-like central downwardly projecting process. Fore femur without an anteroventral preapical comb; preapical dorsal bristle present on all tibiae; basal segment of hind tarsus compressed slightly, the anterior surface with a central longitudinal bare area. Inner

cross vein close to middle of discal cell; outer cross vein slightly curved; penultimate section of fourth vein about two-thirds as long as ultimate; first posterior cell slightly narrowed apically. — Length, 6 mm.

Type, male, Hokuto, XII, 1912; allotype, Chip Chip, III, 1909; male paratype, Tao Tsui, Kutsu, V, 1914.

Minettia hoozanensis (sp. n.): Male and female. — A smaller and more shining black species than the above one, with the frons black except the anterior margin which is testaceous yellow. The fore tarsi in male are dark except on basal two-thirds of basal segment, and this segment is thicker than usual, while the hind metatarsus in same sex is not compressed. The fore tarsi in female are normal, and not so noticeably darkened apically. The tube-like hypopygial process is more slender than in *tubifera*, and more heavily chitinized. In both sexes the ocellar bristles are not longer than the anterior orbitals, and the aristal hairs are shorter than in *tubifera*. — Length, 4 mm.

Type and allotype, Hoozan, 1911.

Minettia nogrohalterata (sp. n): Male. — Like a small specimen of *fuscofasciata* de Meijere, but the abdomen is entirely shining black, the two black submedian thoracic vittae are more uniform in width and more sharply defined, the aristal hairs are hardly more than half as long as width of third antennal segment, the inner cross vein is slightly beyond middle of discal cell, and the male hypopygium is different. — Length, 4,5 mm.

Type, Nordl. Paiwan-Distr., Shinsinei, X, 1912.

Minettia quadrispinosa (sp. n): Male and female. — This species is so closely similar to *fuscofasciata* de Meijere that it probably has been confused with it heretofore. The only external character available for its distinction lies in the lack of the hind preapical dorsal bristle, and the structure of the male hypopygium, which like that of the above species will be figured in the paper above referred to. — Length, 6 — 7 mm.

Type and 17 paratypes, Tao Tsui Kutsu; 13 paratypes Chip Chip; 1 paratype Kosempo; 1 paratype, Taihoku Distr., Gai-So-Kai.

Genus *Sapromyza* Fallen.

There are comparatively few species of this genus in the Orient, most of those referred to the genus by various authors belonging to *Homoneura* van der Wulp. Below I describe three Formosan species of the genus and include mention of redescription of one previously described species that is new to Formosa.

Sapromyza hirsutiseta de Meijere. Male. — Shining fulvous yellow. Head with a large deep velvety black obcordate spot extending from anterior ocellus over upper half of occiput, and filling more than half

the vertex; face white dusted; basal two antennal segments of antennae yellow, third and arista missing in type; palpi fuscous at apices. Thorax with a broad continuous black vitta filling the area between the dorsocentrals and extending over disc of scutellum, the part on mesonotum whitish dusted, lateral edges of mesonotum slightly darkened and white dusted. Abdomen brown. Legs yellow. Wings clear.

Frons broader than long, vertex rounded; anterior orbitals less than half as long as posterior pair and situated close to them; ocellars long, equal to postverticals; inner verticals twice as long as outer pair. Thorax with three strong pairs of postsutural dorsocentrals, a pair of short but distinct presecutellar acrostichals, six series of intradorsocentral hairs, and two sternopleurals. Fore femur without anteroventral comb; all tibiae with preapical dorsal bristle. Ultimate section of fourth vein fully 1.5 as long as penultimate. — Length, 2.5 mm.

Locality: Kankau, Koshun, IV, 1912.

Sapromyza flavopleura (sp. n.): Male. — Head testaceous, frons grey except on orbits, upper half of occiput marked with fuscous; antennae black, third segment yellow except extreme base; arista and its hairs black; palpi fuscous, paler at bases. Thorax fuscous, and grey dusted, on dorsum, the pleura yellow. Abdomen fuscous, hypopygium slightly yellowish. Legs yellow. Wings hyaline. Halteres brownish yellow.

Frons and bristles as in last species, the anterior orbitals farther in front of posterior pair, and vertex not so much rounded; third antennal segment about 1.5 as long as wide, rounded at apex; arista with dense hairs, the longest about half as long as width of third antennal segment. Thorax with two pairs of dorsocentrals, a pair of prescutellar acrostichals, and six series of intradorsocentral hairs; anterior sternopleural minute. Legs as in last species. Last section of fourth vein twice the preceding one. — Length, 2.5 mm.

Type, Taihoku, 1912.

