punctured on the disk before the middle, behind the middle and at the sides with irregular semicircular punctures, which become confluent towards the apex; a rather strong, smooth, discal costa from the middle to the apical callosity; slightly impressed at the apex of the scutellum and within the humeral prominence. Pygidium short and broad, slightly convex, with coarse confluent punctures and sparse pubescence; a large fovea on each side near the apex. Beneath very coarsely punctured at the sides; mesosternal process dilated and rounded in front. Legs punctured and sparsely pubescent.

Loo Choo Islands (*H. Pryer*).

Compared with *C. Lewisi* this species has the thorax narrower at the base and less deeply emarginate before the scutellum, the scutellum much more narrowed at the apex, the pygidium less convex, and the mesosternal process much smaller; it appears to be allied to the European *C. angustata*, Germ. All the specimens taken by Mr. Pryer are males, and there are also examples from the same locality in the collections of Mr. G. Lewis and the British Museum.

XXVI.—*An Account of three Series of Lepidoptera collected in North-west India by Major Yerbury.* By ARTHUR G. BUTLER, F.L.S., F.Z.S., &c.

[Continued from p. 151.]

Papilionidæ.

PIERINÆ.

64. *Colias Fieldii*.

Colias Fieldii, Ménétriés, Cat. Mus. Petrop. Lep. i. p. 79, pl. i. fig. 5 (1855).

♂. Thundiani, 15th August, 1886.

This is considerably larger and deeper-coloured than *C. edusina*; the latter is, however, perhaps nothing more than the prevalent western type of the same species.

65. *Colias edusina*.

Colias edusina, Felder, Wien. ent. Mon. iv. p. 100. n. 55 (1860).

♂. Murree, 2nd August, 1885; ♂ ♀. Thundiani, 13th, 15th, 17th, and 25th August, 1886.

“Common at Campbellpore and Murree; very common on Thundiani.”—*J. W. Y.*

66. *Colias sareptensis*.

Colias hyale, var. *sareptensis*, Staudinger, Cat. Lep. eur. Faun. p. 5. n. 48 (1871).

♂. Campbellpore, 3rd and 20th April; ♀. 2nd June; Hassan Abdal, 9th May; ♂. Abbottabad, 1st October, 1886.

67. *Colias erate*.

Colias erate, var. ♀, *pallida*, Staudinger, Cat. Lep. eur. Faun. p. 3. n. 54 (1871).

♂ ♀. Hassan Abdal, 9th April; ♂. Campbellpore, 20th April; ♂ ♀. Thundiani, 15th and 17th August; ♀. Nandar, 25th September, 1886.

Typical *C. erate* was not sent with the present series, its place being evidently almost entirely occupied by the hybrid form *C. pallida*. Major Yerbury says:—“All these pale forms of clouded yellows are common at Campbellpore, Hassan Abdal, and Murree, but uncommon on Thundiani.”

68. *Terias fimbriata*.

Terias fimbriata, Wallace, Trans. Ent. Soc. ser. 3, vol. iv. p. 323. n. 16 (1867).

♂. Abbottabad, 13th October, 1886.

69. *Terias irregularis*.

Terias irregularis, Moore, Proc. Zool. Soc. 1882, p. 253.

♂. Campbellpore, 24th October, 1886.

70. *Terias anemone*, var.

Terias anemone, Felder, Wien. ent. Monatschr. vi. p. 23. n. 7 (1862).

♂ ♀. Hassan Abdal, 9th May; ♂. Khairabad, 23rd May and 6th June; Abbottabad, 1st October, 1886.

Slightly smaller than Japanese examples and usually rather paler; but amongst specimens recently received from Major Yerbury there is a male (taken at Khairabad on the 28th October, 1886) which is quite as large as those from Japan; the early examples (*i. e.* those taken in May and June) are all more or less worn and faded, with the exception of a single male from Major Yerbury's private collection obtained at Hassan Abdal on the 27th June.

71. *Terias suava*.

Terias suava, Boisduval, Sp. Gén. Léop. i. p. 670. n. 28 (1836).

♂. Campbellpore, 8th May; Abbottabad, 1st October, 1886.

Amongst specimens of *Terias* recently presented to the Museum is a small male of *T. silhetana*, Wallace, taken by Major Yerbury at Noor Poor Shahan, near Rawul Pindi, on the 10th April, 1887.

72. *Terias purreea*.

