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Lispe (Diptera, Muscidae) of Africa

N. E. Vikhrev

Zoological Museum of Moscow University, 2 Bolshaya Nikitskaya Str., 125009, Moscow, Russia

Author
Nikita E. Vikhrev
E-mail: nikita6510@yandex.ru
SPIN: 1266-1140
Scopus Author ID: 32467511100

Abstract. The first complete overview of the African fauna of *Lispe* is published. The paper consists of 3 parts. (1) The alphabetical list of 55 taxa of the African fauna is given with references, distribution data and, where necessary, taxonomic remarks or descriptions. (2) Addendum with 26 African taxa of *Lispe* which are not included in the main alphabetical list (as synonymies or for other reasons). (3) Identification key for *Lispe* of Africa. The paper is illustrated with 47 figures. Six new taxa of *Lispe* are described: *Lispe alkalina* **sp. nov.**; *Lispe andrefana* **sp. nov**; *Lispe confusa* **sp. nov.**; *Lispe patersoni* **sp. nov.**; *Lispe polonaise* **sp. nov.**;. *Lispe selena* **sp. nov**. Nine new taxonomic statuses in genus *Lispe* are proposed: *Lispe* ***flavicornis*** Stein, 1909 = *L. silvai* Paterson, 1953 **syn. nov.**; *L. niveimaculata* Stein, 1906 = *L. sineseta* Zielke, 1971, **syn. nov.**; *L. pectinipes* Becker, 1903 = *L. xantophlebia* Seguy, 1950, **syn. nov.**; *L. scalaris* Loew, 1847 = *L. flavipes* Stein, 1913 **syn. nov.**; *L. wittei* Paterson, 1956 = *L. ethiopica* Vikhrev, 2012, **syn. nov.**; *L. geniseta macfiei* Emden, 1941= *L. macfiei* Emden, 1941, **stat. nov.**; *L. geniseta setigena* Vikhrev et Pont, 2016 = *L. setigena* Vikhrev et Pont, 2016, **stat. nov.**; *L. ochracea* Becker, 1910 = *L. canis* Malloch, 1922 **stat. nov.**; *L. tentaculata draperi* Séguy, 1933 = *L. draperi* Séguy, 1933, **stat. nov**.

Keywords: Diptera, Muscidae, *Lispe*, Africa, identification key, review, new species, synonymy.

Lispe (Diptera, Muscidae) Африки

Н. Е. Вихрев

Зоологический музей Московского государственного университета им. М. В. Ломоносова,
Большая Никитская ул., д. 2, 125009, г. Москва, Россия

Сведения об авторе
Вихрев Никита Евгеньевич
E-mail: nikita6510@yandex.ru
SPIN-код: 1266-1140
Scopus Author ID: 32467511100

Аннотация. Опубликован первый полный обзор африканской фауны *Lispe*. Статья состоит из 3 частей. (1) Приводится алфавитный список 55 таксонов африканской фауны со ссылками, данными о распространении и при необходимости таксономическими замечаниями или описаниями. (2) Приложение с 26 африканскими таксонами *Lispe*, которые не были включены в основной список, будучи синонимами, или по другим причинам. (3) Определительный ключ для африканских *Lispe*. В статье использовано 47 иллюстраций. Описаны 6 новых таксонов: *Lispe alkalina* **sp. nov.**; *Lispe andrefana* **sp. nov.**; *Lispe confusa* **sp. nov.**; *Lispe patersoni* **sp. nov.**; *Lispe polonaise* **sp. nov.**; *Lispe selena* **sp. nov**. Предложены 9 новых синонимов и изменений ранга таксонов: *Lispe* ***flavicornis*** Stein, 1909 = *L. silvai*, Paterson, 1953 **syn. nov.**; *L. niveimaculata* Stein, 1906 = *L. sineseta* Zielke, 1971, **syn. nov.**; *L. pectinipes* Becker, 1903 = *L. xantophlebia* Seguy, 1950, **syn. nov.**; *L. scalaris* Loew, 1847 = *L. flavipes* Stein, 1913 **syn. nov.**; *L. wittei* Paterson, 1956 = *L. ethiopica* Vikhrev, 2012, **syn. nov.**; *L. geniseta macfiei* Emden, 1941= *L. macfiei* Emden, 1941, **stat. nov.**; *L. geniseta setigena* Vikhrev & Pont, 2016 = *L. setigena* Vikhrev & Pont, 2016, **stat. nov.**; *L. ochracea* Becker, 1910 = *L. canis* Malloch, 1922, **stat. nov.**; *L. tentaculata draperi* Séguy, 1933 = *L. draperi* Séguy, 1933, **stat. nov**.

Ключевые слова: Diptera, Muscidae, *Lispe*, Африка, ключ, обзор, новые виды, синонимы.

Introduction

The last key for African *Lispe* Latreille 1796 was published 80 years ago (Emden 1941), and the catalogue of Afrotropical fauna of the genus, 40 years later (Pont 1980). In the present work, I have tried to combine the complete identification key and the updated catalogue of African *Lispe*.

All presently known taxa of African *Lispe* are listed in Parts I and II: "Alphabetical list of African *Lispe* with references or comments" and "Addendum", thus these two parts may be used as the updated catalogue of African *Lispe*. Only those species of *Lispe* which are included in "Alphabetical list …" are also included in Part III: "Identification key for *Lispe* of Africa", where a total of 55 taxa are keyed in comparison with Emden's (1941) key where only 25 taxa were considered. I limited the key to 55 species the specimens of which I personally examined and came to an unambiguous conclusion about their taxonomic status. The majority of taxa are only briefly mentioned in the list, with references to previous papers where discussions of taxonomy and examined material were given. In some cases new examined material with new records from Africa is added. The minority of the listed species which I have not considered before and 6 newly described species are presented in more detail.

The addendum contains 26 taxa of *Lispe*. All names listed as valid in Pont's (1980) catalogue and absent in the "Alphabetical list…" are in Addendum. There are taxa: synonymized after 1980 (1); excluded from African fauna (2); having uncertain or changed taxonomical status with taxonomical comments and references given where possible and necessary (3).

In this work I treat the African continent as a whole, both the main part south of Sahara Desert belonging to the Afrotropical realm and the northern Palaearctic part of Africa are considered. The Afrotropical realm includes also Yemen, Madagascar and smaller islands surrounding the continent, African part of the Palaearctic realm includes the Canary Islands.

Material and methods

The specimens examined are deposited in the following museums:

BMNH—Natural History Museum, London, UK;

DEI—Senckenberg Deutsches Entomologisches Institut, Müncheberg, Germany.

MNHN—Muséum national d'Histoire naturelle, Paris, France;

TAUI—Tel-Aviv University, Israel;

NCU—Nicolaus Copernicus University, Torun, Poland;

ZIN—Zoological Institute, Saint Petersburg, Russia;

ZMHU—Museum für Naturkunde, Berlin, Germany;

ZMUM—Zoological Museum of Moscow University, Russia.

Geographical coordinates are given in the decimal degrees format.

The following generally accepted abbreviations for morphological structures are used: *f1*, *t1*, *f2*, *t2*, *f3*, *t3* = fore-, mid-, hind- femur or tibia respectively; *ac* — acrostichal setae; *dc* — dorsocentral setae; *prst* — presutural; *post* — postsutural; *a*, *p*, *d*, *v* = anterior, posterior, dorsal, ventral seta(e).

The abbreviation for the tarsi as *tar* followed by a pair of digits separated by a hyphen was proposed by Vikhrev (2011): the first digit (1 to 3) gives the leg number and the second digit (1 to 5), the number of the tarsal segment. For example, *tar1-4* = 4th segment of fore tarsus; *tar3-1* = hind basitarsus.

Illustrations are original unless otherwise indicated. Since I have to reference numerous figures of this paper including those from literature (some of the latter reproduced in the former, with different numeration), to avoid confusion I capitalize the first letter (Fig. or Figs) for figures in this paper but use the lower-case letter (fig. or figs) in literature references to figures published elsewhere.

Alphabetical list of African *Lispe* with references and/or comments

Lispe alkalina sp. nov.

http://zoobank.org/NomenclaturalActs/29D5B82A-3983-419A-A4AD-7D58C994C56E

Figs 1–8

Holotype: male, ETHIOPIA, *Oromia* reg., Langano Lake, 1590 m asl, 7.646°N 38.706°E, 13–15 March 2012, N. Vikhrev (ZMUM).

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Paratypes, 26♂, 18♀: ETHIOPIA: *Oromia* reg.: Langano Lake, 1590 m asl, 7.646°N 38.706°E, 13–15 March 2012, N. Vikhrev, 11♂, 4♀; Abijatta alkaline lake, 1580 m asl, 7.61°N 38.65°E, 14 March 2012, N. Vikhrev, 3♂;

KENYA, Elementeita alkaline lake, 1800 m asl, 0.46°S 36.26°E, 20–21 November 2012, D. Gavryushin, 8♂, 5♀;

TANZANIA, *Mbeya* reg.: Rukwa alkaline lake, 8.36°S 32.84°E, 800 m asl, 13 December 2015, N. Vikhrev, 3♂, 9♀ (all ZMUM).

Description. *Male*. Body length 4.8–5.6 mm. *Head* with frons, fronto-orbital plates, face, parafacials and gena with an intense silver pollinosity (Fig. 2); occiput with whitish-grey pollinosity. Margin between fronto-orbital plates and frontal triangle hardly distinct, the latter with convex margins. Fronto-orbital plates with 2 long inclinate setae and with 3–6 setulae in an outer row; parafacials wide, with 3–6 fine hairs in lower third. Antenna black, short, postpedicel falling of mouth margin by more than its own length. Aristal hairs hardly longer than half width of antenna. Vibrissae strong, almost 2x longer than distance between their insertion places. Palpi yellow with outer surface with dense silver pollinosity.

Thorax evenly grey dusted. *dc* 2+3, strong; meron bare above hind coxa, anepimeron with 10–12 setulae. Wing clear, calypters white, halter yellow. *Legs* dark, densely grey dusted, with reddish knees. Characteristic for the *L. caesia* group ventral spines hardly distinct only on fore femur. *f1* with a row of 7 long *pv* setae. *t1* with long submedian *pv* seta; ground setulae on *d* surface somewhat elongated. Mid coxa with a pair of curved, backward directed spinules consisting of several closely set setulae (Fig. 4). *f2* with several *a* setae in basal half, 3 long *pv* at middle and 2 *p* preapical. *t2* with a long *pv* below middle. Hind coxa with seta on posterior margin. *f3* with 2 long and strong *av* in apical half (submedian and preapical) and 2 (1–3) shorter *av* in basal half and 1(2) fine long *pv* setae at base. *t3* with 1 strong *ad*. Tarsi unmodified.

Abdomen grey dusted, tergites 1+2 to 4 with a large black triangular median spot each, tergite 5 mostly grey with some black pattern antero-laterally (Figs 1, 3). Male terminalia (shown on Figs 5, 6): cercal plate with elongated and pointed apical part and with a pair of lateral processes which are curved and hairy at apex.

Female differs from male as follows: body length 5.5–6.5 mm. Head and body with yellowish dusting instead of the silvery one. Frontal triangle, fronto-orbital plates, face and gena yellowish. Palpi yellow, without silver pollinosity. Mid coxa without pair of spinules. *f1* and *f2* with rows of distinct ventral spines. *t3* apart from *ad* with *av* seta in apical third.

Etymology. The name refers to alkaline (or soda) water in the lakes where the new species was collected.

Habitat. Specimens were found on silty or sandy shores of lakes along the Great African Rift at altitude 800–1800 m asl. Abijatta, Elementeita and Rukwa lakes are terminal basins, so their square and salinity strongly change depending on the season and year. Thus, it is impossible to know the exact salinity of these lakes at the time of collecting material there from the literature sources, but I can offer indirect data. While collecting I went swimming in Langano and Rukwa lakes and found the water almost fresh to the taste, about as fresh as the water of the Caspian Sea, that is, at the salinity level of 20–40 g/l. However, even such a low level of salinity is ecologically important, for example, it makes Lake Langano free of schistosomiasis, unlike truly freshwater lakes in Africa.

Lispe ambigua Stein, 1913

Figs 13–14

Lispe ambigua Stein, 1913 (Paterson 1953: 178; Vikhrev 2016: figs: 2 and 5)

Material examined: see Vikhrev (2016).

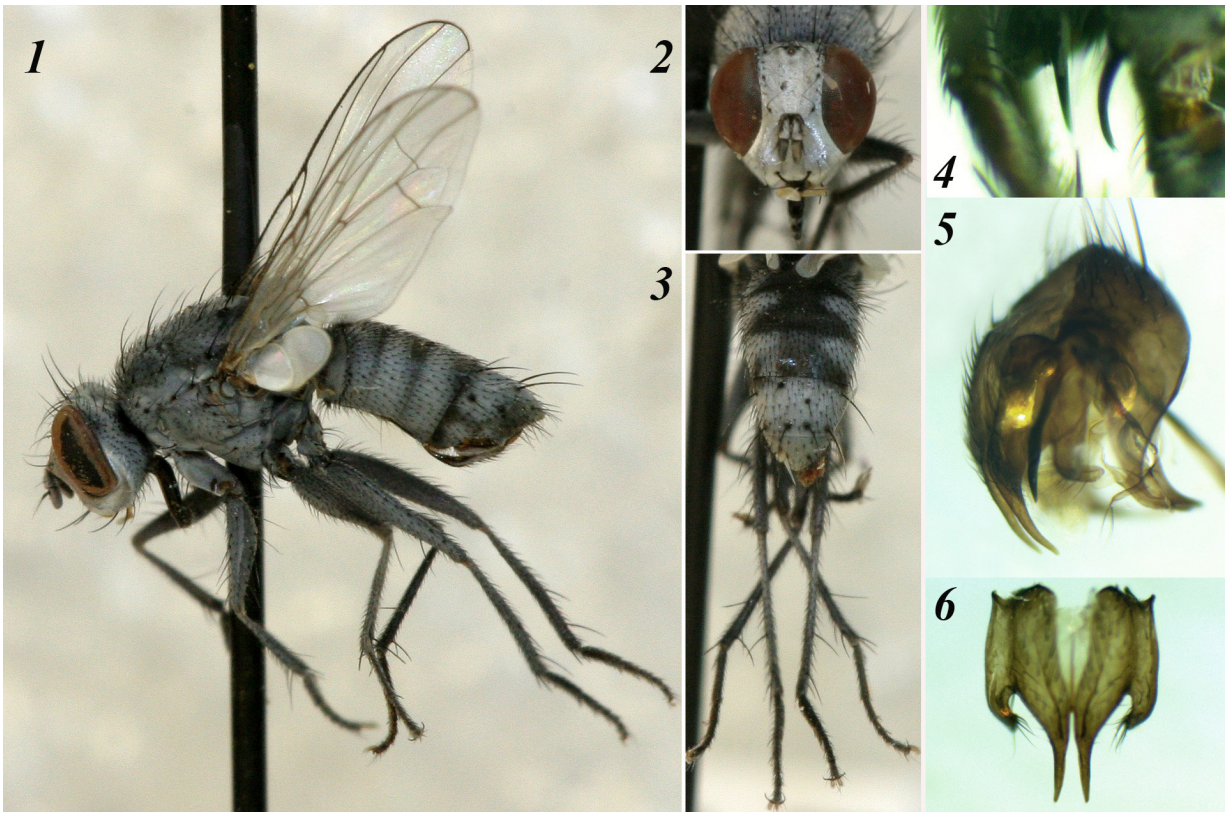
Distribution. Highlands (from 1950 to 3370 m asl) of Ethiopia and Kenya.

***Lispe andrefana* sp. nov.**

http://zoobank.org/NomenclaturalActs/3cefcf7c-da05-462e-8fc7-1ab3598bce8c

Figs 9–12

Holotype: male, MADAGASCAR, Toliara env., Ifaty, 23.16°S 43.62°E, 14–20 November 2012, A. Medvedev (ZMUM).



Figs 1–6. *L. alkalina* **sp. nov.**, male: *1* — general view, lateral; *2* — head; *3* — abdomen, postero-dorsally; *4* — spines on mid coxa; *5* — genitalia, lateral view; *6* — cercal plate

Рис. 1–6. *L. alkalina* **sp. nov.**, самец: *1* — общий вид сбоку; *2* — голова; *3* — брюшко сзади; *4* — шипики на средней коксе; *5* — гениталии сбоку; *6* — церки

Paratypes, 25♂, 27♀, the same data as the holotype.

Description. *Male*. Body length 5.5–6.1 mm. *Head* with frontal triangle, face and parafacials with silvery-white pollinosity; fronto-orbital plates and gena with whitish anterior and dark posterior parts; frontal vitta dark (Fig. 10); occiput grey. Frontal triangle rather narrow with only slightly convex margins. Fronto-orbital plates with 3 long inclinate setae and with 3–6 setulae in outer row; parafacials with 7–8 hairs in lower third. Antenna short, postpedicel falling of mouth margin by twice its own length. Pedicel yellowish, postpedicel dark yellowish at very base, base of arista yellow. Aristal hairs hardly longer than half width of antenna. Vibrissae weak, hardly as long as distance between their insertion places. Palpi yellow with whitish pollinosity.

