ISSN 2336-3193
DOI: 10.1515/cszma-2017-0006

Acta Mus. Siles. Sci. Natur., 66: 53-63, 2017
Published: online April 2017, print April 2017

Upswing of collections of horse flies (Diptera, Tabanidae) held at the National Museums of Kenya, Nairobi

Jan Ježek, Jozef Oboňa, Wanyoike Wamiti & Ndung'u Njoroge

Upswing of collections of horse flies (Diptera, Tabanidae) held at the National Museums of Kenya, Nairobi. – Acta Mus. Siles. Sci. Natur., 66: 53-63, 2017.

Abstract: History of zoogeographical views and actual distribution of 23 determined species of Tabanidae from three subfamilies, five tribes and 8 genera (*Philoliche* Wiedemann, 1828 – 4 species; *Chrysops* Meigen, 1803 – 3; *Thaumastocera* Grünberg, 1906 – 1; *Ancala* Enderlein, 1922 – 1; *Atylotus* Osten-Sacken, 1876 – 1; *Tabanus* Linnaeus, 1758 – 8; *Haematopota* Meigen, 1803 – 4; *Hippocentrum* Austen, 1908 – 1) mainly from Kenya are summarized, using the names of recent African countries. *Tabanus sericiventris* Loew, 1858 is new for Kenya. Lower taxonomical units as *Tabanus insignis* f. *neavei* Austen, 1912 and *T. marmorosus* ssp. *congicola* Bequaert, 1930 are discussed. A complete new references to all identified taxa are given.

Key words: Taxonomy, faunistics, actual distribution, DRC, Ethiopia, Kenya, Lake Tanganyika, Mali, Uganda, Afrotropical Region.

Introduction

A checklist of species of horse flies of Kenya is our aim for the future. The study of 37 loaned specimens of Tabanidae from cca 1400 held at the National Museums of Kenya is a first step. All literary data on African Tabanidae namely after historical works of Oldroyd (monographs of African horse flies with keys - 1952, 1954, 1957), Moucha (catalogue of world species - 1976) and Chainey & Oldroyd (catalogue of African species - 1980) were analyzed. The mentioned authors accounted often distribution as areas or stripes of topographical occurence of species without saying concrete actual names of African governments. Many new references are added up to date to resolve this problem.

Material and methods

The material of 37 studied specimens (32 ♀♀, 5 ♂♂), as a part of the horse flies collection, is deposited in the National Museums of Kenya, Department of Zoology, Diptera section. Dry and pined flies were examined with a Carl Zeiss Jena stereomicroscope and determined by the first author in Prague (Czech Republic). The collection of Tabanidae deposited in Nairobi will be reviewed in future and now contains about 1400 specimens, incl. a lot of undetermined ones (see Tab. 1). The nomenclature of Tabanidae was mainly used sensu Moucha (1976), and partially sensu Chainey & Oldroyd (1980).

Results

FAMILY TABANIDAE
Subfamily **Pangoniinae**, Tribe **Philolichini**
Genus ***Philoliche***, Subgenus ***Dorcaloemus***

***Philoliche* (*Dorcaloemus*) *compacta* (Austen, 1908a)**: Ann. Mag. nat. Hist., 1(8): 212. (as *Pangonia*)

Material examined: Kenya, Lunga Lunga, 20.v.1981, W.R. Ingram leg., 1♂.

History of zoogeographical views. Oldroyd (1957): Kenya, Tanganyika, former Belgian Congo, Nyasaland and Rhodesia (adapted). Moucha (1976): Eastern and Southern Africa. Chainey & Oldroyd (1980): Malawi, Mozambique, Tanzania, Zaire, Zambia, former Rhodesia (adapted).

Distribution. DRC, Kenya, Malawi, Mozambique, Tanzania, Zaire, Zambia, Zimbabwe.

***Philoliche* (*Dorcaloemus*) *rueppellii* (Jaennicke, 1867)**: Abh. Senkenb. naturf. Ges., 6: 329. (as *Pangonia*)

Material examined: Manda Island (Lamu Archipelago of Kenya), Mangrove Swamp Habitat, vii.-viii.1982, Brathay Expedition leg., 1♂.

History of zoogeographical views. Oldroyd (1957): Kenya, Sudan, Uganda, former Abyssinia (adapted). Moucha (1976): Eastern Africa. Chainey & Oldroyd (1980): Ethiopia, Kenya, Uganda.

Distribution. Ethiopia, Kenya, Sudan, Uganda.

Subgenus *Ommatiosteres*

***Philoliche* (*Ommatiosteres*) *elongata* (Ricardo, 1912)**: Ann. Mag. Nat. Hist., 1(8): 54. (as *Pangonia*)

Material examined: Kenya, Tsavo West National Park (Maktau), 10.vi.1981, R.H. Markham leg., 2 ♀♀.

History of zoogeographical views. Oldroyd (1957): Kenya, Tanganyika, former Northern Rhodesia and the Belgian Congo (adapted). Moucha (1976): Eastern and Southern Africa. Chainey & Oldroyd (1980): Angola, Kenya, Tanzania, Zaire, Zambia. Chainey (1983): Afrotropical Region, key. Dias (1994): Angola.

Distribution. Angola, DRC, Kenya, Tanzania, Zaire, Zambia.

Subgenus *Philoliche*

***Philoliche* (*Philoliche*) *magrettii* (Bezzi, 1901)**: Bull. Soc. ent. Ital., 33: 7. (as *Pangonia*)

Material examined: Kenya, Baringo, 26.viii.1981, R.H. Markham leg., 1♀.

History of zoogeographical views. Oldroyd (1957): Eritrea, Kenya, Northern Nigeria, Sudan, Somalilands (adapted). Moucha (1976): Eastern Africa. Chainey & Oldroyd (1980): Ethiopia (Eritrea), Guinea-Bissau, Kenya, Mozambique, Nigeria, Somalia, Sudan, Tanzania. Dirie *et al*. (1989): Somalia. Amoudi & Leclercq (1988, 1992), Leclercq (2000), Al-Dhafer *et al*. (2009): Saudi Arabia. Mahmoud & Osman (1979): Sudan.

Distribution. Eritrea, Guinea-Bissau, Kenya, Mozambique, Nigeria, Saudi Arabia, Somalia, Sudan, Tanzania.

SUBFAMILY CHRYSOPSINAE

Tribe **Chrysopsini**, Genus *Chrysops*

***Chrysops funebris* Austen, 1907**: Ann. Mag. nat. Hist., 20(7): 507.

Material examined: Kenya, Stoneham, E. Sur. Ests. Trans Nzoia. Brit. E. Africa, 26.iii.1926, ? leg. (illegible), 1♀.

History of zoogeographical views. Oldroyd (1957): Kenya, Sudan, former Belgian Congo, Cameroun Français, British Cameroons and Spanish Guinea (adapted). Moucha (1976): E. Africa. Chainey & Oldroyd (1980): Congo basin from Cameroun and Equatorial Guinea to Sudan, Angola, Kenya, Mozambique and Uganda (adapted). Dias (1994): Angola.

Distribution. Angola, Cameroon, Congo Republic, DRC, Equatorial Guinea, Kenya, Mozambique, Sudan, Uganda.