Terias purreea, Moore, Proc. Zool. Soc. 1882, p. 252.

♂. Akhor, 22nd April; Hassan Abdal, 9th May; ♂ ♀. Khairabad, 23rd May; ♂. 6th June; Campbellpore, 30th May and 21st October; ♀. Thundiani, 12th September; Hurripur, 14th October, 1886.

The female obtained at Campbellpore in October was taken *in coitû* with a typical male *T. hecabe*, another proof of the readiness with which distinct species of the *Colias* group of genera will pair together. Both sexes of *T. purreea* can be distinguished easily from the corresponding sexes of *T. hecabe*, and until some reliable lepidopterist can settle down to carefully rear each species of *Terias* from eggs which he has seen deposited upon plants strictly confined in such a way as to prevent all intrusion of other species, I shall continue to believe in the possible constancy of the various forms. As regards Mr. Pryer's experiments in Japan, he has himself proved their untrustworthiness by recording his belief that he has reared *T. læta* (an Indian species) from eggs laid by *T. betheseba*, and, still further, that one of the pupæ from the same batch of eggs produced the almost generically distinct *T. hecabe*, which individual of the batch he says he is "led to believe is a hybrid." What Mr. Pryer means by expressing his faith in anything so utterly impossible I leave him to explain; meanwhile I candidly confess my inability to rely upon his experiments.

73. *Terias fraterna*.

♂. *Terias fraterna*, Moore, Journ. Linn. Soc., Zool. 1886, p. 46, pl. iv. fig. 6.

♀. Hassan Abdal, 14th October, 1885.

It seems probable that this insect, which is intermediate between *T. purreea* and *T. hecabe*, is a hybrid between the two species.

74. *Terias hecabe*.

Papilio hecabe, Linnæus, Mus. Lud. Ulr. p. 249 (1764).

♂. Hassan Abdal, 22nd July; ♂ ♀. Thundiani, 12th and

16th September ; ♂. Nandar, 25th September ; Campbellpore, 21st October, 1886.

75. *Terias hecabeoides*.

Terias hecabeoides, Ménétriés, Cat. Mus. Petrop. Lep. i. p. 85, pl. ii. fig. 2 (1855).

♂. Nandar, 25th September, 1886.

76. *Terias læta*.

Terias læta, Boisduval, Sp. Gén. Léop. i. p. 674. n. 36 (1836).

♀. Nandar, 25th September, 1886.

77. *Gonepteryx rhamni*.

Papilio rhamni, Linnæus, Faun. Suec. p. 272. n. 1042 (1761).

♀. Campbellpore, 20th March ; ♂. Khairabad, 11th April, 1886.

From specimens since received from Major Yerbury it is evident that two males were obtained at Campbellpore on the 3rd March and three at Khairabad on the 11th April. It may readily be distinguished from the more abundant Indian form *G. nipalensis* by its much more uniform (yellowish) colour below ; in *G. nipalensis* the costal border and apex of primaries and the whole of secondaries on the under surface are considerably whiter than in *G. rhamni*; the margin of the wings is also more scalloped.

78. *Gonepteryx nipalensis*.

Gonepteryx nipalensis, Doubleday, Gen. Diurn. Lep. p. 71. n. 9 (1847).

♂. Akhor, 22nd April ; Futch Khan's bungalow, Kooteer, Chittar Pahar, 23rd April ; Hassan Abdal, 9th May ; ♀. Thundiani, 11th August, 1886.

Of the two preceding species Major Yerbury says:—"Common round Campbellpore in the spring ; also in the Chach plain on the banks of the Indus, at Murree, and Thundiani."

79. *Gonepteryx zaneka*.

Gonepteryx zaneka, Moore, Proc. Zool. Soc. 1865, p. 493. n. 35, pl. xxxi. fig. 18.

♂ ♀. Thundiani, 13th August ; ♂. 17th, 20th, and 21st August, 1886.

"Common on Thundiani in August and September 1886."
—J. W. Y.

The female of this species seems to be comparatively rare ; of a dozen examples recently brought home by Major Yerbury in papers the whole are males.

80. *Teracolus protractus*.

Teracolus protractus, Butler, Proc. Zool. Soc. 1876, p. 137. n. 37.

♀ . Campbellpore, 29th June ; ♂ ♀ . 12th July, 1886.

Two males and one of the females have the third black spot of primaries expanded so as to reach the inner margin ; the under surface of the males is yellow, but that of the females varies from clear yellow to pinkish yellow, approaching flesh-pink.

