

discernible; fringe yellowish. Hind wings fuscous, with yellowish fringes. Head, thorax, and abdomen rosy grey; anal segment of abdomen yellow.

Expanse of wings 12 millim.

One female, S. Paolo.

In the specimen above described the abdomen is unusually short and apparently malformed.

PACHYZANCLA, Meyr.

Type *P. stultalis*, Wlk. (*P. mutualis*, Meyr. Tr. E. S. 1884, p. 315 (part)).

Pachyzancla dissimilis, sp. n.

Resembles *stultalis*, Wlk., but smaller, the transverse lines not preceded or followed by a paler space; first line less oblique, nearly vertical, second line without any denticulations in the middle and lower thirds; the general ground-colour of both wings more uniformly fuscous.

One female from Accra.

LXV.—Notes on Dr. C. Flach's *Synonymic List of the European Trichopterygidæ*. By the Rev. A. MATTHEWS.

FOR the last few years the time which I have been able to devote to entomology has been fully occupied in investigating the Corylophidæ; but since that study has been almost finished, I have lately turned my attention to collecting materials for a second part of my 'Trichopterygia Illustrata,' and I find that such a work is much needed, for, since the publication of the first part in 1872, the number of the Trichopterygidæ has been nearly doubled by the discovery of fresh species in various parts of the world, especially in America, through the exertions of Mr. Crotch, Mr. Champion, Dr. Le Conte, Dr. Horn, and Mr. Casey.

Thus it has happened that until a few weeks ago I was unaware of the existence of an important essay on the European species of Trichopterygidæ from the pen of Dr. C. Flach, published in the 'Verhandlungen der kaiserlich-königlichen zoologisch-botanischen Gesellschaft in Wien,' vol. xxxix. 1889, pp. 481-532.

In this essay Dr. Flach has revised, or, rather, attempted

to reconstruct, the nomenclature of the whole family, and my purpose in the present paper is to consider the alterations proposed by Dr. Flach and to set plainly before entomologists my own views, where they differ from those of Dr. Flach, and, having done this, to leave it in their hands to form an unprejudiced opinion on the comparative merits of the systems in question.

The changes of nomenclature proposed by Dr. Flach form a leading feature in his essay and require special notice. The manner in which he has treated the genus *Ptilium* exhibits a characteristic example of his style. He has, in fact, adopted an arrangement suggested long ago by Col. Motschulsky, dividing this very complex genus into many subgenera. The creation of what are termed subgenera has always appeared to me objectionable for many reasons: it is impossible to define a subgenus with accuracy sufficient to enable a student to determine the proper position of any doubtful species; if this could be done, and the subgenus proved to exhibit unmistakable anatomical characters, it would become a true genus, and must be designated as such in any subsequent work. Col. Motschulsky's separation of *Ptinella* from *Ptilium* is a clear proof of the truth of what I have said, for no one since his time has ever thought of reuniting those two genera. If it had been possible I would willingly have retained *Micrella*, *Oligella*, and other genera which he proposed at the same time as *Ptinella*; but I could find in these no true persistent generic characters; the differences which they exhibit are merely specific, *e. g.* the short transversely-jointed antennæ of *P. Kunzei* merge gradually through other species whose thorax is equally devoid of channels into the long slender-jointed antennæ of *P. exaratum*, and the same may be said of their superficial sculpture and other differences. I found therefore that generic separation could not be supported by anatomical evidence, and was content to retain in the old genus the greater part of its former species, distinguishing its various divisions by sculptural characters alone—thus avoiding the confusion of a multiplicity of indefinite generic terms. But even if subgeneric names should be deemed advisable, I consider it unjust as well as uncourteous to appropriate to your own credit names previously published by another author, although they be but imperfectly characterized. Be this as it may (for genera are at the best mere arbitrary divisions, depending on the peculiar ideas of individual authors), in dealing with species greater caution is required. The characters which distinguish species are mainly superficial: anatomical variation, though often useful,

can only be regarded as accessory ; length of limb, form of outline, and superficial sculpture must always form the principal specific factors—colour and size, except when uniformly persistent, are of minor importance.

But, on the other hand, anatomical characters, especially the organs of the mouth and the comparative shape and disposition of the various parts of the external skeleton, must be regarded as the only true generic distinctions.

Such, I believe, are the rules by which generic or specific separations should be regulated. But all these rules seem to have been disregarded in the nomenclature of the Trichopterygidæ with which Dr. Flach concludes his essay.