***Chrysops longicornis* Macquart, 1838**: Dipt. exot., 1: 156.

Material examined: Mali, Reg. Sikasso, 2 km E of Bougouni, 30.xii.1978, A. Cisse leg., 1♀.

History of zoogeographical views. Oldroyd (1957): Ethiopian Region, Cape Province – Natal, South Africa, Zanzibar, Pemba Island (Zanzibar Archipelago), former British Cameroons (adapted). Leclercq (1961): former Congo (adapted). Leclercq (1965): Liberia. Moucha (1976): Ethiop. Region. Chainey & Oldroyd (1980): Senegal; widespread Afrotrop. Reg. (incl. Pemba and Zanzibar), Sierra Leone. Goodwin (1982, 1985): Mali. Raymond *et al*. (1984): Senegal. Dias (1987, 1994): Angola. Inaoka *et al*. (1988b), Hayakawa *et al*. (1989), Itina *et al*. (2013): Nigeria. Chainey & Cheke (1994): Togo. Taylor & Chainey (1994), Acapovi *et al*. (2001): Ivory Coast. Dias (1996): Central Africa Republic (CAR). Sasaki & Nishida (1999), Sasaki (2005): Tanzania. Schacht (2000): Gambia. Dia *et al*. (2004), Koné *et al*. (2011): Burkina Faso. Esterhuizen (2006): Natal Province, South Africa.

Distribution. Angola, Burkina Faso, Cameroon, CAR, Congo Republic, DRC, Gambia, Ivory Coast, Liberia, Mali, Natal Province – South Africa, Nigeria, Pemba Island, Senegal, Sierra Leone Republic, Tanzania, Togo.

Chrysops obliquefasciatus **Macquart, 1838**: Dipt. exot., 1: 157.

Material examined: Ethiopia, Holetla, 10.iv.1987, B.L. Parker leg., 1♀.

History of zoogeographical views. Oldroyd (1957): Cape Province – Natal, South Africa, Eritrea, former Abyssinia and Somaliland (adapted). Moucha (1976): S. Africa, former Congo (adapted). Chainey & Oldroyd (1980): South Africa; Angola, Mozambique, Zaire, Zambia, former Rhodesia (adapted), Dias (1994): Angola.

Distribution. Angola, Eritrea, Ethiopia, Mozambique, Republic of South Africa, Somalia, Zaire, Zambia, Zimbabwe.

Tribe **Rhinomyzini**, Genus ***Thaumastocera***

Thaumastocera akwa **Grünberg, 1906**: Zool. Anz., 30: 356.

Material examined: Congo Belge (= now DRC), Equateur, Ikola, iii.1959, R.H. Carcasson leg., 1♂.

History of zoogeographical views. Oldroyd (1954): Guinean and Congo forest belts, from Sierra Leone to eastern Uganda. Leclercq (1965): Liberia. Moucha (1976): Sierra Leone to E. Uganda. Chainey & Oldroyd (1980): Cameroon, from Guinea and Sierra Leone to Uganda and Zaire (adapted). Dias (1994): Angola. Dias (1996): CAR.

Distribution. Angola, Cameroon, CAR, DRC, Guinea, Liberia, Sierra Leone, Uganda, Zaire.

SUBFAMILY TABANINAE

Tribe **Tabanini**, Genus ***Ancala***

Ancala africana **(Gray, 1832)**: in Griffith Cuvier´s Animal Kingdom, 15: 696. (as *Tabanus*)

Material examined: Kenya, Δ 8, L. Badingo Kiserian Camp (illegible), Malaise trap, ii.1989, Operation Raleigh leg., 1♀; Kenya, Stoneham, Mambavi leg., 3.v.1927, 1♀.

History of zoogeographical views. Oldroyd (1954): from Natal to Sudan and Ethiopia, and westwards into Angola; S.W. Africa, former Belgian Congo and N. Nigeria (adapted). Moucha (1976): Natal to S. Sudan. Chainey & Oldroyd (1980): Mozambique, Uganda, Northern Nigeria to Sudan and Ethiopia, eastern Africa, NE Africa, southern Africa (incl. Angola and Namibia), Zaire (adapted). Dirie *et al.* (1989): Somalia. Irish (1991): Namibia. Dias (1987): Mozambique. Dias (1990): Republic of South Africa. Dias (1994): Angola. Dias (1996): CAR. Mihok (2002): Kenya. Sasaki (2005): Tanzania. Esterhuizen (2006): Natal Province, South Africa.

Distribution. Angola, CAR, DRC, Ethiopia, Kenya, Mozambique, Namibia, Nigeria, Republic of South Africa, Somalia, Sudan, Tanzania, Zaire, Uganda.

Genus ***Atylotus***

Atylotus agrestis **(Wiedemann, 1828)**: Aussereur. zweifl. Ins., 1: 557. (as *Tabanus*)

Material examined: Kenya, Simamal, 19.vi.1993, A.F. Mahad leg., 1♀; Kenya, Δ A3, L. Baringo Kiserian Shamba, Malaise trap (illegible), ix.1988, Operation Raleigh leg., 1♀; Kenya, Koobi Fora, 9.ii.2015, J. Oboňa leg., 1♀.

History of zoogeographical views. Oldroyd (1954): From Senegal to Natal, and westwards to Angola. Guinea, Tanganyika, former Northern Rhodesia, Belgian Congo, Gold Coast and Dahomey. Egypt, Arabia, Palaearctic and Oriental Regions. Mauritius and Réunion (adapted). Steyskal & El-Bialy (1967): Egypt. Moucha (1976): Ethiopian Region. Chainey & Oldroyd (1980): widespread Afrotrop. Reg. outside of Congo basin and West African forest areas, Egypt, Ghana, Madagascar, Mauritius, Réunion, South Yemen, Oriental Reg., South Africa (adapted). Dusbábek *et al.* (1980): Uganda. Karim (1980): Sudan. Raymond *et al.* (1984): Senegal. Goodwin (1982, 1985): Mali. Dias (1985): Guinea Bissau. Leclercq & Maldès (1987): Morocco. Dirie *et al.* (1989): Somalia. Hayakawa *et al.* (1989): Nigeria. Amoudi (1989), Amoudi & Leclercq (1988, 1992), Hussein *et al.* (1991), Leclercq (2000), Al Dhafer *et al.* (2009): Saudi Arabia. Dias (1990): Namibia. Phelps & Holloway (1990, 1992): Zimbabwe. Dias (1994): Angola. Dias (1996): CAR. Acapovi *et al.* (2001): Ivory Coast. Mihok (2002): Kenya. Schacht (2002): Gambia. Abdesalam *et al.* (2003): Chad. Amsler *et al.* (1994), Desquesnes *et al.* (2004), Desquesnes & Dia (2003a,b, 2004), Dia *et al.* (2004), Koné *et al.* (2011): Burkina Faso. Esterhuizen (2006):

Natal Province, South Africa. Abu El-Hassan *et al.* (2010): Egypt. Müller *et al.* (2012): Sinai Peninsula Egypt. Baldacchino *et al.* (2014): Africa. Mahmoud & Osman (1979): Sudan.

