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(214 b) *Pyrausta flavicollalis*, sp. n.

♀. Greyish fuscous; palpi at base, back of head, tegulæ, pectus, legs, ventral surface, and extremity of abdomen bright yellow; fore tibiæ and tarsi fuscous in front. Fore wing finely pencilled with black and bluish-white scales except costal and terminal areas.

Hab. ARGENTINA, Florenzia, Gran Chaco (*Wagner*), 1 ♀ type. *Exp.* 18 mm.

[To be continued.]

II.—*Notes on the Lamellicorn Genus Popillia and Descriptions of some new Oriental Species in the British Museum.*
By GILBERT J. ARROW.

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IN Dr. Kraatz's list of the species of *Popillia* in the Deutsche ent. Zeitschr. 1892 (p. 303), lamentable confusion was introduced into the classification of this difficult genus. Dr. Kraatz's collection has happily become accessible, and the specimens of *Popillia* from India and China have been kindly sent to me for examination by Herr Schenkling. Hence the present notes. Having also examined the types of Hope and Newman in London and Oxford, and a number of Fairmaire's in the Paris Museum, I am able to at least partially correct the confusion which has resulted from the inadequate descriptions of all those writers. Not only has Kraatz misapplied the names given by all his predecessors mentioned, but he has burdened his catalogue with numerous names of colour-varieties, which in several cases are not varieties of the species to which he has assigned them. He has not avoided the repetition of the same name for these varieties (e. g., *cupricollis* occurs three times and *testaceipennis* twice), and so evidently did not contemplate their use as specific names in any case; and as they are merely descriptive of the colours of individual specimens, and are sometimes left to explain themselves without any attempt at definition, they are evidently not applicable as specific names. This is also the case with the many varietal names introduced by Ohaus, who has a var. *testaceipes* of *P. complanata*, Newm. (the new species *P. pulchripes* of the present paper),

and also a var. *testaceipes* of *P. deplanata*, Ohaus, both described in the course of the same work.

Having separated *Popillia* 6-guttata, Fairmaire, from the genus *Popillia*, and formed for it the new genus *Spilopopillia*, figuring the species upon his plate, Kraatz, upon a later page of his monograph, has described a very closely related insect with all the same generic features as a *Popillia* under the name of 6-maculata. This is a broader form, with almost the same pattern, but nearly black ground-colour, and the pronotum is smooth, with fine and scanty puncturation. It should be called *Spilopopillia* 6-maculata.

I have long ago recorded my opinion that Kraatz's genus *Pæcilsticta* must be for the present merged in *Anomala*. The same applies to *Hadropopillia*, which is synonymous with the subgenus *Spilota*.

The four species placed together as *Ischnopopillia* are not naturally associated together. The description applies best to *rugicollis*, Newm., and *moorei*, Kr. (the female of the latter was redescribed by Kraatz as *andrewesi*), of which the former may be considered the type of the genus. *I. exarata* and *erythroptera* I consider species of *Anomala*.

P. fimbriata, Newm., does not belong to the genus. It will be described in the 'Fauna of British India.'

P. gemma, Newm., is not the species described by Kraatz under that name. It is the same as *P. metallicollis*, Fairm. Dr. Kraatz's species is named *P. pulchra* later in this paper.

P. perotteti, Kr., is *P. chlorion*, Newm., of which *P. cærulea*, Boh., is not a variety. The form from Szechuen called *perotteti*, var. *chrysis*, Kr., is a var. of *P. inconstans*, Fairm., and not of *perotteti*. *P. straminipennis*, Kr., is 4-guttata, F., and *P. chinensis*, var. *sordida*, Kr., is a form of the same species and identical with *P. castanoptera*, Hope. The so-called varieties of *chinensis*, *purpurascens*, and *frivaldskyi* belong to yet another species distinguished by the smooth pronotum and the quadrate clypeus of the male, which sex was overlooked by Kraatz.

P. andamanica, Kr., has been pronounced by Ohaus to be only a variety of *P. marginicollis*, Hope, but it is a very distinct species, marked, amongst other features, by the absence of a mesosternal process.

P. marginicollis, Hope, is the type of a group of species all distinguished by a peculiar type of elytral striation, but differing greatly in the form of the sternal process and other features. As all those hitherto known have been confused with *P. marginicollis*, I have tabulated and named here those known to me. They differ from all other Oriental species in

having upon each elytron five dorsal striæ (that is, striæ lying between the suture and the humeral callus) equidistant from each other and without rows of punctures between them. The ventral segments are each divided at the sides into two pseudo-segments by a carina from which spring hairy fringes, and in most species another row of hairs arises from the anterior margin of each segment. This double fringe is not visible at the extreme outer edge of the abdomen, and is most apparent, when present, in the penultimate segment.

