

segment where they are longer and stand out. *Antennae* brown, except the torus, which is bright yellowish-red; on the basal segments there are a few white scales. *Proboscis* dark, labellae pale.

Thorax: integument of mesonotum slaty-grey in the middle with three dark longitudinal lines, dark brown at the sides; the pale median area is clothed with pale golden narrow-curved scales, and a tuft of white longer scales in front. *Scutellum* dark in the middle, pale at the sides, with bright brown border-bristles and a row of thin white scales behind.

Abdomen dark with golden hairs, which are more numerous on the apical segments.

Legs brown; in the forelegs the first three tarsi have pale apical bands; mid tibiae and first three tarsi with pale apical bands; in the hindlegs there is a pale spot at the apices of the tibiae and first tarsal joint, a white apical band on the second, the third is mostly white, and the last two tarsi all white.

Wings: the veins are for the most part clothed with yellow scales, except on the costa, which is mainly black.

Length, about 4 mm.

Distribution.—This species was described by Theobald from two females taken at Onderstepoort; it is by no means common here. We have taken a single female at Ntabanana, Zululand, in a house, and Dr. Ingram has collected specimens at Sterkfontein, Sterkstroom, and Vaalwater in the northern Transvaal.

Seasonal Prevalence.—The type specimens were caught in mosquito-traps in March and April. There are eight females contained in the laboratory collection, one of which was caught in January, 1918, one in March, 1918, five in April, 1917, and one in April, 1918. The female taken in Zululand was captured in March, 1923.

11. ANOPHELES (MYZOMYIA) NATALENSIS (Hill and Haydon).⁽¹⁾

Myzorhynchus natalensis Hill and Haydon (1907).

Hill and Haydon, Ann. Natal Mus., Vol. I, Pt. 2, p. 152, Pl. XXIII (1907).

This species was described by Hill and Haydon from adults bred from larvae collected in Natal on three occasions, once near sea-level and twice at 2,200 feet, in eddies in fast running streams in which grass and rushes were growing. It has not been recorded since.

Description of Adults:

The following is the original description of the adults:—

Female.—*Palpi* black, scales long and copious at the base, shorter and smoother in the distal portion. Tip white, and in addition four narrow white bands, about equi-distant from one another: first from apex narrower than the second and fourth, and the third very thin indeed, and barely perceptible in some specimens. *Head* with a few white curved scales, but no tuft. *Thorax* black with the dorsum grey, clothed with short golden hairs. *Scutellum* dark grey. *Halteres* black at extremity. *Abdomen* black, clad with long golden hairs. No scales observed on the ventral aspect.

⁽¹⁾ *Anopheles aureosquamiger* is a synonym of this species. For description of the female see page 908.

Wings.—Prevailing colour black with white and yellow markings, the former on the anterior border, the latter on the wing veins. Scales broadly lanceolate, rather longer than in *paludis*, to which it has the further similarity that light scales are mixed with the dark here and there without forming definite spots. Costa black; a small white spot one-third or so of the length from the base, a larger spot two-thirds of the length, and a third, which is small, at the commencement of the curve of the wing; a further extending to the apex. First longitudinal vein with two yellow spots near the base, and white spots beneath the costal spots, with a small additional white mark a little on the distal side of the first costal. Second longitudinal vein black, two small yellow spots opposite to the second costal spot, first fork-cell long and narrow, a yellow spot at the end of each branch. On the third longitudinal vein the black and yellow scales intermingle, the former predominating in some specimens, the latter in others, hence the number and size of definite spots vary, and is not symmetrical. The stem of the fourth vein is black; there are numerous other scales about the fork cell, which may or may not form definite spots at the bifurcation and on either branch. The stem of the fifth is mostly black with yellow patches near the base and at the bifurcation; variable yellow spots on the anterior and a larger yellow patch on the posterior branch. Sixth longitudinal vein yellow and black alternately. Fringe black, a golden spot opposite termination of all veins, and in some instances a light patch on the proximal side of the sixth. The number of actual spots other than on costa and first long vein is uncertain and asymmetrical. Length of detached wing 3·8 mm. to 4·2 mm.

Legs black, femora and tibiae all brilliantly spotted with pale yellow, and the metatarsus banded with three or four bands of white or pale yellow. On the forelegs is a broad white band at the apical extremity of the metatarsus, and all tarsal segments except the fourth; the hind-legs similarly adorned, but the apical band of the first tarsus very broad, and the distal two-thirds to half of the second, and the third and fourth snow-white. In the mid-legs there is a barely perceptible apical ring on the tarsal segments. Knees black in all legs.