Distribution. Angola, Benin, Burkina Faso, CAR, Chad, Congo Republic, DRC, Egypt incl. Sinai Peninsula, Gambia, Ghana, Guinea, Guinea Bissau, Ivory Coast, Kenya, Madagascar, Mali, Mauritius, Morocco, Namibia, Nigeria, Saudi Arabia, Senegal, Republic of South Africa, Réunion, Somalia, South Yemen, Sudan, Tanganyika, Uganda, Zambia, Zimbabwe. Palaearctic and Oriental Regions.

Genus ***Tabanus***

***Tabanus biguttatus* Wiedemann, 1830**: Aussereur. zweif. Ins., 2: 623.

Material examined: Kenya, Loiyangalani, vi.1973, M.P. Clifton leg., 1♀; ? (illegible), Mbita, viii.1993, Haten Mohamed leg., 1♀; ? (illegible), Stoneham, Brit. E. Africa, E. Surr. Ests. Trans Nzoia, 31.v.1934, ? leg. (illegible), 1♂; Kenya, Lake Bogoria, 27.vi.1986, D.B. Ekkens leg., UEA 2010, 1♂.

History of zoogeographical views. Oldroyd (1954): Jordan Valley, the Cape of Good Hope and the former Southern Congo probably and Southern Arabia (adapted). Leclercq (1961): former Congo (adapted). Steyskal & El-Bialy (1967), Abu El-Hassan *et al.* (2010): Egypt, but later was Egypt completely annuled by Abu El-Hassan *et al.* (2013). Moucha (1976): Ethiopian Region. Chainey & Oldroyd (1980): South Africa and throughout Afrotrop. Afr. excluding Congo basin, South Yemen (adapted). Karim (1980), Mahmoud & Osman (1979): Sudan. Raymond *et al.* (1984): Senegal. Dias (1985, 1987): Guinea Bissau. Goodwin (1982, 1985), Djiteye *et al.* (1998): Mali. Leclercq (1982, 2000), Amoudi (1989), Amoudi & Leclercq (1988, 1992), Al-Dhafer *et al.* (2009): Saudi Arabia. Leclercq (1965), Inaoka *et al.* (1988a), Hayakawa *et al.* (1989), Ahmed *et al.* (2005), Itina *et al.* (2013): Nigeria. Turnbull *et al.* (1992): Ethiopia. Vala & Leclercq (1993): Benin. Chainey & Cheke (1994): Togo. Dias (1994): Angola. Dias (1996): CAR. Schacht (2000): Gambia. Acapovi *et al.* (2001): Ivory Coast. Abdesalam *et al.* (2003): Chad. Dia *et al.* (2004), Koné *et al.* (2011): Burkina Faso. Sasaki (2005): Tanzania.

Distribution. Angola, Benin, Burkina Faso, CAR, Chad, DRC, Ethiopia, Gambia, Guinea Bissau, Ivory Coast, slopes of Jordan Valley, Mali, Nigeria, Republic of South Africa, Saudi Arabia, Senegal, South Yemen, Sudan, Tanzania, Togo.

***Tabanus insignis* Loew, 1858**: Öfv. Kongl. Vet.-Akad. Forh., 14: 341.
f. *neavei* Austen, 1912: Bull. ent. Res., 3: 330.

Material examined: Kenya, North Nandi Forest between Kapsemoiti and Kamweiga, xi.1978, North Nandi Expedition leg., 1♀; Kenya, North Nandi Forest, NHK-Wien Expedition, xi.-xii.1979, G.R.C. van Someren leg., 1♀.

History of zoogeographical views. Oldroyd (1954): Uganda. Moucha (1976): Uganda. Chainey & Oldroyd (1980): Kenya, Tanzania, Uganda.

Distribution. Kenya, Tanzania, Uganda.

Comments on lower taxonomical units of this species see in the chapter Discussion at the end of this study.

***Tabanus marmorosus* Surcouf, 1909**: Bull. Mus. Nat. Hist. Paris, 15: 356.
ssp. *congoicola* Bequaert, 1930: Harvard Afr. Exped. Liberia, 36: 926.

Material examined: Uganda, 5000 ft., Budongo Forest, v.1963, J.G. Williems leg., 1♀.

History of zoogeographical views. Oldroyd (1954): Gabon, Uganda, former Belgian Congo (adapted). Chainey & Oldroyd (1980: Angola, Gabon, Uganda, Zaire, former Congo (adapted). Dias (1994): Angola. Dias (1996): CAR. Mavoungou *et al.* (2012): Gabon.

Distribution. Angola, CAR, Congo Republic, DRC, Gabon, Uganda, Zaire.

Comments on lower taxonomical units of this species see in the chapter Discussion at the end of this study.

***Tabanus par* Walker, 1854**: List Dipt. Brit. Mus. 5, Suppl. 1: 235.

Material examined: Mali, Region Koulikoro, Forêt Tienfala, 14.xi.1978, J.T. Goodwin leg., 2♀♀.

History of zoogeographical views. Oldroyd (1954): from the Gambia to Natal, Uganda, former Belgian Congo (adapted). Leclercq (1961): former Congo (adapted). Leclercq (1965): Angola. Moucha (1976): Gambia to Natal. Chainey & Oldroyd (1980): South Africa; throughout Afrotrop. Africa but mainly outside Congo basin. Dusbábek *et al.* (1980): Uganda. Goodwin (1982, 1985), Djiteye *et al.* (1998): Mali. Raymond *et al.* (1984): Senegal. Amsler *et al.* (1994), Dia *et al.* (2004): Burkina Faso. Dias (1985): Guinea Bissau. Dias (1994): Angola.

Dias (1996): CAR. Acapovi *et al.* (2001): Ivory Coast. Mihok (2002): Kenya. Ahmed *et al.* (2005): Nigeria. Esterhuizen (2006): Natal Province, South Africa. Mavoungou *et al.* (2012), Bitome Essono *et al.* (2015): Gabon.

Distribution. Angola, Burkina Faso, CAR, Congo Republic, DRC, Gabon, Gambia, Guinea Bissau, Ivory Coast, Mali, Natal Province - South Africa, Nigeria, Senegal, Uganda.

Tabanus sericiventris **Loew, 1858**: Öfv. Kongl. Vet.-Akad. Forh., 14: 339.

Material examined: Kenya, Watamu, 28.i.2015, J. Oboňa leg., 1♀.

History of zoogeographical views. Oldroyd (1954): former Cape Colony, Bechuanaland, Transvaal and Orange Free State (adapted). Moucha (1976): S. Africa. Chainey & Oldroyd (1980): South Africa.

Distribution. Botswana, Republic of South Africa. **New for Kenya.**

Tabanus sufis **Jaennicke, 1867**: Abh. Senck. Naturf. Ges., 6: 332.

Material examined: Mali, Foret de Tienfala, Reg. Koulikoro, 6.ii.1979, A. Ba leg. (illegible), 1♀; F. Cl. Tienfala, Region Koulikoro (illegible), 27.ix.1978, D.R. Ashton leg., 1♀.