Before entering into a detailed examination of this nomenclature I must premise that in my own collection there are authentic types from the collections of M. Allibent and Col. Motschulsky of the greater number of the species described by those authors, together with types of their own species kindly presented to me by Dr. Aubé, MM. C. Brisout de Barneville, Fairmaire, Reiche, Thomson, Hampé, and other friends, so that I may fairly consider that I am in a position to speak with some amount of accuracy on their respective merits ; and with these preliminary remarks I will now turn to the unwelcome task of examining the nomenclature of the Trichopterygidæ published by Dr. Flach.

The first genus in this list which requires notice is *Ptenidium*, divided in the following manner into four subgenera :—

PTENIDIUM, Erichson.

Matthewsium, Flach.

ovulum, Flach.

Gressneri, Gillm.

Lederi, Flach.

lævigatum, Gillm.

atomaroides, Matth., ex typ.

Bruckii, Matth.

turgidum, Thoms.

Wankowiezium, Flach.

intermedium, Wank.

? *Wankowiezii*, Matth.

Var. *Weisei*, Flach.

Brenskii, Flach.

Ptenidium.

Pensigi, Flach.

turgidulum, Flach.

fuscicorne, Erichs.

picipes, Matth.

obscuricorne, Mots.

laticolle, Hochh.
Heydeni, Flach.
myrmecophilum, Mots.
 formicetorum, Kraatz.
 Kraatzii, Matth.
pusillum, Gyll.
 apicale, Erichs.
 evanescens, Marsh.
 punctatum, Mots.
 terminale, Hald.
 Var. *corpulentum*, Lucas.
 Var. *atomaroides*, Mots.
 Var. *maroccanum*, Flach.
Brisouti, Matth.
 nitidum, Bris.
 evanescens, Mots.
 Var. *longicorne*, Fuss.
 Var. *orientale*, Flach.
obotritis, Flach.
punctatum, Gyll.
 alutaceum, Gillm.
 littorale, Mots.

Gillmeisterium, Flach.

nitidum, Heer.
 pusillum, Erichs.
 4-foveolatum, Allib.
 minutissimum, Steph.
 Var. *insulare*, Flach.
 Var. *Matthewsii*, Flach.
 laevigatum, Gillm.
 punctatum, Steph.
Reitteri, Flach.

If the characters on which these subgenera are founded result in the combination of such miscellaneous groups as those exhibited in the foregoing list, they must be radically false and deceptive. *P. Gressneri* shows the most striking dissimilarity in form and outline to every other species of *Ptenidium*, unless it be to Dr. Flach's new species, with which I am unacquainted. *P. laevigatum*, Gillm., is very closely allied to *P. nitidum*, Heer. My own description of this species was made from an example presented to me by Dr. Aubé, which had been verified by Gillmeister himself, and therefore authentically typical. *P. atomaroides* (whether assigned to myself or to Col. Motschulsky) can be associated with no other than *P. evanescens*. If by the words "ex typ." (appended to this name in his list) Dr. Flach means to insinuate that he received the type from myself, I can only say that I never sent an example of any species whatever to Dr. Flach, although I have offered to do so, and I positively

decline to be considered responsible for mistakes made by other people. But the expression "ex typ." may account for many of the errors of nomenclature contained in this list. I have myself suffered from the careless manner in which specimens are often named and then distributed as types of certain species; and the same misfortune may have, and probably has, happened to Dr. Flach. *P. Bruckii* is conspicuously distinct from all its congeners. *P. turgidum* I described from a type I received from M. Thomson; it is allied to *P. formicetorum* alone. In his next subgenus Dr. Flach has placed *P. intermedium*, Wank.; but this is so closely allied to *P. evanescens*, Marsh., that it seems strange to have placed them so widely apart.

Of the ten species contained in his subgenus *Ptenidium* four are introduced by Dr. Flach himself, and are all unknown to me; but throughout the *Ptenidia* it would be difficult to find among the older species five more totally dissimilar than those which he has grouped together in this division, namely, *P. fuscicorne*, *formicetorum*, *evanescens*, *Brisouti*, and *punctatum*. In his last subgenus, *Gillmeisterium*, Dr. Flach has placed but two species, *P. nitidum* and *P. Reitteri*; the synonymy assigned to the former of these is, as far as I can judge, correct, with the exception of *P. lævigatum*, Gillm. I need not repeat again what I have said only a few lines above respecting this species, but, should any doubt exist, must refer its solution to the description and figure given by Gillmeister himself or to those in the 'Trichopterygia Illustrata.'

The genus *Euryptilium* is placed next in succession, and in this genus Dr. Flach has included *Ptilium marginatum*, Aubé. It seems to me that Dr. Flach is right in adding this species to *Euryptilium*, for the apex of the elytra is entire and its whole form and sculpture very similar.

