

where it joins the costa abruptly; sheath broad at base, tapering to an obtuse point. Colour black; posterior and upper orbits, face below antennæ, clypeus, labrum, mandibles, except tips which are piceous, palpi, posterior angles of pronotum, tegulæ, legs entirely, apical segments of venter, reddish-yellow; flagellum beneath and entire apical joints rufous; posterior tarsi infuscated. Wings hyaline, nervures pale brown, costa and basal half of stigma pallid.

♂.—Length,  $4\frac{1}{2}$  mm. More slender than ♀; differs from the ♀ as follows: ocellar basin present, but very shallow, bounded by low rounded walls; middle fovea shallower; stigma rounded on lower margin; lower discal cell of hind wing slightly exceeding lower; clypeus, labrum, mandibles, pallid. The mandibles are sharp, with a small inner tooth; procidentia rounded at apex.

*Habitat*.—♀, Delta, Colo., April 23, '97 (C. P. Gillette), "Willow galls"; ♂, Ft. Collins, Colo., March 30, '97 (E. G. Titus), "emerging from Willow galls collected in Jan."; ♀, same as last; ♂, Delta, Colo., April 28, '97 (C. P. Gillette), "Willow galls, flies emerging May 23." The first ♀ and ♂ are the types. Type in the collection of the Colorado Agricultural College.

This species falls near *E. insularis*, Kincaid, and *E. salicicola*, E. A. Sm. It may be known from the former by the different shaped stigma, and from the latter by the more acutely pointed sheath. There are also other characters to separate it from these two species.

#### MOSQUITO COMMENT.

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Reference to Dr. Dyar's recent article\* is only necessary because his comment on *A. perplexens* mihi, may be construed to imply a carelessness in my work which does not exist. Naturally, Dr. Dyar could not know that the only times any interchange of lids has occurred have been when, at the National Museum, he, Dr. Knab and myself were discussing species, and it was impossible for me to keep track of all the lids; in these cases the mosquitoes were destroyed on my return to my rooms. Moreover, *A. perplexens* was found in a box with typical American mosquitoes which were undoubtedly taken at Gretna, Pa. My boxes are not uniform, nor is more than a small proportion of the collection even temporarily kept in

\*Notes on Mosquito Work, CAN. ENT., Sept., 1908, page 312.

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them. Dr. Dyar's suppositions as to the manner in which any error may have occurred are, therefore, entirely faulty, and he has apparently forgotten that I consulted him on this species, and he advised its publication.

I am myself, however, inclined to believe that a mistake may have been made in the habitat of this specimen, and that it probably is a Philippine mosquito; just as I feel quite sure that *Grahamia Spencerii*, Theob., owes its being reported from the Philippines to my very careful and interested Chinese servant, who, of course, would not realize that a dead mosquito picked up in the house and placed in one of the small boxes on my table could make dire confusion, so a similar interference by some uninformed but well-intentioned person may account for *A. perplexens*. At all events, if an error has been made it is not due to an interchange of box lids, and my own precautions are such that no transposition of the mosquitoes themselves could have taken place while in my hands.

In the February number of the CANADIAN ENTOMOLOGIST I described a new anophelina, and referred it to *Chagasia*. Comparison with the *Chagasia* in the British Museum leads me to believe it to be new, and I therefore make it the type of a new genus, *Calvertia*, named in honour of Dr. W. J. Calvert, of St. Louis, formerly of the Medical Corps, U. S. Army, at whose suggestion I began the study of Philippine mosquitoes.

CALVERTIA, nov. gen.

Head with forked scales, antennæ bearing outstanding scales on the second joint and more appressed ones on the first; thorax with curved and broadly fusiform scales, not markedly outstanding laterally; abdomen with hairs, and on at least one segment bearing long flat more or less spatulate scales.

The genus lies near *Chagasia*.

There have lately been received from the Philippines two new mosquitoes described below.

*Anopheles formosus*, n. sp.—(Female.)

Head brown, with light yellow or white long slender curved scales on the vertex, and projecting forward in a tuft between the eyes, white forked scales on the occiput, and brown forked scales laterad and ventrad; antennæ dark brown, verticels and pubescence brown, basal joint testaceous; palpi brown, rather heavily scaled, the tip light, and bases of penultimate and antepenultimate joints narrowly light-banded, proboscis

dark brown, the labellæ slightly lighter; clypeus brown; eyes dark rich brown.