Thorax (Fig. 9) evenly grey dusted; *dc* 2+4, two anterior postsutural pairs weak; meron bare above hind coxa; anepimeron with 10–11 setulae. Wings clear, calypters white, halter yellow. *Legs* dark, densely grey dusted, with basal 1/3–1/5 of tibiae yellowish. The characteristic for the *L. caesia* group ventral spines are weak, distinct only on fore and mid femur. *f1* with a row of 7 long *pv* setae. *t1* with submedian *pv* seta. *f2* with 1–3 fine *v* setae in basal half and 2 *p* preapical. *t2* with 1 *pv* below middle. Hind coxa with seta on posterior margin. *f3* with 1 submedian *av* and 1–3 *v* in basal half. *t3* with 1 *ad* and 1 *av*. Hind tarsus: *tar3-1* slightly thickened in basal half; posteriorly with a dense row of downcurved *p* setulae.

Abdomen dirty-grey dusted, tergite 4 with a pair of black rounded spots; tergite 3 with same but hardly distinct spots (Figs 9, 11). Male cercal plate shown in Fig. 12, it is heart-shaped, typical for for the *L. caesia* group.

Female differs from male as follows: body length 5.8–6.6 mm. Head and body with yellowish dusting instead of the whitish-grey one. Frontal triangle, fronto-orbital plates,

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face and gena yellowish. All femora with rows of ventral spines. *t1* with submedian *p* strong. *t3* apart from *ad* with *av* seta in apical third. Hind tarsus unmodified.

Etymology. The name refers to the Madagascan region Atsimo-Andrefana where the type series was collected.

Lispe apicalis Mik, 1869

Lispe comitata Becker, 1904 (Hennig 1960; Vikhrev 2015: 230 and figs 1, 6)

Lispe apicalis Mik, 1869 (Vikhrev 2015)

Material examined: see Vikhrev 2015; 2020).

Distribution. In Africa recorded from Morocco and Algeria. Palaearctic: ranges to the East to 100.3°E, to the North to 51.2°N.

Lispe argentata Couri, Pont et Penny, 2006

Fig. 16

Lispe argentata Couri, Pont et Penny, 2006

Material examined: MADAGASCAR, Toliara env., Ifaty, 23.16°S 43.62°E, 14–20 November 2012, A. Medvedev, 10♂, 4♀ (ZMUM).

Distribution. Madagascar, the only known locality is Ifaty.

Descriptive notes. Species was described from Madagascar, Toliara reg, Ifaty. The type series consists of 1♂ and 1♀ collected by Malaise trap, the female misses fore and mid legs, therefore some points should be clarified. *Male*. Body length 7–7.5 mm. *Head* densely silvery-white dusted, frontal vitta less dusted, so frontal triangle distinct, widened, with convex margins. Frons narrowed, about 1/3 of head width. Antenna dark, medium long, postpedicel falling of mouth margin by almost its own length. Aristal hairs 0.5x as long as antenna width. Vibrissae strong. Palpi yellow, so densely dusted at the apex that look brownish. *Thorax* grey dusted with indistinct whitish median vitta. Meron bare; anepimeron with 15 long hairs; 2+3 *dc*, all strong. *Legs* dark, hind coxa with seta on inner posterior margin, *f1* and *f2* with rows of strong ventral spines. *t1* without median seta; *t2* with 1 *p* and 1 *ad* below it; *f3* with 3 strong *av* in apical half and 3 strong *pv* in basal half. *t3* with 1 fine *ad* and 1 strong *av*; *tar3-1* widened, with a tuft of downward directed setae at middle. *Abdomen* with paired, not very distinct, round dark dorsal spots on tergites 3 and 4; antero-lateral margins of tergite 5 slightly darkened. *Female* differs as follows: body length 7.5–8 mm, dusting of head and body yellowish-grey; *f3* with only 1 *av* at middle; hind tarsus unmodified; abdominal dark spots triangular, distinct.

Lispe assimilis Wiedemann, 1824

Lispe modesta Stein, 1913 (Vikhrev 2012b)

Lispe assimilis Wiedemann, 1824 (Vikhrev 2012b); (Pont 2019: 144–150, figs 304–316)

Material examined: see Vikhrev (2012b).

New records: KENYA, Melewa R., 1900 m asl, 0.67°S 36.39°E, 19 November 2012, Gavryushin, 1♀.

TANZANIA: *Dodoma* reg. Dodoma env., 6.20°S 35.75°E, pond, 1150 m asl, 11–13 February 2017, N. Vikhrev, 8♂, 4♀; Mtera Reservoir, 7.13°S 36.00°E, 14 February 2017, N. Vikhrev, 4♂, 2♀; *Morogoro* reg., Mikumi village, 7.40°S 36.99°E, 5–7 February 2017, N. Vikhrev, 2♂ (all ZMUM).

Remarks. Tanzanian material shows that in E Africa *L. assimilis* is more common in rainy season.

Distribution. African records: Ethiopia, Kenya, Morocco, Nigeria, Tanzania, Sudan. Widespread in S Palaearctic, Oriental, and Australia.

Lispe barbipes Stein, 1908

Lispe barbipes Stein, 1908 (Vikhrev 2012b: 28–29, fig. 1; 2014: fig. 62)

Material examined: see Vikhrev (2012b; 2014).

New material: NAMIBIA: Windhoek env., 22.54°S 17.20°E, 1800–1900 m, 25–30 November 2018, N. Vikhrev, 11♂, 11♀; Luderitz env., 26.61°S 15.19°E, sewage fields, 20–22 January 2021, N. Vikhrev, 2♂, 2♀; Noordoewer env., Orange R., 28.686°S 17.557°E, 23–25 January 2021, N. Vikhrev, 1♂ (ZMUM).

Distribution. A South African species: Botswana, Namibia, South Africa. Record from Ethiopia (Vikhrev 2012b) was a misidentification of a female of *L. cilitarsis*.

Lispe bengalensis Robineau-Desvoidy, 1830

Lispe tetrastigma Schiner, 1868 (Hennig 1960: 458–459, figs 381, 401)

Lispe armipes Becker, 1903 (Hennig 1960)

Lispe berlandi Seguy, 1940 (Pont 1986)

Figs 7–12. *L. alkalina* **sp. nov.** (*7–8*): *7* — female, general view; *8* — female, head; *L. andrefana* **sp. nov.** (*9–12*): *9* — the holotype, general view; *10* — the holotype, head; *11* — the holotype, abdomen, posterior view; *12* — cercal plate

Рис. 7–12. *L. alkalina* **sp. nov.** (*7–8*): *7* — самка, общий вид; *8* — голова самки; *L. andrefana* **sp. nov.** (*9–12*): *9* — голотип, общий вид; *10* — голотип, голова; *11* — голотип, брюшко сзади; *12* — церки

Lispe bengalensis Robineau-Desvoidy, 1830 (Pont 1986); (Pont 2019: 215–221, figs 448–459); (Vikhrev 2020: figs 18, 20, 48)

Material examined: see Vikhrev (2020): Australia: Queensland, Victoria; Cambodia; India: Andhra Pradesh, Goa, Gujarat and Orissa states; Indonesia, W Papua prov.; Madagascar; Malaysia, Borneo, Sabah state; Namibia; Sri Lanka; Tanzania: Pwani and Mtwara reg.; Thailand, Phuket prov.

Distribution. Palaeotropical species, widespread near seashores of Africa, S Asia, and Australia.

Lispe bipunctata Seguy, 1938

Lispe bipunctata Seguy, 1938 (Vikhrev 2016: 179–180 and fig. 21)

Material examined: see Vikhrev (2016).

Distribution. Known from S Ethiopia, SNNPR reg.

Lispe biseta Stein, 1913

Lispe biseta Stein, 1913 (Vikhrev 2016: figs 1, 3)

Material examined: see Vikhrev (2016).

Distribution. Africa: highlands (1400–2350 m asl) of Ethiopia, Kenya, Tanzania.

Lispe caesia Meigen, 1826

Lispe microchaeta Seguy, 1940

Lispe caesia microchaeta Seguy, 1940 (Hennig 1960)

Lispe caesia Meigen, 1826 (Hennig 1960; Zhang et al. 2016; Vikhrev et al. 2016: 407–409 and figs 1–6)

Material examined: see Vikhrev et al. 2016; Vikhrev 2020.

Distribution. Africa: Egypt and Morocco. A Palaearctic species ranging from the Atlantic coast to 95°E in Siberia.

Lispe candicans Kowarz, 1892

Lispe simonyii Becker, 1910

Lispe candicans Kowarz, 1892 (Hennig 1960; Zhang et al. 2016: figs. 1D, 3E, 4H, I, L, 12, 13, 31G, H; Vikhrev 2020: 163–165 and figs 10–15)

Material examined: see Vikhrev (2020).

Distribution. Africa: Egypt, Morocco, Mozambique, Senegal, Yemen. Also Mediterranean coast, Near East, India (Gujarat).

Remarks. As discussed by Vikhrev (2020), the taxonomic status of *L. simonyii* so far can-

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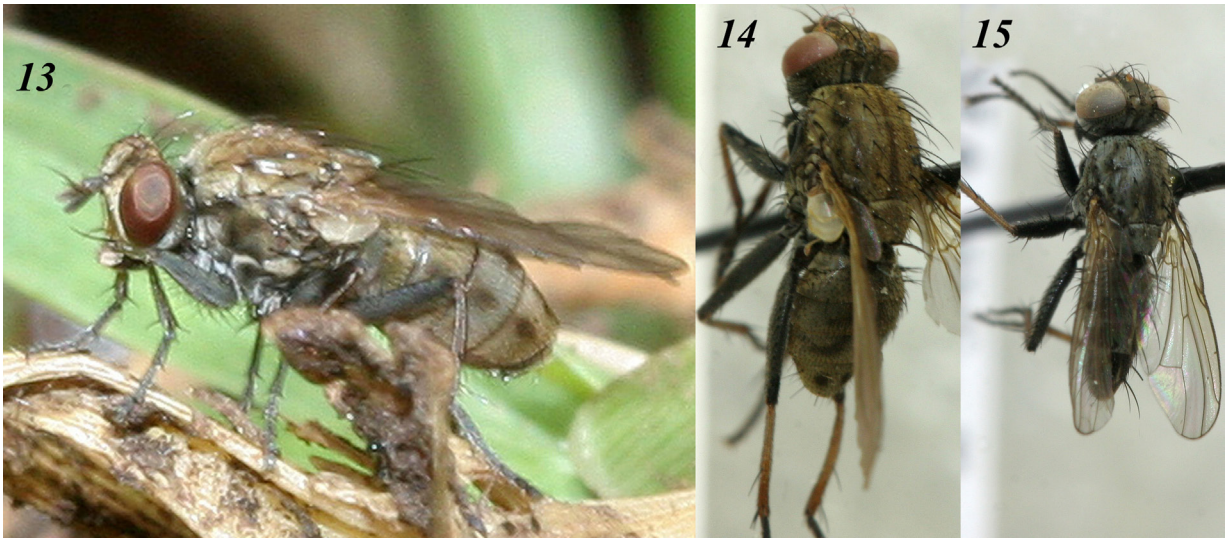


Figs 13–15. *L. ambigua* (*13–14*): *13* — female, general view; *14* — female, dorsal; *L. dichaeta* (*15*): *15* — male, dorsal

Рис. 13–15. *L. ambigua* (*13–14*): *13* — самка, общий вид; *14* — самка, сверху; *L. dichaeta* (*15*): *15* — самец, сверху

not be clarified, so here I consider *L. candicans* in a broad sense.

Lispe capensis Zielke, 1971

Figs 17–21

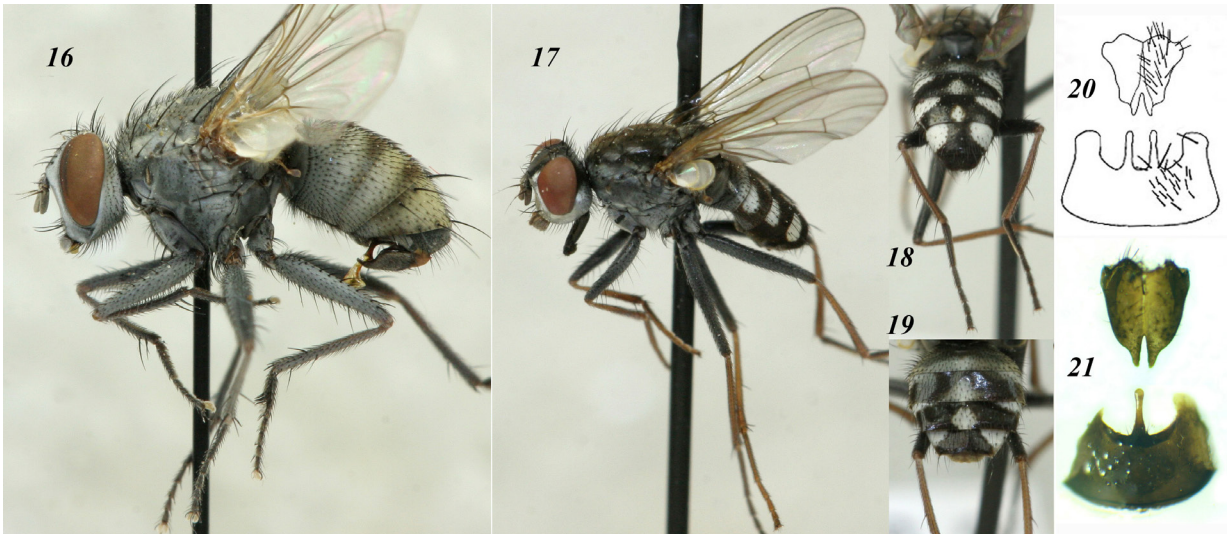
Lispe capensis Zielke, 1971

Material examined: NAMIBIA: Walvis Bay env., 22.97°S 14.54°E, 5–9 December 2018, N. Vikhrev, 16♂, 26♀; Luderitz env., 26.61°S 15.19°E, sewage fields, 20–22 January 2021, N. Vikhrev, 2♀ (all ZMUM).

Distribution. Reliably known from South Africa and Namibia. For the collecting site in Namibia see the notes on the type locality of *L. polonaise* sp. nov.

REDESCRIPTION. *Male*. Body size — 5.5–6 mm. *Head*. Frontal triangle shining black, interfrontalia matte black, fronto-orbital plate shining black but grey dusted in anterior half; parafacials and face whitish-grey, occiput grey. Antennae black. Arista in basal half with hairs 0.5x as long as width of antenna, in apical half bare. Vibrissae strong. Palpi covered with dark grey pollinosity, yellowish on margins. *Thorax* black, scutum shining, pleura grey dusted. *dc* 2+3 all strong; anepimeron with about 12 setulae; meron above hind coxa with 4–5 hairs; katepimeron with 2(3) hairs in posterior half; scutellum bare on ventral surface. Wings brownish-hyaline, calypters whitish-yellow, halter yellow. *Legs* with coxa, trochanters and femora black; tibiae and tarsi yellow (mid and hind tarsi dorsally darkened). *t1* without seta. *t2* with 1 *p* and in some specimens with additional seta on *p*, *pv* or *v* position; hind coxa bare; *f3* at apex with 1 *av* and 1–2 *pv*, otherwise bare; *t3* with 1*ad*; tarsi unmodified. *Abdomen* with colour pattern similar to that of *L. nana* (Figs 17, 18): tergites 3 and 4 mainly black with three whitish spots, a pair of antero-lateral ones and rounded postero-median one. Tergite 5 with a pair of large rounded anterolateral spots. Abdominal tergite 3 without a pair of small rounded knob-like process at each ventral fore-marginal corner (characteristic for *L. nana*). Sternite 5 with strong medial process clearly visible on intact abdomen. Cercal plate and sternite 5 as shown in Fig. 21.

Female differs as follows. Body size 5.7–6.5 mm. Tarsi darkened. Scutum with the median pruinose patch at level of 2nd and 3rd *post dc*, typical for females *L. tentaculata* and *L. draperi*. Normally 2+3 *dc*, but some specimens have additional weak pair between 1st and 2nd *post dc* and may be described as *dc* 2+4. Abdominal pattern similar to that of the male but less contrasting black-white, more greyish (Fig. 19).



Figs 16–21. *L. argentata* (*16*): *16* — male, general view; *L. capensis* (*17–21*): *17* — male, general view; *18* — male abdominal pattern; *19* — female abdominal pattern; *20* — male cercal plate and sternite 5 (from Zielke 1971); *21* — male cercal plate and sternite

Рис. 16–21. *L. argentata* (*16*): *16* — самец, общий вид; *L. capensis* (*17–21*): *17* — самец, общий вид; *18* — брюшко самца; *19* — брюшко самки; *20* — церки и стернит 5 (по Zielke 1971); *21* — церки и стернит 5

Remarks. *L. capensis* was described from 6♂ and 6♀ from Cape Town, South Africa. The following characters from Zielke's (1971b) description fit our Namibian series: 6–7 mm; palpi dark, femora dark, tibiae and tarsi yellow; *t1* without seta; *t2* with *p*; *f3* at apex with 1 *av* and 2 *pv*; *t3* with 1 *ad*; cercal plate as in Fig. 20. On the other hand, Zielke indicated 2+4 *dc*; did not mention the presence on the female scutum of the pruinose patch and drew unprecedented paired internal processes on sternite 5 (Fig. 20). However, our Walvis Bay series has a very characteristic medial process on male sternite 5, it looks very similar to those on Zielke's drawing, and I believe that duplication of the process has been a result of some funny error. Note also the remarks below to *L. aurocochlearia* Seguy, 1950, probably *L. capensis* is not the oldest name for the taxon. Vikhrev (2014) supposed a close relationship between *L. nana* and *L. tentaculata* group, the intermediate characters of *L. capensis* support this hypothesis.