History of zoogeographical views. Bodenheimer (1937): former Palestine (adapted). Oldroyd (1954): Chad, Egypt, Gambia, Israel, Iraq, slopes of Jordan Valley, Kenya, Mauritania, Sudan, lake Tanganyika, Uganda, former Belgian Congo, Nubia, Northern Nigeria and Abyssinia (adapted). Moucha (1976): Ethiop. Region, Israel, Iraq. Chainey & Oldroyd (1980): from Mauritania through northern Nigeria and Chad to Sudan, Ethiopia, Kenya, Egypt, Middle East, mid-Saharan oases and Tanzania (adapted). Ježek (1980): Iran. Karim (1980): Sudan. Goodwin (1982, 1985): Mali. Leclercq (1986), Amoudi & Leclercq (1988, 1992, 1996), Al-Dhafer *et al.* (2009): Saudi Arabia. Leclercq (2000): Oman, Saudi Arabia. Abdesalam *et al.* (2003): Chad. Desquesnes & Dia (2003a), Dia *et al.* (2004), Koné *et al.* (2011): Burkina Faso. Al-Talafha *et al.* (2004, 2005a,b): Jordan). Steyskal & El-Bialy (1967), Abu El-Hassan *et al.* (2010, 2013): Egypt. Müller *et al.* (2012): Sinai Peninsula Egypt. Ježek *et al.* (2017): so far unpublished new data.

Distribution. Burkina Faso, Chad, Congo Republic, DRC, Egypt (incl. Sinai Peninsula), Ethiopia, Gambia, Israel, Iran, Iraq, Jordan, Kenya, Mali, Mauritania, Nigeria, Oman, Palestine, Saudi Arabia, Sudan, lake Tanganyika, Tanzania, Uganda.

Tabanus taeniola **Palisot de Beauvois, 1807**: Ins. rec. Afr. Amer., 1: 56.

Material examined: Kenya, Δ 13, L. Batingo Kiserian Shamba, Malaise trap (illegible), ix.1988, Operation Raleigh leg., 1♀; Kenya, Δ 9, L. Baringo Kiserian - camp, Malaise trap (illegible), iii.1989, Operation Raleigh leg., 1♀; Kenya, Δ 5, L. Baringo Kiserian camp, Malaise trap (illegible), xi.1988, Operation Raleigh leg., 1♀; Kenya, Marsabit, 30.iii.1983, A.L. Omaraodyene leg., 1♀.

History of zoogeographical views. Oldroyd (1954): Unusual distribution - map 26, p. 282; Senegal, Angola, Eritrea, Somalilands, Cape Colony, Rhodesias, former Abyssinia, Belgian Congo and French Equatorial Africa (excessively adapted). Steyskal & El-Bialy (1967), Morsy & Habib (2001), Mohamed *et al.* (2002), Abu El-Hasan *et al.* (2010, 2013): Egypt. Moucha (1976): Ethiopian Region. Chainey & Oldroyd (1980): Nigeria; almost entire Afrotropical Region (incl. Aldabra and Madagascar) but mainly riverine in Congo basin. Dusbábek *et al.* (1980): Uganda. Karim (1980), Mahmoud & Osman (1979): Sudan. Wiesenhütter (1980), Sasaki & Nishida (1999), Sasaki (2005): Tanzania. Goodwin (1982, 1985), Djiteye *et al.* (1998): Mali. Raymond *et al.* (1984): Senegal. Dias (1987): Guinea, Guinea Bissau. Inaoka *et al.* (1988a), Ahmed *et al.* (2005): Nigeria. Amoudi & Leclercq (1988, 1992, 1996), Amoudi (1989), Leclercq (2000), Al-Dhafer *et al.* (2009): Saudi Arabia. Dirie *et al.* (1989): Somalia. Turnbull *et al.* (1992): Ethiopia. Amsler *et al.* (1994), Solano & Amsler-Delafosse (1995), Desquesnes & Dia (2003a), Dia *et al.* (2004), Koné *et al.* (2011): Burkina Faso. Chainey & Cheke (1994): Togo. Dias (1994): Angola. Taylor & Chainey (1994), Acapovi et al. (2001): Ivory Coast. Dias (1996): CAR. Al-Houty (1997): Kuwait. Mihok (2002): Kenya. Schacht (2002): Gambia. Abdesalam *et al.* (2003): Chad. Esterhuizen (2006): Natal Province - South Africa. Müller *et al.* (2011): Jordan. Müller *et al.* (2012): Sinai Peninsula Egypt and Israel. Abu El-Hassan *et al.* (2013): Mozambique. Baldacchino *et al.* (2014): Africa and Middle East. Bitome Essono *et al.* (2015): Gabon.

Distribution. Africa and Middle East; Aldabra Island, Angola, Burkina Faso, Cameroon, CAR, Chad, Congo Republic, DRC, Egypt (incl. Sinai Peninsula), Eritrea, Ethiopia, Gabon, Gambia, Guinea, Guinea Bissau, Israel, Ivory Coast, Kenya, Kuwait, Madagascar, Mali, Mozambique, Nigeria, Republic of South Africa, Rhodesia, Saudi Arabia, Senegal, Somalia, Sudan, Tanzania, Togo, Uganda.

***Tabanus unilineatus* Loew, 1852**: Berl. Verl. Preuss. Akad. Wiss. Berlin, p. 658.

Material examined: Kenya, Cars, Mtwapa, 3.vi.1987, B.L. Parker leg., 1♀.

History of zoogeographical views. Oldroyd (1954): Portuguese E. Africa, lake Tanganyika, Kenya, former Nyasaland, N. and S. Rhodesia (adapted). Moucha (1976): E. Africa, former Rhodesia (adapted). Chainey & Oldroyd (1980): Kenya, Malawi, Mozambique, Tanzania, Zambia and former Rhodesia (adapted). Phelps & Holloway (1990, 1992): Zimbabwe.

Distribution. Kenya, Malawi, Mozambique, Tanzania, Zambia, Zimbabwe.

Tribe **Haematopotini**, Genus ***Haematopota***

***Haematopota bullatifrons* Austen, 1908**: Ann. Mag. nat. Hist., 1(8): 407.

Material examined: Mali, Region Sikasso, Ranch de Madina, 23.-24.vi.1978, J.T. Goodwin leg., 1♀.

History of zoogeographical views. Oldroyd (1952): former N. and S. Nigeria, Gold Coast and N. Territories (adapted); Moucha (1976): Ghana, Nigeria. Chainey & Oldroyd (1980): Nigeria, Benin, Ghana, Mali and former Upper Volta (adapted). Goodwin (1982): Mali. Raymond *et al.* (1984): Senegal. Chainey & Cheke (1994): Togo.

Distribution. Benin, Burkina Faso, Ghana, Mali, Nigeria, Senegal, Togo.

***Haematopota patellicornis* (Enderlein, 1925)**: Mitt. zool. Mus. Berlin, 11: 399. (as *Tylopelma*)

Material examined: Kenya, Garaton, UEA, 19.v.1986, J.Wattisa leg., 1♀.

History of zoogeographical views. Oldroyd (1952): Kenya, Sudan, Togo, Uganda, former Abyssinia, Belgian Congo, N. Nigeria and Ruanda-Urundi (adapted). Leclercq (1961): former Congo (adapted). Moucha (1976): Ethiop. Region. Chainey & Oldroyd (1980): Burundi, Central African Republic, Ethiopia, Kenya, Nigeria, Rwanda, Sudan, Togo, Uganda, Zaire. Turnbull *et al.* (1992): Ethiopia. Chainey & Cheke (1994): Togo. Dias (1996): CAR.