Male.—The wings are less thickly scaled and the proportion of yellow scales is always higher.

Hill and Haydon remark that at first sight, under a magnification of X10, it resembles *N. pretoriensis*, but the character of the wing scales immediately shows the difference; and that the closely set, broad lanceolate scales on the wing and the scaly palpi clearly place it in the genus *Myzorhynchus*, although they were unable to detect any ventral scales.

Edwards considers that this species probably has its nearest ally in *A. ardensis* Theo.

12. ANOPHELES (MYZOMYIA) ARDENSIS (Theobald).

Pyretophorus ardensis Theobald (1905).

Myzomyia pyretophoroides Theobald (1907).

Theobald, Jour. Econ. Biol., I, p. 17 (1905); Mon. Culic., Vol. iv, pp. 49, 75 (1907); 1st Rep. Dir. Vet. Res., Un. S.Afr., pp. 237, 242 (1911).

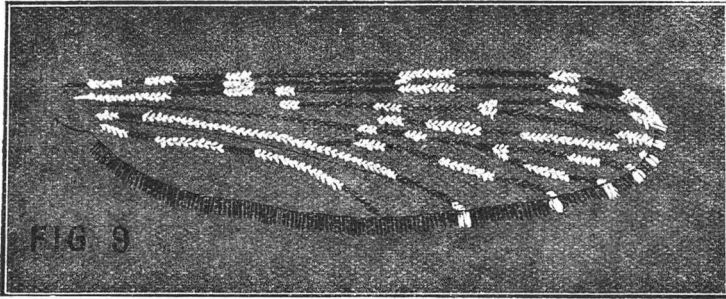


Fig. 9.—*Anopheles ardensis* (Theobald).

Description of Adults:

Female.—*Head* clothed with black upright forked scales and a small patch of white ones in front. *Palpi* dark brown with white apex and three narrow white bands. *Proboscis* dark brown. *Antennae* dark brown, with one or two white scales on the second and third segments.

Thorax.—Integument of mesonotum grey in the middle, with a median dark line and dark brown at the sides, clothed with long golden, very narrow-curved scales, and a tuft of white narrow-curved scales in front. *Scutellum* slaty-grey (brown in some lights), with a few long golden curved scales and brown border bristles.

Abdomen dark, clothed with dull golden hairs. *Legs* dark brown; femora, tibiae, and metatarsi spotted, with narrow apical bands; first and second front and mid tarsi, and first three hind tarsi with white apical bands.

Wings with black and yellow scales, the former predominating, except on the third, fifth, and 6th long vein.

Length 5 to 6 mm.

Male.—*Palpi* brown with a narrow median and apical white bands on the first segment; last two segments swollen, with long golden brown hairs and with apical white bands.

Ungues.—Fore unequal, the larger curved and uniserrate; mid and hind small, equal and simple.

Wings similar to those of the female.

Length 4.5 mm.

Distribution.—Durban and Pietermaritzburg, Natal; Eshowe, Zululand (coll. A. Ingram); Pretoria and Onderstepoort, Transvaal.

Seasonal Prevalence.—June and September at Pietermaritzburg; October at Onderstepoort.

Observations.—This species was described from a female and male collected in Durban by Dr. Power during an outbreak of malaria. The female had fed on a patient suffering from that disease (malignant tertian). It is by no means common at Onderstepoort.

13. ANOPHELES (MYZOMYIA) GAMBIAE Giles (1902).

? *A. costalis* Loew (1866).

Anopheles costalis Theobald (1901), nec Loew (1866)

A. merus Donitz (1902).

A. gracilis Donitz (1902).

Pyretophorus costalis Theobald (1903).

A. arabiensis Patton (1905).

Theobald, Mon. Culic., Vol. I, p. 157, Pl. 4, f. 15 (1901);
Vol. III, p. 74 (1903); Vol. IV, p. 74 (1907); Vol. V,
p. 40 (1910); 1st Rep. Dir. Vet. Res., Un. S.Afr., p.
238 (1911).

Loew, Berlin ent. Zeitschr., X, p. 55 (1866).

Giles, Rep. Mal. Exp., Liv. Sch. Trop. Med., p. 49, Pl. V
(1900); Handb. Gnats, 1st Edit., p. 151 (1900); 2nd
Edit., pp. 308, 511 (1902).

