

de betere watervoorziening in Mekka en Arafah, betere regeling van de medische dienst, bevordering der hygiëne in de hospitalen te Mekka enz. wijzen er toch op, dat men de goede richting is ingeslagen.

Sinds 1933 wordt de Hedjazische Regeering in het Office Internationale d'hygiëne publique vertegenwoordigd door Dr. MAHMOED HAMOEDA, hoofd van den Arabischen geneeskundigen dienst. Voorts is in 1935 in het leven geroepen een „Wet op het uitoefenen der geneeskunde in het Saoedi Arabische Koninkrijk" die deze uitoefening in ruimen zin regelt en waaraan ook onderworpen zijn de gezantschaps- en consulaatsartsen als mede de doktoren der medische missie's, die aldaar gedurende het Hadjseizoen ter behandeling van hun pelgrims overkomen. Ten slotte staan vele verbeteringen voor de verschillende ziekenhuizen nog op het programma ¹⁾.

De toekomst zal ons echter moeten leeren of het resultaat den toets der Westersche opvattingen zal kunnen doorstaan.

Samenvatting.

Een overzicht wordt gegeven van het pelgrimsverkeer te Kamaran afkomstig uit het Zuiden en gedurende het tienjarige tijdperk 1927—1937.

Achtereenvolgens worden de prophylactische maatregelen besproken (vaccinatie en quarantaine), verder het verloop van het aantal pelgrims in het algemeen en dat van Ned.-Indië en Straits-Settlements en Britsch-Indië afzonderlijk behandeld.

De scheepvaartlijnen, de gezondheidstoestand, de ziekte en sterfte onder de pelgrims worden verder nagegaan en tenslotte een beschrijving gegeven van het quarantaine-station te Kamaran.

Summary.

~~A review is given of the pilgrim traffic to Kamaran from the South during the decade from 1927 to 1937.~~

The prophylactic measures (vaccination and quarantine) taken are discussed seriatim and further the variation in the number of pilgrims in general and in that coming from the Netherlands Indies, the Straits Settlements and India considered apart.

The shipping companies; and the general state of health, the diseases and the deaths among the pilgrims, are discussed and finally a description is given of the quarantine station at Kamaran.

NOTES ON MOSQUITOES FROM THE NETHERLANDS INDIES. A NEW CULEX AND TWO NEW FINLAYA'S FROM NEW-GUINEA,

by

J. BONNE-WEPSTER.

CULEX (CULEX) MIRACULOSUS NOV. SP.

FEMALE. *Head.* Vertex clothed with narrow, slightly curved creamy yellow and numerous upright scales, medianly the upright scales are yellow, more laterally dark brown. Along the eyemargins small, very narrow, curved creamy scales, down the sides the scales are somewhat broader and not curved, creamy, semi-flat. Palpi dark brown scaled, some yellowish scales at tip. Proboscis dark brown, with a broad, yellowish

1) Medisch verslag 1935—1936.

band about the middle, nearly one third of the length of the proboscis; labellae light brown. *Clypeus* bare. *Antennae* dark, small hairs whitish.

Thorax. *Mesonotum* with the integument blackbrown, covered with narrow, slightly curved dark brown, light golden brown and golden yellow scales, forming a definite pattern (see fig. 1).

In front and over root of wing the small golden scales are mixed with larger nearly white ones which are more curved. Bristles long, dark brown and golden. *Scutellum* covered with narrow-curved whitish scales. *Pleurae* with patches of rather broad white scales on mesepimeron and sternopleura; anterior pronotal (= prothoracic) lobes with numerous narrow curved, creamy yellow scales and many strong golden brown bristles; on posterior pronotal lobes (pro-epimeron) in front small narrow curved golden scales.

Wings (Fig. 2) Outstanding scales long, linear. Scales dark brown except at base of costa and L I, where there is a light yellow spot, towards apex of wing the scales are light, yellow on costa and L I, white on greater part of fork L II, on apical half of L III, nearly the whole fork of L IV white scaled, apex of upper fork of L V white scaled. All the white scales on apical part of wing with a slight yellowish tinge in certain lights. A sprinkling of white scales all over subcosta, a few light scales on middle part of costa and L I. Fringe of wing light scaled at upper fork of L V, largely at apex of L III and the forks of L IV. The light scales towards apex form a large distinct light spot, visible with the naked eye.

