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### A new species of *Drepanephora* from South Africa (Diptera: Lauxaniidae)\*

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It gives me great pleasure to dedicate the remarkable new species described below to Professor Dr. ERWIN LINDNER, architect of *Die Fliegen*, and a distinguished student of the Diptera, on the occasion of his seventy-fifth birthday.

#### Lauxaniidae

#### *Drepanephora* Loew

*Drepanephora* Loew, 1869, Berl. ent. Z., p. 95.

BECKER, 1895, Ibid., p. 254. HENDEL, 1908, Genera Insectorum, 68, pp. 56—57. HENDEL, 1908, Suppl. Ent. 2, p. 101. BRUNETTI, 1913, Rec. Indian Mus., 8, pp. 180—181. HENDEL, 1925, Encycl. Ent. (B), 11, p. 107.

*Amphicyphus* de Meijere, 1908, Tijdschr. Ent., 51, p. 147. BEZZI, 1917, Philipp. J. Sci., 12, p. 131. MALLOCH, 1926, J. Linn. Soc. N. S. W., 51, pp. 549—550. FREY, 1927, Acta Soc. Faun. Flor. Fennica, 56 (8), pp. 3, 5. MALLOCH, 1929, Proc. U. S. nat. Mus., 74 (6), p. 17. CURRAN, 1938, Amer. Mus. Novit., 979, pp. 6—7. NEW SYNONYMY.

Type species — *Drepanephora*: *D. horrida* Loew (op. cit.), Ceylon.

— *Amphicyphus*: *Ensina reticulata* Doleschal (Natur. Tijdschr. v. Nederl. Indie., p. 412, 1856), Borneo.

A detailed account of *Drepanephora*, based on LOEW's unique type of *horrida*, has been given by HENDEL (1908, Genera Insectorum), who found the genus to be remarkable among the Lauxaniidae for the unusual modification of certain cephalic and thoracic bristles which may be laterally flattened to the degree that they are elongate-lanceolate or blade-shaped. Also, the head has a characteristic shape, being broad and with a prominently raised ocellar tubercle. At the present time three species are known:

*D. horrida* Loew — Ceylon.

*D. piliseta* Hendel — Formosa.

*D. multimaculata* Brunetti — N. E. Frontier of India.

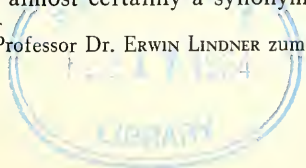
The genus *Amphicyphus* de Meijere has been discussed by MALLOCH (1926, 1929) who indicates the following characters to be diagnostic: the presence of an unequal pair of strong, curved, black, ventral spurs on the hind tibia (this MALLOCH considers unique in the family), the length and stiffness of many of the hairs on the body and legs, long preapical tibial bristles, tapering third antennal segment, incurved anterior orbital bristles, slight callosities on which the apical scutellar bristles are placed, and a lack of black setulae on the costa. There are at present two described species:

*A. reticulatus* (Doleschal) — Borneo, Java, Philippines, N. Queensland.

*A. africanus* Curran — Liberia.

The latter species, *africanus*, I have found to be widely distributed in Subsaharan Africa; it is almost certainly a synonym of *reticulatus*.

\* Herrn Professor Dr. ERWIN LINDNER zum 75. Geburtstag.



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The species described below has lanceolate bristles and a prominent tubercle on the frons, and is without doubt referable to *Drepanephora*. However it also possesses all the characters cited by MALLOCH as typical of *Amphicyphus*. This suggests that these genera are synonymous, and a comparison of the specimen with abundant material of *Amphicyphus africanus* on hand confirms the synonymy. The only difference between *Amphicyphus* and *Drepanephora* is that species of the latter have certain bristles lanceolate (BRUNETTI does not mention such bristles in his description of *D. multi-maculata*), but as the development of this condition varies interspecifically such bristles seem to have little significance as a generic criterion. In this group of species the vestiture shows several abnormal modifications — these affecting the stiffness and abundance of hairs, situation of certain bristles, and the length of the tibial bristles — and the development of blade-like bristles is probably a further manifestation of this trend.