Donitz, Zeits. Hygiene, XLI, pp. 76, 77 (1902).

Patton, Bombay Nat. Hist. Soc., p. 625 (1905).

Hill and Haydon, Ann. Natal Mus., Vol. I, Pt. 2, p. 131,
Pl. XVI, 1907 (Larva).

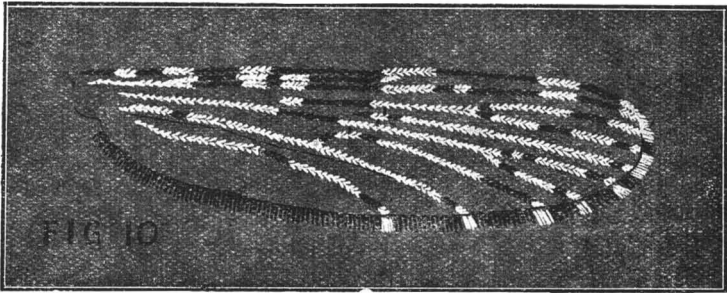


Fig. 10.—*Anopheles gambiae* Giles.

Habitat.—This species is common and widely distributed throughout the Ethiopian Region. In South Africa it has been recorded by Theobald from Salisbury, S. Rhodesia, Delagoa Bay, Leydsdorp, and Onderstepoort in the Transvaal, and Durban in Natal. Donitz has recorded it from Franzfontein, South-West Africa. Ten females were sent by Captain Impey, S.A.M.C., collected at Old Congella, Durban, on the 26.II.1918. I have also received specimens collected in Ovomboland by Captain Drew, S.A.M.C. The Natal Museum possesses specimens reared from larvae collected at Verulam, Natal, by Dr. Claude Fuller, and one female from Isipingo, Natal. In the Durban Museum there are a number of specimens collected in Durban, and several taken at Ngxwala Hill, Zululand, by Mr. Fred. Toppin. There are also specimens in the S. African Museum, Capetown, from Vryburg. We have also taken specimens in the Ntabanana and Mhlatuse Settlements, Zululand.

Observations.—According to Hill and Haydon, this is the commonest and most widely distributed species of Anophelina in Natal on low levels near the sea coast in the warmer months of the year. They

did not meet with it in inland districts, and did not find larvae before October, not later than early May. At Onderstepoort this species is very common in certain years, and in others it has not been found at all. For instance, during the months of March to May, 1909, it was the commonest Anopheles found here, but was not seen again till March, 1914, when it again occurred in large numbers.

Seasonal Prevalence.—It has only been collected in the mosquito-traps at Onderstepoort during the months of February to May.

Economic Importance.—This species has been proved to be a natural carrier of malarial parasites, and also a carrier of *Filaria nocturna*.

Description of Adults:

Female.—*Head* clothed with black upright forked scales and some white ones in front. *Palpi* black, with three white bands, of which the apical one only is broad; the scales are appressed except at the base of the first segment, where they are larger and stand out. *Antennae* brown with pale pubescence, except the torus, which is yellowish-brown with a few white scales, which also occur on the second and third segments. *Proboscis* black with pale labellae.

Thorax.—Integument of mesonotum brown, clothed with yellow narrow-curved scales, pale hairs, and a small tuft of white broader scales in front. *Scutellum* with some yellow narrow-curved scales and brown border-bristles.

Legs.—Femora and tibiae brown, with yellow or pale spots; in the forelegs the tarsi are broadly banded with yellow, the bands involving both sides of the joints; in the mid and hind legs the tarsi are usually only banded at the apices of the joints; the metatarsi are also spotted.

Abdomen dark, clothed with golden hairs, which are more numerous on the posterior segments.

Wings.—Black with yellow patches and spots. The markings in this species are variable.

Length 4·5 mm.

Male.—*Palpi* with four white bands—one narrow one just before the middle of the first segment, and another, slightly broader, at the apex, and one broad one at the apex of the second and third segments. *Antennae* pale yellowish-brown with slightly darker plumose hairs. *Ungues.*—Fore unequal, the larger curved and uniserrate; mid and hind equal and simple.

Length 4·5 mm.

14. ANOPHELES (MYZOMYIA) CINEREUS Theobald (1901).

Pyretophorus cinereus Theobald (1903).

Anopheles (Myzomyia) jehafi Patton (1905).