Lispe cilitarsis Loew, 1856

Fig. 24

Lispe cilitarsis Loew, 1856 (Vikhrev 2012b: figs 2, 7; Vikhrev 2014: fig. 60)

Material examined: see Vikhrev (2012b; 2014).

New record: TANZANIA: *Morogoro* reg., Morogoro env., lake (Mindu Dam), 6.865°S 37.608°E, 5 December 2015, N. Vikhrev, 6♂, 5♀ (ZMUM).

Distribution. Reliably recorded in Africa from Egypt, Ethiopia (Amhara, Afar and Oromia reg.), Morocco (Tan-Tan reg.) and Tanzania. Also known from Arabian Peninsula (Pont 1991) and Israel.

Lispe confusa **sp. nov.**

http://zoobank.org/NomenclaturalActs/5c2bb345-4455-4c57-a977-2d5c3e498878

Figs 22–23

Lispe paraneo Zielke, 1972 (Vikhrev 2014), misidentification

Holotype: male, BOTSWANA, *N-W Distr.*, Maun, 19.92°S 23.51°E, 940 m asl, 3–8 February 2013, A. Medvedev (ZMUM).

Paratypes, 44♂, 27♀: BOTSWANA: *S Distr.*, Kanye, 24.95°S 25.34°E, 1270 m asl, 28–30 January 2013, A. Medvedev, 16♂, 8♀; *N-W Distr.*, Maun, 19.92°S 23.51°E, 940 m asl, 3–8 February 2013, A. Medvedev, 4♂, 2♀; *Central Distr.*, Nata, Nata R., 20.21°S 26.18°E, 915 m asl, 9 February 2013, A. Medvedev, 4♂, 4♀ (ZMUM).

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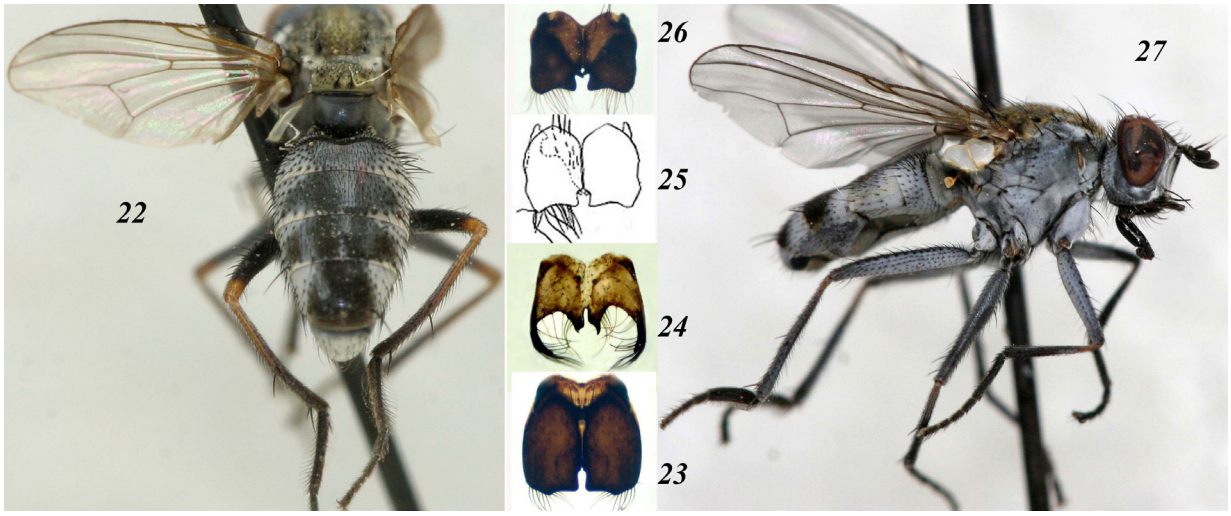


Figs 22–27. *L. confusa* **sp.nov.** (*22–23*): *22* — male, posterior view; *23* — cercal plate; *L. cilitarsis* (*24*): *24* — cercal plate (from Vikhrev 2012b; 2014); *L. wittei* = *L. ethiopica* (*25–27*): *25* — cercal plate (from Paterson 1956); *26* — cercal plate (from Vikhrev 2012b; 2014); *27* — male, general view

Рис. 22–27. *L. confusa* **sp.nov.** (*22–23*): *22* — самец, брюшко сзади; *23* — церки; *L. cilitarsis* (*24*): *24* — церки (по Vikhrev 2012b; 2014); *L. wittei* = *L. ethiopica* (*25–27*): *25* — церки (по Paterson 1956); *26* — церки (по Vikhrev 2012b; 2014); *27* — самец, общий вид

MADAGASCAR, Toliara env., 23.28°S 43.62°E, 18–19 November 2012, A. Medvedev; 13♂, 4♀ (ZMUM).

NAMIBIA: Windhoek env., 22.60°S 17.14°E, 1780 m asl, 25–30 November 2018, N. Vikhrev, 1♂ (ZMUM); Walvis-Bay env.: Bird Sanctuary, 22.968°S 14.533°E, 21 November 2018, KEIB exp., leg., 3♂, 3♀ (NCU); 22.97°S 14.54°E, 5–9.12.2018, N. Vikhrev, 2♂, 3♀; Luderitz env., 26.61°S 15.19°E, sewage fields, 20–22 January 2021, N. Vikhrev, 2♂, 3♀ (ZMUM).

TANZANIA, *Mbeya* reg., Nyasa Lake, Matema vill., 9.50°S 34.01°E, 15 December 2015, N. Vikhrev, 2♂ (ZMUM).

Description. A typical representative of *L. longicollis* subgroup. *Male* body about 7 mm long, slender and leggy, resembles a racehorse. Body dark except for apices of femora and basal half of tibiae. *Head* with dark frons, yellowish and narrow frontal triangle. Fronto-orbital plates, parafacials, face, gena and occiput whitish-grey dusted. Antenna dark, long, postpedicel falling of mouth margin by 1/4 of its own length. Aristal hairs as long as antenna width. Palpi yellow. *Thorax*. Scutum black, with brownish dusting; pleura grey dusted; 2+4 *dc* (strong, strong, weak, weak, strong, strong); meron with 3–5 hairs above hind coxa, anepimeron with 10–12 setulae. Wing with vein M distinctly curved at apex (Fig. 22). *Legs*. *t1* with short *p*; *t2* with 1 *p* and 1 *av*; *t3* with median 1 *av* (weak), 1 *ad* and 1 *pd*; *f3* dorsally curved, with 2(3) fine and long *v* setae at base and 1 short *av* at apex. Hind tarsus modified: *tar3-1* strongly outward curved, with rows of *av* and *pv* hairs 3x as long as tarsus width. Abdomen whitish-grey dusted, with large trapezoid black spots on tergites 3 to 5 (Fig. 22). Cercal plate as in Fig. 23.

Female differs as follows: body length about 7.5 mm; dusting of head yellowish, body dusting denser; *f3* without fine *v* setae at base; hind tarsus unmodified.

Diagnosis. The previous misidentification of the species as *L. paraneo* is discussed below in Addendum. *L. confusa* is closely related to North African *L. cilitarsis*. As a lumper I did my best not to describe this species but Tanzanian specimens convinced me to do so. *L. confusa* and *L. cilitarsis* are sympatric in Tanzania with no intermediate specimens. Males differ as follows:

— Mid tarsus without a row of *p* setulae, only normal ground setulae hardly longer than tarsus width; cercal plate as in Fig. 23.

The southern part of Africa till Tanzania . . . . . ***confusa* sp. nov.**

— Mid tarsus with a row of curled setulae on *p* surface from apex of *tar3-1* to *tar2-5*, these setulae at least 2x longer than tarsus width; cercal plate as in Fig. 24. The northern part of Africa till Tanzania . . . . ***cilitarsis*** Loew

Unfortunately, females of these species are indistinguishable.

Etymology. The name refers to my previous misidentification of this species.

Lispe desjardinsii Macquart, 1851

Lispe remipes Becker, 1913 (Paterson 1953: figs 12–13)

Lispe planiseta Snyder, 1949: figs 1–2

Lispe desjardinsii Macquart, 1851 (Vikhrev 2014: fig. 45)

Material examined: see Vikhrev (2014).

Distribution. Africa: D. R. Congo, Cote d'Ivoire, Ghana, Kenya, Liberia, Madagascar, Mauritius, Nigeria, Reunion, Uganda.

Lispe dichaeta Stein, 1913

Fig. 15

Lispe dichaeta Stein, 1913 (Vikhrev 2016: figs 9, 10)

Material examined: see Vikhrev (2016).

Distribution. As discussed by Vikhrev (2016) all previous distributional data on *L. dichaeta* need to be verified. An Afrotropical species, reliably recorded from Ethiopia (Oromia and Amhara reg.); Kenya (Kiambu, Laikipia and Nyandarua Co.); Tanzania (Iringa reg.).

Lispe dmitryi Vikhrev, 2014

Lispe dmitryi Vikhrev, 2014 (Vikhrev 2014: 167–168 and figs 55–57)

Material examined: see Vikhrev (2014).

Distribution. Kenya, Nakuru Co.

Lispe elkantarae Becker, 1907

Lispe elkantarae Becker, 1907 (Hennig 1960; Vikhrev 2015: fig. 2)

Material examined: see Vikhrev (2015).

Distribution. Africa: Algeria and Morocco; also Turkey.

Lispe emdeni Vikhrev, 2012

Lispe emdeni Vikhrev, 2012 (Vikhrev 2012a: 107–109 and figs 1–5; Vikhrev 2014)

Material examined: see Vikhrev (2014).

Distribution. Africa: Ethiopia, Amhara reg. Also India: Rajasthan, Madhya Pradesh, Gujarat states. Found on big stones in or along slow, seasonally drying streams.

Lispe flavicornis Stein, 1909

Lispe silvai Paterson, 1953, **syn. nov.**

Lispe flavicornis Stein, 1909 (Pont 1991; Zhang et al. 2016: 55–57 and figs 1E, 2C, 3E, 14–16, 30C, 31I, J; Vikhrev 2020: fig. 17)

Material examined: see Vikhrev (2020), about 140 ♂ and ♀ from: Cambodia; India: Andhra Pradesh and Gujarat states; Indonesia, Papua prov.; Malaysia, Borneo, Sabah state; Taiwan; Thailand: Chonburi and Phuket prov.; Tanzania: Lindi, Mtwara and Pwani regions.

New record: EGYPT, *Sinai*, Al-Bardawil (≈31.1°N 33.3°E), 25 July 1967, Margalit, 1♀ (TAUI).

Distribution. A Palaeotropical species, widespread near seashores in Africa, Asia and New Guinea. African records are from Egypt, Mozambique, Tanzania (Lindi, Mtwara and Pwani regions).

Synonymy. The detailed Paterson's description leaves no doubt in the true identity of *L. silvai*, cercal plate and sternite 5 as follows from the drawings (Paterson 1953: figs 8, 9) fit too. The type locality is Lourenco Marques (= Maputo, 26.0°S 32.5°E), river bank. It is not a freshwater river but a saltish Estuario do Espírito Santo, a common estuary of Tembe, Umbeluzi, Matola and Infulene Rivers. Such places are typical habitats of *L. flavicornis.* So, *Lispe flavicornis* Stein, 1909 = *Lispe silvai* Paterson, 1953, **syn. nov.**

Lispe freidbergi Vikhrev, 2012

Lispe freidbergi Vikhrev, 2012 (Vikhrev 2012c: 425–427 and figs 8–10)

Material examined: see Vikhrev (2012c).

Distribution. Known for Egypt (Sinai) and Israel (Negev).

Lispe fulvitarsus fulvitarsus Snyder, 1949

Lispacoenosia fulvitarsus Snyder, 1949: 8–9

Lispe asetopleura (Vikhrev, 2012c: 424 and figs 1–3)

Lispe fulvitarsus fulvitarsus Snyder, 1949 (Snyder 1949; Vikhrev 2014: fig. 44b)

Material examined: see Vikhrev (2014).

Distribution. Afrotropical: Cameroon,

 https://www.doi.org/10.33910/2686-9519-2021-13-3-369-400

D. R. Congo, Ethiopia, Ghana, Kenya, Madagascar, Nigeria, Tanzania.

Lispe geniseta macfiei Emden, 1941

Lispe geniseta Stein, 1909 (Pont 1980)

Lispe macfiei Emden, 1941 (Emden 1941)

Lispe macfiei Emden, 1941 (Vikhrev 2016)

Lispe geniseta macfiei Emden, 1941, **stat. nov.**

Material examined: see Vikhrev (2016).

Distribution. Afrotropical: Ghana, Madagascar, Malawi, Tanzania (Mbeya, Morogoro, Pwani regions), Togo.

Remarks. *Lispe macfiei* Emden, 1941 was described from a single female specimen and later synonymized by the author himself with the Asian *L. geniseta*. Vikhrev (2016: 176–179 and figs 12–19) found that the specimens identified as *L. geniseta* from S Asia, Africa, and Australia are very similar but slightly differ by the structure of the male genitalia. Based on these differences Vikhrev and Pont again suggested to regard *L. macfiei* as a valid species, while the Australian form was described as *L. setigena* Vikhrev et Pont, 2016. Currently, I hold a more lumping view on species limitation. I do not share anymore the opinion that differences (including very small ones) in the structure of the male genitalia are a more reliable reason for separating species than non-genitalic characters, I did not see confirmation of this either in the literature or in my observations. I believe that the best solution is to regard geographically isolated Asian, African, and Australian populations of *L. geniseta* in the taxonomic rank of subspecies until otherwise is demonstrated. So, I propose *L. geniseta macfiei* Emden, 1941 = *Lispe macfiei* Emden, 1941, **stat. nov.** and *L. geniseta setigena* Vikhrev et Pont, 2016 = *L. setigena* Vikhrev et Pont, 2016, **stat. nov.**

Lispe halophora Becker, 1903

Lispe halophora Becker, 1903 (Hennig 1960; Zhang et al. 2016: 57–60 and figs. 1F, 17, 18, 31O; Vikhrev 2020: fig. 47)

Material examined: see Vikhrev (2020).

Distribution. N Africa: Algeria, Egypt, Morocco.

Lispe irvingi Curran, 1937

Lispe irvingi Curran, 1937 (Curran 1937; Vikhrev 2014: figs 4, 7, 8)

Material examined: see Vikhrev (2014).

New record: NAMIBIA, Windhoek env., 22.54°S 17.20°E, 1800–1900 m asl, 25–30 December 2018, N. Vikhrev, 14♂, 8♀ (ZMUM).

Distribution. Afrotropical: Botswana, Kenya, Madagascar, Namibia, Tanzania, Uganda.

Lispe keiseri Zielke, 1972

Lispe keiseri Zielke, 1972 (Vikhrev 2016: figs 20, 22)

Material examined: see Vikhrev (2016).

Distribution. Madagascar: Antananarivo, Fianarantsoa, former Toamasina province.

Lispe kowarzi kowarzi Becker, 1903

Fig. 28

Lispe kowarzi Becker, 1903

Lispe pakistanensis Shinonaga et Afzal, 1989 (Vikhrev, 2012c)

Lispe kowarzi kowarzi Becker, 1903 (Vikhrev, 2014: fig. 43a)

Material examined: see Vikhrev (2014).

Distribution. Africa: S Palaearctic: Egypt, Morocco, Senegal. Also S Asia from Israel to India.

Lispe leucocephala Loew, 1856

Lispe frontalis Zielke, 1972 (Zhang et al. 2016)

Lispe leucocephala Loew, 1856 (Zhang et al. 2016: 63–65 and figs. 1H, 23–25, 31KL; Vikhrev 2020)

Material examined: see Vikhrev (2020).

Distribution. Known from seashores, in Africa from Egypt and Madagascar. Also India, Gujarat.

Lispe loewi Ringdahl, 1922

Lispe loewi Ringdahl, 1922 (Vikhrev 2015: fig. 17; 2020: fig. 46)

Material examined: see Vikhrev (2015; 2020).

Distribution. Africa: Algeria, Egypt, Morocco and Sudan (?). Also Palaearctic from Europe to Central Asia and S Siberia.

Lispe maculata Stein, 1913

Lispe sp. of *leucospila*-group (Pont 1990: 354, figs. 18, 19)

Lispe maculata Stein, 1913 (Vikhrev 2014: figs 3, 10)

Material examined: see Vikhrev (2014).

Distribution. Afrotropical: Ethiopia: Amhara and Oromia reg.; Kenya; Malawi; Uganda; Yemen; Zimbabwe.

Figs 28–29. *28 — L. kowarzi kowarzi*, female; *29 — L. pectinipes*, female

Рис. 28–29. *28 — L. kowarzi kowarzi*, самка; *29 — L. pectinipes*, самка

Lispe madagascariensis Zielke, 1972

Lispe madagascariensis Zielke, 1972 (Zielke 1972; Vikhrev 2016, redescription and figs 6, 7, 8)

Material examined: see Vikhrev (2016).

Distribution. So far reliably known from Madagascar, Central African Republic and Tanzania (Lindi, Mbeya, Morogoro, Mtwara, Pwani and Ruvuma regions). Probably it is widely distributed in African lowlands.