Most of the species are subject to very great variation in pigmentation, especially upon the elytra.

Mesosternum more or less produced.

Ventral segments with single rows of hair *pulchra*, sp. n.

Ventral segments with double rows of hair.

Upper surface without dark markings *felix*, sp. n.

Upper surface with dark markings.

Elytra lightly striated *lavistriata*, sp. n.

Elytra deeply striated.

Mesosternal process rather long.

Body convex; pale thoracic margin

vague *mongolica*, sp. n.

Body not very convex; pale thoracic

margin sharp.

Pygidial tufts elongate, small *marginicollis*, Hope.

Pygidial tufts large and compact .. *birmanica*, sp. n.

Mesosternal process short.

Legs red, base of the pronotum strongly
emarginate *taiwana*, sp. n.

Legs dark, base of the pronotum
feebly emarginate *lewisi*, sp. n.

Mesosternum truncated.

Short; pronotum finely punctured, ventral seg-
ments with double rows of hair *andamanica*, Kr.

Elongate; pronotum strongly punctured, ven-
tral segments with single rows of hair *formosana*, sp. n.

Popillia pulchra, sp. n.

Popillia gemma, Kr. (nec Newm.).

Læte cupreo-aurea, capite (clypeo excepto), pygidio (apice excepto) corporeque subtus æneo-viridibus, pedibus aureis, tarsis posticis nigris; corpus rhomboidale, vix convexum, sat breve, clypeo brevi, antice fere recto, crebre punctato, fronte fortiter punctato; pronoti lateribus sat fortiter medio vix punctato, angulis bene mar-
catis, anticis acutis, posticis paulo obtusis, lateribus vix arcuatis, medio obtuse angulatis; elytrorum dorso profunde 5-striato, striis punctatis, interstitiis convexis, inæqualibus, subsuturali basi sparse punctato; pygidio profunde sed laxè transverse strigoso, basi haud dense flavido-bifasciculato, pectore toto abdominisque

lateribus sat longe hirsutis; processu mesosternali modice elongato, compresso, haud acuto.

Brilliant golden-yellow, with crimson and greenish reflections, the head (except the clypeus), pygidium (except the posterior half), and lower surface dark metallic green, and the legs golden, with the hind tarsi black.

The body is rather short and rhomboidal in shape and not very convex. The clypeus is short, nearly straight in front and closely punctured, and the forehead is strongly and not very closely punctured. The pronotum is distinctly but not closely punctured at the sides, very lightly in the middle, and the angles are well marked, the front ones acute, the hind slightly obtuse, the sides scarcely rounded but angulated before the middle. The scutellum bears a few minute punctures. The elytra have each five deep punctured dorsal striæ. The interstices are convex, but the second and fourth are a little depressed and the former bears a few large punctures anteriorly. The pygidium is rather coarsely transversely strigose and bears two patches of pale hairs at the base. The sternum is clothed with rather long decumbent hairs and each ventral segment has a row of similar hairs at the side. The mesosternal process is compressed, rounded at the extremity, and moderately long. All the tibiæ and the hind tarsi are short and thick in both sexes.

♂. The front tibiæ are very broad and the two teeth short.

Length 9.5–11 mm.; breadth 6–6.5 mm.

Hab. BURMA: Karen Hills (2700–3300 ft., Dec. 1888), *L. Fea*.

Popillia felix, sp. n. (Fig. 2.)

Læte igneo-metallica, elytris cupreo-rosaceis: ovalis, convexa, clypeo subtilissime rugoso, fronte sat fortiter et crebre punctato, pronoto vix perspicue punctato; angulis anticis acutis, posticis valde obtusis, lateribus medio angulatis, haud arcuatis; scutello minute punctato; elytris striis 5 dorsalibus profunde impressis, interstitiis lævibus, convexis, æqualibus; pygidio sat grosse transverse striolato, basi bifasciculato; processu mesosternali sat longo, haud crasso; metasterni lateribus albo-hirtis, segmentisque ventralibus transversim bisectis, biseriatim pilosis.

Golden-red above and beneath, with the elytra orange-red, the pygidium bearing two basal patches of whitish hairs, the sternum densely clothed (except in the middle) with similar hairs, and each ventral segment bearing two rows of transversely placed hairs at the sides. The body is oval, compact

and convex, and the upper surface very smooth and shining. The clypeus is shortly transverse, nearly straight in front and very finely rugose, and the forehead is rather closely and evenly punctured. The pronotum is very smooth and shining and scarcely visibly punctured, with the front angles acute, the hind angles very obtuse, and the sides angulate in the middle and not visibly curved. The scutellum is very minutely punctured, and each elytron bears five deep, equidistant, dorsal striæ. The striæ are finely punctured and the interstices smooth and convex. The pygidium is convex and rather coarsely transversely strigose. The mesosternal process is moderately long and slender, not flattened. The tibiæ are stout and the two teeth of the front tibia short and close together.