Theobald, Mon. Culic., Vol. I, p. 161, Pl. II, f. 7 (1910);
Vol. III, p. 78 (1903); 1st Rep. Dir. Vet. Res., Un.
S.Afr., p. 247 (1911); 2nd ditto, p. 325 (1913).

Giles, Handbook of Gnats, p. 309, Pl. X, f. 1 (1902).

Patton, Journ. Bombay Nat. Hist. Soc., p. 630 (1905).

Hill and Haydon, Ann. Natal Mus., Vol. I, Pt. 2, p. 135,
Pl. XVII, 1907 (Larva).

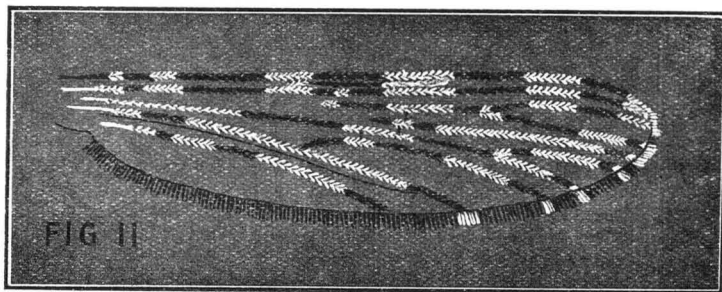


Fig. 11.—*Anopheles cinereus* Theobald.

Description of Adults:

Female.—*Head* clothed with black upright-forked scales and two small patches of white ones in front. *Antennae* brown, with a few white scales on the tori and two following joints. *Palpi* clothed with appressed scales except at the base where they are long, with four narrow white bands, the last apical and often indistinct; the other three involving both sides of the joints. *Proboscis* dark brown.

Thorax.—Integument of mesonotum grey in the middle with three dark longitudinal lines, dark brown at the sides; the median grey area is clothed with long whitish narrow-curved scales and a few hairs; brown hairs are also present on the dark lateral margins. *Scutellum* dark brown with a grey sheen, and with golden brown border bristles. *Pleurae* brown.

Legs.—Coxae and trochanters yellowish brown; femora, tibiae, and tarsi dark brown with narrow, pale bands at the apices of the joints. *Abdomen* dark brown, clothed with golden hairs.

Wings.—Black with pale creamy and white patches.

Length about 5 mm.

Male.—The male resembles the female, except that the hairs on the abdomen are much paler in colour and the wings are also paler. *Antennae* testaceous with long plumose hairs of the same colour, except on the two apical segments, which are brown, long and slender with a few short dark hairs. *Palpi* dark brown, with a narrow band before the middle of the first segment and one at the apex; second and third segments swollen, with two pale bands—one at the apex of each segment; on the inner margins and at the extremity of the first segment there are some long hairs.

Habitat.—Aden; Zomba; Nyasaland; Kenya Colony; Salisbury, S. Rhodesia; Johannesburg, Vaalwater (*vide* Ingram), Onderstepoort,

Transvaal; Barrage, O.F.S. (*vide* Ingram); Weenen (coll. H. P. Thomasset), Pietermaritzburg, Shafton Grange, Howick, and Ladysmith, Natal (specimens in the Natal Museum); Mount Fletcher, Cape Province (*vide* Theobald).

Observations.—This species is often common at Onderstepoort during the summer months, and I have taken it in houses on one or two occasions.

Hill and Haydon state that it is rare in Natal. They found larvae in running water on the coast and at an altitude of 2,200 feet. Larvae have been found at Onderstepoort in small pools near the banks of the river, and Dr. Ingram has taken larvae in rock-pools at Vaalwater, in the northern Transvaal.

Seasonal Prevalence.—Specimens have been collected in mosquito traps at Onderstepoort during the months of August to May. One female from Ladysmith was caught in August. The type specimen was taken at Salisbury in June.

15. *ANOPHELES (MYZOMYIA) NILI* Theobald (1904).

Myzomyia funesta var. *umbrosa* Theo. (1903), *nec*
Myzorhynchus umbrosus Theo.

Myzomyia unicolor Grünberg (1905).

Theobald, *Mon. Culic.*, III, p. 34 (1903); First Rep. Welle.

Labs., Khartoum, p. 66 (1904).

Grünberg, *Zool. Anz.*, XXIX, p. 379 (1915).

Edwards, *Bull. Ent. Res.*, Vol. II, p. 142 (1911); Vol. III,
p. 248 (1912).