Legs. Brownscaled; femora slightly mottled with golden scales in front, white on underside and behind, base white ringed, apex golden yellow; tibiae dark brown, a yellow stripe behind, base and apex lightscaled all round, broadly so on hind tibiae, narrow on mid and front tibiae. Tarsi basally banded on all segments with yellow scales; on T I and T II of mid and hind legs apical bands present, a stripe of whitish scales on underside of T I of all the legs, visible only in certain lights.

Abdomen. Tergites brown scaled with broad basal bands of yellow scales on S III—VII, S I dark scaled, on S II there is a large triangular yellow basal patch, S VII with a narrow apical band of yellow scales, S VIII all yellow scaled. Basal bands of tergites running all down the sides. Sternites as far as visible golden yellow scaled.

No males or larvae have been found.

Described from two females.

DISTRIBUTION. Western part of New Guinea (Anggi lakes, altitude 2000 M).

This mosquito comes very near to *Culex* (C) *epidesmus* (THEOBALD) 1910. The colour however is not conspicuously yellow and the wingspot is much larger. Type specimen 37.916/17 of the Collection at the Central Laboratory, Batavia-C., Java.

Aedes (FINLAYA) *gracilelineatus* nov. species.

FEMALE. *Head.* *Vertex* with numerous small narrow curved creamy scales, intermingled with golden to dark brown, upright forked ones; in front between the eyes the curved scales are larger, flat, forming a golden patch; down the sides a patch of whitish broad flat scales. Strong golden orbital bristles present. *Palpi* about $\frac{1}{2}$ the length of the proboscis, darkbrown scaled. At tip the hairs seem golden. *Proboscis* dark throughout. *Clypeus* nude, dark grey. *Antennae* dark with fine silvery-gray pubescence, long hairs sparse; tori and base of next joint golden yellow.



Fig. 1.

Mesonotum of *Culex (C.) mirabilis* n. sp.

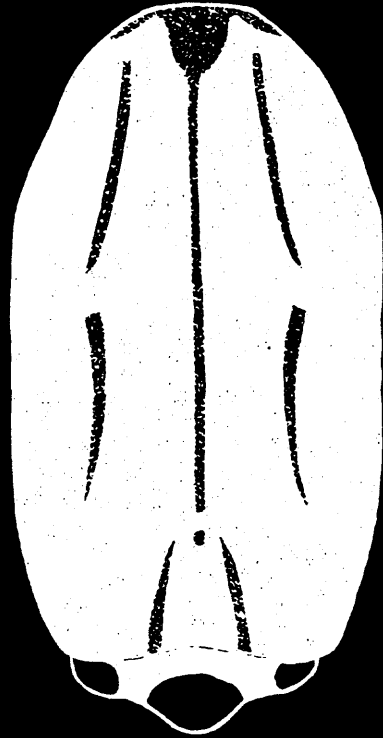


Fig. 3.

Mesonotum of *Aedes (F.) gracilelineatus* n. sp.

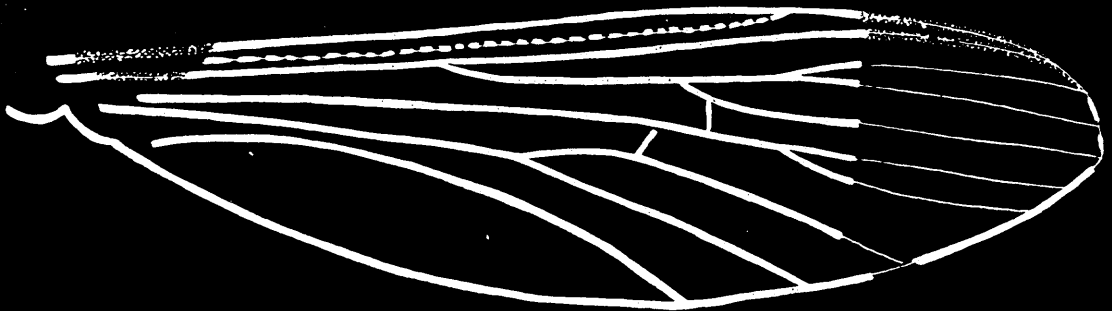


Fig. 2.