Lispe marina Becker, 1913

Lispe lanzarotensis Baez, 1978 (Pont 1986)

Lispe marina Becker, 1913 (Hennig 1960; Bergerard 1995; Vikhrev 2020: figs 8, 9, 16)

Material examined: see Vikhrev (2020).

Distribution. Africa: Morocco and Canary Isl. Also Atlantic coast of France, Portugal, and Spain.

Lispe medvedevi Vikhrev, 2014

Lispe medvedevi Vikhrev, 2014 (Vikhrev 2014: 155–156 and fig. 24)

Material examined: see Vikhrev (2014).

Distribution. Madagascar, Alaotra-Mangoro region.

Lispe nana Macquart, 1835

Fig. 47

Lispe nana Macquart, 1835 (Hennig 1960; Vikhrev 2014: figs 40–42)

Material examined: see Vikhrev (2014; 2020).

Distribution. Africa: Canary; Cape Verde; Egypt; Ethiopia (Amhara and Oromia); Morocco; Sudan; Yemen. Also Palaearctic: from Europe to Central Asia; Oriental: N India. The record from South Africa (Pont 1980) most probably is misidentification of Afrotropical *L. triangularis* Vikhrev, 2014. For a related form from Reunion Island of an uncertain taxonomic status see *L. martirei* in Addendum.

Lispe nivalis Wiedemann, 1830

Lispe nivalis Wiedemann, 1830 (Vikhrev 2012c; Vikhrev 2014: fig. 21; Vikhrev 2020: fig. 29)

Material examined: see Vikhrev (2012c; 2014).

New records: NAMIBIA, Windhoek env., 22.545°S 17.255°E, 1870 m asl, 28–31 January 2021, N. Vikhrev, 3♂, 1♀ (ZMUM).

Distribution. Widespread throughout Africa except for Madagascar where it is replaced by the related *L. medvedevi*. Also S-W Palaearctic from Iberian to Arabian Peninsulas.

Lispe niveimaculata **Stein, 1906**

Fig. 44

Lispe sineseta Zielke, 1971, **syn. nov.**

Material examined: Syntypes 1♂, 1♀: W. Africa (TANZANIA), Nyassa-See, Langenburg (= Neu Langenburg = Tukuyu, 9.25°S 33.65°E) July 1898, S. Fulleborn (ZMHU).

CAMEROON, *South* reg., Sangmelima env. (≈ 2.8°N 12.1°E), 7 November 1987, F. Kaplan, 1♀ (TAUI);

IVORY COAST, N of Man (7.5°N 7.5°W), 500–600 m asl, waterfalls, 20 February 1998, C. Kassebeer et Hilger, 2♂♂, 1♀ (ZMUM);

 https://www.doi.org/10.33910/2686-9519-2021-13-3-369-400

Londana (= Touba, 8.3°N 7.7°W), 7 July 1890, 1♂ (DEI).

KENYA, *Rift Valley* prov., Kericho env., 0.33°S 35.33°E, 25 August 2003, S. Kleynbegr, 2♀ (TAUI).

TANZANIA: Tanga (5.1°S 39.1°E) vicinity, 25 August 2003, L. Friedman, 1♂ (TAUI); 11 km E of Mikumi, 7.356°S 37.059°E, pond in dry forest: 5–7 December 2015, N. Vikhrev, 1♂, 1♀; 24–25 February 2017, N. Vikhrev, 1♂, 1♀ (ZMUM).

SOUTH AFRICA, Durban, 1902, F. Muir, 2♂, 1♀ (ZMHU).

REDESCRIPTION. *Male* (Fig. 44). Body size 6–6.5 mm. *Head*. Frontal triangle shining black, interfrontalia math black, frontoorbital plate shining black but grey dusted in frontal third, parafacial yellow, occiput partly subshining. Arista in basal half with hairs 1.5 times longer than antenna width, in apical half bare. Antenna black. Palpi yellow to dirty-brown.

Thorax. Scutum and scutellum black with 2 brownish submedian vittae, pleura grey dusted. Scutum covered with only very short and sparse ground hairs. Dorsocentral 0+1 (however, there is a pair of short strong spines just behind the neck in *dc* rows). Katepisternal reduced to 0+1; postpronotal setae reduced; meron bare; anepimeron with 8–10 setulae. Wings distinctly brownish. Halters black.

Legs black but trochanters yellow and posterior tibiae from yellow to brown. Fore coxa with spine-like setae: 1–3 in basal half and 2 downward directed ones at apex. *f1* with only 2–3 short *pv* spines at apical half. *t1* without or with *p* setae. Mid coxa on lower edge with outward directed spine. *f2* thickened in basal half; with short spinulose setae: 2*a* before middle, 1 *p* in apical third and 1 *p* at apex. *t2* with 2 (1–3) short *p* setae. *f3* with *v* spine at basal third; *ad* row consisting of short and sparse spine-like setae. *t3* with 1 *ad* seta. Tarsi unmodified.

Abdomen black with white lateral spots on tergites 3 to 5.

Female differs as follows: body size 6.5–7.5 mm; setae on legs shorter; *f2* with only 1*a* seta; *f3* without ventral spine at base.

Distribution. An Afrotropical species recorded from Cameroon, Central African Rep. (Dr. Miroslav Bartak, pers. comm.), Ghana, Ivory Coast, Kenya, Tanzania, S Africa.

Synonymy. The description of *L. sineseta* (Zielke 1971a) fits *L. niveimaculata*. According to Zielke (1971a), *L. sineseta* runs in the key by Emden (1941) to *L. niveimaculata* but differs from the latter by the absence of a *pv* seta on *t1*. However, in the original description by Stein (1906) *L. niveimaculata* has *t1* bare. Actually, chaetotaxy of *t1* is variable, more frequently it is bare but in 30% specimens with *pv* seta. So, *L. niveimaculata* Stein, 1906 = *L. sineseta* Zielke, 1971, **syn. nov.**

Lispe nuba Wiedemann, 1830

Lispe nuba Wiedemann, 1830 (Vikhrev 2012b; 2020)

Material examined: see Vikhrev (2012b).

New records: BOTSWANA: *S Distr.*, Kanye, 24.95°S 25.34°E, 1270 m asl, 28–30 January 2013, A. Medvedev, 42♂, 26♀; *N-W Distr.*, Maun, 19.92°S 23.51°E, 940 m asl, 3–8 February 2013, A. Medvedev, 1♂, 4♀; *Central Distr.*, Nata, Nata R., 20.21°S 26.18°E, 915 m asl, 9 February 2013, A. Medvedev, 1♂, 2♀ (ZMUM).

KENYA, a pool near Malewa R., 1900 m asl, 0.67°S 36.39°E, 19 November 2012, D. Gavryushin, 6♂, 9♀(ZMUM).

MADAGASCAR, Vavony, 18.77°S 49.17°E, 1 December 2012, A. Medvedev, 2♀(ZMUM).

NAMIBIA, Windhoek env., 22.545°S 17.255°E, 1870 m asl, 11–15 January 2021, N. Vikhrev, 3♂, 3♀ (ZMUM).

Distribution. Widespread throughout Africa. Also Israel.

Lispe ochracea Becker, 1910

Lispe bivittata Stein, 1909 (Pont 1986: records for Egypt, Sudan and Yemen; Pont 1991: records for Saudi Arabia and Oman), misidentifications

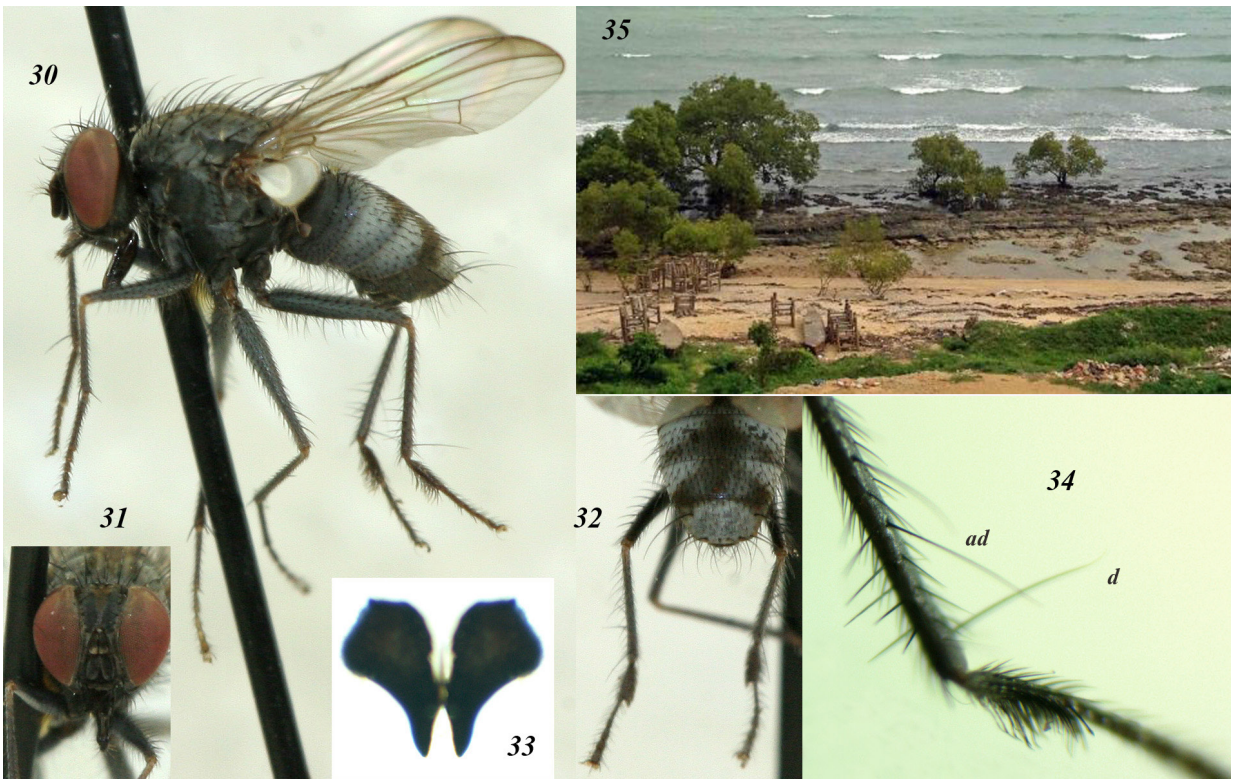
Lispe canis Malloch, 1922, **stat. nov.**

Lispe bivittata spp. *subbivittata* Mou, 1992

Lispe subbivittata Mou, 1992 (Vikhrev 2014: fig. 22)

Lispe ochracea Becker, 1910 (Vikhrev 2020)

Material examined: see Vikhrev (2014; 2020).



Figs 30–35. *L. patersoni* **sp. nov.**: *30* — the holotype, general view; *31* — the holotype, head; *32* — the holotype, abdomen, posterior view; *33* — cercal plate; *34* — left hind tibia, male; *35* — the exact collecting site of the type series in Mtwara town, flies were found on the stony littoral zone (photo: https://donquiblog.com/tag/old-boma/)

Рис. 30–35. *L. patersoni* **sp. nov.**: *30* — голотип, общий вид ; *31* — голотип, голова; *32* — голотип, брюшко, вид сзади; *33* — церки; *34* — самец, левая задняя голень; *35* — точное место поимки типовой серии, город Мтвара, каменистая литораль (фото: https://donquiblog.com/tag/old-boma/)

Distribution. Africa: Egypt, Ethiopia, Sudan, Yemen. Asia: Arabian Peninsula, China (Laoning prov.), India, Iran, Sri Lanka.

Remarks. Pont (1977) synonymized *L. canis* described from Sri Lanka to *L. bivittata*. However, Malloch's (1922b) description of male *t3* and *tar3-1* indicates that it is *L. ochracea* as in the here assumed sense. So, *Lispe ochracea* Becker, 1910 = *Lispe canis* Malloch, 1922, **stat. nov.**

Lispe orientalis Wiedemann, 1824

Lispe orientalis Wiedemann, 1824 (Vikhrev 2011: figs 3–3, 3–4, 5–2; Vikhrev 2014)

Material examined: see Vikhrev (2014).

New record: MOROCCO, Ouirgane env., 950 m asl, 31.176°N 8.080°W, 12–14 May 2021, O. Kosterin, 3♂, 6♀ (ZMUM).

Distribution. In Africa known from Egypt (Sinai) and Morocco (High Atlas). A widespread South Eurasian species.

***Lispe patersoni* sp. nov.**

http://zoobank.org/NomenclaturalActs/d2a3d757-fbe6-44f0-abc9-49d600573c05

Lispe patersoni patersoni

Figs 30–35

Holotype: male, TANZANIA, *Mtwara* reg., Mtwara, 10.30°S 40.15°E, 21–22 December 2015, N. Vikhrev (ZMUM).

Paratypes, 17♂, 31♀: EGYPT, Sinai, Ras Burha (South Sinai ≈ 27.8°N 34.2°E): 5 September 1976, A. Freidberg, 2♂; 23 September 1977, Kugler, 1♂ (TAUI and ZMUM).

TANZANIA: *Lindi* reg., Lindi env., 9.95°S 39.72°E, 23–26 December 2015, N. Vikhrev, 10♀; *Mtwara* reg., Mtwara, 10.259°S 40.166°E, 21–22 December 2015, N. Vikhrev, 14♂, 21♀ (ZMUM).

Other material: MADAGASCAR, Nosy Be Isl., Ambatoloaka beach (13.398°S 48.206°E), 4–7 April 1991, A. Freidberg, F. Kaplan, 1♂ (see Remarks).

 https://www.doi.org/10.33910/2686-9519-2021-13-3-369-400

Description. *Male*. Body length 4.1–4.6 mm. *Head* with frons, face, parafacials and gena black; fronto-orbital plates and frontal triangle dark brown (Fig. 31); occiput dark-grey. Parafacialia and gena narrow, so is frontal triangle. Fronto-orbital plates with 3 long inclinate setae and with 5–6 setulae in outer row. Antennae black, postpedicel rather long, falling of mouth margin by 1/3 of its own length. Aristal hairs as long as width of antenna. Vibrissae indistinct from setae around it. Palpi black, only moderately and gradually widened at apex.

Thorax black, with weak brownish-grey pollinosity; *dc* 2+3, all well distinct; meron bare; anepimeron with 8–10 setulae. Wings darkened at apex between veins R2+3 and R4+5 (Fig. 30), calypters white, halters black. *Legs* dark, basal 1/4 of tibiae and tarsi yellowish. The ventral spines on femora characteristic for the *L. caesia* group are absent. *t1* without submedian seta. *f2* with 4–5 fine *v* setae in basal half and 2 *p* preapical. *t2* with 1 *pv* below middle. Hind coxa with seta on posterior margin. *f3* with a complete row of 7–8 *av* seta and 3–4 fine *v* setae in basal half. *t3*: *ad* below middle and preapical *d* fine and long (about 0.4x as long as length of tibia); ground *ad* setulae in basal half distinctly elongated; *a* to *av* surfaces with 7–8 setae in apical half. Hind tarsus slightly modified: *tar3-1* with *av* and *pv* rows of waved setulae (Fig. 34).

Abdomen grey dusted, tergites 1+2 to 4 with a large black triangular median spot each, tergite 5 mostly grey with some black pattern antero-laterally (Fig. 32). Male cercal plate as shown in Fig. 33, cercal plate heart-shaped, typical for the *L. caesia* group.

Female differs from male as follows: body length 4.2–4.7 mm. Vibrissae strong. Wings less distinctly darkened at apex. *f3* with *av* setae weaker but more numerous (9–10) and with strong preapical *av*. *t3* with *ad* and apical *d* shorter but stronger and with only 1(2) *av* seta. Hind tarsus unmodified.

Etymology. Named in honour of a South African dipterologist H. E. Paterson and to apprise his contribution to the taxonomy of African *Lispe*.

Habitat. Flies were found on the stony littoral zone of the Indian Ocean, the exact collecting site of the type series in Mtwara is shown in Fig. 35.

Remarks. Specimens in the type series of *L. patersoni* from Tanzania and Egypt are uniform, while the single Madagascan male differs as follows:

— *t3* in apical half with 3 long (about 0.6x as long as length of tibia) and waved *ad* setae, (other setae on *t3* also longer than in *L. patersoni*). *f3* with *av* setae about 2x as long as femur width; wing only indistinctly darkened at apex .... *male from Madagascar*

— *t3* in apical half with only 1 long (about 0.4x as long as length of tibia) and not waved *ad* setae. *f3* with *av* setae shorter at most 1.5x as long as femur width; wing distinctly darkened at apex .... *males from Tanzania and Egypt*

I suppose that Madagascan population has a taxonomic rank of subspecies but for reasonable conclusions, more specimens are needed.

Lispe pectinipes Becker, 1903
Fig. 29

Lispe leucospila Wiedemann, 1830 (Paterson 1953: 168; Hennig 1960; Xue et Zhang 2005: 122), misidentifications

Lispe cochlearia Becker, 1904 (Hennig 1960)

Lispe mixticia Séguy, 1941 (Hennig 1960)

Lispe lateralis Stein, 1906 (Hennig 1960)

Lispe xanthophleba Séguy, 1950, **syn. nov.**

Lispe paraspila Zielke, 1972 (Vikhrev 2014)

Lispe pectinipes Becker, 1903: (Lyneborg 1970; Vikhrev 2014: figs 5–6)

Material examined: see Vikhrev (2012c; 2014).