Macfie and Ingram, *Bull. Ent. Res.*, XIII, iv, p. 409, f. 1
(1923). Pupa.

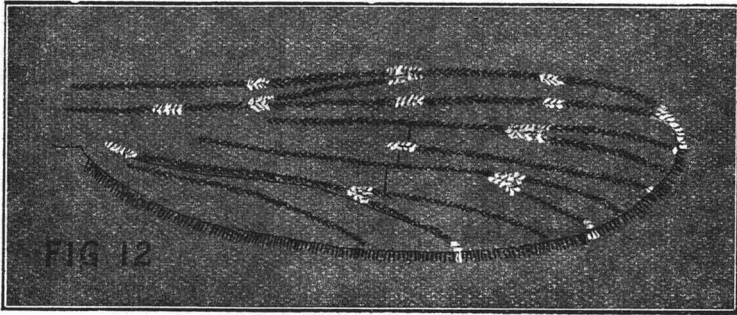


Fig. 12.—*Anopheles nili* Theobald.

Description of Adults :

Female.—*Palpi* thin, dark with a white band at apex only. Mesonotum pale fawn-coloured in the middle, dark brown at the sides, covered with scattered golden hair-like scales and a tuft of pale narrow-curved scales in front. *Abdomen* dark brown to black with bright brown hairs. *Legs* brown, unbanded. *Wings* with the veins mainly clothed with dark brown scales. Costal spots yellow, the remainder pale. Lower branch of fifth long vein with or without a white band at the fork. First fork cell slightly shorter than second fork cell.

Length 3 mm.

This small species can be easily distinguished by the palpi of the female having only a white band at the apex.

Several specimens were collected by the writer in the Umhlatuse Settlement, Zululand, in April, 1923; they were caught near the river at night attacking heifers. This species has previously been recorded from the Sudan, Togo, Northern and Southern Nigeria, and the Gold Coast.

16. *ANOPHELES (MYZOMYIA) RHODESIENSIS* Theobald (1901).

Myzomyia rhodesiensis Theobald (1903).

Theobald, *Mou. Culic.*, Vol. I, p. 184, Pl. IV, f. 14 (1901);
Vol. III, p. 35 (1903); 1st Rep. Dir. Vet. Res., Un.
S.Afr., p. 237 (1911).

Giles, *Gnats or Mosq.*, 2nd Edit., p. 321 (1902).

Edwards, *Bull. Ent. Res.*, Vol. III, Pt. 3, p. 248 (1912).

Kirkpatrick, *The Mosquitoes of Egypt*, pp. 53-56 (1925).
♀, ♂, larva, and pupa.

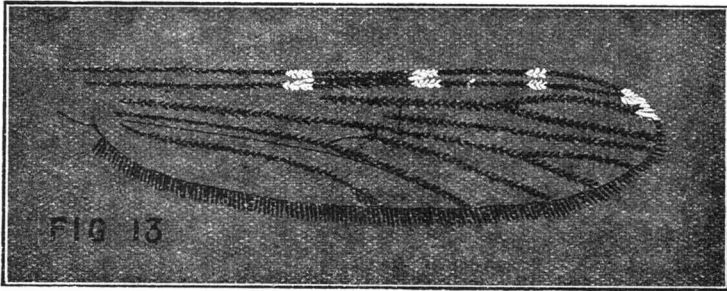


Fig. 13.—*Anopheles rhodesiensis* Theobald.

Description of Adults:

Female.—*Head* clothed with black upright-forked scales, except for a small median patch of broader white ones. *Antennae* brown. *Palpi* dark brown, with three narrow pale bands. *Proboscis* dark.

Thorax.—Integument of mesonotum reddish-brown, with ashy-grey reflections in the middle, sparsely clothed with longish brown hairs and a small patch of white narrow-curved scales in front. Scutellum and metanotum reddish-brown, the former with numerous long and short brown hairs on its margin. *Legs* brown, tarsi unbanded.

Abdomen dark brown, with yellowish-brown markings at the base and in the middle of the segments, with numerous hairs on the dorsum and lateral margins.

Wings.—Costa dark brown, with three small white spots and a yellow apical spot. First long vein with three white spots similar to those on the costa. Remainder of the veins all clothed with pale brown scales, the median ones being elongated-oval. The lateral ones long and thin. First fork-cell longer and slightly narrower than the second fork-cell; its base a little nearer the base of the wing than that of the latter; its stem about two-thirds the length of the cell; stem of second forked-cell longer than the cell; supernumerary and

mid cross-veins very close together or united; the posterior cross-veins nearly its own length distant behind the mid. Wing fringe brown.