♂. The front tibiæ are very broad and the two teeth minute and sharp.

♀. The terminal tooth of the front tibia is blunt and spatulate and the hind tarsi are very short and thick.

Length 13-14 mm. ; breadth 8 mm.

Hab. ASSAM.

A pair in the British Museum and one in the Oxford Museum (from the Miers Coll.) are labelled "India" alone, and one in the German Entom. Nat. Museum is said to have come from Assam.

Popillia lævistriata, sp. n.

Flavo-ænea, capite postice, pronoti disco, scutelloque obscure viridibus: elongata, parum convexa, nitidissima; clypeo subtiliter ruguloso, fronte modice punctato; pronoto parce et minute punctato, postice lævi, lateribus medio angulatis, angulis omnibus distinctis, anticis acutissimis, basi medio profunde exciso; elytris striis 5 dorsalibus minute punctatis leviter impressis, intervallis fere planis; pygidio transversim ruguloso, basi maculis duabus grossis setosis ornato; abdominis segmentis lateraliter transversim bisectis et biseriatim setosis; mesosterno modice producto, fere acuto.

Reddish testaceous, suffused (except upon the elytra) with a metallic-green lustre, the head (except the clypeus), the pronotum and scutellum deep green, the former with rather broad but vaguely defined yellow margins. It is rather elongate and extremely smooth and shining. The clypeus is very minutely rugulose and the forehead rather closely punctured. The pronotum is very minutely punctured at the front and sides, the lateral margins are sharply angulated in the middle, the front angles very acute, the hind angles

slightly obtuse but not rounded, and the base strongly excised before the scutellum, which bears only a few minute punctures. Each elytron bears five equidistant punctured striæ, which are lightly impressed, with the intervals scarcely convex. The pygidium is coarsely transversely rugose and bears two rather large compact patches of whitish hairs at the base. The ventral segments are divided laterally by median carinæ, and each bears a double fringe of stiff hairs. The mesosternum is produced into a moderately long and acute process.

♂. The legs are very short and thick, and the front tibia bears two very minute sharp teeth placed close together at the extremity.

Length 11 mm.; breadth 6 mm.

Hab. ASSAM: Patkai Hills (*Doherty*).

I know only a single specimen (in the British Museum).

Popillia mongolica, sp. n. (Fig. 5.)

Testacea, capite toto, pronoto (lateribus vage flavis exceptis), scutello corporeque subtus obscure viridibus, corpore toto viridi-metallico-suffuso, elytris plus minusve fusco-lineatis: late ovata, convexa, supra nitida, clypeo subtiliter ruguloso, fronte cum vertice crebre punctatis; pronoto et scutello parce et minute punctulatis, illo postice medio lævigato, hoc apice acute angulato; elytris profunde striatis, striis dorsalibus 5 crebre et minute punctatis; pygidio grosse transverse strigato, basi maculis duabus grossis setosis ornato; abdominis segmentis lateraliter transversim bisectis et biseriatim setosis; mesosterno modice producto.

P. mongolica is the most stout and globose species of the group known to me. The prothorax is very convex and round, smooth and shining, with a generally broad but rather vaguely limited pale lateral border. As in *P. marginicollis* and *birmanica*, the elytral striæ are usually more or less tinged with dark pigment, which may extend on to some of the intervals. The pygidium is decorated with two large tufts of white hair, and the abdominal segments are distinctly doubly fringed at the sides. The mesosternal process is of moderate length.

Length 11–12 mm.; breadth 7–7.5 mm.

Hab. CHINA: Hong Kong, Foh-kien.

Popillia birmanica, sp. n. (Fig. 3.)

Rufo-testacea, fronte, prothoracis medio, scutello corporeque subtus plus minusve viridi-æneis, pedibus pallidis, elytris plerumque fusco-lineatis, corpore toto, elytris exceptis, viridi-metallico-tincto;

sat elongato, parum convexo, clypeo subtiliter ruguloso, fronte crebre punctato, pronoto parce minute punctato, postice lævigato: scutello fere lævi, apice rotundato; elytris striis dorsalibus 5 profunde impressis, confluentur punctatis, interstitiis convexis; pygidio grosse transversim strigato, basi maculis duabus grossis setosis lineisque setarum lateralibus fere ad apicem ductis ornato; segmentis abdominalibus lateraliter transversim bisectis et biserialiter setosis; mesosterno modice producto.

