DISTRIBUTIONAL RECORDS OF INDIAN MUSCOIDS, WITH DESCRIPTIONS OF TWO NEW SPECIES.

By R. Senior White, F.R.S.E., F.E.S., F.R.S.T.M.& H., Hony. Correspondent, Zoological Survey of India.

(Plate II.)

Since the various parts of the Revision of the Indian Calyptrate Muscoids by Major Patton and myself have appeared, (Patton & Senior White, 1924; Senior White, 1924, 1925, 1926), the present author has accumulated considerable further distributional records, which are here set forth, as the majority are from places and localities difficult of access to the entomologist.

Ambadola is a village in the extreme north of the Vizagapatam Agency, about 1,200 feet elevation. The country is open, with some scrub jungle.

Artham Camp, now abandoned, was district headquarters during the construction of the Raipur-Vizianagram Railway. It is of about 400 feet elevation in plains country.

Anuppur, in Rewa State, is about 1,000 feet elevation, near the head waters of the Nerbudda and the Sone. The country is open.

Basta, in Orissa, is on the coastal plain near Balasore.

Chakadhapore, in Chota Nagpur, is a small town. Elevation about 800 feet.

Dangoaposi, in Chota Nagpur, Singhbhum District, is about 1,600 feet. The country is open.

Gidni, in Chota Nagpur, is on the boundary of Orissa and Bengal. Elevation about 300 feet.

Goilkera, Chota Nagpur, circa 1,600 feet. Open country.

Jaleshwar, Orissa. Coastal plain.

Jeraikela, Chota Nagpur, about 800 feet, in Sal forest country.

Jonk River, elevation about 600 feet, near the eastern edge of the Chattisgarh Division of the Central Provinces.

Komarada, on the plains of Madras, about 3 miles north of Artham Camp.

Manharpur, Chota Nagpur, a small town, about 800 feet.

Posoita, Chota Nagpur, a station in heavy Sal forest, about 1,100 feet elevation.

Santragachi, about 5 miles south-west of Howrah, Lower Bengal. Sarandha, a tunnel pierces the range of this name in heavy Sal forest, about 1,400 feet.

Tanga Manda, a station, in Bamra State, Chota Nagpur. Elevation about 800 feet. Country forested.

Titlagahr, Patna State, about 800 feet. In open rice country.

The other localities mentioned are all well known.

MUSCINAE.

Morellia hortensis Wied.

Wied., Anal. Ent. 49, 101 (1824).

Artham Camp, Parvatipuram District, 21-xii-25, 1 3. Jeraikela, Chota Nagpur, 9-viii-28, 1 3.

Musca nebulo Fab.

Fab., Ent. Syst., IV, p. 321, 35 (1784). Patton & Senior White, Rec. Ind. Mus., XXVI, p. 563, pl. xxx, fig. 3, pl. xxxii, fig. 29 (1924).

Vizagapatam, 3-9-vii-26, 3 👌 2 🗣.

Artham Camp, Parvatipuram District, 29-xi-25, 1 3.

Delhi, 31-x-27, $3 \stackrel{?}{\circ} 6 \stackrel{?}{\circ}$.

Jeraikela, Chota Nagpur, 9-vii-28, 3 Q.

Santragachi, Bengal, 19-vii-28, 1 & 4 \, 2.

Musca vicina Macq.

Macq., Dipt. Exot. supp. 4, p. 226, 19 (1850). Patton & Senior White, Rec. Ind. Mus., XXVI, p. 563, pl. xxx, fig. 2, pl. xxxii, fig. 28 (1924).

Vizagapatam, 3-9-vii-26, 1 ♀.

Kasauli, Simla Hills, 29-vii-27, 1 ♂ 1 ♀.

Santragachi, Bengal 19-vii-28, 1 & 4 \, 2.

Musca sobens Wied.

Wied., Ausser. Zweifl. Ins., II p. 418 (1830). Patton & Senior White, Rec. Ind. Mus., XXVI, p. 565, pl. xxx, fig. 5, pl. xxxii, fig. 31 (1924).

Vizagapatam, 3-9-vii-26, 2 ♂ 12 ♀.

Artham Camp, Parvatipuram District, 22-xii-25, 1 &.

Goilkera, Chota Nagpur, 1-15-vi-26, 1 ♀; 13-16-vii-26, 2 ♂.

