

The types of Calyptratae (Diptera) preserved in the Museum für Naturkunde, Leibniz-Institute for Evolution and Biodiversity Science, Berlin, Germany, collected from Indian Sub continent

Shuvra Kanti Sinha*

Zoology Department, Sonamukhi College, Sonamukhi - 722 207, West Bengal, India; suvrosinha@gmail.com

Abstract

A total of 18 type-specimens (Holotypes, Paratypes, Paralectotypes, and Syntypes) under family Muscidae, Calliphoridae, Oestridae and Hippoboscidae were enumerated. All the calyptrate specimens were originally described from India and adjoining countries and the present status of the specimens are mentioned.

Keywords: Berlin Museum, Calyptratae, Collection, Diptera, Indian Subcontinent, Type

Introduction

Research on Calyptratae was initiated in India during mid eighteenth century, after the establishment of Danish Colony at Tranquebar of India in 1706. Dr. Johan Gerhard Koeng (1728-1785) may be honored as the pioneer worker on insects (Calyptratae) in India because he drew attention of the European researcher to Indian subcontinent for the first time (Sinha, 2015). He was arrived India in 1768 from Uppsala in Sweden as a student of Great Linnaeus with whom he maintained correspondence. He collected numerous insects from the Coromandel Coast (east coast of India) and supplied plenty of materials to the renowned European Systematists like Linnaeus and Fabricius (Ayyar, 1939). Niels Tonder Lund and Count Ove Sehestedt of Denmark directed Officials to collect insect specimens including Diptera from Danish colonies of Tranquebar and certain other parts of India which Fabricius studied and published as a first account on the Indian Insect fauna (Datta & Parui, 1991). Several Calyptrate fly specimens were deposited in different Museums or kept in personal collection by some taxonomists. The Museum für Naturkunde,

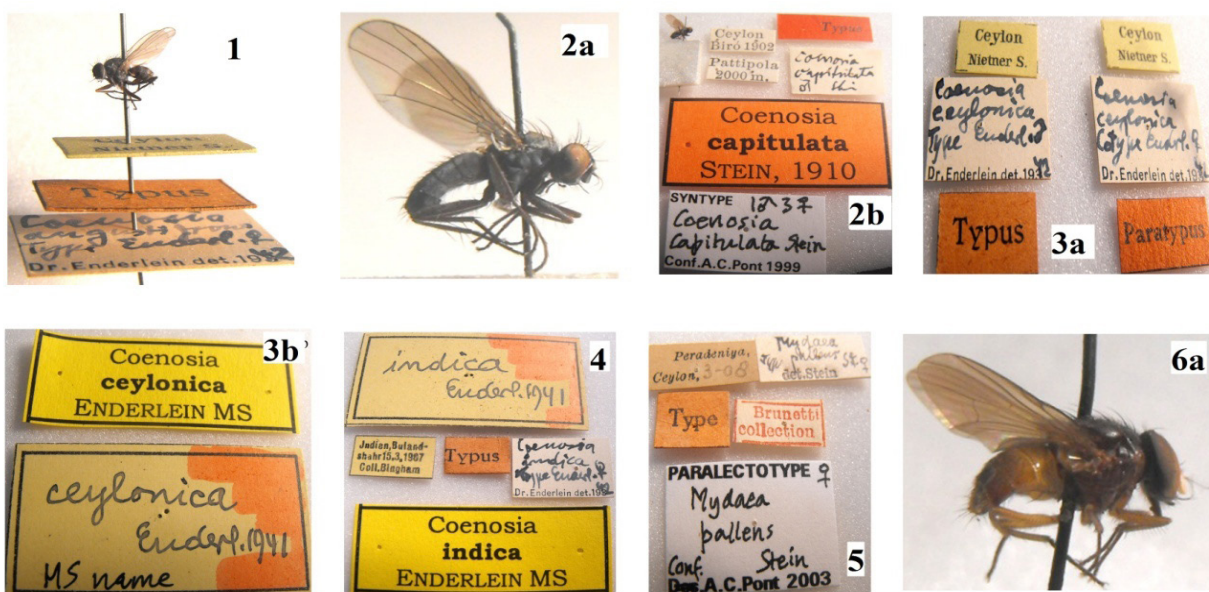
Humboldt-Universität zu Berlin, Germany, preserve very well many calyptrate fly specimens collected from the India and adjoining countries. The collectors of the calyptrate specimens of ZMHU were G. A. K. Marshall, J. W. Yerbury, L. Biro, S. Nietner, C. T. Bingham, E. Brunetti, Fischer, V. W. Hoffmeister and F. M. Brauer, which were identified by several renowned authors like P. Stein, M. S. Enderlein, D. Aubertin, P. G. E. Speiser and T. S. Cobbold. Some of the specimens were confirmed and labeled by Pont and Werner (2006). Amongst which the types were identified and enumerate in the present work.