Reddish testaceous, with the head (except the clypeus), the middle of the pronotum, the scutellum, and parts of the lower surface dark green, entirely suffused with a metallic-green lustre, except upon the elytra, which have usually more or less distinct longitudinal dark lines.

It is elongate in shape and not very convex. The clypeus is very minutely rugulose and the rest of the head distinctly punctured. The pronotum is very finely and sparingly punctured, with the middle of the basal part quite smooth. The scutellum bears a few very minute punctures and its apex is rounded. The elytra have each five very deep equidistant dorsal striæ bearing confluent punctures at the bottom, and the intervals are smooth and convex. The pygidium is coarsely transversely striolated and bears two large white hairy patches at the base and a line of irregular hairs on each side almost meeting at the apex. The ventral segments are divided by transverse carinæ at the sides and doubly fringed. The mesosternum is moderately produced.

Length 9-12.5 mm.; breadth 5-7 mm.

Hab. ASSAM: Sylhet, Patkai Mts., Cachar; BURMA: Momeit (*Doherty*); TENASSERIM: Papun (*Lt.-Col. Adamson*).

Popillia taiwana, sp. n. (Fig. 6)

Rufo-castanea, capite (clypeo excepto), pronoti disco, scutello corporeque subtus fusco-viridibus, corpore toto (elytris exceptis) viridi-metallico suffuso; capite antice minutissime rugoso, postice fortiter punctato; pronoto convexo, antice et lateraliter laxè punctato, postice lævi, lateribus antrorsum a basi convergentibus, angulis distinctis, anticis acutissimis, baseos medio fortiter exciso, scutello minute punctato, apice rotundato; elytris striis 5 dorsalibus profunde impressis, minute punctatis; pygidio fortiter transversim punctato-striolato, basi maculis duabus grossis setosis ornato; abdominis segmentis lateraliter transversim bisectis, biserialiter setiferis; mesosterno paulo producto, haud acuto.

This is a compact convex species, with the posterior part of the head, the disc of the pronotum, and the scutellum very deep green, and the yellow margins of the pronotum con-

spicuous and sharply defined. It is only moderately shining above, the pronotum is finely punctured except behind, and the scutellum is broad and rounded, not angulate, at the apex. The mesosternum is produced into a short blunt process, and the sides of the abdominal segments bear double rows of short stiff hairs.

Length 10–11 mm.; breadth 6 mm.

Hab. Formosa (*Bowring*).

Popillia lewisi, sp. n.

Viridi-cuprea, elytris prothoracisque marginibus angustis, testaceis, lævissime metallescentibus, tarsis antennisque piceis: modice elongata, parum convexa, nitidissima, capite subtiliter dense rugoso, vertice polito, parce punctato, clypeo parvo, sutura obsoleta; pronoto a basi ad apicem angustato, antice et lateraliter sat fortiter punctato, postice medio lævissimo, basi medio parum profunde exciso; scutello vix punctato; elytris striis 5 dorsalibus profunde impressis, his minute punctatis, stria sexta grosse punctata, antice abbreviata, reliquis grosse punctatis; pygidio grosse transversim rugato, utrinque macula 2-forma flavo-pilosa ad apicem fere conjuncta, ornato; processu mesosternali brevi, compresso, corpore subtus ad latera flavido-piloso, abdominis segmentis lateraliter transversim bisectis, biseriatim pilosis.

This is the third species of *Popillia* found in the Japanese Islands and the smallest and most distinct of the three, *P. japonica*, Newm., and *insularis*, Lewis, being nearly inter-related and having an additional dorsal stria. *P. lewisi* is easily distinguished from the rest of the *marginicollis* group by the form of the long, curved, pubescent patches upon the pygidium. In most of the species there are a few straggling hairs between the basal tufts and the apex of the pygidium, but here the hairs are almost equally dense from the base almost to the apex, forming a comma-like patch on each side. The sternal process is distinctly produced, but very broad and blunt, and the pronotum is rather long, with its sides convergent and only very feebly angulated in the middle.

Two male specimens have been found and presented to the British Museum by Mr. J. E. A. Lewis.

Length 9 mm.; breadth 5 mm.

Hab. Okinawa I. (Great Loo Choo).

Popillia formosana, sp. n. (Fig. 7.)