Distribution. CAR, Congo Republic, Burundi, DRC, Ethiopia, Kenya, Nigeria, Rwanda, Sudan, Togo, Uganda, Zaire.

***Haematopota ugandae* Ricardo, 1906**: Ann. Mag. nat. Hist., 7(18): 105.

Material examined: Kenya, Molo Side, Mau Forest, Malaise trap, vi.1991, Bagine and Mugambi leg., 1♀; Kenya, North Nandi Forest, xi.-xii.1979, G.R.C. van Someren leg., NMK-Wien Expedition, 1♀.

History of zoogeographical views. Oldroyd (1952): Kenya, S. Sudan, Uganda, former Belgian Congo (Ruanda, Ruhengeri). Moucha (1976): Kenya, Sudan, Uganda, former Congo (adapted). Chainey & Oldroyd (1980): Burundi, Kenya, Rwanda, Sudan, Uganda, Zaire.

Distribution. Burundi, Kenya, Rwanda, Sudan, Uganda, Zaire.

***Haematopota vittata* Loew, 1858**: Öfv. Kongl. Vet.-Akad. Forh., 14: 336.

Material examined: Lake Tanganyika, Old Shinyanga, 22.i.1954, E. Burtt. Blocka leg., 1♀.

History of zoogeographical views. Oldroyd (1952): Angola, Kenya, Natal, lake Tanganyika, former Nyasaland, the Rhodesias, Belgian Congo (adapted). Moucha (1976): Ethiop. Region. Chainey & Oldroyd (1980): Angola, Botswana, Kenya, Malawi, Mozambique, South Africa, Tanzania, Uganda, Zaire, Zambia and former Rhodesia (adapted).

Distribution. Angola, Botswana, Burundi, Congo Republic, DRC, Kenya, Malawi, Mozambique, Republic of South Africa, Rwanda, Tanzania, Uganda, Zaire, Zambia, Zimbabwe.

Genus ***Hippocentrum***

***Hippocentrum versicolor* Austen, 1908**: Ann. Mag. nat. Hist., 8(2): 354.

Material examined: Mali, Region Sikasso, Ranch de Madina, 6.viii.1978, J.T. Goodwin leg., 1♀.

History of zoogeographical views. Oldroyd (1952): Nigeria, Sudan, Uganda, former Cameroons, Gold Coast, North-eastern Belgian Congo (adapted). Moucha (1976): Ethiop. Region. Chainey & Oldroyd (1980): Ghana, Nigeria, Sudan, Uganda, Zaire and former Upper Volta (adapted). Goodwin (1982): Mali. Dias (1996): CAR.

Itina *et al.* (2013): Nigeria.

Distribution. Burkina Faso, Cameroon, CAR, Ghana, Mali, Nigeria, Sudan, Uganda, Zaire.

Discussion

Moucha (1976) registered three valid forms of *Tabanus insignis* from Sierra Leone to Cape: f. *neavei* (see above) from Uganda, f. *velutinus* Surcouf, 1906 (Bull. Mus. Nat. Hist. Paris, 12: 524) from Abyssinia = Ethiopia and f. *occidentalis* Oldroyd, 1954 (Horse-flies of Ethiop. Reg., 2: 203) from Sierra Leone. *T. sharpei* Austen, 1908 (Ann. Mag. Nat. Hist., 8(1): 226) is recognized in the catalogue as a synonym to *insignis*. Chainey & Oldroyd (1980) accounted *T. insignis* from South Africa with widespread occurence, however, mainly outside Congo basin. Unrecognized Austen´s *T. sharpei* is mentioned here from Malawi; f. *neavei* (originally described as a species) from Kenya, Tanzania and Uganda; f. *occidentalis* from Sierra Leone; f. *velutinus* (published originally as bona species) from Ethiopia, Kenya and Tanzania. Differential diagnoses of all mentioned forms published by Oldroyd (1954) are uncertain: characters vary, the tendency to enlargement and fusion of the sublateral and lateral spots of the second abdominal segment, coloration of femora and third antennal segment, a corresponding lightening of pigment in most part of the body including the antennae. Ultimately, molecular evidence may be necessary to accurately resolve the validity of all forms or good species. Only several papers concerning this problem as well as distribution were published recently: Turnbull *et al.* (1992): Ethiopia (as *insignis* s. str.). Mihok (2002): Kenya (as *insignis* s. str.). Dias (1994): Angola (as *insignis* f. *occidentalis*). Sasaki (2005): Tanzania (as *insignis* s. str.). Esterhuizen (2006): Natal Province, South Africa (as *insignis* s. str.).

Some discrepances are known as well in the case of *T. marmorosus*. Oldroyd (1954) recognized two subspecies (*marmorosus* s. str. and *m. congicola*). It was followed by Chainey & Oldroyd (1980): ssp. *congicola* (originally described by Bequaert only as a variety) is distributed through Angola, Gabon, Uganda, Zaire and former Congo (adapted) and ssp. *marmorosus* s. str. penetrates to CAR, Ghana, Guinea, Ivory Coast, Liberia, Nigeria, Siera Leone, former Cameroun, Congo and Equatorial Guinea (adapted). *T. marmoratus* Austen, 1909 was recognized as incorrect subsequent spelling of *marmorosus*. Moucha (1976) published eroneously distribution of *T. marmorosus* s. str. with occurence in Gabon, Uganda and former Congo and *T. m. congicola* in former Congo. There is only one new paper where distribution of *T. marmorosus* s. str. is noted: Taylor & Chainey (1994): Ivory Coast. Two subspecies on the same locality or area (Moucha 1976, Chainey & Oldroyd 1980) must not be supported recently and the problem of two probably valid species would be resolved in future.

Acknowledgements: We are grateful to the staff of the National Museums of Kenya, especially at the Zoology Department for the issuance of our export permits in the case of the loan of horse flies. Regarding the mission of February 2014 in Kenya, J. Oboňa, is indebted to colleagues from the Department of Ecology led by Martin Hromada. They provided assistance with field logistics and a great hospitality. We would especially like to thank the editor of AMS and anonymous reviewers for helped by providing constructive comments and for improving the manuscript and amendments. Our thanks are due mainly to Jan Votýpka and Jana Rádrová (both Department of Parasitology, Charles University, Praha, Czech Republic), Aleš Bezděk (Czech Academy of Sciences, České Budějovice, CZ) and Michal Tkoč (Department of Entomology, National Museum, Praha, CZ) for copies of many published papers from around the world and information on new literature. This study was partly supported by the project of the Ministry of Culture of the Czech Republic (DKRVO 2017/14, National Museum, 00023272), and by the Agency of Ministry of Education, Science, Research and Sport of the Slovak Republic (Project: ITMS: 26110230119).