It should be noted that the figure given by HENDEL (1908) in *Genera Insectorum* (Plate I, fig. 1) of *D. horrida* in lateral view shows a posterior leg, but in the description (*Ibid.*, p. 57) it is stated, "Hinterbeine fehlen dem Unicum". Although the pattern given on this added leg in the figure appears to be correct, none of the long tibial bristles are shown, nor are the two curved ventral spurs, and possibly this has been misleading.

*Drepanephora lindneri* n. sp.

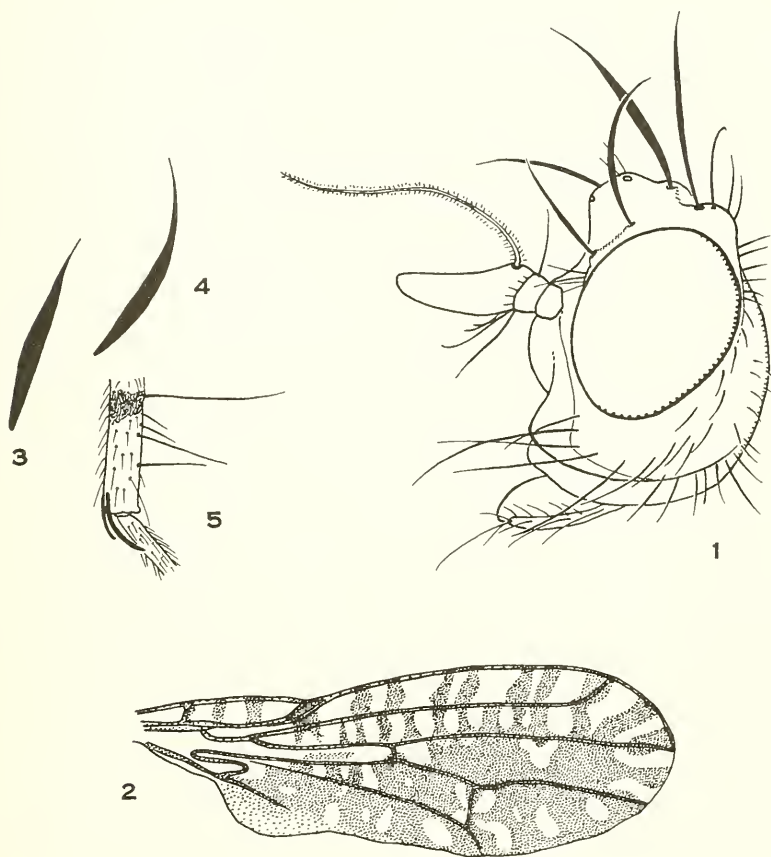
A species with lanceolate acrostichal, postvertical and presutural dorsocentral bristles, and a wing-pattern similar to that of *D. reticulatus* (Dol.). Arista white. Postvertical bristles very long.

♀. Head shaped as in fig. 1, much broader than high, face and frons very broad, clypeus prominently projecting. Face with transverse depression shortly below middle, markedly convex above this depression, below it flat medially with slight callosities laterally. Frons characterised by development of an ocellar tubercle which is prominently produced anterodorsally, its width basally about equal to distance between postvertical bristles, ocelli arranged on summit in equilateral triangle. Vertex fairly sharply margined, in profile convex behind ocellar tubercle, declining laterally to well-defined callosity above upper eye corner, on which inner and outer vertical bristles are placed. Eyes with microscopic hairs. First and second antennal segments short, subequal; third segment fairly elongate, about 3 times its breadth at mid-length, tapering apically, upper margin very slightly convex. Arista sub-basal, with short hairs, white except very pale yellow at base.