Among the *Ptilia* the subdivisions and the combination of species become more numerous and still more perplexing. In his first subgenus Dr. Flach places *P. Kunzei* alone, but amalgamates under that name *P. brevicolle*, whose thorax is one half shorter, and *P. rugulosum*, which has long and slender antennæ and exhibits striking differences in outline and sculpture. The next subgenus, *Trichoptilium*, contains but one species, *T. Sahlbergi*. The figure of this insect (pl. xi. fig. 3) clearly proves that it cannot possibly be included in any part of the genus *Ptilium*, since its thorax overlaps the shoulders of the elytra, a formation hitherto only found in *Actidium* and *Microptilium*. Then follows the subgenus *Typhloptilium*, containing *T. ædipus* and two others

unknown to me. From types received from Herr Reitter *T. ædipus* is identical with a species which I formerly described under the name of *Ptilium obcæcatum*. I would at that time have willingly separated this species from *Ptilium*, but could find no distinct generic difference, and did not consider the rudimentary condition of its eyes to be of itself sufficient. The next subgenus, *Ptiliolum*, commences with *P. oblongum*, a name long ago superseded by *Spencei*, Allib., and to this are added as synonyms *Foersteri* and *fuscipenne*; the latter of these is the type (received from Prof. Foerster) from which I described *P. Foersteri*. Dr. Flach then makes *P. angustatum*, Erichs., into a distinct species, although he had just before quoted that name as a synonym of *P. oblongum*, and finishes *Ptiliolum* with two new species. The last subgenus of this group is *Euptilium*, containing *croaticum*, *caledonicum*, and one new species. Then having inserted the genus *Actidium* in the most unintelligible manner among the normal *Ptilia*, Dr. Flach appropriates Motschulsky's name *Oligella* for the purpose of forming a genus to receive *P. foveolatum* alone. To this succeeds the absurd introduction of Motschulsky's *Micridium vittatum* among some of the most normal species of *Ptilium*. The shape and length of the posterior legs is alone sufficient to separate *Micridium* by a long interval from *Ptilium*, without entering at all into the numerous anatomical differences which exist between those two genera. But this is not all; Dr. Flach has incorporated with *Micridium vittatum* two almost normal species of *Ptilium*, *P. Halidaii* and *P. angulicolle*, which resemble *Micridium* in the transparency of their elytra and in that alone. Then, after the intercalation of *Millidium*, Dr. Flach proceeds to enumerate the remaining *Ptilia* as species of his subgenus *Ptilium*.

I have now examined in detail the whole arrangement of the Ptiliina; to proceed in the same way through the Trichopterygina would but entail the constant repetition of similar remarks and prove wearisome to the reader. The same confusion of synonymy pervades the whole list; it is very conspicuous in *Ptinella* (Neuglenes), but seems to reach its climax in *Trichopteryx*.

I fully believe that Dr. Flach's new species are true and genuine, the characteristic portraits of those which he has figured speak for themselves; but, if I can judge by types of some others received from Herr Reitter, the differences on which they have been separated are far less distinguishing than those which exist between many species unceremoniously grouped together by Dr. Flach as mere synonyms; and in

what way to account for the synonymy exhibited in his list is far beyond my comprehension.

I have myself long passed the conventional term of human life, and would gladly welcome the appearance of any one who would carry on the work which has been my study for more than fifty years, but not in such a fashion as this.

Gumley, Market Harborough,
March 1892.

LXVI.—*Descriptions of some new Species of Asiatic Saturniidae.* By F. MOORE, F.E.S.

1. *Antheræa pulchra*.

Male.—Varied with ochreous red on the basal area, orange-yellow along the apical border, and olive-grey on hind margins, the outer borders olive-grey; ocelli oval, with thick black outer ring, slightly protuberant at upper and lower end of the cell; submarginal band dark red, very slightly white-bordered; subbasal bands prominent, black; two transverse discal, dusky ochreous-brown, lunular fasciæ, both clouded anteriorly on the fore wing and blackish on the hind wing, the inner discal fascia being very narrow and the outer one broad.

Female.—Varied deep orange-brown; with two darker discal fasciæ as in the male; outer borders paler; submarginal band broad, with prominent white border; ocellus of fore wing protuberant at upper and lower end of the cell, the black border thickened at the lower protuberance; ocellus of hind wing less protuberant.

Expanse $5\frac{3}{4}$ inches.

Hab. Satara Hills, Bombay (*Coussmaker*).

A larger insect than the three following: distinguishable from them in the male by the broader dusky outer discal band and much narrower inner discal fascia, the latter crossing the wing outside the cell on both wings; the interspace between the subbasal dusky band and the submarginal band is also wider.

2. *Antheræa fasciata*.

Male.—Pale brownish ochreous; discal area slightly tinted



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