Material and methods

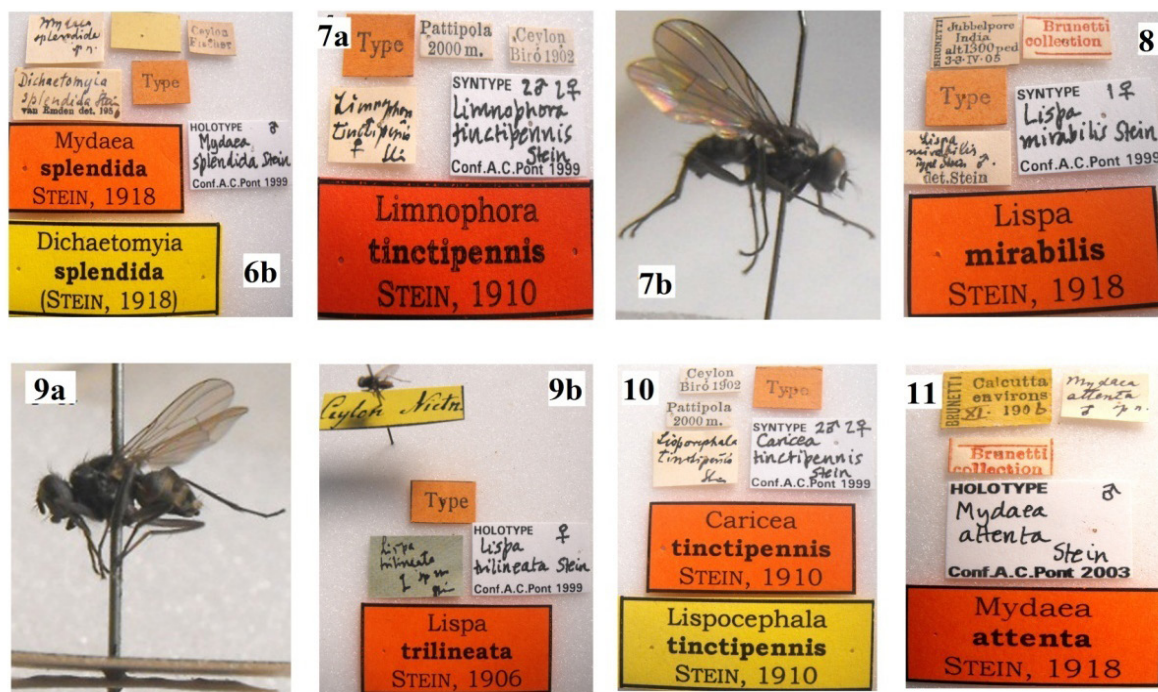
All the type specimens are listed alphabetically under the family Muscidae, Calliphoridae, Oestridae and Hippoboscidae with original published locality data. The current identity of the type material is mentioned.

Abbreviation: BMNH (The Natural History Museum, UK), MNM (Magyar Nemzeti Múzeum, Budapest, Hungary), ZMHU (Museum für Naturkunde, Humboldt-Universität zu Berlin, Germany).