New record: NAMIBIA, Windhoek env., 22.54°S 17.27°E, 1860 m asl, 21–24 November 2018, N. Vikhrev, 7♂, 2♀ (ZMUM).

Synonymy. The female holotype of *L. xantophleba* was examined in MNHN: NIGER, Baguezan Mt. (17.7°N 8.6°E), 1200–1300 m asl, 26–31 August 1947, L. Chopard, A. Villiers. I found that *Lispe pectinipes* Becker, 1903 = *Lispe xantophlebia* Seguy, 1950, **syn. nov**.

Distribution. Widespread from Morocco, Egypt and Yemen in the north to Namibia and South Africa in the south, as well as in the Oriental region. Common in SW Palaearctic; the northernmost known locality is Russia, Sochi, 43.4°N. Introduced in Hawaiian Oahu Island.

Lispe pennitarsis Stein, 1918

Lispe pennitarsis Stein, 1918 (Vikhrev 2014: figs 49–50)

Material examined: see Vikhrev (2014).

Distribution. Madagascar.

***Lispe polonaise* sp. nov.**

http://zoobank.org/NomenclaturalActs/2b644fb8-989e-47bd-8726-175ffc6145b2

Figs 36–39

Holotype: male, NAMIBIA, Walvis-Bay env., 22.97°S 14.54°E, 5–9 December 2018, N. Vikhrev (ZMUM).

Paratypes, 13♂, 26♀: NAMIBIA, Walvis-Bay env.: Bird Sanctuary, 22.968°S 14.533°E, 21 November 2018, KEIB exp., leg., 4♂, 5♀ (NCU); 22.97°S 14.54°E, 5–9 December 2018, N. Vikhrev, 9♂, 20♀; Luderitz env., 26.61°S 15.19°E, sewage fields, 20–22 January 2021, N. Vikhrev, 1♀ (ZMUM).

Description. *Male* (Fig. 36). Body length 6.5–7.5 mm. *Head* with frontal triangle, fronto-orbital plates, face, parafacials and gena with an intense whitish pollinosity (Fig. 37); occiput grey. Frontal triangle slightly widened with slightly convex margins. Fronto-orbital plates with 3–4 long inclinate setae and with 8–9 setulae in outer row; parafacials wide, with 9–10 hairs along its length. Antennae black, short, postpedicel falling of mouth margin by 1.5 its own length. Aristal hairs shorter than half width of antenna. Vibrissae strong. Palpi yellow with outer surface with dense silver pollinosity.

Thorax evenly grey dusted. *dc* 2+3, all strong; meron bare; anepimeron with about 15 setulae. Wings clear, calypters white, halters brown. *Legs* dark, densely grey dusted, with reddish knees. The ventral spines on femora characteristic for the *L. caesia* group are absent. *t1* with long submedian *pv* seta. *f2* with about 10 fine *v* setae in basal half and 2*p* preapical. *t2* with a long *pv* below middle. Hind coxa with seta on posterior margin. *f3* with 4–6 strong *av* at apical half and 8–9 fine long *pv* setae at basal 2/3. *t3* with 1 long and strong median *ad* and with 4–5 *av* and 7–8 fine *pv* at apical half. Hind tarsus modified, *tar3-1* with two approximated, short and strong *v* spines near base (Fig. 38).

Abdomen evenly whitish-grey dusted, only tergite 3 with a pair of indistinct dark spots. Cercal plate with elongated and pointed apical part and with a pair of lateral processes.

Female differs from male as follows: body length 7–8 mm. Ventral spines distinct on *f1* and *f2*. *t2* in 50% females with *ad* seta on one tibia, the rest 50% without *ad*. *f3* with 2 *av* and 2–3 *pv*. *t3* apart from *ad* with 2–3 *av* seta in apical third, these much stronger than in male. Hind tarsus unmodified.

Etymology. The name refers to the French word Polonaise meaning a Polish in the feminine gender. Named in honour of my Polish colleagues from Nicolaus Copernicus University, Torun: Andrzej Grzywacz, Marcin Piwszynski and Krzysztof Szpila. They visited Bird Sanctuary near Walvis-Bay two weeks before me and first collected this species.

Habitat. Specimens were found in the area of Bird Sanctuary. It is a nice (Fig. 39) but quite artificial landscape—sewage fields of Walvis-Bay town. Due to strong evaporation in the Namib desert, the waters of the sanctuary lakes are salty, as is the soil around them. What the natural habitat of *L. polonaise* **sp. nov.** remains unknown.

Lispe pygmaea Fallen, 1825

Lispe argenteifacies Grimshaw, 1901 (Vikhrev 2016)

Lispe ponti Hardy, 1981 (Vikhrev 2016)

Lispe aureola Shinonaga, 2014 (Vikhrev 2016)

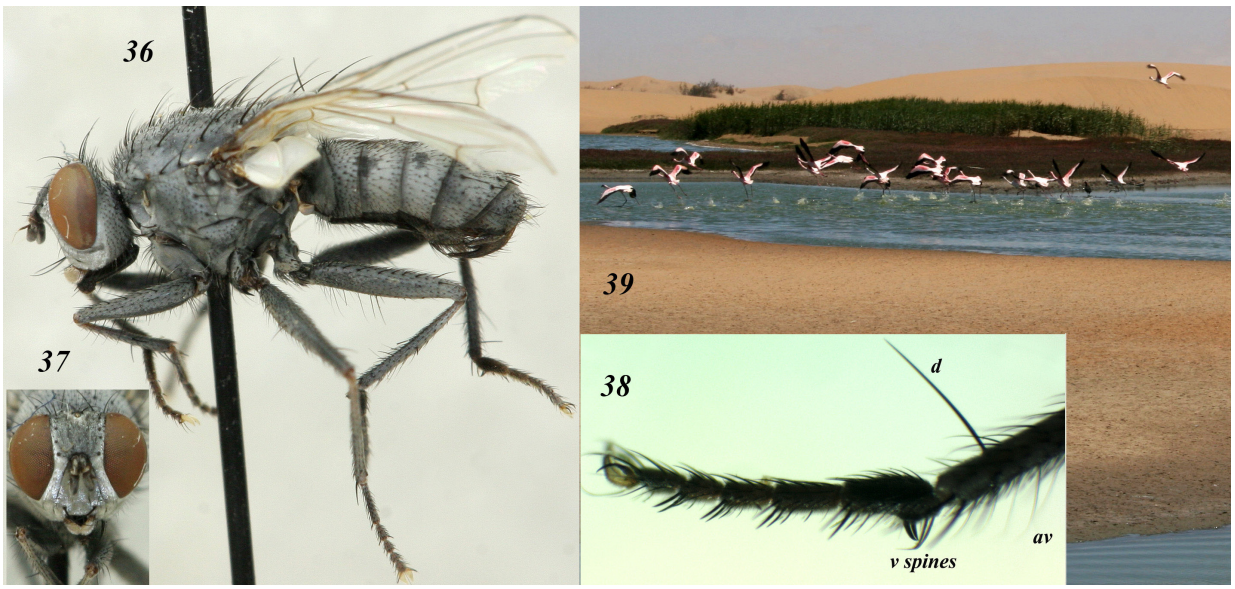
Lispe japonica Shinonaga, 2014 (Vikhrev 2016)

Lispe pygmaea Fallen, 1825 (Vikhrev 2016; Vikhrev 2020: fig. 35)

Material examined: see Vikhrev (2016).

Distribution. Africa: Egypt, Luxor reg.; Ethiopia, Amhara reg. (Vikhrev 2016); Cape Verde and Sudan (Pont 1980). Also widespread in Palaearctic from south to about 60°N; introduced in Hawaii and recently in Japan (Vikhrev 2016).

 https://www.doi.org/10.33910/2686-9519-2021-13-3-369-400



Figs 36–39. *L. polonaise* **sp. nov.**: *36* — the holotype, general view; *37* — the holotype, head; *38* — left hind leg, male; *39* — the exact collecting site of the type series in Namibia: Bird Sanctuary — sewage fields of Walvis-Bay town

Рис. 36–39. *L. polonaise* **sp. nov.**: *36* — голотип, общий вид; *37* — голотип, голова; *38* — самец, левая задняя нога; *39* — точное место поимки типовой серии с Намибии: птичий санктуарий около города Уолфиш-Бей

Lispe rigida Becker, 1903

Lispe rigida Becker, 1904 (Vikhrev 2012c: figs 21, 31, 32)

Material examined: see Vikhrev (2012c).

Distribution. Africa: Egypt and Morocco. Also Israel, Iran, India (Rajasthan), Saudi Arabia, and Turkmenistan.

Lispe scalaris Loew, 1847

Figs 42, 43

Lispe persica Becker, 1904 (Vikhrev 2012a)

Lispe flavipes Stein, 1913, **syn. nov.**

Lispe scalaris maroccana Canzoneri et Meneghini, 1966 (Vikhrev 2014)

Lispe sp. (Pont 1991: 355) (Vikhrev 2014)

Lispe scalaris Loew, 1847 (Vikhrev, 2014)

Material examined: see Vikhrev (2014).

New records: NAMIBIA: Windhoek env., 22.54°S 17.20°E, 1900 m asl, 1–4 December 2018, N. Vikhrev, 2♂; Oanob L., 23.323°S 17.018°E, 1460 m asl, 1 December 2018, N. Vikhrev, 2♀; Windhoek env., 22.545°S 17.255°E, 1870 m asl, 11–15 January 2021, N. Vikhrev, 15♂, 2♀; Noordoewer env., Orange R., 28.686°S 17.557°E, 23–25 January 2021, N. Vikhrev, 2♂, 2♀ (all ZMUM).

TANZANIA, *Dodoma* reg. Dodoma env., 6.20°S 35.75°E, pond, 1150 m asl, 11–13 February 2017, N. Vikhrev, 2♂, 2♀ (ZMUM).

Distribution. Africa: Egypt, Ethiopia, Morocco, Namibia, South Africa, Sudan, Tanzania. Palaearctic: Near East (Israel and Saudi Arabia), Turkey, Iran, Turkmenistan; Oriental: India, Rajasthan.

Synonymy. 1. In the African Catalogue (Pont 1980) *L. scalaris* was listed only for Egypt and Sudan. Vikhrev (2014) reported that it is more widely distributed from Central Asia and India to Ethiopia and Morocco in Africa. The new records listed above show that *L. scalaris* is distributed throughout Africa, in other words it is present in most arid localities of Asia and Africa.

Specimens of *L. scalaris* have thorax densely dusted or mostly shining as a result of wiping of dusting in aged specimens (due to this variability *L. persica* was described). Colour of the femora is also variable. Indian males have femora almost entirely dark except for their very apices (see Vikhrev 2014: fig. 34a), in females the yellow colour is a little more extended. At the other end of the range, in Namibia, males have more yellow femora, *f2* is yellow on almost apical half (Fig. 42). Namibian females have colour of the femora varying from entirely

yellow, as shown in Fig. 43, to the same as in males. Specimens from Morocco or Ethiopia have the intermediate colour of femora. Females with yellow or almost yellow legs were reported not only from S Africa: from Morocco (Canzoneri and Meneghini 1966 as *L. scalaris maroccana*; Vikhrev 2014) and Saudi Arabia (Pont 1991: 355 as *Lispe* sp.). Vikhrev (2014) found that yellow-legged females occur together with those with dark or partly yellow femora and came to the conclusion that it is not a separate taxon but a colour variation.

2. The identity of *L. flavipes* Stein, 1913 needs clarification. It was described from South Africa, Willowmore (33.28°S 23.48°E) from two female syntypes (note that the yellow-legged specimens of *L. scalaris* are always females). Vikhrev (2014) identified the series of *Lispe* collected in Madagascar as *L. flavipes* because Madagascan specimens have all femora yellow, belong to the *L. scalaris* group and were collected in the southern part of Africa. The identification seemed correct in 2014, but presently we know that the yellow-legged form of *L. scalaris* is rather common in S Africa. Syntypes of *L. flavipes* were destroyed in 1956 in Budapest (Pont 2013). I checked Stein's (1913) description again: frontal triangle black and tergites 3 and 4 with a pair of black shining spots. It fits *L. scalaris* but contradicts Madagascan specimens which have whitish-yellow frontal triangle and abdomen evenly yellowish-grey dusted without any spots. Thus, *Lispe scalaris* Loew, 1847 = *Lispe flavipes* Stein, 1913, **syn. nov**. and the Madagascan series is described below as *L. selena* sp. nov.

Lispe selena sp. nov.

http://zoobank.org/NomenclaturalActs/3e49f00d-42db-4b1f-9003-45730fdd9d3b

Figs 40, 41

Lispe flavipes Stein, 1913 (Vikhrev 2014), misidentification

Holotype, male, MADAGASCAR, *Toamasina* reg., Manambato, 18.75°S 49.15°E, 27–30 November 2012, A. Medvedev (ZMUM).

Paratypes 6♂, 7♀: the same data as the holotype.

Description. *Male*. Body slender, length 5.1–5.6 mm (Fig. 40). *Head* densely dusted: fronto-orbital plates yellow-white (without shining black spots on upper part as in *L. scalaris*); interfrontalia dark grey; frontal triangle very distinct, wide, yellow; face and parafacials golden-yellow, gena whitish; occiput whitish-grey (without shining black spots on upper part). Fronto-orbital plates with 2(3) inclinate, 1 reclinate seta and several setulae in outer row. Parafacials narrow, with a row of minute hairs. Pedicel yellow, postpedicel black, yellowish at very base; aristal hairs half as long as antenna width. Palpi medium wide, yellow.

Thorax densely grey dusted, scutum with indistinct pair of narrow vittae along dorsocentrals. *dc* 2+3 all strong; *prst ac* hairs in 3 rows (anteriorly sometimes in 2 widely separated rows, posteriorly in 3–4); Katepisternals 1:2; anepimeron with 1–3 setulae; meron bare. Wings slightly brownish darkened in apical 1/3 from level of M-Cu crossvein (Fig. 40). *Legs*. Trochanters, femora, tibiae and fore tarsus yellow, posterior tarsi darkened. *f2* with 1 *pd* at apex and 1 *pd* at apical 1/3; *f3* with short submedian *ad* (and ground setulae on *pv* surface elongated in basal half); *t1* without setae; *t2* with 1 *p*; *t3* with a short *ad*.

Abdomen evenly grey dusted. Cercal plate as shown in Fig. 41.

Female similar to the male, differs as follows: *f3* without *av*; wings hyaline.

Diagnosis. *Lispe selena* sp. nov differs from related *L. scalaris* by larger (5.1–5.6 mm) body; occiput, abdomen and scutum without shining black areas; abdomen without any dark pattern; yellow frontal triangle; darkened in apical 1/3 wings.

Etymology. Named *selena* to place the new species in the African list immediately below related *L. scalaris*.

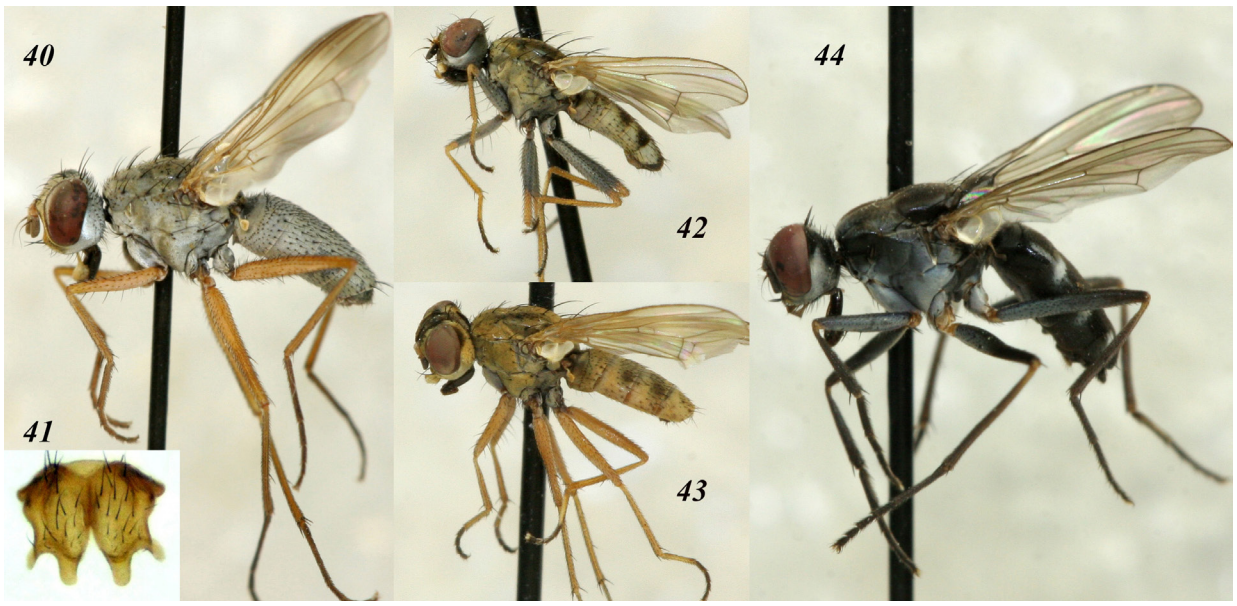
Lispe sexnotata Macquart, 1843

Lispe sexnotata Macquart, 1843

Material examined: MADAGASCAR: Andasibe, 18.94°S 48.42°E, 6 December 2012, A. Medvedev, 14♂, 13♀ (ZMUM).