Jeraikela, Chota Nagpur, 9-vii-28, 1 & 3 \square.

Jaleshwar, Orissa, 11-vii-26, 1 ♀.

Santragachi, Bengal, 19-vii-28, 1 \, 2.

Musca vetustissima Wlk.

Patton & Senior White, Rec. Ind. Mus., XXVI, p. 566, pl. xxx, fig. 6, pl. xxxii, fig. 32 (1924).

Artham Camp, Parvatipuram District., 14-xi-25, 1 \circlearrowleft ; 19-22-xii-25, 3 \circlearrowleft 10 \circlearrowleft .

Musca ventrosa Wied.

Wied., Ausser. Zweifl. Ins., II p. 656 (1830). Patton & Senior White, Rec. Ind. Mus., XXVI, p. 568, pl. xxx, fig. 10, pl. xxxii, fig. 37 (1924).

Artham Camp, Parvatipuram Dist., 22-xii-25, 1 \(\text{Q.} \). Goilkera, Chota Nagpur, 28-viii-28,

Musca pattoni Aust.

Aust., A. M. N. H., (8) V, p. 114 (1910). Patton & Senior White, Rec. Ind. Mus., XXVI, p. 570, pl. xxx, fig. 15, pl. xxxii, fig. 41 (1924).

Artham Camp. Parvatipuram District, 14-xii-25, 1 3 (specimen with very narrow frons and 5 radial hairs); 19-22-xii-25, 1 3 5 \(\frac{1}{2}\).

Shillong, Khasi Hills, 11-12-x-26, 1 & 1 \overline{9}.

Posoita, Chota Nagpur, 30-viii-28, 2 3 (one with 3 and 5 radials on left and right wings respectively, one with 4 on each wing).

Musca spinohumera Awati.

Awati, Ind. Journ. Med. Res., IV, p. 138 (1916). Patton & Senior White, Rec. Ind. Mus., XXVI, p. 571, pl. xxx, fig. 14, pl. xxxiii, fig. 43 (1924).

Artham Camp, Parvatipuram District, 21-xii-25, 1 Q.

Musca planiceps Wied.

Wied., Anal. Ent., 48, 100 (1824). Patton & Senior White, Rec. Ind. Mus., XXVI, p. 575, pl. xxxi, fig. 23, pl. xxxiii, fig. 51 (1924).

Artham Camp, Parvatipuram District, 15-xii-25, 1 3. Goilkera, Chota Nagpur, 1-15-vi-26, 1 3.

Musca crassirostris Stein.

Stein in Becker, Mitt. Zool. Mus. Berlin, II, p. 99, 137 (1903). Patton & Senior White, Rec. Ind. Mus., XXVI, p. 577, pl. xxxi, fig. 26, pl. xxxiii, fig. 42 (1924).

Komarada, Parvatipuram District, 28-xi-25, 1 3 (males following in swarms whilst walking through reaped rice fields).

Artham Camp, Parvatipuram District, 19-21-xi-25, 12 3 2.

Passeromyia heterochaeta Villen.

Villen., Bull. Soc. Ent. Fr., 1915, p. 225 (fig.).

Goilkera, Chota Nagpur, 28-viii-28, $1 \ Q$ (in railway carriage that had been standing some days in the station).

Orthellia lauta Wied.

Wied., Ausser. Zweifl. Ins., II, p. 410, 44 (1830).

Artham Camp, Parvatipuram District, 29-xi-22-xii-25, 14 3 26 \(\). Anuppur, Rewah State, 9-xii-28, 1 \(\).

Orthellia latifrons Mall.

Mall., A. M. N. H., (9) XII, p. 508 (1923).

Artham Camp, Parvatipuram District, 28-xi-22-xii-25, 7 & 5 \Q.

Orthellia obscuripes Stein.

Mall., A. M. N. H., (9) XII, p. 505 (1923).

Anuppur, Rewah State, 9-xii-28, 1 3, which, with some reservation, I attribute to this species.

Orthellia siamensis Mall.

Mall., A. M. N. H., (9) XII, p. 509 (1923).

Artham Camp, Parvatipuram District, 22-xii-25, 1 3. Darjiling, 11-vi-26, 1 3.

Jeraikela, Chota Nagpur, 9-vii-28, 3 &.

Stomoxys calcitrans Linn.