“Common at Campbellpore, beginning of July 1886.”—*J. W. Y.*

There can be little doubt but that the form of this species occurring at Campbellpore will prove to be fairly constant in the slight differential characters which distinguish it from the type ; it is, however, extremely doubtful whether it can be separated, inasmuch as we have a female from Kutch with the typical small black spots and deep flesh-pink secondaries on the under surface, males from the same locality being yellow below.

81. *Teracolus puellaris*.

Teracolus puellaris, Butler, Proc. Zool. Soc. 1876, p. 136. n. 33.

♀ . Chittar Pahar, Lumbahdun, November 1885 ; ♂ ♀ . Campbellpore, 29th June, 17th July, 1886.

In Major Yerbury's private collection I found one or two females of *Teracolus ochreipennis* taken at Campbellpore on the 29th June. Major Yerbury says it was fairly common for two days, 29th and 30th, and then disappeared.

82. *Teracolus purus*.

Teracolus purus, Butler, Proc. Zool. Soc. 1876, p. 160. n. 113, pl. vii. figs. 14, 15 (1876).

♂ . Campbellpore, 13th, 17th, and 25th July ; ♀ . Hassan Abdal, 18th July, 1886.

It will be seen that this species was obtained at the same time in 1886 as in 1885. Major Yerbury, in his notes, expresses a belief that *T. bimbura*, *farrinus*, *purus*, and a fourth form unidentified by Mr. De Nicéville are all varieties of *T. etrida*. He says :—“All these forms of *Teracolus* are common round Campbellpore. There are two broods, spring and autumn. I obtained specimens also at Hassan Abdal, Khairabad, and near Barracoo on the Murree and Pindee

road." The dates of capture seem to me to point to an opposite conclusion, since *T. bimbura* and *T. farrinus*, the two forms least alike, were collected in October and November only by Major Yerbury. I have already shown that *T. farrinus* cannot, however, be the autumnal form of *T. purus*, as Col. Swinhoe obtained specimens at Kurrachee in July, whereas he caught *T. purus* in May and June. On the other hand, the range of *T. bimbura* (which might otherwise be supposed to be the late brood of *T. purus*) appears not to be the same as that of the latter species.

83. *Ixias pygmæa*.

Ixias pygmæa, Moore, Proc. Zool. Soc. 1882, p. 254, pl. xii. fig. 1.

♀. Campbellpore, 21st October, 1886.

"Fairly common round Campbellpore and Khairabad in October and November; very common at Kala Dilli in the Chittar Pahar in November."—*J. W. Y.*

I have examined twenty-two examples recently brought home by Major Yerbury in addition to five previously received; the males vary only in size, the females only in occasionally having the oblique band on the apical area tinted with orange; practically, therefore, the common *Ixias* of Campbellpore and the neighbourhood, in spite of its near relationship to *I. moulmeinensis* of Burmah and many other fixed local types, perfectly holds its own as a constant form and therefore a species. Once begin to associate these local types and the whole genus runs together, as may be seen by arranging them as follows:—1. *I. Reinwardtii*, of Lombock; 2. *I.*, sp.?, of Bali; 3. *I. venilia*, of Java; 4. *I. insignis*, of Formosa; 5. *I. balice*, of Java; 6. *I. venatrix*, of Moulmein; 7. *I. kausala*, of Depalpur &c.; 8. *I.*, sp.?, Himalayas; 9. *I.*, sp.?, Bhotan; 10. *I.*, sp.?, Elephant Island, W. Bombay; 11. *I. moulmeinensis*, of Burmah; 12. *I. pygmæa*, of Campbellpore and Kangra Valley; 13. *I. pyrene*, of the N.E. Himalayas to China; 14. *I.*, sp.?, of Darjiling; 15. *I. sesia*, of Mussowrah, Bengal; 16. *I.*, sp.?, of Silhet to Bhotan; 17. *I.*, sp.?, of Darjiling to Bhotan; 18. *I. dharmasala*, of Dharmasala; 19. *I.*, sp.?, of N.W. Provinces and "Afghanistan" (probably incorrect locality); 20. *I. frequens*, of Barrackpore &c.; 21. *I. cingalensis*, of Ceylon; 22. *I. Wattii*, of Bengal; 23. *I. undatus*, of Borneo; 24. *I. evippe*, of Eastern India, from Darjiling to China; 25. *I. latifasciatus*, of Moulmein; 26. *I. anaxibia*, of China*; 27. *I.*, sp.?, of

* This species is, however, unknown to me, and may be only one of the three following, badly figured by Cramer.