Thorax beautifully marked; prothoracic lobes dark brown, with dark brown long flat scales; mesonotum has the median part a light soft fawn colour covered with light yellow or whitish curved hair-like scales extending from the nape to the scutellum, except a small brown median spot just cephalad of the scutellum, and connecting with the dark median line; this median part is bordered with a more or less distinct white line, broadening toward the scutellum; there are also broad submedian yellowish stripes extending from the nape about half the length of the mesonotum; laterad the mesonotum is dark rich brown; scutellum light, continuing the colouring and scales of the medio-mesonotum; pleura rather grayish, with dark and white bands; metanotum rich yellowish brown.

Abdomen grayish brown, covered with long light yellow hairs.

Legs: coxæ and trochanters light, with a little brown; the very bases of the femora light, otherwise the legs are a rich brown, with yellowish knee-spots and narrow yellowish bands at the bases of most of the tarsal joints, generally slightly including the apices of the preceding joint. These bands are on all the tarsal joints of the hind legs, and lacking on the fourth and fifth joints on the fore and mid legs; ungues simple and equal.

Wings yellowish, with brown spots; two small brown spots on the costa near the base, and two large ones, the proximal including the subcosta and first longitudinal practically as much as the costa, with a small extension on the root of the second long. vein, and a still smaller one just under the distal end of the large spot; the distal large spot begins just exterior to the junction of the subcosta with the costa, and ending a little interior to the junction of the first long. vein with the costa, and extends onto the first long. and upper fork of the second long. vein, with small spots on the lower fork; the distal end of the lower fork of the second, of the third, of both forks of the fourth and of the fifth, have heavy dark spots; wing-field somewhat spotted; fringe is dark except at the junction of the first long. and costa, where it is yellow, and a pale spot midway between the forks of vein 5; cells long, the first submarginal as long as its stem, and a little longer and narrower than the second posterior cell; supernumerary and mid cross-veins meet, and are about equal in length, posterior cross-vein about as long as the mid, and more than its own length distant.

Halteres have light bases, with heavy dark knob.

Length, 10 mm. (proboscis 3.5 mm.).

Habitat : Camp John Hay, Benguet, P. I.

Taken March 20, 1908.

This large and beautifully marked *Anopheles* is the first of this genus to be received from the P. I., and shows the characteristic habitat of *Anopheles* in the tropics, coming from the high mountain regions of Benguet.

*Pseudouranotania parangensis*, n. sp.—(Female).

Head brown, covered with flat scales, dark brown except a broad band of white scales around the eyes, meeting at the vertex, a few black bristles projecting forward; antennæ brown, verticels and pubescence brown, basal joint testaceous; palpi minute, brown; proboscis brown, apex swollen; clypeus brown; eyes brown.

Thorax: prothoracic lobes heavily clothed with white flat scales; mesonotum brown, partly denuded, but with brown curved scales scattered over it and more completely covering it laterally, a line of outstanding white or bluish-white scales extending from the wing joint cephalad about one-half the length of the mesonotum; scutellum brown, with brown flat scales; pleura dark brown, with a pronounced line of white flat scales; metanotum brown.

Abdomen brown, with dark brown scales and a white median spot extending over most of the dorsal aspect on the first, second, third and fourth segments, better developed on the third and fourth; venter light.

Legs: coxæ and trochanters light; femora brown, ventrally lighter; tibiæ brown, and on the fore and mid legs all the tarsal joints brown; on the hind legs the first and second tarsals are brown, the third, fourth and fifth pure white; unguis simple and equal.

Wings partly denuded, mostly brown-scaled, but half the length of the stem of the fifth, and the bases of the sixth with white roundish scales; fringe unspotted; the cells very short, the first submarginal a little shorter and somewhat narrower than second posterior cell; mid and supernumerary cross-veins of about equal length and meet, posterior cross-vein longer than mid and its own length distant interiorly. Halteres with white stem and black knob.

Length, about 5 mm., of which the proboscis is nearly 2.5 mm.

Habitat : Parang Mindanao, P. I.

Taken : Collection undated, summer of 1908.