Linn., F. Suec., (ed. ii), p. 467, 1900 (1761). Brun., Rec. Ind. Mus., IV, p. 68 (1910).

Goilkera, Chota Nagpur, 28-viii-28, 1 \, Santragachi, Bengal, 19-vii-28, 1 \, \text{\$\text{\$\sigma}\$}.

CALLIPHORINAE.

Calliphora aucta Wlk.

Wlk., Dipt. Saund., p. 334, (1856). S. White, Rec. Ind. Mus., XXVIII, p. 129 (1926).

Darjiling, 9-vi-26, $1 \circlearrowleft$ (on window); 11-vi-26, $1 \circlearrowleft 3 \circlearrowleft$ (in garden).

Lucilia pulchra Wied.

Wied., Ausser. Zweift. Ins., II, p. 406 (1830). S. White, Rec. Ind. Mus., XXVIII, p. 130 (1926).

Artham Camp, Parvatipuram District, 29-xi-19-xii-25, 5 Q.

Lucilia inducta Wlk.

Wlk., Dipt. Saund., p. 335 (1856). S. White, Rec. Ind. Mus., XXVIII, p. 130 (1926).

Darjiling, 4-vi-26, 1 Q.

Lucilia albopilosa S. W.

S. White, Rec. Ind. Mus., XXVIII, p. 130 (1926).

Darjiling, 4-vi-26, 1 3.

Lucilia cuprina Wied.

Wied., Ausser. Zweifl. Ins., II, p. 654 (1830). S. White, Rec. Ind. Mus., XXVIII, p. 131 (1926).

Santragachi, Bengal, 17-19-vii-28, 2 of 2 Q.

Chrysomyia megacephala Fab.

Fab., Syst. Ent., IV, p. 317, 18 (1794). S. White, Rec. Ind. Mus., XXVIII, p. 132 (1926).

Goilkera, Chota Nagpur, 13-16-vii-26, 7 Q.

Chrysomyia combrea Wlk.

Senior White, Rec. Ind. Mus., XXVIII, p. 133 (1926). Shillong, Khasi Hills, 12-x-26, 1 3.

Caiusa indica Surc.

Surc., Arch. Mus. N. H. Paris, (5) VI, p. 53 (1920).

Komarada, Parvatipuram District, 12-x-25, 1 of (at food).

Bengalia jejuna Fab.

Fab., Ent. Syst., IV, p. 312, 1 (1794). S. White, Rec. Ind. Mus., XXVIII, p. 137 (1926).

Raipur, Central Provinces, 18-ii-26, 1 ♀. Basta, Orissa, 13-v-28, 1 ♀ (at light). Jeraikela, Chota Nagpur, 9-vii-28, 1 ♂ 1 ♀.

Bengalia lateralis Macq.

Macq., Dipt. Exot., II, iii, p. 277, 1 (1843). S. White, Rec. Ind. Mus., XXVIII, p. 137 (1926).

Uluburu, Keonjhar State, 30-ix-28.

Bengalia martin-leakei, sp. nov.

(Plate II, figs. 1, 2.)

15 mm. 1 3. Head: frons orange-brown, parafrontalia paler, ashy, the whole rather less than one-third of head width. Parafacialia paler greyish, with black flecks opposite the antennal roots, at middle and (large and less distinct) on each side of mouth opening. Antennae dark brown, third segment grey pollinose. Palpi yellow with black bristles. Thorax: mesonotum and scutellum light coffee brown, without distinct paler lateral margins. Pleurae almost concolorous. Abdomen: Yellow with black marginal hind bands, broad on segments ii and iii. Legs brown, meta-tarsi paler, apical tarsal segments blackened. Front femora armed with six spines on basal third, closely set, the first short, on very prominent tuberosity. Wings infuscated. Squamae grey.

The male genitalia are very similar to lateralis Macq., but the bifurcation of the anterior claspers is a perfectly distinct feature. The posteriorly directed process on the posterior claspers common to lateralis and siamensis S. W. is here reduced to a vestige.

In my key to the genus (Senior White, 1924), the new species runs to couplet 5, separating on the more basal situation, closer apposition and stronger character of the front tibial spines from *siamensis*, to which it appears most closely allied.

Unique type from Rayagada, Vizagapatam Agency Tracts, 1-x-25, 1 3. In my own collection. I have much pleasure in dedicating this

species to Col. A. Martin Leake, V.C., F.R.C.S., Chief Medical Officer of the Bengal-Nagpur Railway, as a mark of appreciation of his never failing interest in the purely scientific side of my work in his Department.