Salanga; 28. *I. pallida*, of Upper Tenasserim; 29. *I. citrina*, of Upper Tenasserim; 30. *I. andamana*, of the Andamans; 31. *I.*, sp.?, of the Thoungyeen Valley, Tenasserim; 32. *I. mariannæ*, of the N.W. Himalayas, Bombay, Ceylon, &c.; 33. *I. meridionalis*, of Poona and Bombay; 34. *I. agnivera*, of Poona and Bombay; 35. *I. depalpura*, of Depalpur, &c.

Probably no collections but our own and Mr. Moore's are sufficiently rich in the various closely-allied types of *Ixias* to show the perfect gradation which exists in the above series, and, consequently, to many lepidopterists the differences upon which some of them are separated must appear to be trivial in the extreme; nevertheless, I am convinced, after examining the numerous collections which have come to hand during the last twenty-three years, that most of the above are strictly constant to locality, and that only such species as have a wide geographical range (as *I. evippe*) show any tendency to *variability* (*i. e.* individual inconstancy), and even then that there is never any difficulty in deciding to which *Ixias* the aberrant specimen belongs.

In a case like the foregoing, and it is not a solitary one by any means amongst the *Lepidoptera*, only two courses are open to the systematist: he must either say that the genus consists of one species exhibiting local modifications, the degrees of which are trivial, but the sum of which, comparing the first and last, is prodigious, or he must separate all the forms as species, no matter whether their modification has been due to isolation on islands, by mountain ranges, by rivers, or limitation of food-plant.

84. *Catopsilia jugurthina*.

Colias jugurthina, Godart, Enc. Méth. ix. p. 96. n. 21 (1819).

♂. Hassan Abdal, 27th June; Chuttar, between Tret and Barracoo, Murree road, 9th October; ♀. Hurripur, 14th October, 1886.

This is one of the forms of the *C. crocale* group, of which at present we know too little to be certain whether it is constant or otherwise; it is certainly the commonest of the Indian forms, and its range is enormous, extending along the base of the Himalayas and down the east of India to the Malayan Islands, certainly as far as Waigiou, with scarcely any alteration of pattern. The locality of *C. crocale* is said to be "East Indies;" in the Museum collection we have it (I speak of the typical form) from Ceylon and Malacca only. In my opinion it is highly probable that the latter is an aberrant development of the same species, tending to resemble the

Celebesian *C. flava*; for both *C. jugurthina* and *C. crocale*, together with a third yellower form, occur in Ceylon.

When I wrote my monograph of the genus there was no difficulty; all the forms of the *C. crocale* type were associated as one variable species, and *C. catilla* stood next as a well-marked second species. Since then intermediate forms, apparently constant, have turned up between *C. crocale* and *C. catilla*, whilst collections have come to hand containing only one or two of the supposed "varieties" in considerable numbers, showing that in certain localities these types are either constant or prevalent; thus assurance has turned to uncertainty, and it has become necessary to specify the form received when giving an account of a collection—another evidence of the truism "the more we know the less we know."

85. *Catopsilia gnoma*.

Papilio gnoma, Fabricius, Syst. Ent., App. p. 808 (1775).

♀. Campbellpore, 1st August, 1886.

"A few at Campbellpore, 22nd and 24th July, 1886."—*J. W. Y.*

86. *Catopsilia minna*.

Papilio minna, Herbst, Naturs. Schmett. v. pl. lxxxix. figs. 1, 2 (1792).

♂ ♀. Campbellpore, 12th July; ♂. 14th and 16th July, 1886.

C. pyranthe, with which this was identified, was formerly associated with it; that insect is, however, a narrower bordered species, with slighter markings also on the female primaries: both forms appear to be constant.

87. *Belenois auriginea*.

Belenois auriginea, Butler, Proc. Zool. Soc. 1886, p. 374. n. 74.

♀. Campbellpore, 16th May, 1886.