Wing of *Culex (C.) mirabilis* n. sp.

Thorax. *Mesonotum* covered with golden brown very small narrow curved scales; creamy colored, somewhat larger, scales forming fine lines as in fig. 3. Bristles long golden, very sparse. *Scutellum* with a large patch of white, flat lying curved scales on the mid lobe, on the lateral lobes the patch of white scales has a slightly creamy hue in certain lights. Scutellar bristles golden. *Pleurae*. Anterior pronotal lobes with a large patch of rather broad semiflat golden yellow scales in front, bristles golden; posterior pronotal lobes closely covered with narrow curved flat lying whitish scales with yellowish shine, bristles golden; large patches of rather broad nearly white, flat and semi-flat-lying scales on upper and lower sternopleura and mesepimeron.

Wing. Outstanding scales long, linear, brown.

Legs. *Front legs* with the femora dark brown in front and above, tip creamy, below and behind creamy scaled throughout; tibiae dark brown scaled, with a creamy stripe below from base to tip, which is faintly creamy all round, tarsi dark scaled, except very narrow basal white rings, incomplete and faint on T III, IV and V. *Mid legs* with the femora dark brown scaled in front and above, except the creamy base and tip, — below and behind creamy scaled throughout; tibiae as in front legs; tarsi dark, very narrow white rings on T I, II, III and IV. *Hind legs* with the femora dark brown above, behind and in front, except the narrowly creamy tip and broadly creamy base, below creamy scaled throughout; tibiae dark scaled except creamy base, coppery shine on apical half on underside; tarsi dark, narrow but distinct white basal bands on T I, II, III and IV.

Abdomen. T I with a large patch of semi-flat, creamy white scales medianly from base to apex, laterally no scales present but numerous golden hairs of different lengths. T II—VI dark scaled with basal bands of creamy white scales, on T II and T III these bands medianly slightly broadened; on T VII band of creamy white scales medianly largely interrupted. T VIII entirely dark. Lateral patches not more than a slight broadening of the continued dorsal bands. On segment VIII lateral triangular basal patch present. *Sternites* dark scaled with basal bands of golden scales, narrow on basal segments; broad, covering nearly $\frac{3}{4}$ of segment, on S V, VI and VII, S VIII dark.

MALE. Head. *Palpi* slightly shorter than proboscis, brown scaled, turned upwards, top of long joint and all of penultimate joint with long golden hair tuft on inner side, hairs on terminal joint short and sparse, a white ring at middle of long joint, basal white incomplete rings on apical two joints. *Antennae* with numerous long golden brown hairs, very plumose, except at apical joints where the hairs are short and very light. *Mesonotum* as in female, but laterally all along the median golden line many small golden scales present. Abdominal bands on tergite mostly silvery white, light scales on apical sternites covering nearly all of segment.

Terminalia (fig. 4). Coxite slender with very hairy basal lobe, hairs and scales on dorsal and ventral border both moderate rather sparse, no very long scales or flattened hairs present; style of moderate length, terminal appendage rather long. Some small subapical hairs on style. Harpago with long slender stem, covered with fine pubescence, blade long, broadened on basal fifth, tapering from there till tip. Paraprocts with one curved apical tooth. Phallosome very simple, no serrations or chitinised plates present. No larvae have been found. Described from one female and two males.

DISTRIBUTION. Western part of New Guinea (Anggi lakes, altitude 2000 m). This mosquito comes very near to *Aedes (Finlaya) saxicola* en *Aedes (Finlaya) chrysolineatus*; but differs in the following points: from *saxicola*; this species has three white