Length about 3 to 3·5 mm.

Male.—*Palpi* brown, last two joints slightly darker, tipped with grey. *Antennae* with last joint swollen. *Wings* with markings similar to those of the female, except that the outer white spot on the costa is larger.

Length 2·5 to 3 mm.

Distribution.—Onderstepoort and Leydsdorp, Transvaal; Natal; S. Rhodesia; Belgian Congo; Gold Coast; Kenya Colony; and Egypt (Kirkpatrick).

Seasonal Prevalence.—This species has been caught at Onderstepoort during the months of September to June, but is never common here. I have never taken it in houses.

Economic Importance.—This species has not been proved to be a transmitting agent of the malarial parasites, but Kirkpatrick considers that it is most probably a carrier of some importance in parts of Egypt.

17. ANOPHELES (MYZOMYIA) FUNESTUS Giles (1900).

Anopheles kumasii, Chalmers (1900).

Myzomyia funesta (Giles) Theobald (1903).

Giles, Mem. Liv. School of Trop. Med., Mem. 2, p. 50 (1900); Handb. of Gnats, p. 162 (1900); 2nd Edit., p. 318 (1902).

Theobald, Mon. Culic., Vol. 1, p. 178, Pl. 4, f. 3 (1901); Vol. III, p. 34 (1903); Vol. IV, p. 46 (1907); Vol. V, p. 17 (1910); 1st Rep. Well. Res. Labs., Khartoum, p. 68 (1904); 1st Rep. Dir. Vet. Res., Un. S.Afr., p. 235 (1911); 2nd ditto, p. 323 (1912).

Blanchard, Les Moustiq., p. 178 (1905).

Newstead, Ann. Trop. Med. and Parasit., I, No. 1 (1907).

Edwards, Bull. Ent. Res., Vol. III, Pt. III, p. 248 (1912).

Patton and Cragg, Textb. Med. Ento., p. 250, Pl. XXXIX (1913).

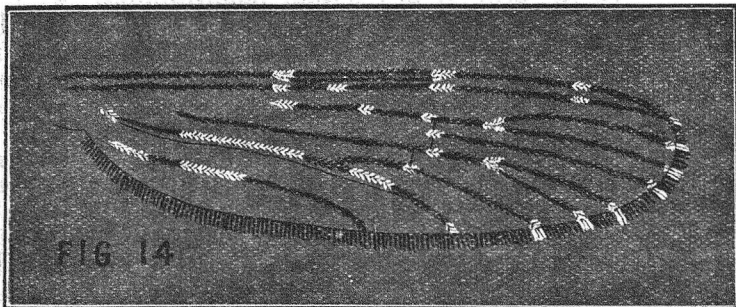


Fig. 14.—*Anopheles funestus* Giles.

Description of Adults:

Female.—*Head* clothed with white upright forked-scales in front, black ones at the sides and behind. *Palpi* black, with a white apex

and two narrow white bands—one near the base and the other near the apex. *Proboscis* dark brown, testaceous at the apex. *Antennae* dark brown, with a few white scales on the second segment.

Thorax.—Integument of mesonotum grey, dark brown at the sides, sparsely clothed with golden hairs, except in front, where there is a patch of white narrow-curved scales. *Scutellum* grey. *Legs* dark brown; metatarsi and tarsi with inconspicuous, narrow, pale, apical bands. *Abdomen* dark, sparsely clothed with yellow hairs. *Wings*.—Costa black, with five or six pale creamy spots. First forked cell with one small and one large dark patch on each of its branches; its stem is for the most part black. Third long vein pale, except for a dark spot at the base and apex. Second forked-cell with two dark patches on each of its branches; its stem is for the most part dark. Fifth long vein with two dark patches on its upper branch and one on the lower; also one at its base and one at the fork. Sixth long vein with two small dark spots. Stem of first forked-cell more than half the length of the cell; stem of second cell slightly longer than the cell; mid cross-vein nearer the apex of the wing than either the supernumerary or posterior cross-veins. Fringe black, with pale spots at the junction of all the veins except the sixth. Average length of wing 3 mm.

Length 3 to 3·5 mm.