"Common round Campbellpore in the spring."—*J. W. Y.*

According to De Nicéville this is the spring brood of *B. lordaca* (identified by him as *B. mesentina*); that this is incorrect is evident from the fact that Col. Swinhoe took the supposed autumn brood at Quetta in March and May, and that its African representative, which I regard as the same species, was taken in Somali-land in January and at Haithal-kim in April; we also have one male taken by Major Yerbury at Campbellpore in June. It is an interesting fact that the bulk of the supposed seasonal forms are incapable of being tested by dates, that "dry- and wet-season forms" so called are always coming to hand with the same date of capture on

their envelopes ; but what is most singular is that the publication of facts to this effect does not hinder the repetition of these errors in the writings of those who first promulgated them.

Turning to Major Yerbury's private collection, the first specimen I took up was a dark male (*B. auriginea*) which should have been taken in the spring ; but on looking at the label I found it marked "Rawul Pindee, 21st November." I next turned up a pale female (*B. lordaca*), and found it labelled "Campbellpore, 21st May, 85." This remarkable evidence led me to examine seven other specimens recently brought home by Major Yerbury, with the following result:—

Supposed Spring Brood.

♂. Rawul Pindee, 25th November.
♀. " " 5th December.

Supposed Autumn Brood.

♂. Thundiani, 5th May.
♂. Campbellpore, 31st October.
♂ & ♀. Rawul Pindee, 25th November.

88. *Synchlœ daplidice*.

Papilio daplidice, Linnæus, Syst. Nat. i. 2, p. 760. n. 77 (1767).

♀. Hassan Abdal, 9th May, 1886.

"Common in the neighbourhood of Campbellpore in May and June, and at Hassan Abdal in May."—*J. W. Y.*

Amongst the *Lepidoptera* brought home this year are ten examples of *Pontia soracta* taken by Major Yerbury at Thundiani on the 3rd, 4th, and 5th of May and at Kala Pani on the 6th.

89. *Ganoris ajaca*.

Pieris ajaca, Moore, Proc. Zool. Soc. 1865, p. 490. n. 21, pl. xxxi. fig. 16.

♂ ♀. Thundiani, 11th, 13th, and 14th August, 1886.

"Common at Murree and Thundiani in August."—*J. W. Y.*

90. *Ganoris gliciria*.

Papilio gliciria, Cramer, Pap. Exot. ii. pl. clxxi. figs. E, F (1779).

♀. Attock Bridge, Khairabad side, 4th April ; ♂ ♀. Hassan Abdal, 9th May ; ♀. Thundiani, 14th August, 1886.

91. *Ganoris nipalensis*.

Pieris brassicæ, var. *nipalensis*, Gray, Lep. Ins. Nepal, pl. vi. figs. 1 and 3 (1846).

♀. Thundiani, 20th September, 1886.

92. *Euchloe lucilla*.

Euchloe lucilla, Butler, Proc. Zool. Soc. 1886, p. 376. n. 80, pl. xxxv. fig. 4.

Campbellpore, 18th and 27th March, 1st, 7th, 13th, and 14th April; Attock Bridge, Khairabad side, 4th April; Akhor, 22nd April, 1886.

Now that I have a long series of this species before me (that is to say thirteen in the present consignment, fourteen recently brought home, and nine in Major Yerbury's private collection), I am better able to point out the constant differences between it and the Algerian *E. charlonia*. It is invariably smaller, with comparatively shorter costal margin to primaries; the colour of the males is a slightly deeper yellow, frequently gamboge-yellow—the females being pale brimstone, only slightly yellower than some males of *E. penia* of Turkestan; the black spot at the end of the cell is larger and never replaced by a black lunule on the under surface; the outer border of primaries is never triangular, as in *E. charlonia*, but always forms a distinct angle internally on the lower radial vein; on the under surface the white-spotted rose-coloured margin to the primaries is far brighter and clearer, and the apical area of primaries and whole surface of secondaries are frequently, though not invariably in the female, paler and less black-speckled, or even yellow, faintly speckled with olive.

PAPILIONINÆ.

93. *Papilio erithonius*.

Papilio erithonius, Cramer, Pap. Exot. iii. pl. ccxxxii. figs. A, B (1872).

Campbellpore, 20th April, 1886.

"Common at Campbellpore in October and November, 1885."—J. W. Y.

94. *Papilio asiaticus*.

Papilio machaon, var. *asiatica*, Ménétriés, Cat. Mus. Petrop. Lep. i. p. 70 (1855).

Futch Khan's bungalow, Kooteer, 26th April; Thundiani, 12th August, 1886.

95. *Papilio arcturus*.