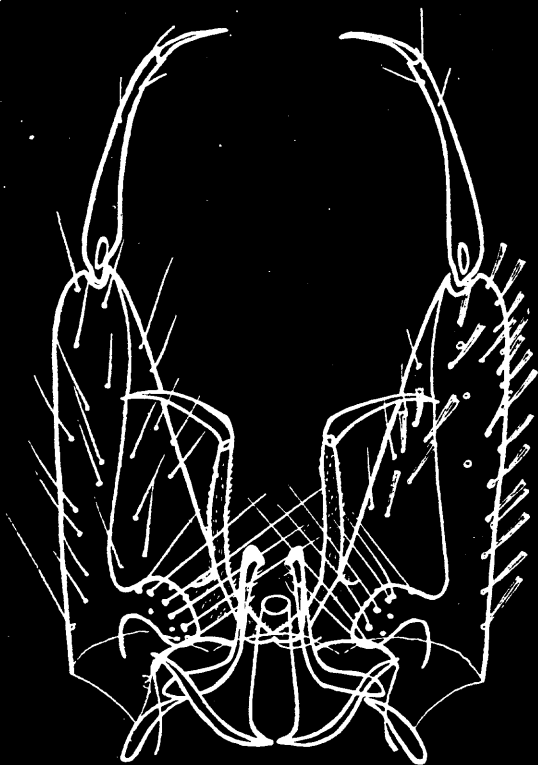


Fig. 4.
Terminalia of ♂ *Aedes* (F.) *gracilelineatus* n. sp.

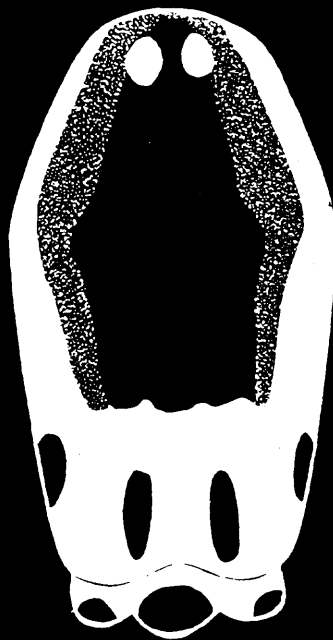


Fig. 5.
Mesonotum of *Aedes* (F.) *anggiensis* n. sp.

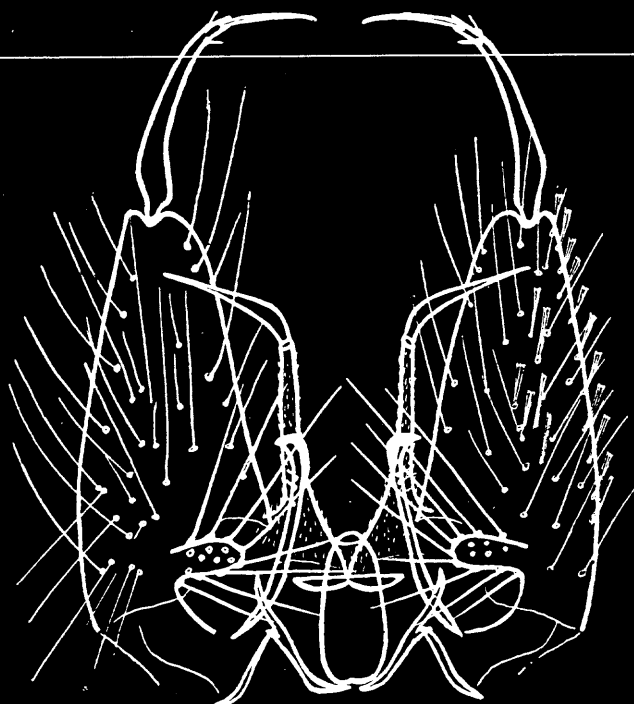


Fig. 6.
Terminalia of ♂ *Aedes* (F.) *anggiensis* n. sp.

rings on the hind tarsi, while *gracilelineatus* has 4 tarsi ringed on the hind legs; the mesonotal lines in *gracilelineatus* are sharply defined; the stem of the harpago in the male terminalia is very slender in *gracilelineatus*, short in *saxicola*. From *chrysolineatus* the new species differs in having the proboscis dark throughout, the mesonotal lines shorter and the stem of the harpago much more slender. Type no. 38.064/66 of the collection at the central Laboratory, Batavia-C., Java.

AEDES (FINLAYA) anggiensis nov. species.