Bengalia hastativentris S. W.

S. White. Spol. Zeyl., XII, p. 306 (1923).

Delhi, 5-viii-27, 1 \, 2.

Bengalia bezzii S. W.

S. White, Spol. Zeyl., XII, p. 306 (1923).

Chakhadapore, Chota Nagpur, 6-vii-28, 1 Q.

RHINIINAE.

Pollenia pilisquama S. W.

S. White, Rec. Ind. Mus., XXVI, p. 84 (1924).

Shillong, Khasi Hills, 12-x-26, 2 3.

The type of this species came from Ceylon, and the present is yet another record of the similarity of the Ceylon and Shillong dipterous faunas.

Strongyloneura viridana Tnsd.

Tnsd., Rec. Ind. Mus., XIII, p. 197 (1917).

Artham Camp, Parvatipuram District, 14-xii-25, 1 2.

Strongyloneura coerulana Tnsd.

Tnsd., Rec. Ind. Mus., XIII, p. 198 (1917).

Artham Camp, Parvatipuram District, 14-15-xii-25, 1 ♂ 1 ♀.

Strongyloneura nebulosa Tnsd.

Tnsd., Rec. Ind. Mus., XIII, p. 197 (1917).

Goilkera, Chota Nagpur, 13-16-vi-26, 1 3.

Metallea divisa Wlk.

Wlk., Dipt. Saund., p. 333 (1856). S. White, Spol. Zeyl., XIII, p. 114 (1924).

Titlagahr, Patna State, 11-xii-26, 2 \Q (the legs and abdomen are rather darker than in southern specimens).

Jeraikela, Chota Nagpur, 9-vii-28, 1 ♀.

Idiella mandarina Wied.

Wied., Asser. Zweifl. Ins., II, p. 350 (1830). S. White, Spol. Zeyl. XIII, p. 111 (1924).

Goilkera, Chota Nagpur, vi-26, 1 &.

Stomorhina dsicolor Fab. var. nigripes S. W.

S. White, Mem. Dept. Ag. Ind. (Ent. Ser.) VII, p. 167 (1922).

Darjiling, 11-vi-26, 1 3, is intermediate between the type and the variety.

SARCOPHAGINAE.

Sarcophaga pes-helicis, sp. nov.

(Plate II, fig. 3.)

9 mm. 1 3. Head: frontal width about half an eye-breadth. Frontals diverging. Facials numerous and strong. Genals strong, black. clear rows of post-ocular black cilia. Frontal stripe dark brown. Parafrontals together about as wide as frontal, these and face dark silvery grey with black reflections at their junction. Antennae black, third joint about $2\frac{1}{2}$ times second. Palpi black. Thorax: ground colour bluish-grey, more yellowish grey marginally. Acrostichals a weak prescutellar pair only. Dorso-centrals 2: 3. Abdomen: ground colour as thorax, the black spots rather elongate. Second segment with marginals. GSi black with strong apicals; GSii black. Sternites outstandingly haired. Legs: Mid femora with comb and fringe of short hairs. Mid tibiae bare. Hind femora with long sparce fringe on pos-Hind tibiae with sparce double fringe. terior aspect. Wings: Vein I bare. Segments iii and v of costa sub-equal. Genitalia as figured on pl. II, fig. 3. Seventh sternite of haemorrhoidalis pattern. specific name refers to the snail-like appearance of the median and two lateral processes of the aedoeagus.

Unique type: Darjiling, in garden, 11-vi-26, 1 3. In my own collection.

In my keys to the Oriental species (Senior White, 1924), the species on external characters runs to *josephi* Bött., separating on the presence of marginals on the second abdominal segments. On genitalia characters it runs to couplet 38 of the key, from the two species contained in which it is amply distinct.

In describing a new species from the Himalayas it is always necessary to make sure that the form is not a member of the Palaearctic Fauna. By my key to these species it runs to discifera Kram., from which the genitalia at once distinguish it.

It is noteworthy that in the Darjiling area, which in almost every family of the Diptera has one of the richest faunas in the World, in the Sarcophaginae, beside this evidently very rare form, much collecting has only yielded two common and wide-spread Palaearctic species.

Sarcophaga haematodes Mg.