Æneo-castanea, capite, pronoto, scutello corporeque subtus obscure viridibus, elytris testaceis, hand metallicis, clypeo antico pronotique lateribus angustis plerumque testaceis, tarsis antennisque

rubris, femoribus tibiisque aut viridibus aut pallidis; sat brevis et convexa, clypeo minute rugoso, sutura recta, vertice irregulariter grosse punctato; pronoto brevi, convexo, subtiliter irregulariter punctato, lateribus medio fortiter angulatis; scutello paulo punctato; elytris striis 5 dorsalibus profundissime impressis et crebre punctatis, reliquis grosse punctatis, sexta antice abbreviata; pygidio fortiter transversim strigato, basi maculis 2 grossis setosis ornato; mesosterno antice verticali, recte angulato; corpore subtus ad latera sat longe griseo-piloso, abdominis segmentis lateraliter transversim bisectis, longe vix biserialim pilosis.

This is a small species of rather elongate form, with the shoulders rather prominent, the dorsal striæ extremely deep and strong, and the intervals very convex. The pronotum is very distinctly punctured and deeply emarginate in front of the scutellum; the hairy patches on the pygidium are remote and not produced towards the apex, and the mesosternum is truncate squarely in front and not produced. The hairy clothing of the lower surface is long and shaggy, but not thick.

Length 8 mm.; breadth 4.5 mm.

Hab. FORMOSA: Tai-nan.

In my paper on the Ruteline Coleoptera of Ceylon (Ann. & Mag. Nat. Hist. (8) viii. 1911, p. 354), I pointed out that, contrary to the opinion previously held, only a small proportion of the Ceylonese Rutelinæ occurred also on the Indian mainland; but amongst this small number of species common to both I included the only species of *Popillia* found in Ceylon, following Kraatz and Ohaus, both of whom had made special studies of this insect and its varieties. Later investigation has shown that this species is no exception, but that the Indian forms determined by those authors as belonging to it are really distinct. The Ceylon insect must be called *P. discalis*, Walk., that being the oldest of the names bestowed upon it, for *complanata*, Newm., the name by which it has been known, belongs to a mainland form (the type is a female) superficially like it, but structurally different.

Identical colour-phases recur through a series of different species in this group, so that description of the colours alone, as has been thought sufficient hitherto, is quite valueless. Specimens from Southern India submitted to Dr. Kraatz by Mr. H. E. Andrewes and to Dr. Ohaus by myself have been determined by them as belonging to the numerous colour-phases of the so-called *P. complanata*, showing that

the varietal names were applied not to definite natural forms, but to similarly coloured phases of various species collectively.

It is essential that descriptions should include the distinctive male characters, the females of various species of this group, which is distinguished by the border of white hairs on each side of the pronotum, being extremely similar, while the males fall into two divisions. In that to which the Ceylonese *P. discalis*, with *lucida*, *chlorion*, *adamas*, &c., belong, the longer middle claw is entire, while in *P. complanata* and other species it is cleft.

Five species of the group hitherto unrecognized are here described. Like all its other known members, they are Indian, and will be tabulated in my volume in the 'Fauna of British India.'

Popillia propinqua, sp. n. (Fig. 15.)

Cuprea vel fusco-ænea, supra nitidissima, elytris testaceis: breviter ovata, clypeo et fronte dense rugosis, pronoto antice et lateraliter lævissime punctato, lateribus sat dense albo-setosis; scutello fere lævi; singulis elytris dorsaliter transverse impressis et 5-striatis, striis punctatis, interstitio subsuturali lato, antice fortiter lineato-punctato; pygidio grosse punctato, maculis magnis 2 albo-pilosis basi ornato; mesosterno compresso, curvato, acuto.

Deep metallic green or coppery above and beneath, with the elytra alone testaceous; shortly ovate and very shining above. The clypeus and forehead are densely rugose and the vertex strongly punctured. The pronotum is very shining, minutely punctured at the front and sides, with a close-fringe of white setæ on each side. The scutellum is almost smooth. The elytra have each a distinct transverse impression before the middle and five punctured dorsal striæ, the subsutural interval being broad and bearing a row of strong punctures anteriorly. The pygidium is coarsely punctured and has two large, round, setose patches at the base and numerous scattered setæ towards the apex. The mesosternal process is strongly curved and sharp-pointed.

♂. The inner front claw is broad, but scarcely angulated, and the outer claw of the middle tarsus is entire.

Length 8.5–10 mm.; breadth 5–6.5 mm.

Hab. S. INDIA: Travancore (*G. S. Imray*).

This has the closest resemblance to *P. discalis* and *complanata*, but, with the exception of the elytra, it is uniformly dark in colour, the legs, clypeus, and sides of the pronotum being apparently always without the pale colouring which usually tinges them in the other two species. The foveæ

before the middle of the elytra are deeper and the mesosternal process is more pointed. The male is immediately distinguishable from that of *P. complanata* by the fact that the outer claw of the middle tarsus is not cleft. The ædeagus of the male *P. propinqua* is represented at fig. 15, and that of *P. complanata* at fig. 12.