FEMALE. Head. Vertex with curved and upright forked scales. The latter brown, mainly behind on the nape, the curved scales all over vertex, golden and nearly white, a large very light median area not intermingled with upright forked scales stretching forward between the eyes scales long and lying rather flat. Down the sides creamy golden flat scales in a large patch. Along the eye margins creamy small curved scales and strong orbital bristles. Palpi less than $\frac{1}{4}$ of the length of the proboscis, dark. Proboscis dark throughout. Clypeus dark gray, nude. Antennae dark, fine silvery-gray pubescence present, long hairs sparse, tori and base of next joint golden yellow, a few small narrow light scales on inner side of tori.

Thorax. Mesonotum largely covered with long narrow curved white scales and small very narrow golden ones forming a pattern as in fig. 5, remaining scales golden brown, bristles golden and brown, sparse. Scutellum with all the lobes covered with whitish curved scales, apical bristles strong, dark brown.

Pleurae. Anterior pronotal lobes with a large patch of semi-flat, golden yellow scales, scales not broad, slightly curved, bristles golden; posterior pronotal lobes closely covered with narrow curved flat lying golden scales, large patches of broad, nearly white, flat and semi-flat lying scales on upper and lower sternopleura and mesepimeron.

Wings. Outstanding scales long, linear, golden, particularly light golden on apical third.

Legs. Front legs with the femora dark scaled in front, except the creamy base and tip, above extreme base creamy white scaled, rest of basal half brown scaled, apical half creamy with brown scales intermingled, tip broadly creamy scaled, below and behind creamy scaled throughout; tibiae dark brown scaled with a creamy stripe below, from base to tip, tip faintly creamy all round; tarsi dark scaled, distinct white rings on T I, II and III, none on T IV and V. Middle legs with the femora dark scaled in front and above except the creamy base and tip, behind and below creamy scaled, apical half intermingled with numerous brown scales, tip broadly creamy; tibiae dark throughout except creamy ring at base and minute creamy spot at apex on underside; tarsi dark, distinct white rings on T I, II, III, narrow or indistinct on T IV. Hind legs with the femora light creamy scaled above on basal fifth, rest-except creamy tip-darkbrown scaled; in front, behind and below nearly basal half light creamy scaled, rest-except broadly creamy tip-dark brown; tibiae dark except creamy base and tip; tarsi dark, with rather broad basal white bands on T I, II, III, IV, a tiny basal spot on T V.

Abdomen. T I with numerous long golden brown bristles and scattered creamy colored scales, except medianly where the scales from a small patch. T II—VI with narrow basal light bands, on T II the band is broadened; on T VII band rather obsolete; T VIII dark in certain lights with coppery shine. On T VI and T VII light scales along median line. Lateral white patches rather large on all the segments, but on T VIII indistinct. Ster-

nites brown scaled with creamy colored basal narrow bands on S II—VI; S VII and S VIII in certain lights with brassy shine.

MALE. Head. Palpi shorter than proboscis, brown scaled with thick hairtuft at terminal segments, a rather broad white ring at middle of long joint, a large white patch at base of penultimate joint above, and a slightly smaller white patch at base of apical joint above. Antennae with numerous long golden brown hairs, very plumose, except at apical joints where the hairs are short and whitish. Abdominal bands on tergites mostly silvery white.

Terminalia (fig. 6). Coxite moderate, basal lobe present with numerous long strong hairs; hairs all over dorsal and ventral surface, all moderately long; no very long scales or flattened hairs present, the scales which are present on coxite not numerous or conspicuous; style rather short, appendage very long, a few small subapical hairs present on style. Harpago with both stem and blade quite long, stem covered with fine pubescence, blade slightly broadened on basal fourth, tapering from there till tip. Paraprocts with one curved apical tooth. Phallosome very simple, no serrations or chitinised plates present.

No larvae have been found. Described from three females and three males.

DISTRIBUTION. Western part of New Guinea (Anggi lakes, altitude 2000 m).

This mosquito comes very near to *Aedes (Finlaya) albotaemius*, but differs in the following details: the proboscis in ♂ and ♀ of *anggiensis* is dark throughout; the male palpi of the new species are distinctly white ringed; the dark interruptions in the mesonotal white are quite in front, and not lateral as in *albotaemius*; the white thoracic part is surrounded by creamy golden scales; there are no long scales on the coxite of the male terminalia and the stem of the harpago is distinctly more slender.

Type No. 38.067/72 of the collection at the Central Laboratory, Batavia-C., Java.