Mg., Syst. Besch., V, p. 29 (1826). S. White, Rec. Ind. Mus., XXVI, p. 230 (1924).

Darjiling, 4-7—vi-26, 3 ♂ 1 ♀.

Sarcophaga walayari S. W.

S. White. Rec. Ind. Mus., XXVI, p. 231 (1924).

Posoita, Chota Nagpur, 30-viii-28, 2 3, in heavy Sal forest.

This is the first record of the capture of this species since the original unique type from Malabar, over 2,000 miles south-west of the present record. The structure of the genitalia make the conspecificity certain, but I would add to my original description as follows:—Lateral verticals may be present or absent; 3rd. abdominal segment with strong marginals; costal bristle present or absent. The rediscovery of this species in heavy forest strengthens the opinion expressed in my 1924 paper, p. 234, that this is a heliophobic species confined to deep forest.

Sarcophaga annandalei S. W

S. White, Rec. Ind. Mus., XXVI, p. 233 (1924).

Goilkera, Chota Nagpur, 12-15-vi-26, 1 3.

This station is about 1,600 feet up in the hills of the Singhbhum District, in very different country to Pusa, the nearest record. The present one sheds no further light on the distribution.

Sarcophaga knabi Park.

Park., Proc. U. S. Nat. Mus., LIV, p. 96 (1917).

Artham Camp, Parvatipuram District, 14-21-xii-25, 3 3. Titlagahr, Patna State, 10-xii-26, 1 3. Chakadharpore, Chota Nagpur, 7-vii-28. Ambadola, Vizagapatam Agency Tracts, 15-iii-29, 1 3.

Sarcophaga knabi Park. var. flavipalpis S. W

S. White, Rec. Ind. Mus., XXVI, p. 235 (1924).

Artham Camp, Parvatipuram District, 29-xi-21-xii-25, 3 3.

Titlagahr, Patna State, 10-xii-26.

Chakadharpore, Chota Nagpur, 7-vii-28.

Sarandha Forests, Chota Nagpur, 14-vii-26, 1 3.

Posoita, Chota Nagpur, 30-viii-28, 1 3.

Ambadola, Vizagapatam Agency Tracts, 15-iii-29, 3 3.

These records indicate that this species and its variety are generally distributed in the Eastern Ghats of the Carnatic, in the Chota Nagpur Hills, and even up toward the Eastern Central Provinces.

Sarcophaga albiceps Mg.

Meig., Sys, Besch., V, p. 22 (1826). S. White, Rec. Ins. Mus., XXVI, p. 236 (1924).

Shillong, 12-x-26, 1 3.

Ambadola, Vizagapatam Agency Tracts, 15-iii-29, 3 3.

Sarcophaga hirtipes Wd. var. orchidea Bött.

Bött., Ann. Mus. Nat. Hung., XI, p. 375 (1913).

Artham Camp, Parvatipuram District, 28-xi-14-xii-25, 5 3.

Titlagahr, Patna State, 10-xii-26, 2 3.

Sarandha Forests, Chota Nagpur, 14-vii-26, 1 3.

Shillong, Khasi Hills, 11-x-26, 1 3.

Gidni, Bihar, 11-viii-28, 1 3.

Chakadhapore, Chota Nagpur, 7-vii-28, 2 3.

Andamans, August, 1928, 4 3 (Sewell).

These records show the Malayan form of this species to be widely distributed in the Northern Carnatic and the Chota Nagpur Hills, *i.e.*, in the triangular space formed by the lines leading to Bhimavaram and Palamau of text-fig. 1 of my 1924 paper.

Sarcophaga orientaloides S. W.

S. White, Rec. Ind. Mus., XXVI, p. 244 (1924).

Artham Camp, Parvatipuram District, 19-22-xii-25, 3 &. Ambadola, Vizagapatam Agency Tracts, 15-iii-29, 1 &. Goilkera, Chota Nagpur, 1-15-vi-26, 1 &.

These records extend the known distribution over the Eastern Ghats and the Chota Nagpur Hills. It probably exists all over the hill areas of the Carnatic.

Sarcophaga crinita Park.

Park., Proc. U. S. Nat. Mus., LIV, p. 92 (1917).

Dangoaposi, Chota Nagpur, 3-xi-25, 1 3.

Sarcophaga futilis S. W.