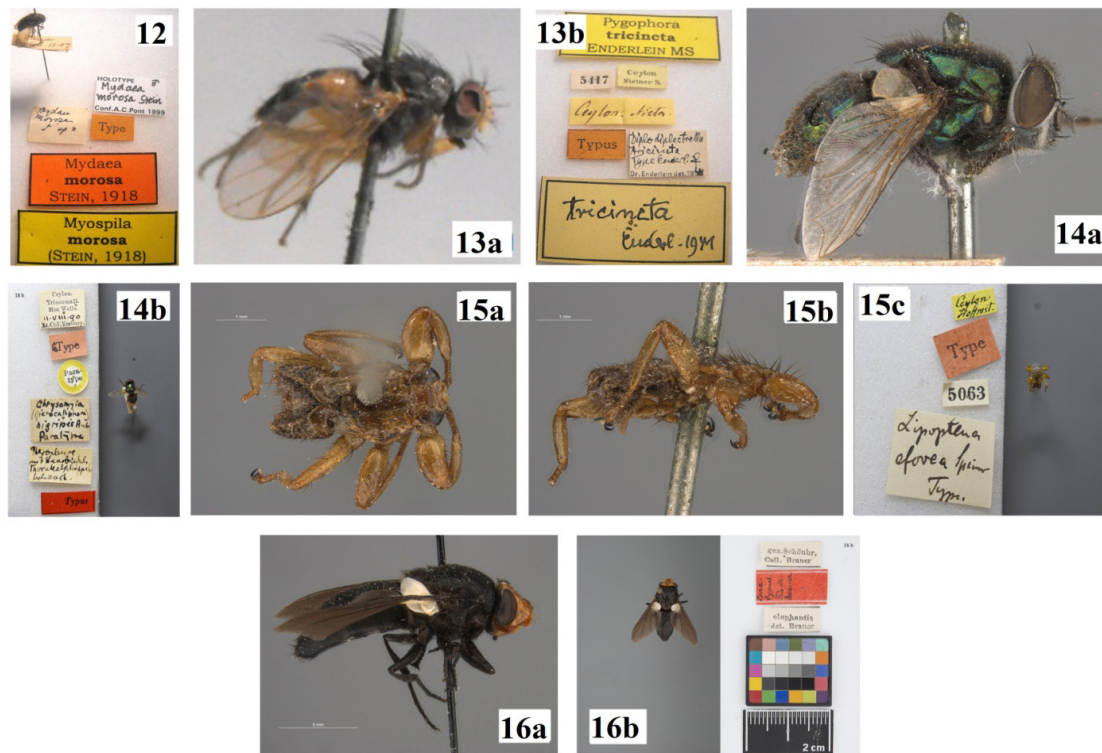
* Author for correspondence



Figures 1-6. 1. *Coenosia angustifrons* Stein Type with labels, 2a. *Coenosia capitulate* Stein Syntype, 2b. Original plus Syntype labels, 3(a&b). *Coenosia ceylonica* Enderlein Type and Paratype labels, 4. *Coenosia indica* Enderlein Original and Type labels, 5. *Mydaea pallens* Stein Original and Paralectotype labels, 6a. *Dichaetomyia splendida* (Stein) Holotype with labels.



Figures 6b-11. 6b. *Dichaetomyia splendida* (Stein) Holotype with labels 7 (a&b). *Limnophora tinctipennis* Stein Syntypes and labels, 8. *Lispa mirabilis* Stein Original type and Syntype labels, 9(a&b). *Lispa sericipalpis* Stein Holotype and Original labels, 10. *Lispocephala tinctipennis* (Stein) Original and Syntype labels, 11. *Mydaea attentata* Stein Holotype Original labels.



Figures 12-16. 12. *Mydaea morose* Stein Holotype and Original labels, 13(a&b). *Pygophora tricincta* Enderlein Type and Original labels, 14(a&b). *Chrysomya nigripes* Aubertin Paratype and labels, 15(a,b&c). *Lipoptena efovea* Speiser Type and Original labels, 16(a&b). *Gasterophilus elephantis* Cobbold Paratype and labels.

Family Muscidae

Total 15 specimens were collected from Indian subcontinent of which four Syntype: 1. *Coenosia capitulate* Stein, 1910: 567(♂♀ *coenosia*) “3♂ und eine grössere Anzahl weibchen aus Pattipola (22.II. 1902” [SRI LANKA, Collector L. Biró] (Figure 2a,b); 2. *Limnophora tinctipennis* Stein, 1910: 557 (♂♀ ; *Limnophora*) “Mehrere Pärchen aus Pattipola 2000 m (22.II. 1902)” [SRI LANKA, collector L.Biro] (types in Pattipola, MNM) (Figure 7a,b); 3. *Lispa mirabilis* Stein, 1918: 176 (♂♀ ; *Lispa*); ZMHU material: Syntypes, labeled as “BRUNETTI, Jubbelpore, India, alt 1300 Ped, 3-8. IV. 05”, with partly handwritten label by Stein as “*Lispa mirabilis* Stein 1♂” (Figure 8); 4. *Lispocephala tinctipennis* Stein 1910: 563(♂♀ ; *Caricea*) “Zahlreiche Männchen und Weibchen aus Pattipola (22. II. 1902)”. [SRI LANKA, Collector L. Biró] (Figure 10) three *Paralectotype*: 5. *Dichaetomyia pallens*, Stein, 1918: 170 (♂♀; *Mydaea*). Stein mentioned 2♂ collected by E.Brunetti from Penang (the type specimens are preserved in the BMNH) (Figure 5); 6. *Phaonia acerba*, Stein, 1918: 166 (♂♀; *Phaonia*). Stein mentioned 1 ♀ collected by E.Brunetti from DARJEELING (the type specimens are

preserved in the BMNH); 7. *Phaonia debilis*, Stein, 1918: 167 (♂♀; *Phaonia*). Stein mentioned 1♂, 2 ♀ collected by E.Brunetti from MUSSOORIE (N. India) on 20-26.v.05 (the type specimens are preserved in the BMNH); four *Holotype*: 8. *Dichaetomyia splendida*, Stein, 1918: 172 (♂♀; *Mydaea*) (Figure 6a,b); 9. *Lispa sericipalpis* (Stein, 1906) = *trilineata* Stein, 1906: 71 (♀ ; *Lispa*). [CEYLON = Sri Lanka] (Figure 9a,b); 10. *Mydaea attentata* Stein, 1918 = *argentata* Walker, 1918: (♂♀; *Mydaea*), 1♂, [CALCUTTA, environs, Collector Brunetti] (Figure 11); 11. *Mydaea morose* Stein, 1918: (♂♀; *Myospila*), 1♂, [CEYLON, Collector Brunetti] (Figure 12) are studied and conf. by Pont and Werner (2006).