Popillia pulchripes, sp. n. (Fig. 10.)

P. complanata, var. *viridipennis*, Kr. Deutsche ent. Zeitschr. 1892, p. 263.

P. complanata, var. *testaceipes*, Oh. Stett. ent. Zeit. 1897, p. 345.

Metallico-viridis, cyanea vel cuprea, prothoracis lateribus (anguste) pedibusque pallide flavis, sed tibiarum posticarum apice et tarsis posticis nigris: elongato-ovalis, convexa, nitida, prothoracis lateribus parce albido-setosis, pygidio maculis duabus haud magnis sed compactis basi ornato; clypeo rugoso, fronte crebre punctato; pronoto parce et minute punctato; scutello fere impunctato; singulis elytris fovea post scutellum striisque 5 dorsalibus punctatis profunde impressis, intervallo subsuturali modice lato, antice paulo punctato; pygidio grosse transverse striolato; processu mesosternali compresso, curvato, subacuto.

Uniform metallic green, blue or coppery above and beneath, with the extreme lateral edge of the prothorax and the legs bright orange, except the hind tarsi and the extremity of the hind tibiae, which are almost black. The extremity of the abdomen is often orange also.

Rather elongate-oval in shape, very smooth and shining, with a scanty fringe of greyish hairs at the sides of the pronotum, a small but compact tuft on each side of the base of the pygidium, and a thin clothing at the sides of the body beneath. The clypeus is rugosely, and the forehead closely, punctured, the pronotum very finely and scantily (except near the sides) and the scutellum almost smooth. The elytra have each a deep transverse impression behind the scutellum and five strongly impressed and punctured striae, and the intervals are convex, the second not much wider than the third and bearing only a few punctures. The pygidium is coarsely transversely punctured, and the mesosternal process is compressed, strongly curved, and not very blunt.

♂. The front tibia is armed with two short sharp teeth, the lower lobe of the inner front claw is not angulated, and the longer claw of the middle foot is not cleft.

Length 10-12 mm.; breadth 6-7 mm.

Hab. S. INDIA: Nilgiri Hills.

Taken in some numbers by Mr. H. L. Andrewes and Sir G. Hampson.

I have explained in my preliminary remarks why the names applied as varietal names to this and other forms described here cannot be retained.

Popillia eximia, sp. n. (Fig. 14.)

Supra omnino læte viridis: subtus cuprea, ovalis, sat convexa, nitida, clypeo rugoso, fronte crebre punctato, pronoto antice et lateraliter minute punctato, postice lævi, lateribus setis albidis sat anguste marginatis, scutello lato, lævi, haud angulato; singulis elytris fovea profunda pone scutellum striisque 5 dorsalibus profundis punctatis impressis, intervallo subsuturali haud lato, impunctato; pygidio grosse transverse punctato, basi utrinque macula haud magna albo-setosa ornato; processu mesosternali modice longo, curvato, compresso.

Bright green above and coppery beneath, with a close but narrow margin of white setæ on each side of the pronotum and a small compact patch on each side of the pygidium.

It is oval and moderately convex in shape and very smooth and shining above. The clypeus is rugose, the forehead densely punctured, the pronotum finely and scantily punctured at the front and sides, and the scutellum almost unpunctured. The last is broad and rounded at the apex. The elytra have each a very large and deep impression behind the scutellum and five deep dorsal striæ, which are distinctly punctured. The subsutural interval is scarcely wider than the next and almost unpunctured. The pygidium is coarsely transversely punctured, and the mesosternal process is moderately long, compressed, curved, and pointed.

♂. The two teeth of the front tibia are minute and sharp, the lower lobe of the inner front claw is not angulated nor very wide, and the longer claw of the middle feet is simple.

Length 11.5 mm.; breadth 7 mm.

Hab. S. INDIA: Nilgiri Hills (*G. F. Hampson*).

A single ♂ specimen.

Popillia clara, sp. n.

Viridis vel igneo-rufa, pronoti margine parciissime griseo-hirto pygidioque utrinque fasciculo minuto ornato: ovalis, glabra, nitida, clypeo rugoso, fronte crebre punctato, prothorace lateraliter parce punctato; scutello lævi; elytris sat vage punctato-striatis; pygidio grosse strigato; processu mesosternali compresso, obtuso, fere recto.

Bright metallic green or fiery red above and beneath, or
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with the upper surface, or the elytra only, fiery red; very smooth and shining.