Head generally pale brownish-yellow. Both frontal bristles on small, dark brown marks; callosities bearing vertical bristles blackish-brown. Upper borders of ocelli infuscated. Face semi-matt, pale brownish-yellow except lateral callosities which are obscurely brown and shining, also upper lateral parts obscurely brownish (most apparent in lateral view); a thin, brown, median line extends from anterior edge to lower part of upper convexity. Clypeus brownish with subtriangular pale, median area; palps whitish. Parafacials with tapering, subtriangular, dark mark above, adjacent to orbit, and a dark irregular mark adjacent to vibrissal angle. An ill-defined darkening on lower occiput. Basal and second antennal segments pale-yellowish, third segment greyish-white on lower half, brownish on upper half.

Mesonotum dull brownish tinged with yellow, tinge more noticeable laterally, with broad, poorly defined, sublateral, dark vitta; each vitta extending inwards to dorsocentral line, outwards to beyond presutural bristle, anteriorly onto upper half of humeral callus where vitta is almost black and contrasts with clear brownish-yellow of lower half; posteriorly vitta becomes indistinct. A trace of a thin, median, yellowish line along entire length of mesonotum, not continuous but irregularly fragmented; also two distinct, thin, yellowish lines between dorsocentral and acrostichal rows,

strongest anteriorly, thinning posteriorly and disappearing just past upper end of suture. Irregular, greyish, pollinose patches present on dark sublateral vittae. Pleura pale brownish-yellow, boldly marked across middle by a blackish stripe extending from immediately behind propleuron backwards to surround haltere base, occupying lower half of mesopleuron, pteropleuron and inferior pleurotergite, sharply delimited by lower margins of these sclerites, interrupted at middle by an elongate, membranous strip



*Drepanephora lindneri* n. sp. (1) Head in lateral view. (2) Left wing, ventral aspect. (3) Presutural dorsocentral bristle. (4) Sub-basal scutellar bristle. (5) Apical part of hind tibia, showing the two curved spurs and the long preapical bristle.

between meso- and ptero-pleura. Anterior coxae almost entirely dark brown; middle coxae with slight, subshining, blackish swelling on upper, outer side; hind coxae pale yellow except upper and vertical edges which are lined with black. Femora rather thick, each pale yellowish with two wide, brown rings, basal and distomedian on first and second legs, basal and almost median on hind legs. Tibiae slender, pale yellowish, with two narrow, brown rings placed on the thirds. Tarsi concolorous pale yellowish.

Scutellum as long as its greatest width, lateral margins almost straight, posterior corners sharp with distinct, slight, black tubercles carrying posterior scutellar bristles; posterior margin slightly concave; disc quite markedly convex. Lateral margins narrowly brownish-yellow, disc subshining blackish-brown. Posterior edge with pale median mark.



Wing boldly patterned as shown in fig. 2, resembling that of *D. reticulatus*, pattern in smoky-brown and pearly-white. R 1 ending very close to Sc, R 2 + 3 subparallel to R 4 + 5 for most of its length, apical part quite steeply curved forwards. Apical parts of third and fourth veins subparallel, slightly undulating. Posterior cross-vein nearly three times length of anterior one. Apical section of fifth vein about two-thirds length of posterior cross-vein. Fourth vein index 2.0.

Haltere stem pale yellowish, knob irregularly darkened.

Abdomen mainly dull brownish-yellow with distinct pattern, there being a bold, irregular median vitta bordered by pale, broad, sublateral vittae which are interrupted by thin, dark, hind margins of tergites, bordered in turn by irregularly patterned lateral parts of tergites which merge to give an appearance of variegated lateral vittae. Tergites 2—5 have subtriangular or subquadrangular, median, blackish marks, tergite 6 with irregular, dark, median mark, these together forming irregular vitta, this vitta bordered on tergites 2—5 by brownish-yellow areas. Slightly less than lateral quarter of tergites 2—5 with irregular marking composed of brown spots and areas of ashy-grey pollen, marginal bristles standing on brown spots. In addition, tergites 2—6 very narrowly black along hind margins. Tergite 6 yellowish-brown laterally, only the extreme corner darkened, some of the larger marginal bristles on dark spots. Venter irregularly patterned in pale yellowish-brown and brown.