Some other type specimens are as follows:

1. *Coenosia angustifrons* Stein, 1913

Angustifrons Stein, 1913 : 580 (♂♀; *Coenosia*), 1♂ and 3 ♀ aus Salisbury”, [ZIMBABWE, Collector G.A.K. Marshall]

ZMHU material: “Typus” 1 ♀, “Paratypus” 2 ♀, collected by S.Nietner[CEYLON], labeled by Dr. Enderlein, 1942; all three are in good condition (Figure 1).

Current name: Coenosia angustifrons Stein

2. *Coenosia ceylonica* Enderlein MS, 1941

ZMHU material: 1♂, 2♀. 1♂ and 1♀ are damaged, without head. 1♀ in excellent condition and labeled as Paratype. 1♂, 1♀ “Typus”, 1♀ “Paratypus”, collected by S. Nietner [CEYLON], labeled by Dr. Enderlein, 1941 (Figure 3a,b).

Current name: Coenosia ceylonica Enderlein MS

3. *Coenosia indica* Enderlein MS, 1942

ZMHU material: 1♀ in excellent condition and labeled as “Typus”, collected by Charles Thomas Bingham [JNDIEN (India?), BULANDSHAHR, 15.3.1907], labeled by Dr. Enderlein, 1941 (Figure 4).

Current name: Coenosia indica Enderlein MS, 1942

4. *Pygophora tricincta* Enderlein MS, 1941

Tricincta Enderlein, 1941 : (♂♀; *Pygophora*), 1♀, [CEYLON, Collector Nietner, S.]

ZMHU material: “Typus” 1, collected by S. Nietner [CEYLON], handwritten labeled as “Ceylon, Nietner”, printed “5417”, with another handwritten label by Dr. Enderlein as “*tricincta*, Enderlein, 1941” and “*Diplodiplectrella tricincta* Type, Enderlein, 1941”. The specimen is in good condition (Figure 13a,b).

Current name: Pygophora tricincta Enderlein, 1941.

Family CALLIPHORIDAE

5. *Chrysomyia nigripes* Aubertin, 1932

Nigripes Aubertin, 1932 : ix (♂♀; *Chrysomyia*), 1♂, [CEYLON, Collector Yerbury] Type in the British Museum.

ZMHU material: “Paratype” 1♂, collected by Yerbury from CEYLON, printed labeled as “Ceylon, Trincomali, Hot Wells” with handwritten date as 11- VIII- 90, Id. Col. Yerbury”, with another handwritten label “*Chrysomyia*

(*Microcalliphora nigriceps* Aub Paratype”, and another handwritten label. The specimen is covered by little fungal mycelli otherwise in perfect condition (Figure 14a,b).

Current name: Chrysomyia nigripes Aubertin, 1932.

Family HIPPOBOSCIDAE

6. *Lipoptena efovea* Speiser, 1905

Efovea Speiser, 1905 : (♂♀; *Lipoptena*), 1♂, [CEYLON, Collector Hoffmeister]

ZMHU material: “Holotype” 1♂, collected by Hoffmeister [CEYLON], handwritten labeled as “Ceylon, Hoffmst”, with another handwritten label “*Lipoptena efovea* Speiser Type”. The specimen is in good condition (Figure 15a,b,c).

Current name: Lipoptena efovea Speiser, 1905.

Family OESTRIDAE

7. *Gasterophilus elephantis* Cobbold, 1882

Elephantis Cobbold, 1882 : (♂♀; *Gasterophilus*), 1♂, 1♀ [Type Locality LONDON, from an Indian Elephant, Collector Brauer, F.M.]

ZMHU material: “Paratype” 1♂, 1♀ collected by Brauer, F.M. [LONDON], handwritten labeled as “Paratypus Fridr Brauer”, with a printed label “gez. Schönbr coll. Brauer” and another printed label as “*elephantis* det. Brauer”. The ♂ specimen bears a printed label as “*Cobboldia elephantis*, Ost – Indien, Brauer don, 1896”. The specimens along with an opened pupal case are in good condition (Figure 16a,b).

Current name: Cobboldia elephantis (Cobbold, 1886).

Acknowledgement

The author express deep regards to Dr. Joachim Ziegler, Museum für Naturkunde, Leibniz-Institute for Evolution and Biodiversity Science, Invalidenstraße 43, D-10115, Berlin for his kindness and warm hospitality during study the calyptrate specimens preserved in the museum and also for valuable suggestions to revise the manuscript.

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