Male.—*Palpi* black, with a grey apex and a narrow band at a short distance from the apex. The wings differ from those of the female as follows:—The first forked-cell is twice as long as the second forked-cell, and its stem much shorter than the cell; the second forked-cell is very short.

Length 3 to 3·5 mm.

Distribution.—This species is very widely distributed in the Ethiopian Region, and is, according to Edwards, very common in W. Africa. Theobald has recorded it from S. Rhodesia. In the Union it has been taken at Onderstepoort, Transvaal, and in Natal (*vide* Theobald). The Durban Museum possesses specimens collected at Ngxwala Hill, Zululand, by Mr. Fred. Toppin. We have also taken it at Ntabanana, Zululand.

Seasonal Prevalence.—Specimens have been collected in mosquito traps at Onderstepoort in August and during the months of October to June. Theobald records specimens having been taken in S. Rhodesia from February to June.

Observations.—Drs. Hill and Haydon (Ann. Nat. Gov. Mus., Vol. I, Pt. 2, p. 127) record finding this species in Natal throughout the year from sea-level to an elevation of 4,000 feet, but according to Edwards they have confused the following species with it:—*A. transvaalensis* Carter, *A. marshalli* Theo., and *A. pitchfordi* Giles. This being the case, their description and figure of the larva cannot be relied upon. This species is not common at Onderstepoort. Dr. Daniels writes that it is the most numerous, the most widely distributed, and most persistent frequenter of houses in British Central Africa. Dr. Ingram (Bull. Ent. Res., Vol III, p. 75) records finding arvae at Bole, Gold Coast, in almost all water-holes containing clear water, and also in the swamp. It is the commonest Anopheline larva found there.

Economic Importance.—This species has been proved to be a natural carrier of malarial parasites.

Varieties.—Three varieties of this species are known, which may be differentiated as follows:—

- (1) *A. funestus* G. (type form). Costa with a pale spot near the base, third long vein pale-scaled in the middle, sometimes for as much as one-third of its length. Fringe spots distinct.
- (2) *Var. hebes* Donitz, Zeit. f. Hygiene, XLI, p. 84 (1902). Differs from the type in that the wings are slightly narrower and often quite half of the third vein is pale-scaled.
- (3) *Var. subumbrosa* Theo., Mon. Culic., Vol. III, p. 34 (1903). No pale spot on costa near the base; third vein with some pale scales in the middle; fringe spots usually distinct. According to Edwards, *Myzomyia leptomeres* Theo. (Mon. Culic., Vol. III, p. 38) is identical with this variety.
- (4) *Var. bisignata* Grünb., Zool. Anz., XXIX, p. 378 (1905). No pale spot near base of costa; third vein, and sometimes the fifth, entirely dark; fringe spots indistinct or absent.

In the collection at the Veterinary Research Laboratory there are nine females collected at Onderstepoort, all of which have no pale spots on the costa near the base, there being only four pale costal spots. In one specimen the third vein is entirely dark; in another there are three or four pale scales near the middle of the vein, and in the remainder the third vein has a broad pale area in the middle and a small white spot at the base.

18. ANOPHELES (MYZOMYIA) PITCHFORDI (Giles).

Pyretophorus pitchfordi Giles (1904).

Giles, Revis. Anop., p. 34, f. 15 (1904); Journ. Trop. Med., VII, p. 365 (1904).

Theobald, Mon., Culic., Vol. IV, p. 72 (1907); Vol. V, p. 39 (1910).

This species was described from specimens collected 80 miles north of Eshowe, Zululand, in bushy country, at an elevation of 1,500 feet. It has since been recorded from Uganda, Congo Free State, and Angola. The following is the original description:—

Female.—Head black, with a few black forked scales behind and clavate white scales between the eyes, succeeded by which spindled-shaped scales on the front and a rather scanty double white frontal tuft. *Palpi* moderately densely black-scaled, the outer fourth of the appendage white, with a narrow black band and a smaller white band nearer the base. Proboscis black with yellow tip. *Antennae* with a long second joint clothed with white scales. *Thorax* dark with a broad band of white bloom in the middle and clothed with hair-like yellow scales behind and creamy narrow-curved ones in front. *Pleurae* mostly fuscous. *Halteres* with densely black-scaled knobs. *Legs* dark, but for apical femoral and tibial spots, and the tarsals minutely apically pale-banded.

Abdomen black, clothed both dorsally and ventrally with long golden hairs. *Wings* clothed with narrow lanceolate scales; costa