REUNION, riviere Langevin dans les Hauts de Saint-Joseph, 1000 m asl (21.28°S 55.66°E),

 https://www.doi.org/10.33910/2686-9519-2021-13-3-369-400



Figs 40–44. *40 — L. selena* **sp. nov.**, the holotype, general view; *41 — L. selena* **sp. nov.**, cercal plate; *42 — L. scalaris*, male with typical colour of legs; *43 — L. scalaris*, Namibian female with yellow femora; *44 — L. niveimaculata* male, general view

Рис. 40–44. *40 — L. selena* **sp. nov.**, голотип, общий вид; *41 — L. selena* **sp. nov.**, церки; *42 — L. scalaris*, самец с типичной окраской ног; *43 — L. scalaris*, намибийская самка с желтыми бедрами; *44 — L. niveimaculata*, самец, общий вид

4 October 2006, D. Martiré, 1♂ (l'Insectarium de La Réunion).

Distribution. Madagascar and Reunion.

Lispe stuckenbergi Zielke, 1970

Lispe stuckenbergi Zielke, 1970 (Vikhrev 2016: fig. 11)

Material examined: see Vikhrev (2016).

Distribution. Madagascar: Alaotra-Mangoro, Analamanga and Vakinankaratra regions. A Madagascan species related to *L. dichaeta*. Known only from highlands, 920–1570 m asl.

Lispe tentaculata De Geer, 1776

Lispe tentaculata De Geer, 1776 (Vikhrev 2011; Vikhrev 2014)

Lispe tentaculata tentaculata De Geer, 1776

Material examined: see (Vikhrev 2014, under *L. tentaculata*).

Distribution. Africa: Egypt, Ethiopia: Amhara and Oromia regions. Holarctic species with remarkably wide range from over Polar Circle (68.6°N) to the Equator almost (8.8°N) on African highlands.

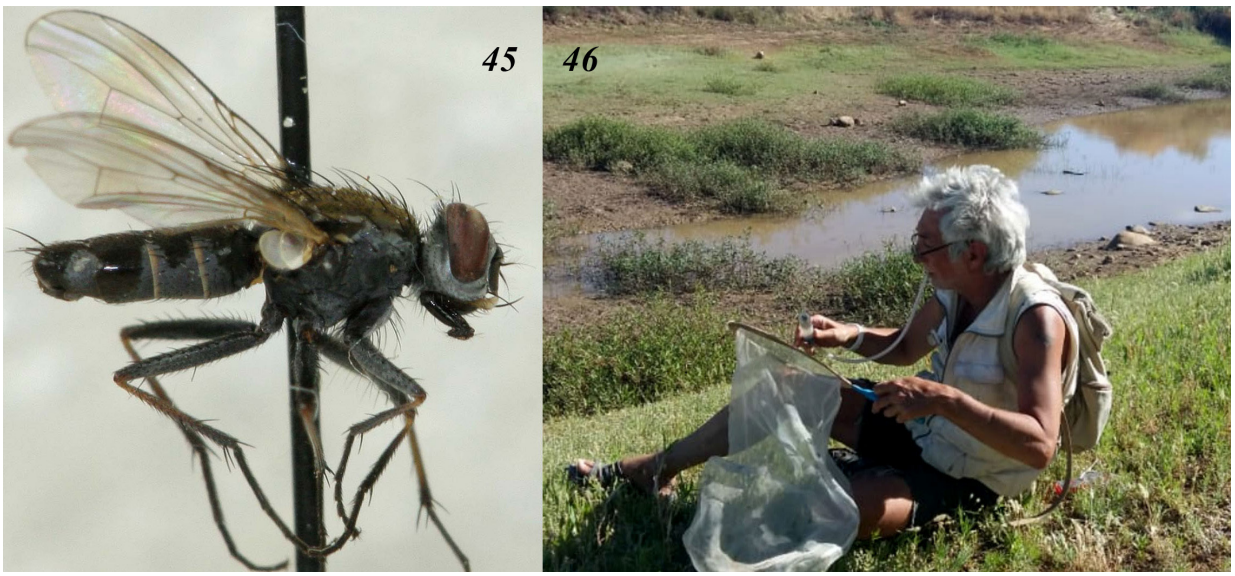
Lispe tentaculata draperi Séguy, 1933, **stat. nov**.

Material examined: see (Vikhrev 2014, under *L. draperi*).

Distribution. Africa: Algeria and Morocco.

Remarks. Hennig (1960: 430) examined the type *L. draperi* and provisionally maintained it as a good species although he considered that the type might be an aberrant specimen of *L. tentaculata*. Later it was sunk as a synonym of *L. tentaculata* by Pont (1986). Vikhrev (2011) found that *L. draperi* has an inner process on sternite 5 of a different shape (short and with blunt apex) than that of *L. tentaculata* (see: Vikhrev 2014: figs 15 and 16). According to the generally accepted opinion that even minute differences in the structure of genitalia are especially taxonomically significant, I proposed to again regard *L. draperi* as a valid species.

Presently I no longer share this point of view. I estimate that the Maghrebian population of *L. tentaculata* is isolated from the main Palaearctic population of the species since the end of the last African humid period when Sahara was a savannah, not a desert as now. The last African humid period finished 5000–6000 years ago, this is not enough for forming repro-



Figs 45–46. *L. zumpti*: *45* — male, general view; *46* — collecting site of my Namibian series

Рис. 45–46. *L. zumpti*: *45* — самец, общий вид; *46* — место поимки вида в Намибии

ductive isolation. I believe that the subspecies rank *L. tentaculata draperi* **stat. nov**. would be the best solution.

Lispe triangularis Vikhrev, 2014

Lispe triangularis Vikhrev, 2014 (Vikhrev 2014: 161–162)

Material examined: see Vikhrev (2014).

New record: NAMIBIA: Windhoek env., 22.54°S 17.20°E, 1800–1900 m asl, 25–30 December 2018, N. Vikhrev, 3♂, 2♀; Luderitz env., 26.61°S 15.19°E, sewage fields, 20–22 January 2021, N. Vikhrev, 5♂, 8♀ (ZMUM).

Distribution. Kenya, Nakuru and Nyandarua Co; Namibia, Windhoek env. The related form from Reunion Island has an uncertain taxonomic status, see *L. martirei* in Addendum.

Lispe tuberculitarsis Stein, 1913

Lispe tuberculitarsis Stein, 1913 (Vikhrev 2014: figs 46–48)

Material examined: see Vikhrev (2014).

New record: BOTSWANA, *N-W Distr.*, Maun, 19.92°S 23.51°E, 940 m asl, 3–8 February 2013, A. Medvedev, 1♀ (ZMUM).

Distribution. Afrotropical: Botswana, Ethiopia, Kenya, Madagascar, Tanzania, South Africa.

Lispe wittei Paterson, 1956

Figs 25–27

Lispe ethiopica Vikhrev, 2012 (Vikhrev 2012b; 2014), **syn. nov.**

Lispe wittei Paterson, 1956

Material examined: see Vikhrev (2012b; 2014).

New records: TANZANIA, *Mbeya* reg.: Rukwa L., 8.36°S 32.84°E, 800 m asl, 13 December 2015, N. Vikhrev, 5♂, 6♀; Nyasa L., Matema, 9.50°S 34.01°E, 15 December 2015, N. Vikhrev, 1♂ (ZMUM).

Distribution. Afrotropical: D. R. Congo, Kasai and North Kivu prov.; Ethiopia, Oromia reg.; Kenya, Nakuru Co.; Tanzania, Mbeya reg.

Synonymy. Described from 4♂ and 5♀ from D. R. Congo, Kasai and North Kivu provinces. According to the detailed description by Paterson (1956): palpi mainly dark; 2+4 *dc*, two *post* anterior pairs small; meron setulose above hind coxa; legs dark except for the base of tibiae; *t1* with *p*; *t2* with 1 *pd* and 1 *av*; *f3* with 1 *av* preapical; *t3* slightly curved dorso-ventrally, with *av*, *ad* and *pd*; *tar3-1* broadened (2x width *t3*, much broader than in *L. cilitarsis*), flattened and curved, with long apically curved *a* and *v* setulae all along and *p* setulae at base; cercal plate as in Figs 25–26. These characters and cercal shape entirely fit those of *L. ethiopica*, so *Lispe wittei* Paterson, 1956 = *Lispe ethiopica* Vikhrev, 2012, **syn. nov**.

Lispe zumpti Paterson, 1953

Figs 45–46

Lispe zumpti Paterson, 1953 (Paterson 1953: 174–176)

 https://www.doi.org/10.33910/2686-9519-2021-13-3-369-400

Fig. 47. *L. nana*, female (photo: Maherjos, Diptera.info)

Рис. 47. *L. nana*, самка (фото: Maherjos, Diptera.info)

Material examined: NAMIBIA, Windhoek env., 22.545°S 17.255°E, 1870 m asl, 11 December 2018, N. Vikhrev, 3♂, 2♀ (ZMUM).

Distribution. Namibia, South Africa, Zambia, Zimbabwe.

Remarks. The dark medial band on the wing is hardly distinct under the microscope, but is more clearly visible without magnification (Fig. 45). There is nothing else to add to the detailed Paterson's description.

I believe that *L. zumpti* belongs to the *L. desjardinsii* group (Vikhrev 2014) as a grey dusted fly with long legs and slender body and *t2* with *p*-seta in *pv* position.

Addendum

Those *Lispe* taxa on which I have come to a clear understanding of their identity are considered above in the alphabetical list and below in the identification key. Here I offer an additional alphabetical list of the African taxa of *Lispe* which were included neither in the main list nor in the key. The starting point for taxa included in the Addendum is Catalogue of the Diptera of the Afrotropical Region (Pont 1980: 750–752). The reasons for exclusion from the main checklist vary: synonymized species; species with uncertain true identity; those not recorded for Africa; with a new taxonomic status.

andrewi Paterson, 1953

A synonym (Vikhrev 2014), see *L. pectinipes*.

asetopleura Vikhrev, 2012

A synonym (Vikhrev 2014), see *L. fulvitarsus fulvitarsus* Snyder, 1949

aurocochlearia Seguy, 1950

Type material examined: Holotype (marked TYPE) ♀: NIGER, Tarrouadji Mts. (17.3°N 8.6°E), 900 m asl, 8–12 September 1947, L. Chopard, A. Villiers. Paratype ♀: NIGER, Baguezan Mts. (17.7°N 8.6°E), 1200–1300 m asl, 26–31 August 1947, L. Chopard, A. Villiers (MNHN).

Remarks. Five years ago I shortly examined these female types but I couldn't come to a definite conclusion. According to my notes specimens were in not good condition. They have thorax as *L. draperi* (scutum with a median pruinose patch at the level of 2nd and 3rd *post dc*), but the abdominal pattern and *t3* without *pd* as those of *L. nana*. Presently

I examined *L. capensis* and found out that it fits well my descriptive notes on *L. aurocochlearia*. However, reexamination of types in MNHN is required to be sure.

bivittata Stein, 1909

Remarks. As it was discussed in Vikhrev (2012c; 2014; 2020), the African records of *L. bivittata* Stein, 1909 (Hennig 1960; Pont 1991) were misidentifications of *Lispe ochracea* Becker, 1910. *L. bivittata* is excluded from the African fauna as an Oriental species which is distributed from India to Sundaland.

congensis Zielke, 1970

Remarks. No material examined. Described from 1♂ and 7♀ from D. R. Congo, May Ya Moto (0.90°S 29.35°E). According to the description (Zielke 1970): body length 6.5 mm; palpi yellow; *dc* 2+3; legs grey (dark?); *t1* with *p*, without *ad* seta; *t2* with *p*; *t3* with *av*, *ad* and *pd*; *f3* with 2 *av* in apical half; vein M straight. The description fits *L. zumpti* supposing that Zielke overlooked the dark medial band on the wing which is hardly distinct under a microscope.

draperi Seguy, 1933

Considered here in a new status, see *L. tentaculata draperi* Seguy, 1933.

ethiopica Vikhrev, 2012

Synonymized here, see *Lispe wittei* Paterson, 1956.

flavipes Stein, 1913

Synonymized here, see *Lispe scalaris* Loew, 1847.

frontalis Zielke, 1972

A synonym (Zhang et al. 2016), see *Lispe leucocephala* Loew, 1856.

fulvitarsus (*Lispacoenosia*) Snyder, 1949

See *Lispe fulvitarsus fulvitarsus* Snyder, 1949.

leucospila Wiedemann, 1830

All African records are misidentifications of *L. pectinipes*. *L. leucospila* is distributed in E Palaearctic, Oriental region and Australia (Vikhrev 2014; 2020), it is excluded from the African fauna.

leucosticta Stein, 1918

Remarks. No material examined. As discussed in (Vikhrev 2016) *L. leucosticta* was described from an unknown locality in Madagascar, the holotype is in Vienna, and it could be the oldest name for *L. madagascariensis* or *L. stuckenbergi*.

longicollis Meigen, 1826

Remarks. The southernmost reliable records are from 35–37°N (Turkey, Turkmenistan) (Vikhrev 2014). I have not found any specimens of *L. longicollis* from Israel in TAUI collection. Thus, I regard the record from Sudan (Pont 1980) as a misidentification and exclude *L. longicollis* from the African list.

macfiei Emden, 1941

Considered here in a new status, see *Lispe geniseta macfiei* Emden, 1941.

mapaensis Paterson, 1953

A synonym (Vikhrev 2014), see *L. pectinipes*.

martirei Vikhrev, 2014

Described from Reunion (Vikhrev 2014: 160–161 and figs 36–39). Closely related to *L. nana* and *L. triangularis*, these species share such unique characters as postpronotal lobes with spinulose setae on anterior part and ♂ abdominal tergite 3 with a small rounded knob-like process at each ventral fore-marginal corner (visible on the not dissected abdomen). *L. martirei* differs from other species of the *L. nana* species complex by dark palpi; darkened wings and border of calypters; darker abdominal pattern; thicker proboscis. *L. martirei* has a frontal triangle with microrough surface as in *L. nana*, scutum shining black as in *L. triangularis*. In order not to complicate the key, I decided to place this species in the Addendum until its taxonomic status is clarified.

miochaeta Speiser, 1910

Remarks. No material examined. As discussed in Vikhrev (2016) the type locality of *L. miochaeta* is the grassland around Mt Kilimanjaro, syntypes should be in Stockholm. It could be the oldest name for *L. dichaeta* or *L. madagascariensis*.

modesta Stein, 1913

A synonym (Vikhrev 2012b), see *Lispe assimilis* Wiedemann, 1824.

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neo Malloch, 1922

Remarks. No material examined. Described from a female from Ghana, Secondi (4.94°N 1.71°W). The description by Malloch (1922b) reminds *L. tentaculata*; 2+4 *dc* (or 2+2 if very weak regarded as absent); *t1* with submedian *d* and *p*; *t2* with *p*; *f3* with median *pv* and apical *av*; *t3* with 1 *ad* and 1 *pd*; tergites 3–4 with dark triangular spots divided by median vitta. Tibial chaetotaxy fits that of the *L. desjardinsii* group (Vikhrev 2014).

paraneo Zielke, 1972

Lispe paraneo Zielke, 1972 (Couri et al. 2006, erroneous key; Vikhrev 2014, misidentification)

Remarks. Described from 1♂ and 4♀ from Saint Augustin (23.55°S 43.76°E), near Toliara, Madagascar. Vikhrev (2014) identified the series of *L. cilitarsis*-like flies collected in the vicinity of Toliara as *L. paraneo*. This series also runs to *L. paraneo* in the key for Madagascan *Lispe* (Couri et al. 2006). Later I found that the key (Couri et al. 2006) contains errors and contradicts the description (Zielke 1972). According to Zielke male *L. paraneo* is characterized as follows: 5.5–6.5 mm; palpi yellow; face and frons silver-white; antennae short; thorax grey dusted without distinct pattern; *dc* 2+4; vein M "rather straight"; legs grey; *t1* with *p*; *t2* with 1 *p* and 1 *ad*; *f3* with some weak *v* setae in basal half; *t3* with 1–2 *av*, 1 *ad*; and *pd*; *f3* with 2 *av* in apical half; *tar3-1* with a brush of long setulae; abdomen evenly grey, with an indistinct dark spot on tergite 4. So, my identification of Madagascan *L. cilitarsis*-like *Lispe* as *L. paraneo* was a misidentification. Zielke's description does not fit any other *Lispe* species I know. Only examination of type material may clarify the situation.

paraspila Zielke, 1972

A synonym (Vikhrev 2014), see *L. pectinipes*.

silvai Paterson, 1953

Synonymized here, see *L. flavicornis*.

sineseta Zielke, 1971

Synonymized here, see *L. niveimaculata*.

surda Curran, 1937

Lispe ambigua surda (Emden 1941)

Lispe surda Curran, 1937 (Curran 1937; Paterson 1953: figs 14, 15; Vikhrev 2016)

Distribution. Described from South Africa, Bloemfontein (29.1°S 26.2°E, 1400 m asl).