The body is compactly ovate and moderately convex. The clypeus is rugose, short, with its front edge almost straight, and the forehead is closely punctured. The pronotum is very smooth and shining, with a few fine punctures near the front and sides, and the lateral grooves are deep and contain a very few inconspicuous whitish hairs. The scutellum is almost unpunctured and scarcely angulated at the apex. The elytra have each a distinct transverse impression before the middle and five lightly impressed and punctured dorsal striæ, the first, third, and fifth intervals being slightly convex, and the second broad and irregularly punctured along the middle. The pygidium is transversely strigose and bears a very minute tuft of outstanding whitish hairs on each side of the base and some scattered hairs towards the apex. The mesosternal process is moderately long, compressed, blunt, and nearly straight. The sides of the sternum and abdomen are clothed with long but not close hair.

♂. The front tibia is very broad and armed with two short but sharp teeth, the lower lobe of the inner front claw is angulated near the base, and the outer middle claw is cleft at the tip. The pygidium is smoother, shorter, and more inclined than in the female, and slightly protuberant at the extremity.

♀. The terminal tooth of the front tibia is long, curved, and blunt.

Length 9–12 mm.; breadth 5·5–7 mm.

Hab. S. INDIA: Nilgiri Hills (*H. L. Andrewes*), Pondichery.

Mr. Andrewes took this species in considerable numbers.

Popillia schizonycha, sp. n. (Fig. 11.)

Haud læte viridis, viridi-aurea vel cuprea, elytris sæpe magis obscure viridibus, nigro-cyaneis vel rufescentibus, marginibus plus minusve infuscat, clypeo, pedibus, abdominisque apice plerumque obscure rufis: corpus sat latum, robustum, supra nitidum; clypeo rugose punctato, fronte crebre punctato, scutello pronotoque antice et lateraliter minute et parce punctato, horum lateribus setis albidis modice late marginatis; singulis elytris fovea transversa post scutellum striisque 5 dorsalibus punctatis profunde impressis; pygidio grosse transversim striolato, basi maculis duabus setosis magnis rotundatis ornato; processu mesosternali longo, compresso, obtuso.

Deep green, golden-green, or coppery, with the elytra generally darker green or blue-black, but sometimes reddish

with a metallic-green suffusion and the sides more or less dark. The clypeus, legs, and extremity of the abdomen are sometimes also of a deep red colour.

It is a broad and massive insect, smooth and shining, and moderately convex above. The sides of the pronotum are conspicuously bordered with white hairs, the pygidium bears a pair of large round hair-patches at the base, and the lower surface is rather thickly clothed at the sides with similar white hairs. The clypeus is rugosely punctured, the forehead densely, and the scutellum and front and sides of the pronotum very finely and sparsely. The elytra have each a deep fovea behind the scutellum and five deeply impressed and punctured dorsal striæ. The subsutural interval is broad and has an irregular line of large punctures along the middle. The pygidium is coarsely transversely striolated, and the mesosternal process is strongly compressed and rounded at the extremity.

♂. The two teeth of the front tibia are short and sharp, the inner front claw has a broad angulated lower lobe, and the outer middle claw is cleft at the tip.

Length 11–12·5 mm.; breadth 6·5–7·5 mm.

Hab. S. INDIA: Bangalore, Nilgiri Hills (*H. L. Andrews*).

Three other Oriental species of *Popillia*, which have been described in connection with a volume in preparation for the 'Fauna of British India' series, may be conveniently included here:—

Popillia pilosa, sp. n.

Golden or coppery green, with the lower surface and legs darker coppery green, and the elytra testaceous, with a metallic sheen, and with the outer edges coppery black. The body is ovate and a little depressed. The clypeus is rugose and short, with the front margin feebly rounded and slightly reflexed. The forehead is rugosely punctured and clothed with long, erect, yellow hairs, and the vertex strongly and distinctly punctured. The pronotum is coarsely punctured, the punctures becoming confluent near the sides, and is also clothed with long but not close yellow hairs. The lateral margins are scarcely curved, angulated before the middle, with the front and hind angles sharp, the former produced, the latter right angles. The scutellum bears a few unequal punctures, and each elytron bears seven nearly equidistant dorsal punctured striæ, the second and fifth less impressed than the rest and abbreviated behind. There is no abrupt

lateral flange. The pygidium is punctured and bears two basal tufts of yellow hairs. The lower surface is clothed, except along the middle line of the abdomen, with long yellowish hair, and the mesosternal process is short and vertical in front.

♂. The inner front claw has the lower lobe very broad and angulate near the base, the two teeth of the front tibia are short and sharp, and the hind tarsi are rather longer and slenderer than those of the female.