Tab 1: Partial collection of Tabanidae held at the National Museums of Kenya, Nairobi *

Subfamily	Genus	Species	Number of specimens
Pangoniinae	*Philoliche*	*Philoliche beckeri* Bezzi, 1901	10
		Philoliche bricchettii Bezzi, 1892	1
		Philoliche compacta (Austen, 1908)	3
		Philoliche distincta (Ricardo, 1908)	9
		Philoliche elongata (Ricardo, 1908)	13
		Philoliche malindensis Oldroyd, 1957	5
		Philoliche rueppellii (Jaennicke, 1867)	16
		Philoliche sagittaria (Surcouf, 1911)	22
		Philoliche zonata (Walker, 1871)	7
Chrysopsinae	*Aegophagamyia*	*Aegophagamyia alluaudi* (Giglio-Tos, 1895)	4
	Chrysops	*Chrysops bicolor* Cordier, 1907	4
		Chrysops brucei Austen, 1907	2
		Chrysops ciliaris Loew, 1858	8
		Chrysops distinctipennis Austen, 1906	32
		Chrysops funebris Austen, 1907	11
		Chrysops fuscipennis Ricardo, 1902	1
		Chrysops longicornis Macquart, 1838	9
		Chrysops magnificus Austen, 1911	1
	Tabanocella	*Tabanocella perpulcra* (Austen, 1910)	6
	Thaumastocera	*Thaumastocera boueti* Séguy, 1946	3
	Sphecodemyia	*Sphecodemyia infuscata* Oldroyd, 1957	1
Tabaninae	*Ancala*	*Ancala africana* (Gray in Griffith & Pidgeon, 1832)	31
		Ancala fasciata (Fabricius, 1775)	5
	Atylotus	*Atylotus agrestis* (Wiedemann, 1828)	31
	Euancala	*Euancala maculatissima* (Macquart, 1838)	4
	Haematopota	indet.	17
		Haematopota abyssinica Surcouf, 1908	17
		Haematopota alluaudi Surcouf, 1908	8
		Haematopota brunnescens Ricardo, 1906	4
		Haematopota denshamii Austen, 1908	3
		Haematopota distincta Ricardo, 1906	107
		Haematopota furva Austen, 1912	8
		Haematopota hirta Ricardo, 1906	40
		Haematopota inornata Austen, 1908	3
		Haematopota maculosifacies Austen, 1914	49
		Haematopota mordens Edwards, 1916	4
		Haematopota peusi Oldroyd, 1952	16
		Haematopota tumidicornis Austen, 1912	4
		Haematopota unicolor Ricardo, 1906	13
		Haematopota vittata Loew, 1858	14
		Haematopota vulnerans (Surcouf, 1909)	7
	Tabanus	indet.	187
		Tabanus atrimanus Loew, 1858	2
		Tabanus besti Surcouf, 1907	2
		Tabanus biguttatus Wiedemann, 1830	100
		Tabanus fraternus Macquart, 1846	21
		Tabanus gratus Loew, 1858	9
		Tabanus guineensis Wiedemann, 1824	19
		Tabanus insignis Loew, 1858	11
		Tabanus leucostomus Loew, 1858	2
		Tabanus marmorosus Surcouf, 1909	2
		Tabanus morsitans Ricardo, 1908	12
		Tabanus par Walker, 1854	13
		Tabanus rufipes Palisot de Beauvois, 1806	19
		Tabanus taeniola Palisot de Beauvois, 1806	127
		Tabanus thoracinus Palisot de Beauvois, 1806	7
		Tabanus variabilis Loew, 1858	4
indet.			253

* preliminary general overview of Tabanidae collection – not reviewed and determined so far by author´s team.

References

Abdesalam A.D., Delafosse A., Else P. & Amsler-Delafosse S. (2003): Vecteurs potentiels de *Trypanosoma evansi* chez le dromadaire au Tchad oriental. – Révue d´ Élevage et de Médecine vétérinaire des Pays tropicaux 55(1) (2002): 21-30.

Abu El-Hassan G.M.M., Badrawy H.B.M., Mohammad S.K. & Fadl H.H. (2010): Cladistic analysis of Egyptian horse flies (Diptera: Tabanidae) based on morphological data. – Egyptian Academic Journal of Biological Sciences 3(2): 51-62.

Abu El-Hassan G.M.M., Badrawy H.B.M. & Fadl H.H. (2013): A review of the genus *Tabanus* Linnaeus, 1758 (Diptera: Tabanidae) from Egypt. – Zootaxa 3691(5): 559576.

Acapovi G.L., Yao Y., N'Goran E., Dia M.L. & Desquesnes M. (2001): Abondance relative des tabanidés dans la région des savanes de Côte d'lvoire. – Revue d'élevage et de Médecine vétérinaire Pays tropicaux 54(2): 109-114.

Ahmed A.B., Okiwelu S.N. & Samdi S.M. (2005): Species diversity, abundance and seasonal occurrence of some biting flies in Southern Kaduna, Nigeria. – African Journal of Biomedical Research 8: 113-118.

Al-Dhafer H.M., Dawah H.A. & Abdullah M.A. (2009): Tabanidae (Diptera) of Saudi Arabia. – Saudi Journal of Biological Sciences 16: 77-83.

Al-Houty W. (1997): Checklist of the insect fauna of Kuwait. – Kuwait Journal of Science & Engineering 24(1): 145-162.

Al-Talafha H.A., Amr Z.S., Abu Baker M. & Katbeh Bader A. (2004): Horseflies of Jordan. – Medical and Veterinary Entomology 18: 208-211.

Al-Talafha H.A., Amr Z.S. & Al-Sheyab (2005a): Seasonal abundance of horse-flies (Diptera: Tabanidae) in Suwaymah (Dead Sea area), Jordan. – Journal of the Entomological research society 7(3): 39-46.

Al-Talafha H.A., Amr Z.S., Abu Baker M. & Katbeh Bader A. (2005b): Systematics and distribution of horse flies (Diptera: Tabanidae) of Jordan. – Journal of Vector Ecology 30(1): 49-61.

Amoudi M.A. (1989): New records of Tabanidae (Diptera) from southwest Saudi Arabia with some aspects on their descriptions and biological information. – Journal of Biological Sciences Research 20(1): 115-127.

Amoudi M.A. & Leclercq M. (1988): *Tabanus riyadhae* (Diptera: Tabanidae), a new species from Saudi Arabia. – Journal of Medical Entomology 25(5): 399-401.

– (1992): The horse-flies from Saudi Arabia, distribution and zoogeography (Diptera: Tabanidae). – Notes fauniques de Gembloux 25: 3-15.

– (1996): New records of Tabanidae (Diptera) from Saudi Arabia, first record of *Atylotus venturii* Leclercq and *Tabanus separatus* Efflatoun. – Journal of the Egyptian Society of Parasitology 26(1): 1-7.

Amsler S., Filledier J. & Millogo R. (1994): Attractivité pour les Tabanidae de différents pièges à glossines avec ou sans attractifs olfactifs. Résultats préliminaires obtenus au Burkina Faso. – Revue d'Élevage et de Médecine véterinaire Pays tropicaux 47(1): 63-68.

Baldacchino F., Desquesnes M., Mihok S., Foil L.D., Duvallet G. & Jittapalapong S. (2014): Tabanids: Neglected subjects of research, but important vectors of disease agents! – Infection, Genetics and Evolution 28 (2014): 596-615.

Bitome Essono P.Y., Dechaume-Moncharmont F.-X., Mavoungou J., Mba R.O., Duvallet G. & Bretagnolle F. (2015): Distribution and abundance of hematophagous flies (Glossinidae, Stomoxys, and Tabanidae) in two national parks of Gabon. – Parasite 22(23): 1-11.