Remarks. No material examined. To make the key below as reliable as possible I included in it only personally examined species. I trust Paterson (1953) publication but the information given there is scarce. That is why I placed this species in the Addendum. *L. surda* runs in my key to couplet 30. Male *L. surda* differs from males of *L. ambigua* and *L. biseta* by the absence of an anteriorly directed projection anterior part of sternite 4. Male cercal plate—Paterson (1953: fig. 15) or Vikhrev (2016: fig. 5). Body length: 7 mm (♂) or 7–7.5 mm (♀) and in female *f2* without strong median *av* as in *L. biseta*. *t2* with *ad* as in *L. ambigua*.

symonii Becker, 1910

As discussed in Vikhrev (2020) the taxonomic status of the species cannot be clarified so far; so this taxon is listed under *L. candicans* in a broad sense.

xanthophleba Seguy, 1950

Synonymized here, see *L. pectinipes*.

Identification key for *Lispe* of Africa, ♂ and ♀

Emden's (1941) key for African *Lispe* divided the fauna into two large groups: those with dark versus yellow palpi. I do not agree with using such a secondary character which may be intraspecifically variable for the main division. Couri et al. (2006) used as the main diagnostic character for Madagascan *Lispe* the amount of dorsocentral setae, this approach seems more reasonable, but it also has its drawbacks. First, it is difficult to apply to species with weak dorsocentrals, especially to aged specimens with worn mesonotum. Second, this character may vary intraspecifically, for example, in *L. tentaculata* male has 2+3 *dc* whereas the female 2+4 *dc*. I believe that the tibial chaetotaxy is a more reliable and the easiest to apply characteristic, however, also not in all cases.

In my opinion, a good key should use the most reliable and easy-to-find characters (1) and be organized so that closely related species run together, not in different parts of the key (2). I tried to make the key this way, but sometimes it was impossible to meet both

conditions, thus *L. loewi* belonging to the *L. palposa* group runs among species of the *L. caesia* group.

I tried to mention as many additional characters in the key as possible. Hopefully this will allow a user to be more confident in the identifications. On the other hand, the key has become larger. I can offer a know-how: since more than half of African specimens of *Lispe* belong to the most common species, start with checking couplets 46–48. If it is not *L. pectinipes* then you have something more interesting.

1. Hind coxa with setae on inner posterior margin. (From brackish to hypersaline water, either seashores or inland salt basins. *t1* usually with *p*; *t2* with 1 *p* and 0–1 *ad*; *t3* always without *pd*. ♂: frons often densely silver-white dusted. ♀: *f1* usually with short *v* hunting spines.) **2**
— Hind coxa bare on inner posterior margin **13**
2. *t1* without *p*. (2+3 *dc*, all strong. Abdominal tergites 3–4 with a large black triangular median spot each.) **3**
— *t1* with *p* **4**
3. Frons black, frontal triangle narrow. *t2* without *ad*. Palpi black. Wing darkened at apex. Small (4.5 mm), dark species known from E African seashores (Fig. 35). ♂: *t3*: with *ad* below middle and preapical *d* fine and long (about 0.4x as long as length of tibia); *a* to *av* surfaces with 7–8 setae in apical half. *tar3-1* with *av* and *pv* rows of waved setulae (Figs 30–34) ..... ***patersoni* sp. nov.**
— Frons densely whitish (♂, Fig. 16) or yellow (♀) dusted, frontal triangle widened, with convex margins. *t2* with *ad*. Palpi partly yellow. Wing hyaline. Large (7 mm) species known from seashore of S-W Madagascar. ♂: *tar3-1* thickened, with ventral tuft of long setae ..... ***argentata*** Couri, Pont and Penny
4. Meron with hairs above hind coxa. *t3* without *av*, with 1 *ad* only. Abdomen with a conspicuous dark midline. 2+3 *dc*. N Africa and Sudan. ♂: Vibrissae absent. Mid leg modified: *t2* with 1 *ad* seta placed distinctly above middle, 1(2) *p* seta(e) short and weak, also placed above middle; *v* surface at apical half with 1–2 strong spine-like seta(e) and a row of longer fine setae (Vikhrev 2015: fig. 17). *tar2-1* with long fine curled ventral setae at base. ♀: *t2* with 2 medium strong *ad* and 3 short *pd*, either *ad* and *pd* widely separated, upper *ad* and *pd* set above middle of tibia (Vikhrev 2020: fig. 46) ..... ***loewi*** Ringdahl
— Meron bare. *t3* with 1 or more *av*. *t2* with 1 *p* and 0–1 *ad*. Abdomen without black midline **5**
5. *dc* setae may be described as 0+2 or 2+4 *dc* (medium/weak, medium/weak + weak, weak, strong, strong) depend on species or specimen. *t2* without *ad*. Frontal triangle broad, with convex margins; frons in ♂ densely silvery dusted, in ♀ white or yellow dusted. Vibrissae in ♂ weak **6**
— 2+3 *dc* (all strong) **8**
6. Palpi dark. Body length over 6.5 mm. All femora with strong ventral spines in both sexes. (Abdomen with a pair of dark spots on tergites 3 and 4, in ♂ also tergite 5 antero-laterally darkened. 2+4 *dc*. ♂: hind tarsus with dense brush of hairs on posterior side.) (Zhang et al. 2016, figs 1d, 12, 13; Vikhrev 2020, figs 10–15) ..... ***candicans*** Kowarz
— Palpi yellow. Body length less than 6.5 mm. Only ♀ with weak ventral spines on fore and mid femora **7**
7. In both sexes frons evenly silvery, borders between fronto-orbital plates, frontal vitta and frontal triangle hardly distinct. Abdomen evenly whitish-grey, unmarked. *dc* setae may be described as 0+2 or 2+4 *dc*. ♂: *t3* with 1 *av*. *tar3-1* thickened (Hennig 1960: textfig. 97; Zhang et al. 2016: fig. 1H) ..... ***leucocephala*** Loew
— In both sexes frontal triangle clearly distinct whitish in ♂, yellowish in ♀. Abdomen with distinct pairs of dark spots on tergite 4, tergite 3 with or without spots. 2+4 *dc*, but there are specimens with 2+3 *dc*. ♂ (Figs 9–12): *t3* with 1 *av* and 1 *ad*. *tar3-1* only slightly thickened in basal half; posteriorly with a dense row of *p* setulae ..... ***andrefana* sp. nov.**

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8. *t2* without *ad* (including females *L. polonaise* sp. nov. with *ad* on one *t2*). Palpi yellow **9**
— *t2* with *ad*. Palpi brown to black. N. Africa. (Frontal triangle widened.) **12**
9. Densely whitish-grey or yellowish (some ♀) dusted flies. Frontal triangle widened, with convex margins. Antenna dark, aristal hairs half as long as width of postpedicel **10**
— Dark, brownish-black species. Frontal triangle narrow. At least pedicel yellow, aristal hairs as long as width of postpedicel **11**
10. Abdomen with large black triangular median spot on tergites 3–4. Brackish lakes of African rift. ♂ (Figs 1–6): Hind tarsus unmodified. *t3* with 1 *ad* only. ♀ (Figs 7–8): *t3* with 2 *av* ..... ***alkalina* sp. nov**.
— Abdomen evenly whitish-grey dusted, only tergite 3 with indistinct dark spots or a line. So far known from Namibia (Fig. 39). ♂ (Figs 36–38): *tar3-1* with two approximated, short and strong *v* spines near base (Fig. 38). *t3* with 1 long and strong median *ad* and at apical half with 4–5 *av* and 7–8 fine *pv*. ♀: *t3* with 2 *av* ..... ***polonaise* sp. nov**.
11. *t3* with 1 *ad*, and 1 *av* setae. Parafacials bare in upper half. Frontal vitta dark, dusted frontal triangle very distinct. Palaeotropical. ♂: Mid tarsus not modified. Hind tarsus modified, *tar3-1* widened. Frontoorbital plates whitish dusted, frontal vitta dark, frontal triangle white to yellow in fresh specimens. Antenna entirely yellow. Wings with dark apex (Zhang et al. 2016: figs 14, 16; Vikhrev 2020: Fig. 17) ..... ***flavicornis*** Stein
— *t3* with 1 *ad* and 2 *av* setae. Parafacials with a complete row of hairs. Frons densely yellowish dusted, frontal triangle hardly distinct. Temperate zone of Atlantic coast. Mid tarsus modified: *tar2-2* and *tar2-3* with long *a* seta each, *tar2-5* with a row of fine *p* hairs. Hind tarsus not modified. Frons yellow dusted, narrow frontal triangle hardly distinct. Postpedicel mostly dark. Wing unspotted. (Vikhrev 2020: figs 8, 9, 16) ..... ***marina*** Becker
12. ♂: *t3* with 2 (1–3) *av* setae. *tar3-1* with ventral rounded process in apical half as in Fig. 49 ♀: Palpi usually black. *t3* with 1 *av*. *f3* with only 1 *av* seta beyond middle, preapical *av* absent. (Zhang et al. 2016: figs 17–18; Vikhrev et al. 2016: figs 1–6) ..... ***caesia*** Meigen
— ♂: *tar3-1* unmodified. *t3* with 3–4 *a*, 8–9 *av* spinulose setae. ♀: Palpi brown. *t3* with 2 *av* at least on one side. *f3* with 2 *av* setae: submedian and preapical. (Zhang et al. 2016: figs 17–18; Vikhrev 2020: fig. 47) ..... ***halophora*** Becker
13. Body black, femora and at least *t1* black, but *tar1-2* to *tar1-5* red in both sexes (Fig. 28). Scutum shining black, without dusting. Tibial chaetotaxy: *t1* with *p*, *t2* with 1 *ad* and 1 *pd*, *t3* with 1 *av*, 1 *ad* and 1 *pd*. Antenna remarkably long. Small (body length 4–5 mm) species ..... **14** (***kowarzi*** species complex, Vikhrev 2014)
— Fore tarsus without described above modification. Scutum not entirely shining black. Other characters are not as above **15**
14. Palpi dark. 1+2–3 *dc* (though weak except for the last prescutellar pair). Anepimeron with 1–3 hairs. Posterior tibiae dark (Fig. 28). ♂: *f2* with 3–4 long ventral setae on basal half, *f3* with 2 strong submedian *v* setae. Abdomen entirely black or almost so ..... ***kowarzi kowarzi*** Becker
— Palpi yellow. 0+1 *dc*. Anepimeron entirely bare. Posterior tibiae yellow. ♂: *f2* and *f3* without ventral setae. Abdomen with paired lateral whitish spots on anterior margins of tergites 3 to 5 ..... ***fulvitarsus fulvitarsus*** Snyder, 1949
15. Lower parafacials with a strong seta. *t1* with *p* seta, long and fine in ♂, long and strong in ♀; *t2* with 1 *ad* and 1 *pd*; *t3* with 1 *av*, 1 *ad* and 1 *pd*. Small to medium-sized, densely brown-grey dusted species **16**
— Lower parafacials without seta. Tibial chaetotaxy is different **19**
16. *dc* 1+2, all remarkably strong, no additional weak *dc*, the median pair is placed almost equidistant from anterior and posterior pairs, additional weak *dc* setulae absent (Fig. 15). *t1* with 1 submedian *d*.

Pulvili not enlarged. Smaller, body length 4.5–5.5 mm . . . . . **17** (***dichaeta*** species complex, Vikhrev 2016)

— *dc* 2+3, typically placed. *t1* without *d*. Pulvili enlarged. Larger, body length 6–7 mm. General view of very closely related *L. g. geniseta*, see Vikhrev (2016: figs 12, 13). ♂: Cercal plate—Vikhrev (2016: figs 14, 17) . . . . . ***geniseta macfiei*** Emden

17. Frons wider, at level of anterior ocellus about 0.44 of head width (Vikhrev 2016: fig. 9). Highlands. (Antenna dark in *L. dichaeta*, but in *L. stuckenbergi* postpedicel yellow at base, pedicel yellow at apex.) ♂: *f3* with 1 strong median *pv*. Cercal plate wide, without anchor-like apex (Vikhrev 2016: figs 10–11) **18**

— Frons narrower, at level of anterior ocellus about 0.37 of head width (Vikhrev 2016: fig. 7). Postpedicel distinctly yellow at base, pedicel yellow at apical half. Lowlands. ♂: *f3* without median *pv*. Cercal plate narrow with anchor-like apex (Vikhrev 2016: fig. 8) . . . . . ***madagascariensis*** Zielke

18. Madagascar. ♂: Cercal plate as in Vikhrev (2016: fig. 11). Mid coxa on posterior surface with a set of 4 appressed, short, strong and straight spines. *tar1-1* and *tar1-2* yellow, concolourous with *t1* . . . . . ***stuckenbergi*** Zielke

— African mainland. ♂: Cercal plate as in Vikhrev (2016: fig. 10). Mid coxa without set of spines. *tar1-1* and *tar1-2* greyish, darker than *t1* . . . . . ***dichaeta*** Stein

19. 2+2 *dc*, all remarkably strong, widely spaced, no additional weak *dc* present. Medium size, densely brownish dusted species. Abdominal tergites 3–4 with a pair of triangular spots (Figs 13–14). Parafacials wide with dense hairs in 2–3 rows. *t1* without median setae; *t2* with or without *ad* and with 1 *pd*; *t3* with 1 *ad*. ♂: Sternite 4 with an anteriorly directed projection on anterior margin (Vikhrev 2016: fig. 1) . . **20** (***ambigua*** species complex, see Vikhrev 2016)

— *dc* setae not as described above **21**

20. *t2* without *ad*. Femora yellow at apices. Body length 7–7.5 mm. ♂: Hind trochanter with ordinary fine setulae. Cercal plate at apex outside curved and bidental, surstylus long and narrow (Vikhrev 2016: fig. 3). ♀: *f2* without strong median *av*; *f3* with short *av* and *pv* setae . . . . . ***biseta*** Stein

— *t2* with *ad*. Femora entirely dark. Body length 5.5–6.5 mm. ♂: Hind trochanter densely covered with spine-like, appressed setulae. Cercal plate at apex outside curved and bidental, surstylus long and narrow (Vikhrev 2016: fig. 3). ♀ (Figs 13–14): *f2* with strong median *av*. *f3* without distinct ventral setae . . . . . ***ambigua*** Stein*

* See also remarks to *surda* Curran, 1937 in the Addendum.

21. Vein M distinctly curved forward at apex. (2+4 *dc*: weak-medium, medium + weak, weak, strong, strong. *t1* with *p* (may be very short in males); *t3* with *pd* and *ad*, with or without *av*. Medium to large size; grey dusted flies with long legs and slender body.) . . . . . **22** (***longicollis*** group, see Vikhrev 2012b; 2014)

— Vein M not curved at apex **28**

22. Meron bare. *t2* without ventral seta. ♂: hind tarsus not modified . . . . . **23** (***assimilis*** subgroup, see Vikhrev 2012b)

— Meron setulose above hind coxa. *t2* with *av* or *v* seta ♂: hind tarsus modified: curved and with long ventral hairs . . . . . **24** (***longicollis*** subgroup, see Vikhrev (2012b; 2014)

23. ♂: *f1* ventrally with a dense brush of setulae placed in about 5 rows in basal half of femur and in 1–2 rows in apical half. *f2* in basal 1/3 with a brush of ventral setae 1.5–2x as long as femur width. ♀: *f1* ventrally with 2–3 rows of fine setulae . . . . . ***nuba*** Wiedemann

— ♂: *f1* ventrally unmodified, without a dense brush of setulae. *f2* with only short ventral setae. ♀: *f1* bare on ventral surface apart from usual row of *av* setae . . . . . ***assimilis*** Wiedemann

24. ♂: *f2* with strong ventral spines or *f3* with 5–7 *av* and *pv* setae in basal half. ♀: *f3* with submedian *av* seta, apical *av* absent **25**

— ♂: *f2* without spines, *f3* with 1–3 fine *v* setae in basal half. ♀: *f3* without submedian *av* but with apical *av* seta **26**