This species appears to be closely similar in coloration to *pleuralis* Kertesz, but in that species there are two dark vittae on the pleura, and the longest hairs on the arista are much longer than width of third antennal segment, while the prescutellar acrostichals are absent also. I have not seen *pleuralis* which is also from Formosa. The size given by Kertesz is 1.6 mm, much less than in *flavopleura*.

The type specimen of flavopleura is slightly greasy and it is possible that perfect specimens may show traces of dorsal vittae.

Sapromyza deceptor (sp. n.): Female. — Pale brownish testaceous, slightly shining. Ocellar spot fuscous, and a deep black spot between each antenna and eye. Thoracic dorsum with traces of two or four pale brownish vittae. Legs testaceous. Wings hyaline.

Frons a little longer than wide, ocellar bristles small, the others strong, the postvertical pair well behind ocelli and distinctly below vertex; surface hairs numerous on anterior half; face slightly receding below, parafacial about half as wide at upper margin as width of third antennal segment, the latter narrowly rounded at apex; arista pubescent. Thorax with three pairs of strong postsutural dorsocentral bristles, one pair of prescutellar acrostichals, four series of intradorsocentral hairs, and the anterior sternopleural minute. Fore femur without an anteroventral comb; all tibiae with distinct preapical dorsal bristle; mid tibia with one long apical ventral bristle. Inner cross vein at middle of discal cell; ultimate section of fourth vein about two and one half times as long as penultimate. — Length, 3 mm.

Type and one paratype, Hokuto, XII, 1912.

This species has much the appearance of a *Panurgopsis*, but the anterior orbitals are curved backward, not inward, and there are no strong bristles on the cheek. The posthumeral bristle is present, and the anterior pair of dorsocentral bristles is close to suture, not proximad of it. There are no outstanding characters that would justify removing the species from the genus *Sapromyza*.

Sapromyza pollinifrons (sp. n.): Male and female. — Head dull yellow, the color of pollen, the antennae concolorous, palpi dark at apices. Thorax black, with a broad stripe of dust resembling pollen covering all the disc between transverse lines drawn along line of posthumeral and supraalar bristles, opaque black laterad of this on each side; pleura largely opaque black. Abdomen testaceous yellow, with a black fascia on apex of each tergite which is variable in extent, but is always broad in centre, covering the entire tergite on a wide area. Legs either dull brownish yellow, or with the femora more or less browned or fuscous. Wings yellowish hyaline. Halteres yellow.

Frons at vertex occupying more than half the head width, narrowed anteriorly, orbits poorly differentiated; anterior orbitals shorter than posterior pair; ocellars long; arista with the longest hairs much less than half as long as width of third antennal segment; cheek not as high as width of third antennal segment; eye slightly emarginate on lower posterior part. Thorax with two pairs of postsutural dorsocentral bristles, no prescutellar acrostichals, four series of intradorsocentral hairs, and the anterior sternopleural bristle shortest. Hind tibia with a very short preapical dorsal bristle; fore femur without an anteroventral comb; mid tibia with one apical ventral bristle. Inner cross vein at middle of discal cell; last section of fourth vein about four times as long as preceding section. — Length, 2.5—3 mm.

Type, male, allotype, and 5 paratypes, Hoozan, 1911.

Genus *Homoneura* van der Wulp.

This genus contains more species of the family in the Orient than all the others combined. A synopsis of all the species known to me is ready for publication so that comparative data is omitted in this paper to reduce the amount of space used.

Homoneura fumipennis (sp. n.): Male. — Brownish testaceous, slightly shining, Frontal orbits clay colored, and like the face, cheeks, and occiput, grey dusted; antennae and palpi yellow testaceous. Thorax with two brown submedian vittae which extend over disc of scutellum, the area between them more densely grey dusted than rest of mesonotum, two broader and fainter brownish vittae behind suture laterad of these. Abdomen with a faint dorsocentral dark vitta except at base. Legs testaceous. Wings dark brown, more intensely so along costa, the suffusion gradually reduced in intensity towards posterior margin, the cross veins more deeply clouded than adjoining field of wing. Halteres testaceous.

Frons over 1,5 as long as wide at anterior margin, orbits well differentiated, all bristles strong, the anterior orbitals almost in line with and a little shorter than posterior pair; longest hairs on arista about half as long as width of third antennal segment; face slightly convex. Thorax with three pairs of strong postsutural dorsocentral bristles, eight series of intradorsocentral hairs, a very weak intraalar, and two sternopleurals. Abdomen stout. Fore femur with an anteroventral comb; mid tibia without posterior bristles, and with an unequal pair of apical ventral bristles; preapical dorsal bristle on hind tibia very short. Inner cross vein a little beyond middle of discal cell. — Length, 5 mm.