Papilio arcturus, Westwood, Ann. Nat. Hist. ix. p. 37 (1842).

Thundiani, 17th August, 1886.

"Common at Murree and Thundiani in August 1885 and 1886."—J. W. Y.

Nevertheless Major Yerbury has only brought home one perfect and three or four mutilated examples ; probably he was too generous to entomologists in India to leave many of so attractive a butterfly to add to our series *. In England *P. arcturus* is generally accounted rather a rare species.

96. *Papilio polycctor*.

Papilio polycctor, Boisduval, Sp. Gén. Lép. i. p. 205. n. 18 (1836).

Kala Pani, 1st September, 1886.

"Taken at Murree and Thundiani. In my opinion *P. arcturus* frequents the upper part of the hill, *P. polycctor* the lower slopes ; one of these species, probably the latter, very common on the stream near the Dhobis ghat, Abbottabad."—*J. W. Y.*

In Major Yerbury's boxes I found one example of *Papilio cloanthus* taken at Murree on the 30th August, 1885 ; *P. philoxenus*, taken at Murree on the 5th August. Among the unset things I found *P. dissimilis*, from Noor Poor Shahan, Rawul Pindee, on the 10th April ; *P. govindra*, taken on Thundiani, 4th May ; and *P. pammon*, at Hurripur, on the 14th October, 1886.

Hesperiidæ.

97. *Hesperia ladon*.

Papilio ladon, Cramer, Pap. Exot. iii. pl. cclxxxiv. G (1782).

Thundiani, 23rd September, 1885.

Only one example was obtained ; it was identified as "*Badamia exclamationis*," a nearly allied but apparently distinct butterfly, which will probably be stated to be a seasonal form of it.

98. *Hesperia alexis*.

Papilio alexis, Fabricius, Syst. Ent. p. 533. n. 387 (1775).

♂. Tret, 9th October, 1885.

99. *Parnara mangala*.

Hesperia mangala, Moore, Proc. Zool. Soc. 1865, p. 792.

Murree, 10th September, 1885 ; Thundiani, 17th and 20th August and 20th and 30th September, 1886.

This species has been identified for Major Yerbury as *Parnara bada*, from which it may easily be distinguished by its superior size, darker coloration, larger hyaline spots, particu-

* See, however, the note to *P. polycctor*, which leaves it doubtful which is the common species.

larly the lowest spot on the primaries, and the more regular arrangement of the spots on the secondaries. I have already pointed out most of these differences, but the name *bada* seems to be still employed for *P. mangala* in India.

100. *Chapra mathias*.

Hesperia mathias, Fabricius, Ent. Syst. Suppl. p. 433 (1798).

♀. Road between Abbottabad and Kala Pani, 9th August ; Kala Pani, 20th August ; Dhum tower, near Abbottabad, 30th September ; ♂. Hurripur, 14th October, 1886.

One of the females enumerated above was labelled as *Parnara bada*, the other two as "*Parnara karsana*;" the male was also identified with the latter in spite of the very distinct oblique band on the primaries, the dark olive coloration, and more numerous hyaline spots.

101. *Gegenes nostrodamus*.

Hesperia nostrodamus, Fabricius, Ent. Syst. iii. 1, p. 328. n. 246 (1793).

♂. Kala Pani, 30th August ; Hurripur, 14th October, 1886.

102. *Gegenes karsana*.

Hesperia karsana, Moore, Proc. Zool. Soc. 1874, p. 576, pl. lxvii. fig. 6.

♂. Futch Khan's bungalow, Kooteer, Chittar Pahar, about 2000 feet, 23rd April, 1886.

103. *Pyrgus marrubii*.

Hesperia malvarum, var. *marrubii*, Herrich-Schäffer, Schmett. Eur. i. *Hesp.* figs. 14, 15 (1845).

Thundiani, 15th and 25th August, 1886.

Identified wrongly as *P. dravira*, and said by Major Yerbury to have been "fairly common on Thundiani, beginning of August 1886."

104. *Pyrgus zebra*, sp. n.