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25. *t1* with a row of 4–7 short but strong *d* setae. *t3* with *av*. Palpi yellow. South Africa, Namibia, Botswana. ♂: (Vikhrev 2012b: fig. 1) *f2* basally with 2–3 remarkably strong and long straight ventral spines. *f3* in basal 1/3 with 1–2 *av* and 1 long *pv*. *t2* and *tar2-1* without row of elongated *p* setulae. *t3* at apical 1/3 with a tuft of long waved setulae on anterior surface. *tar3-1* elongated, strongly downward curved; with long waved *v* setulae. Cercal plate as in Vikhrev (2014: fig. 62) . . . . . ***barbipes*** Stein
— *t1* without a row of *d* setae. *t3* without *av*. Palpi brownish. Kenia. ♂: *f2* without remarkable spines. *f3* before middle with 3(2) *av* and 3(2) *pv*. *t2* and *tar2-1* with a row of fine long (twice longer than tibia width) setulae. *t3* without elongated setulae at apex. *tar3-1* not curved, laterally flattened, in lateral view 1.5x wider than width of *t3*, without long *v* setulae. Cercal plate and sternite 5 as in Vikhrev (2014: figs 56–57) . . . . . ***dmitryi*** Vikhrev
26. Palpi dark (Fig. 27). ♂: *tar3-1* distinctly shorter than *t3* length; *tar3-1* dorso-ventrally remarkably flattened, at least 1.5x wider than *t3*; with rows of *av* and *pv* setulae. Cercal plate as in Figs 25, 26 . . . . . ***wittei*** Paterson
— Palpi yellow. ♂: *tar3-1* not shortened, at least as long as *t3* length; *tar3-1* not flattened, at most as wide as *t3*; laterally strongly curved inside **27**
27. ♂: Mid tarsus with a row of curled setulae on *p* surface. Cercal plate as in Fig. 24. Tanzania to N Africa . . . . . ***cilitarsis*** Loew
— ♂: Mid tarsus without a row of *p* setulae. Cercal plate as in Fig. 23. S Africa and Madagascar to Tanzania (Fig. 22) . . . . . ***confusa*** **sp. nov.**
28. *t2* with *p*-seta in *pv* position. Body build similar to that of *longicollis* group: grey dusted flies with long legs and slender body but vein M not curved. *t1* with *p*; *t3* with *av*, *ad* and *pd* . . . . . **29** (***desjardinsii*** group, see Vikhrev 2014)
—*t2* with *p*-seta in *p* or *pd* position; *t3* not with *av*, *ad* and *pd*. Different combinations of other characters **32**
29. *t1* without *d*. Body length 4.5–6 mm. Wing darkened as in Fig. 45. ♂: Fore tarsus not modified. Fore coxa with a dense tuft of long curved setae posteriorly . . . . . ***zumpti*** Paterson
— *t1* with *d*. Body length 6–7.5 mm. Wing clear. ♂: Fore tarsus modified **30**
30. *dc* 1+3. Palpi blackish at least in apical part. Parafacials with hairs in only one row. ♂: (Vikhrev 2014: fig. 46) *tar1-1* flattened, yellow, *tar1-2* with ventral tubercule in middle. *f3* with 1 long *av* and 1 long *pv* setae in middle; at basal half without spinulose *pv* setae. Cercal plate and sternite 5 as in Vikhrev (2014: figs 47–48). ♀: *f3* with submedian *av* 1.5x longer than femur width . . . . . ***tuberculitarsis*** Stein
— *dc* 2+3. Palpi yellow. Parafacial with hairs in two rows. ♂: Fore tarsus modified differently. *f3* in middle with 1 shorter *av* and without *pv*; at basal half with a row of spinulose *pv* setae ♀: *f3* with submedian *av* at most as long as femur width **31**
31. ♂: *tar1-1* and *tar1-2* with a row of *pv* setulae, some of these setulae scale-lake; *tar1-5* unmodified. Cercal plate and sternite 5 as in Vikhrev (2014: figs 49–50). Common in Madagascar (Vikhrev 2014: fig. 45) . . . . . ***pennitarsis*** Stein
— ♂: *tar1-1* and *tar1-2* unmodified, *tar1-5* with a characteristic dilated and flattened at apex outer pulvilus (see Couri et al. 2006: fig. 101). Widespread in Africa, recorded from Reunion, uncommon in Madagascar . . . . . ***desjardinsii*** Macquart
32. *t2* with *ad* seta(e). (*t1* without *p*; *t3* only with 1 *ad*. Always 2+3 *dc*, all strong.) **33**
— *t2* without *ad* seta **36**
33. Tibiae and tarsi yellow-brown. Densely grey dusted species resembling *L. pygmaea*. Known from Turkana Lake. ♂: Abdominal sternites 3 and 4 densely setulose, abdomen with pair of round spots on posterior half of tergite 4 (Vikhrev 2016: fig. 21). ♀: Abdominal spots less distinct . . . . . ***bipunctata*** Seguy
— Legs dark. Abdominal pattern different. N Africa **34**
34. Abdomen with pairs of large triangular

spots on tergites 3 and 4. On *t2 ad* and *pd* setae of equal length. ♂: (Vikhrev 2020: fig. 30) Abdominal sternites 3 and 4 densely setulose. Vibrissae strong. Cercal plate and sternite 5 as in Vikhrev (2012c: figs 31–32) ..... ***rigida*** Becker

— Abdomen with more (♀) or less (♂) distinct dark median vitta. On *t2 ad* seta 1.5x longer than *pd* setae. ♂: Abdominal sternites not setulose. Vibrissae absent **35**

35. Meron with 3–4 setulae above hind coxa. ♂: Wings darkened antero-apically. *t2* with several additional short *ad*. *t3* with *ad* seta much stronger than elongated setulae in *ad* row. Cercal plate: Vikhrev (2015: fig. 1) ..... ***apicalis*** Mik

— Meron bare. ♂: Wings not darkened. *t2* with only 1 *ad*. *t3* with *ad* seta hardly distinct, longer but about as fine as other elongated setulae in *ad* row. Cercal plate: see Vikhrev (2015: fig. 2) ..... ***elkantarae*** Becker

36. 2+3 *dc*, all strong. (*t1* without *p*; *t2* with 1 *p*; *t3* with *ad*, with or without *pd*. (**!** *tentaculata* with 2+3 *dc* in males and a minority of females runs here. The majority of female *tentaculata* have 2+4 strong *dc*, with 2nd and 3rd *post dc* setae very close together, such position of *dc* is unique in *Lispe* and unmistakable.) **37**

— Not 2+3 strong *dc* **45**

37. Meron with setulae above hind coxa. ♂: Fore tarsus or sternite 5 modified. ♀: Scutum with a median pruinose patch in posterior third ..... **38** (***tentaculata*** species group, part, see Vikhrev 2014)

— Meron bare above hind coxa. Always 2+3 strong *dc*. *t3* with 1 *ad*, without or with 1 *pd* **39**

38. Katepimeron with 2(3) hairs in posterior half. Scutellum bare below at apex. *t3* with 1 *ad*, without 1 *pd*. *f3* without long fine submedian *av*. Abdomen with a *L. nana*-like pattern, contrasted black-and-white (♂) or less contrasted (♀) (Figs 17–19). Tibiae yellow. ♂: Fore tarsus unmodified. Sternite 5 with a strong medial process clearly visible on intact abdomen. Cercal plate and sternite 5 as in Fig. 21 ..... ***capensis*** Zielke

— Katepimeron bare. Scutellum with some fine hairs below at apex. *t3* with 1 *ad* and 1 *pd*. *f3* with 2–3 long fine submedian *av*. ♂: Fore tarsus modified. Sternite 5 with a medial process small, invisible on intact abdomen. Tibiae dark or yellow .... **38a** ***tentaculata*** De Geer

38a. Tibiae dark, only knees yellow. Ethiopia, NE Africa and Canary Isl. ♂: sternite 5 as in Vikhrev (2014, fig. 16) .... ***tentaculata tentaculata*** De Geer

— Posterior tibiae at least in basal half yellowish, usually both *t2* and *t3* entirely yellow. Maghreb: Algeria and Morocco. ♂: sternite 5 as in Vikhrev (2014, fig. 15) .... ***tentaculata draperi*** Séguy

39. *t3* with 1 *ad* and 1 *pd*. Palpi remarkably widened. *f2* without median *a* seta **40**

— *t3* with 1 *ad* only. Palpi weakly widened. *f2* with or without median *a* seta **42**

40. Postpronotal lobes with usual setulae. *ac* hairs in 5–7 rows. Body length 6–6.5 mm. Known from Sinai and Negev. ♂: (Vikhrev 2012c; figs 8–10) *f3* with complete *av* and *pv* rows of spine-like setae of irregular length. Abdominal tergite 3 unmodified ..... ***freidbergi*** Vikhrev

— Postpronotal lobes with spinulose setae. Body length 4–5.5 mm. *ac* hairs in 3 rows. Africa, including small remote islands as Canary; Cape Verde, Reunion. (Vikhrev 2014: figs 36–42; 2020; fig. 27) ♂: Abdominal tergite 3 with a small rounded knob-like process at each ventral fore-marginal corner (visible on not dissected abdomen) ..... **41** (***nana*** complex)

* For specimens from Reunion see also remarks to *martirei* Vikhrev, 2014 in the Addendum.

41. Frontal triangle with microrough surface. Scutum with a dense grey-brown pollination (sometimes mainly worn out, as in Fig. 47, but a significant part of the scutum is always pollinated). ♂: *f3* with 2–3 fine *v* setae in basal 3/5; *t3* with several fine *pv* setulae in median part ..... ***nana*** Macquart

— Frontal triangle remarkably glossy black. Scutum shining black, only a pair of narrow brownish submedian vittae present. ♂:

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f3 without *v* setae; *t3* without fine *pv* setulae . . . . . ***triangularis*** Vikhrev

42. *f2* without median *a* seta. Palpi threadlike in basal 2/3, abruptly widened to a spoon-like apex. Postpronotal lobes with strong spinules. Slender species with thin legs. ♂: *f3* with 1 weak median *av* . . . . . **43** (***scalaris*** group, see Vikhrev 2014)

— *f2* with median *a* seta. Palpi very gradually widened from base to apex. *ac* hairs in 3–4 rows. Postpronotal lobes without strong spinules. Rather stout, densely brown-grey dusted species. ♂: *f2* and *f3* with strong ventral setae **44**

43. Body length 3.8–4.5 mm. Occiput, abdomen and usually scutum with shining black areas. Frontal triangle dark. Wings hyaline. Femora usually at least partly dark (Figs 42), rarely entirely yellow (Fig. 43). From North to South Africa. ♂: *f3* without median *v* seta. Cercal plate as in Vikhrev (2014: fig. 35) . . . . . ***scalaris*** Loew

— Body length 5.1–5.6 mm. Occiput, abdomen and usually scutum without shining black areas, abdomen without any dark pattern. Frontal triangle yellow. Wings slightly brownish darkened in apical 1/3 from level of M-Cu crossvein (Fig. 40). Femora yellow (Fig. 40). Madagascar. ♂: *f3* with median *v* seta. Cercal plate as in Fig. 41 . . . . . ***selena*** **sp. nov.**

44. Body length 5.5 mm or less. Tarsi basally more or less yellow (Vikhrev 2020: fig. 35). African mainland. ♂: *t1* and *tar1-1* without elongated p setulae. Fore coxa without tuft of curved setae posteriorly. Cercal plate — Vikhrev 2016: fig. 24. ♀: *f3* without submedian *av* . . . . . ***pygmaea*** Fallen

— Body length 6.5–7 mm. Tarsi entirely black (Vikhrev 2016: fig. 20). Madagascar. ♂: Fore coxa with a dense tuft of long curved setae posteriorly. *t1* and *tar1-1* with dense row of long posterior setulae. Cercal plate remarkably small, see Vikhrev (2016: fig. 22). ♀: *f3* with strong median *av* . . . . . ***keiseri*** Zielke

45. Femora with ventral rows of short spines. Tergites 3 and 4 with paired trapezoid dark spots, tergites 1+2 and 5 without dark spots. Only the last 2 pairs of *dc* strong, depending on specimen it may be described as 2+4 *dc* or 0+2 *dc*. Frontal triangle narrow, whitish (Vikhrev 2020: figs 18, 19, 20, 48). Palpi black. *t1* without *p*; *t2* with 1 *p*; *t3* with 1 *ad* and 1 *av*. (See the recent redescription in Pont 2019: 215.) Seashores or salt lakes . . . . . ***bengalensis*** Robineau-Desvoidy

— Femora without ventral spines. Other characters not as above **46**

46. Only one pair of strong *prst dc*: 1+4 *dc* (strong + weak, weak, strong, strong) weak setae often broken, so some specimens may look as 1+2 *dc*. Scutum with characteristic dark median vitta. Meron bare. Scutellum bare below. *t1* with strong *p* seta. (*t2* with 1 *p*; *t3* with 1 *ad* and 1(2) *av* (indistinct among dense setulae in ♂ *irvingi*), without *pd*. ♂: *f2* with dense row of 12–14 *pv* setulae in apical 1/4. *t3* with a row of *pv* setulae in apical half. Cerci long, halves of cercal plate widely divided, conjoined at the very base only. ♀: *f3* with 2 strong *av*, medial and apical.) . . . . . **47** (***leucospila*** group, Vikhrev 2014)

— Presutural *dc* absent or two very weak pairs present. If only one pair of *prst dc* (*orientalis* and *emdeni*), this pair is weak and meron with hairs above hind coxa. *t1* without *p* seta (sometimes present in *niveimaculata*); *t3* without *av*, with or without *pd* **49**

47. Tibiae dark, only knees yellowish (in old and faded specimens tibiae may become yellowish). Abdomen glossy black, only small separated whitish dorso-lateral spots present (Vikhrev 2014: fig. 3), in females these spots sometimes are reduced to a single pair on tergite 5 only. Disc of scutum mostly glossy blackish, with three wide, glossy black median and submedian vittae, disc of scutellum entirely glossy black. Brown frontal triangle hardly distinct on brown-black interfrontalia. Body length 5–5.5 mm. ♂: *t3* with 4–6 sparse and short *pv* setae. Cercal plate as in Vikhrev (2014: fig. 10) . . . . . ***maculata*** Stein

— Tibiae yellowish. Abdomen with wide grey lateral vittae (more or less interrupted only

on posterior part of tergite 4). Disc of scutum densely dusted, with brown median vitta from neck to the tip of scutellum. Yellowish dusted frontal triangle distinct on dark interfrontalia. ♂: *t3* with at least 8 longer *pv* setae **48**

48. *Prst dc* seta situated at the middle of the presutural half of scutum (Fig. 29); body length 4–5.5 mm. ♂: *t3* with 1 (2) straight and short *av* seta(e) and with 8–10 fine *pv* setulae in one row . . . . . ***pectinipes*** Becker

— *Prst dc* seta situated in the posterior part of the presutural half of scutum; body length 5–6.5 mm. ♂: *t3* with 4–5 long, fine, slightly curved at apex *av* setae and dense and long setulae on *v* to *pv* surface . . . . . ***irvingi*** Curran

49. Even weak anterior *dc* absent, 1 or 2 pair *post dc* present; ground setulae on scutum sparse. *t3* without *pd*. Meron bare. *f3* with *ad* row consisting of short and sparse spine-like setae. Trochanters yellow **50**

— Weak *prst dc* present although often broken or hardly visible; ground setulae on scutum denser. *t3* with 1 *pd*. Meron with hairs above hind coxa. *f3* with usual *ad* setae. Trochanters concolourous with femora **51**

50. Katepisternal setae reduced to 0+1. Postpronotal setae absent. *f1* with 2–3 short strong *pv* at apex. *t2* with 2 *p*. Africa and Madagascar. ♂: Legs without described below modifications (Fig. 44) . . . . . ***niveimaculata*** Stein

— Katepisternal setae 1:1:1. Postpronotal setae 1(2). *f1* with 5(4–6) longer, less strong *av* in apical half. *t2* with 1 *p*. Madagascar and Reunion. ♂: *t1* with elongated *p* setulae. *tar1-1* and *tar1-2* with a row of long *pv* setulae. *tar3-2* and *tar3-3* with a row of long *pv* setulae . . . . . ***sexnotata*** Macquart

51. Scutellum bare ventrally. Posterior tibiae dark. Scutum densely grey dusted, abdomen grey dusted with dark marks **52**
(***tentaculata*** species group, part, Vikhrev 2014)

Scutellum with hairs at apex below. Posterior tibiae mostly yellow. Scutum thinly grey dusted, abdomen black with whitish spots **53**
(***nivalis*** species group, Vikhrev 2012c; 2014)

52. Body length 4–4.5 mm. *f3* with apical *pv* seta, without av setae. *prst ac* in 3 rows; occiput with black undusted area in upper part. ♂: fore tarsus modified as in Vikhrev (2014: fig. 14) . . . . . ***emdeni*** Vikhrev

— Body length 5–7 mm. *prst ac* in 4–7 rows; occiput evenly grey dusted. Known from Egypt, Sinai. ♂: fore tarsus simple. *f3* with complete (though rather irregular) rows of *av* and *pv* setae. ♀: *f3* without apical *pv* setae, with 6–8 weak *av* . . . . . ***orientalis*** Wiedemann

53. Notopleuron with 1 to several setulae on the area between strong notopleural setae. Anepimeron with 10–20 hairs placed in about 3 rows and occupying a rounded area. Meron with 1–2 hairs just below spiracle (and with 2–3 hairs above hind coxa). ♂: *f3* without submedian *pv* setae, with 1 submedian *av*. Fore coxa without long setae posteriorly. *t3* below strong *ad* with a dense brush of about 20 setulae on *ad*, *a* and *av* surfaces. *tar3-1* with dense short curved setulae on *av* surface. ♀: *f3* with 1 strong submedian *av* setae . . . . . ***ochracea*** Becker

— Notopleuron bare on the area between strong notopleural setae. Anepimeron with 4–8 hairs usually placed in a single horizontal row or almost so. Meron bare below spiracle (and with 2–3 hairs above hind coxa). ♂: *f3* with 3(4) long submedian *pv* setae, the distal one the longest; 1–2 submedian *av*. Fore coxa with a dense tuft of long curved setae posteriorly. *t3* on *a* surface with only 1 strong submedian *ad* seta. *tar3-1* unmodified. ♀: *f3* without submedian *av* setae **54**

54. Palpi black. African mainland. ♂: *f2* with 2–3 weak *v* setulae in basal half. *f3* with a submedian *av* seta 1.5–2x as long as femur width. Cercal plate as in Vikhrev (2014: fig. 21) . . . . . ***nivalis*** Wiedemann

— Palpi yellow. Madagascar. *f2* with 2(3) strong *v* setae in basal half. *f3* with a submedian *av* seta at most hardly as long as femur width, usually shorter. Cercal plate as in Vikhrev (2014: fig. 24) . . . . . ***medvedevi*** Vikhrev

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