Type, Kankau, VII, 1912.

Homoneura latifrons (sp. n.): Female. — Testaceous yellow, slightly shining, abdomen more brownish. Wings greyish hyaline, both cross veins and, apices of veins 2, 3 and 4, clouded, the cloud on fourth vein elongate and less distinct than the others, in addition to these spots there are two or three between inner cross vein and the apex of third vein, the basal one proximad of level of outer cross vein.

Frons wider than long, all bristles strong; arista plumose. Thorax with bristles as in the preceding species, the intradorsocentral hairs in 8—10 series. Fore femur with an anteroventral preapical comb; hind tibia with a rather strong preapical dorsal bristle. Inner cross vein slightly before middle of discal cell; last two sections of fourth vein subequal. — Length, 6 mm.

Type and two paratypes, Taihoku, 1912.

Homoneura fasciventris (sp. n.): Male and female. — This species is so similar to *beckeri* (Kertesz) that I considered it a first to be merely a variety of it. There are however quite constant differences in

color, the face in the new species being always without a distinct grey transverse mark, and the abdominal tergites have always a transverse black apical fascia which is triangularly produced forward in centre, while in *beckeri* the central mark is always separated from the lateral apical fasciae. The male hypopygia present minute differences in the three species which will be figured in the paper already referred to. — Length, 4,5 - 5,5 mm.

Type and 3 paratypes, Chip Chip, III, 1909. Paratypes, 33, Tao Tsui Kutsu; one, Hoozan; 3, Koshun, 1, Tainan; 1, Kosempo.

Homoneura occipitalis (sp. n.): Male and female. — Similar to the last species, but the face has the same dark grey mark as *beckeri*, the upper half of occiput has a large grey mark on each side, which is not present in the other two species, and there are hypopygial differences. — Length, 4,5—5,5 mm.

Type and 6 paratypes, Chip Chip, paratypes, 5, Hoozan; 3, Koshun; ?, Tao Tsui Kutsu; 1, Kankau.

Homoneura pallidula (sp. n.): Male and female. — Entirely pale testaceous yellow, but slightly shining; no dark mark over ocelli; arista and its hairs fuscous; wings hyaline.

Frons subquadrate, bristles strong, postverticals weakest, no surface hairs; longest aristal hairs not longer than width of third antennal segment. Thorax with three pairs of strong dorsocentrals, six series of intradorsocentral hairs, a pair of presentellar acrostichals, and anterior sternopleural and propleural bristles short. Fore femur with anteroventral comb; all tibiae with preapical dorsal bristle. Inner cross vein before middle of discal cell; last section of fourth vein one-fifth longer than preceding section. — Length, 2,5—3 mm.

Type, allotype, and one female paratype, Paroe nordl. Paiwan Distr., VIII, 1912.

Homoneura subvittata (sp. n.): Male and female. — Darker in color than the preceding species, the frons slightly bivittate centrally, the thorax with four or six faint reddish or brownish vittae, and the abdomen with a rather distinct black dorsocentral vitta or series of spots, and the extreme lateral margins of tergites except basally black. In addition to these characters the apex of the cell between auxiliary and first veins is fuscous, the cloud over inner cross vein is larger than in the preceding species and like the other markings much darker, the one over outer cross vein is attenuated in middle, and there are but two spots between inner cross vein and the one on apex of third vein.

Frons about as long as wide, narrowed anteriorly; longest hairs on arista about half as long as width of third antennal segment; ocellar

bristles rather weak. Inner cross vein usually close to middle of discal cell. Otherwise as *latifrons*. — Length, 6 mm.

Type, male, allotype, and 7 paratypes, Kosempo; paratypes, one each, from Kankau, Chip Chip, Taihoku, and Sokutsu.

Homoneura acrostichalis (de Meijere): Several specimens of this species which I have compared with the type sent to me by Dr. de Meijere, are before me from Kankau and Takao. I think that this species appears in Dr. Kertesz's key without a species name at caption 23 in his paper on the species with immaculate wings.

There are many short black spinules and hairs along the extreme edges of the fifth and sixth tergites of the male of this species which, coupled with the trimaculate fifth abdominal tergite, readily distinguish it from any other known species.

Homoneura sauteri (sp. n.): Male and female. — Yellow testaceous slightly shining. Wings hyaline, outer cross vein slightly clouded.

Similar in most respects to *unguiculata* (Kertesz), but less shining, the face without noticeable white dusting, the intradorsocentral hairs in at least eight series, and the apical portion of superior forceps blunt tipped. — Length, 4—5 mm.

Type, male, Kosempo, V, 1912. Allotype, Tainan, V, 1912. Paratypes, three, Macuyama; two, Tao Tsui Kutsu.