Vestiture noteworthy for development of numerous, erect dark hairs, and blade-like nature of certain cephalic, mesonotal and scutellar bristles. Hairs on genae elongate, bristle-like, continuing into row of long, black setae extending around vibrissal angle. Adjacent to orbit, below anterior orbital bristle, is a group of short hairs. Postocular hairs uniseriate. Ventral hairs of second antennal segment black, conspicuously long (up to about two-thirds of third segment). Mesonotal hairs scattered, erect to proclinate, longest ones between dorsocentral lines. Mesopleuron with long, erect hairs, sternopleuron also haired but these shorter and finer. Anterior orbital bristles inclinate and slightly reclinate; posterior orbitals curved, reclinate and somewhat eclinate. Ocellars strong, as long as anterior orbitals. Postverticals extraordinarily developed, almost as long as inner verticals, convergent but not cruciate. Inner and outer verticals situated on lateral callosities of vertex, placed very close together (less than distance between ocelli), both strong, outer about two-thirds length of inner. Nearly all major cephalic bristles are blade-like to some degree as a result of lateral flattening (fig. 1); both orbital pairs and outer verticals slightly flattened; ocellars and inner verticals noticeably flattened; postverticals strongly flattened, widest at midlength.

Mesonotum has 2 + 3 acrostichals, anterior:most pair not well distinguished from some long, erect hairs; second, third and fourth pairs long, subequal, broadly blade-like, their apical portions suddenly tapering to very acute tips; prescutellar acrostichals shorter, thin, unmodified. A peculiar feature is that two anterior blade-like pairs of acrostichals stand very close together, whereas third blade-like pair are twice as far apart and prescutellar pair  $1\frac{1}{2}$  times; 1 + 3 dorsocentrals, of which first three pairs are strongly flattened blades (fig. 3), subequal, posterior pair longer but almost normal, with only slight sign of flattening; 1 humeral, 2 notopleural, 1 supra-alar, 1 presutural, 2 post-alar, bristles present, all these normal except for long inner post-alar which is slightly flattened. All four scutellar bristles strong; sub-basal pair more on disc than normal, strongly flattened (fig. 4), suberect, directed slightly posteriorly but curved forwards; posterior scutellars long, subparallel, slightly flattened over basal two-thirds. One mesopleural present; one sternopleural on one side, two on other, weak. Preapical bristle on fore-legs very long, at least two-thirds of tibial length, situated on lower brown ring; fore-femoral posterodorsal comb with 8—9 setae, posterior comb with 5 setae, posteroventral comb with 8—9 fine setae, ventral comb very strong, with 6—7 stout, long bristles. Preapical bristle of middle leg stout, about as long as twice tibial diameter at attachment site just below lower ring. Posterior tibia with 4—5 long, erect

hairs on upper side (not all strictly dorsal), of which one standing on lower brown ring is stronger and is apparently the preapical (fig. 5). Two strong, black, ventral spines on hind tibia, these curved, closely applied to one another, posterior one a little longer (fig. 5). Anterior face of middle and hind femora with erect hairs; on middle femora an irregular anteroventral series of longer hairs; hind femora with some long hairs on anterior and anteroventral surface, a few at apical quarter especially long.

Second abdominal tergite with only lateral bristles and hairs, third similar but with a few fine, marginal setae, fourth with hairs and bristles on lateral portions and also some quite strong marginal bristles, fifth and sixth tergites with long marginal bristles, only sublateral yellowish-brown parts without bristles.

Total length of wing, 4.20 mm.

Length of wing to base of humeral crossvein, 3.65 mm. Holotype, ♀, Port St. Johns, Eastern Cape Province, South Africa, 20.–25. XI. 1961 (leg. P. J. STUCKENBERG). In the Natal Museum (No. 1001).

Note: The holotype was swept from a small, leafy tree standing in dense shade in a well-preserved, lower montane *Podocarpus* forest, at about 500 ft. altitude and less than a mile from the sea.

Anschrift des Verfassers:

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