Nearest to *P. sataspes* of South Africa ; above black-brown ; a spot in the cell, a smaller spot obliquely below it ; a sub-triangular spot across the end of the cell, two smaller spots obliquely below it, and a dot outside, forming a triangle with the discocellular and second spot ; three small spots placed transversely between the subcostal branches halfway between the cell and apex ; a curved series of five or six crescentic dots near to outer margin, a marginal series of dots at base of fringe, and a series of larger spots on the fringe white : secon-

daries with a subtrigonal spot at the end of the cell, a smaller oblong spot between the latter and the abdominal margin on the first median interspace, four or five dots near outer margin, a marginal series of spots, and the fringe white; palpi, edges of collar, and tegulæ greyish. Costal border of primaries below white; five black marginal dashes from the middle, the last dash being short and apical; a whitish patch at base of cell, a second at about centre of interno-median area, and a third at apex; the ordinary white spots larger than above; the fringe whitish, barred with blackish: secondaries greyish brown; the base, an abbreviated, narrow, slightly zigzag, subbasal band, a broad, nearly regular band from costa to anal angle, and a narrow, slightly interrupted stripe from apex to anal fourth of outer margin white; apical three fourths of outer border grey; abdominal border white; fringe dull white, traversed by a greyish stripe: palpi, excepting the tips, basal half of antennæ below, pectus, and legs white; venter white, the sides blackish, with white edges to the segments. Expanse of wings 26 millim.

♀. Campbellpore, 13th April; ♂. Futch Khan's bungalow, Kooteer, Chittar Pahar, 2000 to 3000 feet, 23rd April, 1886.

The under surface of this very distinct species is quite unlike any other Indian *Pyrgus*, the secondaries being alternately regularly banded with brown and white; several of the specimens were labelled as "*P. evanidus*," but they are utterly distinct from that species, the hind wings of which on the under surface are olive-greenish, spotted and blotched with white. Four examples were sent to us in 1886, and in the unset series brought home by Major Yerbury I found eight more (all taken on the 23rd April). In the notes on the various species I find *P. zebra* again recorded as "*P. evanidus*, common at Campbellpore, May and June; very common on the Chittar Pahar, end of April, 1886."

105. *Taractrocera sagara*.

Pamphila sagara, Moore, Proc. Zool. Soc. 1865, p. 792.

Hassan Abdal, 22nd July, 1886.

"Fairly common at Hassan Abdal, 18th July, 1886; a single specimen taken below Kala Pani, en route to Abbottabad, on the 30th August, 1886."—J. W. Y.

106. *Antigonus Taylora*.

This name has been given by Mr. De Nicéville to a butterfly received by him from the Neilgherries; it is allied to *A.*

vasava and *A. potiphera*, is of the size, shape, and has the front-wing hyaline spots of the latter, but the secondaries are without hyaline spots, and the ground-colour is of a pale cupreous or sericeous clay-colour; the spots of the primaries are black-edged and partly connected by three or four dusky, lunulated, macular stripes, which, however, are better defined on the secondaries; the body is rather dusky in colouring; below the wings are paler, the basal area of primaries and abdominal border of secondaries being whitish and the stripes on the latter wings represented by well-defined blackish spots or dashes. Expanse of wings 35 millim.

Futch Khan's bungalow, Kooteer, Chittar Pahar, probably 3000 feet, 24th April, 1886.

Labelled "*Hesperia*, sp., new." As specimens from the Neilgherries stand in Mr. Moore's collection labelled "*A. Taylora*, De N.," I presume that the species has been described; but after looking through the 'Zoological Records' for the last five or six years and the 'Journal of the Asiatic Society' for 1886 I have failed to find it; perhaps it has been referred to another genus, and therefore I have overlooked it, or possibly it is a MS. name.

Three more or less worn examples were sent home by Major Yerbury, and in the series brought home were two others from the same locality and two taken at Noor Poor Shahan, near Rawul Pindee, on the 10th April.

107. *Plesioneura leucocera*.

Hesperia leucocera, Kollar, in Hügel's Kaschmir, iv. 2, p. 454, pl. xviii. figs. 3, 4 (1848).

Kala Pani, 29th August, 1886.

An account of the moths of these collections will be given in a subsequent paper.

XXVII.—*New Species of Butterflies collected by Mr. C. M. Woodford in the Solomon Islands.* By F. D. GODMAN and O. SALVIN.

SINCE the descriptions published in the last number of the 'Annals' (*anteà*, pp. 90–101) were prepared Mr. Woodford has returned to England, bringing with him another large collection of butterflies chiefly collected on the island of

Butler, Arthur G. 1888. "XXVI.—An account of three series of Lepidoptera collected in North-west India by Major Yerbury." *The Annals and magazine of natural history; zoology, botany, and geology* 1, 196–209.

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