Homoneura crassicauda (sp n.): Male. — Testaceus yellow, with a pair of small opaque black widely separated black spots on fifth tergite, which do not extend over more than half the tergal length. Thoracic dorsum greyish dusted, but slightly shining.

Frons fully 1.5 as long as wide, parallel-sided, with rather closely set microscopic black hairs; anterior orbitals a little shorter than posterior pair; ocellars small; arista distinctly pubescent; face slightly convex. Thorax with three pairs of strong postsutural dorsocentrals, six series of intradorsocentral hairs, and two sternopleurals. Abdomen stout, thick ad apex, the apical part of superior hypopygial forceps tapered to a sharp point. Inner cross vein before middle of discal cell. — Length, 3—4 mm.

Type and 5 paratypes, Chipan, Puyuma Distr., VII, 1912. Paratypes, Pilam and Kankau.

This species is quite similar to *nudifrons* (Kertesz), but in the latter the superior hypopygial forceps are not tapered to a point, and the abdominal spots are larger, extending almost the entire length of the exposed part of tergite.

In addition to the following Formosan species are referable to *Homoneura: quinquevittata* (de Meijere), *discoidalis* (Kertesz), *caloptera* (Kertesz), *trypetoptera* (Hendel), *parviceps* (Kertesz) (= *picta*

de Meijere), *bistriata* (Kertesz), *brevicornis* (Kertesz), *quinquenotata* (de Meijere), *variinervis* (Kertesz), *beckeri* (Kertesz), *simplicissima* (de Meijere), *grandis* (Kertesz), *flavomarginata* (Kertesz), *nigronotata* (Kertesz), *paroeca* (Kertesz), *honesta* (Kertesz), *unguiculata* (Kertesz), *diversa* (Kertesz), *forcipata* (Kertesz), *formosae* (Kertesz), *ornatifrons* (Kertesz) und *notostigma* (Kertesz).

There may be some other species which I have not seen that are referable here too, but most of the species not included in the above list which were listed as belonging to *Lauxania* by Kertesz are referable either to *Minettia* or *Sapromyza*.

Einige neue Trichopteren aus Asien.

Von Dr. Georg Ulmer, Hamburg.

(Mit Taf. 5 u. 6 und 5 Textfiguren).

Die Mehrzahl der hier beschriebenen Arten stammt von Formosa und gehört mit einer Ausnahme dem Deutschen Entomologischen Institut zu Dahlem; eine Art aus Kambodja erhielt ich aus dem Zoologischen Museum Berlin; eine andere von Darjiling aus dem Museum München; der Rest — aus verschiedenen Teilen Asiens — war schon seit langem unbeschrieben in meiner Sammlung. Den Herren Dr. W. Horn, von Rosen und H. Stitz danke ich herzlich für Übermittelung des Materials, ersterem auch besonders für die Möglichkeit der Publikation.

1. ***Rhyacophila kuldschensis*** (n. sp.): Eine große Art mit schlanken Flügeln. — Kopf dunkelbraun, Brust gelbbraun, unten noch etwas heller; Hinterleib oben dunkelbraun, unten gelbbraun. Fühler dunkelgelbbraun, alle Glieder in ihrem apikalen Teile gedunkelt, Gelenke schwach dunkel geringelt; Taster graubraun. Beine gelbbraun, die Knie dunkel, an den Vorder- und Mittelbeinen die Schiene außen graubraun und die Tarsalgelenke ebenfalls etwas gedunkelt; Hinterbeine im ganzen etwas heller als die anderen, die Schienen hell bräunlichgelb; Tarsen der Mittel- und Hinterbeine bedornt, an den letzteren auch die Schiene mit einigen großen Dornen; Vorder- und Mittelschienen apikal keulenförmig verdickt. Flügel lang und schmal, Membran hellgrau, die Vorderflügel mit graubrauner netzartiger, stellenweise zu Flecken zusammenfließender Zeichnung, Adern graubraun; im Hinterflügel sind die Adern heller, gelblich; Behaarung wohl abgerieben, goldige und braune Härchen wie bei unseren Arten (*R. septentrionis* Mc Lach. etc.) auf den Vorderflügeln, zarte graugelbe Härchen auf den Hinterflügeln. Im Vorderflügel ist der Radius gegabelt; Gabel 1 länger als Gabel 2, Gabel 5 kurz gestielt. Die Genitalanhänge des ♂ sind rötlichbraun, die Genitalfüße mehr gelbbraun. Der Fortsatz des IX. Tergits (Taf. 5 Fig. 1, Taf. 6 Fig. 2) bildet eine große Platte,