Bodenheimer F.S. (1937): Prodromus Faunae Palestinae. – Memoirs de l´Institut d´Egypte, Cairo 33: 1-286.

Chainey J.E. (1983): Afrotropical Tabanidae (Diptera): The genus *Philoliche* Wiedemann, subgenus *Ommatiosteres* Enderlein. – Annals of the Natal Museum 25(2): 453-474.

Chainey J.E. & Cheke R.A. (1994): A collection of Tabanidae (Diptera) from Togo with two new synonyms in *Haematopota*. – Journal of African Zoology 108: 225-229.

Chainey J.E. & Oldroyd H. (1980): Family Tabanidae. Pp. 275–308. In: Crosskey R.W. (ed.): Catalogue of the Diptera of the Afrotropical Region. British Museum (Natural History), London. 1437 pp.

Desquesnes M. & Dia M.L. (2003a): *Trypanosoma vivax*: mechanical transmission in cattle by one of the most common African tabanids, *Atylotus agrestis*. – Experimental Parasitology 103: 35-43.

– (2003b): Mechanical transmission of *Trypanosoma congolense* in cattle by the African tabanid *Atylotus agrestis*. – Experimental Parasitology 105: 226-231.

– (2004): Mechanical transmission of *Trypanosoma vivax* in cattle by the African tabanid *Atylotus fuscipes*. – Veterinary Parasitology 119: 9-19.

Desquesnes M, Dia M.L., Bouyer J. & Fatehi M. (2004): Mechanical transmission of *Trypanosoma vivax* and *Trypanosoma congolense* by common African tabanids *Atylotus agrestis* and *Atylotus fuscipes*. – IX European Multicolloquium of Parasitology - EMOP Valencia, Spain, July 18–23, 2004: 143-147.

Dia M.L., Desquesnes M., Elsen P., Lancelot R. & Acapovi G. (2004): Evaluation of a new trap for Tabanids and Stomoxyines. – Bulletin Societé royale belge d´Entomologie/ Koninklijke Belgische Vereniging voor Entomologie 140: 72-81.

Dias J.A.T.S. (1985): Tabanídeos (Diptera-Tabanidae) recolhidos pela missão zoologica da „SPEN“ a republica da Guiné-Bissau. – Boletim da Sociedade Portuguesa de Entomologia 71: 1-5.
– (1987): Tabanídeos (Diptera-Tabanidae) provenientes de alguns antigos territórios portugueses de África, em colecção no Centro de Zoologia. – Garcia de Orta, Sér. Zool., Lisboa 14(1): 89-101.
– (1990): Contribuição para o conhecimento dos Tabanideos (Diptera-Tabanidae) da África Meridional. – Garcia de Orta, Sér. Zool., Lisboa 15(2) (1988): 97-124.
– (1994): Descoberta de uma nova espécie do género *Tabanus* Linnaeus, 1758 (Diptera – Tabanidae) para a fauna de Angola. – Garcia de Orta, Sér. Zool., Lisboa 20(1–2): 69-76.
– (1996): Contribuição para o conhecimento dos Tabanídeos (Diptera-Tabanidae) da República Centro-Africana. – Garcia de Orta, Sér. Zool., Lisboa 21(1): 67-80.
Dirie M.F., Wallbanks K.R., Aden A.A., Bornstein S. & Ibrahim M.D. (1989): Camel Trypanosomiasis and its vectors in Somalia. – Veterinary Parasitology 32: 285-291.
Djiteye A., Diarra M., Ouattara I. & Traore D. (1998): Comparison of the efficacy of different traps and attractans for Tabanidae and *Stomoxys* in Mali. – Journal of Protozoology Research 8: 263-273.
Dusbábek F., Gregor F. & Daniel M. (1980): Note on some Diptera (Tabanidae, Glossinidae, Muscidae and related families) at the peak of dry season in Toro Game Reserve, Uganda. – Folia parasitologica, Praha 27: 165-171.
Esterhuizen J. (2006): Seasonal abundance of horse flies (Diptera: Tabanidae) from two conservation areas in northeastern KwaZulu-Natal Province, South Africa. – African Entomology 14(2): 395-397.
Goodwin J.T. (1982): The Tabanidae (Diptera) of Mali. – Miscellaneous Publications of the Entomological Society of America 13(1): 1-141.
– (1985): Notes on the seasonal and spatial distribution of Tabanidae (Diptera) at Forêt Classee de Tienfala, Republic of Mali. – Myia 3: 415-431.
Hayakawa H., Watanabe M. & Takahasi H. (1989): Surveys of tabanid flies in the early stage of the dry season in Nigeria. – Japanese Journal of Sanitary Zoology 40(2): 117-122.
Hussein S.H., Al-Asgah N.A., Al-Khalifa M.S. & Diab F.M. (1991): The blood parasites of indigenous livestock in Saudi Arabia. – Arab Gulf Journal of Scientific Research 9(3): 143-160.
Inaoka T., Hori E., Ogunba E.O., Watanabe M., Yamaguchi K., Yoneyama Y., Amano T., Takaoka M. & Maeda R. (1988a): Morphological characteristics of the anal segment in the identification of the larvae of *Tabanus*-species (Diptera, Tabanidae) collected from Nigeria. – Japanese Journal of Sanitary Zoology 39(3): 277-282.
Inaoka T., Hori E., Yamaguchi K., Watanabe M., Yoneyama Y. & Ogunba E.O. (1988b): Morphology and identification of *Chrysops* larvae from Nigeria. – Medical and Veterinary Entomology 2: 141-152.
Irish J. (1991): Rectification of misleading locality data recently published for Namibian Tabanidae (Diptera). – Cimbebasia, 13: 183.
Itina V.I., Noutcha A.M.E. & Okiwelu S.N. (2013): Spatial and temporal distribution of Tabanids (Diptera: Tabanidae) in Akwa Ibom State, Nigeria. – Research in Zoology 3(2): 62-65.
Ježek J. (1980): Zoogeography of some Iranian species of horse-flies (Diptera: Tabanidae). – Acta Universitatis Carolinae – Biologica 1977: 317-323.
Ježek J., Tkoč M. & van Harten A. (2017): Order Diptera, family Tabanidae. – Arthropod fauna of the UAE 6: 61 pp., *submitted*.
Karim A.E.I. (1980): Studies on the life-histories of some Tabanidae of Southern Darfur, Sudan. (1) Seasonal and daily abundance. – The Sudan journal of veterinary science and animal husbandry 21(2): 66-76.
Koné N., N'Goran E.K., Sidibe I., Kombassere A.W. & Bouyer J. (2011): Spatio-temporal distribution of tsetse and other biting flies in the Mouhoun River basin, Burkina Faso. – Medical and Veterinary Entomology 25: 156-168.
Leclercq M. (1961): Tabanidae (Diptera Brachycera). – Parc National de la Garamba, Mission H. De Saeger 21(5): 99-116.
– (1965): Tabanidae (Diptera) du Liberia et d´autres pays Africains. – Extrait du Bulletin de l´Institut Agronomique et des Stations de Recherches de Gembloux 33(1): 135-137.
– (1982): Insects of Saudi Arabia. Diptera: Fam. Tabanidae. – Fauna of Saudi Arabia 4: 447-449.
– (1986): Diptera: Fam. Tabanidae of Saudi Arabia (Part 2). – Fauna of Saudi Arabia 8: 340-342.
– (2000): A faunistic account of Tabanidae (Diptera) of Saudi Arabia and Oman. – Fauna of Arabia 18: 285-292.
Leclercq M. & Maldès J.M. (1987): Inventaire des Tabanidae d´Algerie et du Maroc et description d´une espèce nouvelle (Diptera, Brachycera). – Nouvelle Revue d´Entomologique (N.S.) 4(1): 79-84.
Mahmoud M.M. & Osman M.O. (1979): A note on trypanosomiasis in Sudan camels, p. 502-508. Scandinavian Institute of African Studies, Uppsala.
Mavoungou J.F., Makanga B.K., Acapovi-Yao G., Desquesnes M. & M´Batchi B. (2012): Chorologie des Tabanidae (Diptera) dans la réserve de biosphère Ipassa-Makokou (Gabon) en saison des pluies. – Parasite 19: 165-171.