Length 7·5–8·5 mm.; breadth 4·5 mm.

Hab. WESTERN HIMALAYAS: Dehra Dun; Kumaon; Lansdown Garhwal (*A. G. Lyell*, June 1909).

Popillia simlana, sp. n.

Golden or coppery green, with the legs and lower surface dark coppery and the elytra testaceous, with a metallic suffusion and the extreme lateral margins coppery black. The body is ovate and a little depressed. The clypeus is confluent punctured, broad, with the front margin nearly straight and strongly reflexed. The forehead is rugosely punctured and thinly clothed with erect yellow hairs. The pronotum is very strongly punctured, the punctures becoming confluent near the lateral margins, which are scarcely curved, angulated near the middle, with the front angles acute and the hind angles obtuse. The whole surface is thinly clothed with erect yellowish hairs. The scutellum bears only a few fine punctures and the elytra have each five complete punctured dorsal striæ, the second interval very wide and bearing many large irregular punctures, and the fourth having a few punctures forming an imperfect row along the middle. The pygidium bears coarse and not close transverse striolæ, and is decorated at the base with two tufts of greyish hairs. The lower surface and legs are similarly clothed with long, but not close, grey hairs, except at the middle of the abdomen. The mesosternal process is vertical in front and not produced beyond the front coxæ.

♂. The inner front claw has the lower lobe very broad, the front tibia is armed with two short and sharp teeth, and the hind tarsi are rather longer and slenderer than in the female.

Length 8–9 mm.; breadth 4–5 mm.

Hab. PUNJAB: Simla (7000 feet—*H. Chippendale*, June 1909); NEPAL: Khatmandu (*Col. Manners Smith*, June 1909).

This species exactly resembles *P. pilosa*, but is easily

distinguished by the broad reflexed clypeus. The elytral sculpture is also slightly different.

Popillia amabilis, sp. n.

Viridi-aurea vel cuprea, elytris, pedibus 4 anterioribus femoribusque posticis flavis, æneo-tinctis, tarsis posticis obscuris: elongato-ovalis, haud convexa, clypeo parvo, rugoso, fronte pronotoque crebre et grosse punctatis, horum basi lævigato, lateribusque rugatis; scutello parum punctato, elytris lineis 7 dorsalibus fortiter punctatis, lateribus abrupte deplanatis; pygidio maculis 2 magnis flavo-setosis fere conjunctis ornato; processu mesosternali valido, compresso, apice rotundato.

Rich golden-green, the elytra, front and middle legs and hind femora pale yellow with a metallic-green lustre, the lower surface, pygidium, and hind tibiæ generally reddish golden, and the hind tarsi dark brown.

It is elongate in shape and not very convex above. The pygidium bears two large patches of yellow setæ extending almost across it at the base, but scarcely meeting in the middle, the apex bears similar scattered setæ, and the lower surface is rather closely clothed at the sides. The clypeus is very short and rugose, the forehead strongly and densely punctured, and the pronotum coarsely and densely punctured except before the scutellum, the punctures coalescing near the sides. The scutellum bears only a very few punctures, and the elytra have seven dorsal rows of strongly impressed and punctured lines, the second line rather irregular and disrupted at the base. The sutural space is broad and tapers considerably at each end. There is a narrow but abrupt lateral flange at the external margin. The pygidium is scantily punctured and shining along the middle. The mesosternal process is strong, compressed, broad, and bluntly rounded at the end.

♂. The legs are stout, the front tibia armed with two short sharp teeth near the end, the lower lobe of the inner front claw is angulated near the base and the longer claw of the middle foot entire.

I do not know the female.

Length 9-10 mm. ; breadth 5-6 mm.

Hab. ASSAM: Manipur, Naga Hills (*Doherty*).

This species is very close to *P. difficilis*, Newm., but in that the pronotum is much less strongly punctured and the lateral flanges to the elytra are absent.

The types of all the species here described as new are in the British Museum.

The following is the explanation of the accompanying diagrammatic figures of the aedeagus of the male of species referred to in this paper:—

- Fig. 1. *Popillia marginicollis*.
 Fig. 2. " *felix*.
 Fig. 3. " *birmanica*.
 Fig. 4. " *andamanica*.
 Fig. 5. " *mongolica*.
 Fig. 6. " *taiwana*.
 Fig. 7. " *formosana*.
 Fig. 8. " *adamus*.

- Fig. 9. *Popillia lucida*.
 Fig. 10. " *pulchripes*.
 Fig. 11. " *schizonycha*.
 Fig. 12. " *complanata*.
 Fig. 13. " *discalis*.
 Fig. 14. " *eximia*.
 Fig. 15. " *propinqua*.