Mihok S. (2002): The development of a multipurpose trap (the Nzi) for tsetse and other biting flies. – Bulletin of Entomological Research 92: 385-403.
Mohamed H.I., Hassan M.I., Fouda M.A. & Bahgat D.F. (2002): Ultrastructure of the mouth parts and associated sensilla of *Tabanus taeniola* and *Haematopota* sp. (Diptera: Tabanidae). – Journal of the Egyptian German Society of Zoology 39E: 91-106.
Morsy T.A. & Habib K.S.M. (2001): Two species of Tabanids (order: Diptera) in Aswan district, Egypt. – Journal of the Egyptian Society of Parasitology 31(2): 429-432.
Moucha J. (1976): Horse-flies (Diptera, Tabanidae) of the World. Synoptic Catalogue. – Acta Entomologica Musei Nationalis Pragae, suppl. 7: 1-319.
Müller G.C., Hogsette J.A., Revay E.E., Kravchenko V.D., Leshvanov A. & Schlein Y. (2011): New records for the horse fly fauna (Diptera: Tabanidae) of Jordan with remarks on ecology and zoogeography. – Journal of Vector Ecology 36(2): 447-450.
Müller G.C., Revay E.E., Hogsette J.A., Zeegers T., Kline D., Kravchenko V.D. & Schlein Y. (2012): An annotated checklist of the horse flies (Diptera: Tabanidae) of the Sinai Peninsula Egypt with remarks on ecology and zoogeography. – Acta Tropica 122: 205-211.
Oldroyd H. (1952): The horse-flies (Diptera, Tabanidae) of the Ethiopian region. Vol. I: *Haematopota* and *Hippocentrum.* British Museum (Natural History), London, 226 pp.
– (1954): The horse-flies (Diptera, Tabanidae) of the Ethiopian region. Vol. II: *Tabanus* and related genera. British Museum (Natural History), London, 341 pp.
– (1957): The horse-flies (Diptera, Tabanidae) of the Ethiopian region. Vol. III: Subfamilies Chrysopinae, Scepsidinae and Pangoniinae and a revised classification. British Museum (Natural History), London, 489 pp.
Phelps R.J. & Holloway M.T.P. (1990): Alighting sites of female Tabanidae (Diptera) at Rekomitjie, Zimbabwe. – Medical and Veterinary Entomology 4: 349-356.
– (1992): Catches of Tabanidae in response to visual and odour attractans in Zimbabwe. – Journal of African Zoology 106: 371-380.
Raymond H.L., Taufflieb R., Cornet M., Camicas J.-L., Chateau R. & Dieng P.Y. (1984): Liste annotée des Tabanidae (Diptera) du Sénégal et de la Gambie. – Bulletin de l'Institut fondamental d'Afrique noire 42(4) (1980): 812-822.
Sasaki H. (2005): Tabanid flies (Diptera: Tabanidae) of the Mahale Mountains National Park, Tanzania, East Africa. – Journal of Rakuno Gakuen University 30(1): 93-98.
Sasaki H. & Nishida T. (1999): Notes on the flies associated with wild chimpanzees at Mahale Mountains National Park, Tanzania, East Africa. – Medical Entomology and Zoology 50(2): 151-155.
Schacht W. (2000): Insekten aus Gambia, Westafrika (Diptera: Platypezidae, Odiniidae, Tabanidae, Glossinidae und Planipennia: Chrysopidae, Myrmeleontidae, Ascalaphidae sowie Coleoptera: Carabidae, Cicindelidae, Elateridae, Scarabaeidae). – Entomofauna 21(1): 1-4.
– (2002): Weitere Insekten aus Gambia, Westafrika (Coleoptera: Buprestidae, Scarabaeidae; Diptera: Asilidae, Asteiidae, Tabanidae; Hymenoptera: Apidae, Scoliidae; Planipennia: Ascalaphidae, Myrmeleontidae). – Entomofauna 23(13): 149-154.
Solano P. & Amsler-Delafosse S. (1995): *Trypanosoma congolense* chez différentes de taons (Diptera: Tabanidae) au Burkina Faso. – Revue d'élevage et de médecine vétérinaire des pays tropicaux 48(2): 145-146.
Steyskal G.C. & El-Bialy S. (1967): A list of Egyptian Diptera with a bibliography and key to families. – Technical Bulletin, United Arab Republic, Ministry of Agriculture 3: 1-87.
Taylor P.D. & Chainey J.E. (1994): Tabanidae (Diptera) from Taï National Park, Côte d'Ivoire with descriptions of three new species. – Journal of African Zoology 108: 467-479.
Turnbull D.A., Taylor P.D., Smith S.M. & Chainey J.E. (1992): A collection of Tabanidae (Diptera) from west-central Ethiopia, with descriptions of *Tabanus gibensis* sp. n. and the male of *T. pallidifacies* Surcouf. – Journal of African Zoology 106: 133-140.
Vala J.C. & Leclercq M. (1993): A propos de la présence de *Tabanus biguttatus* Wiedemann au Bénin (Diptera: Tabanidae). – Bulletin et annales de la Société royale belge d´entomologie 129: 231-236.
Wiesenhütter E. (1980): Research into the relative importance of Tabanidae (Diptera) in mechanical disease transmission. III. The epidemiology of anaplasmosis in a Dar-es-Salaam dairy farm. – Tropical Animal Health and Production 7(1)(1975): 15-22.

Authors' addresses: Jan Ježek, National Museum, Dept. of Entomology, Cirkusová 1740, CZ–19300 Praha 9 - Horní Počernice, Czech Republic. E-mail: jan.jezek@o2active.cz

Jozef Oboňa*, University of Prešov, Faculty of Humanities and Natural Sciences, Dept. of Ecology, 17. novembra 1, SK–08116 Prešov, Slovakia. E-mail: obonaj@centrum.sk
* corresponding author

Wanyoike Wamiti, Ndung'u Njoroge, Dept. of Zoology, Nat. Museums of Kenya, P.O. Box 40658-00100, Nairobi, Kenya. E-mail: wwamiti@gmail.com, lnjoroge@museums.or.ke