S. White, Rec. Ind. Mus., XXVI, p. 246 (1924).

Artham Camp, Parvatipuram District, 15-xii-25, 1 3.

Chakadhapore, Chota Nagpur, 7-vii-28, 1 3.

Tanga Manda, Bamra State, 12-ix-28, 1 3.

Posoita, Chota Nagpur, 30-viii-28, 1 3.

The Eastern Ghats record from Artham Camp is very isolated. The others extend its Bihar and Orissa distribution.

Sarcophaga martellata S. W.

S. White, Rec. Ind. Mus., XXVI, p. 247 (1924).

Artham Camp, Parvatipuram District, 14-xii-25, 1 3.

Titlagahr, Patna State, 10-xii-26, 1 3.

Jonk River, Central Provinces, 18-iii-29, 1 3.

These records fit in well with my hypothesis of a Carnatic centre of distribution for this species.

Sarcophaga dux Thoms. var. harpax Pand.

Pand., Rev. Ent. Fr., XV, p. 189 (1896). S. White, Rec. Ind. Mus., XXVI, p. 250 (1924).

Dangoaposi, Chota Nagpur, 3-xi-25, 1 3.
Santragachi, Bengal, 18-19-vii-28, 2 3.
Chakadhapore, Chota Nagpur, 7-vii-28, 1 3.
Ambadola, Vizagapatam Agency Tracts, 15-iii-29, 1 3.

It is extremely curious that only the harpax-form has been seen in four years random collecting. The only Madras record is within 5 miles of the Orissa frontier.

Sarcophaga ruficornis Fab.

Fab., Ent. Syst., IV, p. 314, 6 (1794). S. White, Rec. Ind. Mus., XXVI, p. 251 (1924).

Manharpur, Chota Nagpur, 5-ix-26, 1 3.

Sarcophaga fuscicauda Bött.

Bött., Ent. Mitteil., I, p. 168 (1912).

Artham Camp, Parvatipuram District, 29-xi-21-xii-25, 2 3.

This record stands isolated. The nearest are Madras (Guindy), about 500 miles south, and Dacca, about 600 miles north-east.

Sarcophaga karnyi Hardy.

Hardy, Proc. Linn. Soc. N. S. W., LII (4), p. 454 (1927).

This species, described from Java three years after my 1924 'Revision,' was unknown to me personally until I received a small collection from the Andamans made by Lt.-Col. R. B. Seymour Sewell in August, 1928, among which I was at once able to recognize Hardy's species. The details are: MacPherson Strait, Station B. vii, $1 \stackrel{?}{\circlearrowleft} 1 \stackrel{?}{\hookrightarrow} in cop$. Viper Island, Station B. xi, $1 \stackrel{?}{\circlearrowleft} 1 \stackrel{?}{\hookrightarrow} in cop$. There are 4 more $\stackrel{?}{\circlearrowleft} \stackrel{?}{\circlearrowleft}$, without exact locality, in the same collection.

This discovery led me to re-examine the Indian Museum material recorded in my 'Revision,' by which I found that the 6 33 from Port Blair, Andamans, 15-ii-15-iii-15 (Kemp), the 2 33 from Mergui, and the Sarawak 3 from Beebe's collection therein recorded as fuscicauda are really karnyi. Annandale's Rangoon specimen, 25-ii-08, 1 cannot decide about, but it seems nearer to Hardy's than to Böttcher's species.

From the above data it appears that the Indian species, (or possibly variety), does not reach Burma or the Andamans, where it is replaced by the Javanese form. This raises the question of the conspecificity of fuscicauda (type) from Formosa with hutsoni Park. from Ceylon (type) and South India. I have not seen Böttcher's type, and in sinking hutsoni in fuscicauda relied on Böttcher's figure. This, though good enough to illustrate a very distinct new species, is not sufficiently detailed when such a species is suspected of consisting of more than one variety, and until Böttcher's type is re-examined the matter must remain in doubt. If I have erred, I have done so in good company, for Parker's

specimen from Oahu, Hawaii, referred to in my 'Revision,' is karnyi and not fuscicauda, (i.e., the Indian form). There are also closely allied if not identical Australian forms. Text-figure 2 of my 1924 paper is now invalidated.

Sarcophaga hæmorrhoidalis Fall.

S. White, Rec. Ind. Mus., XXVI, p. 255 (1924).

Darjiling, 3-13-vi-26, 13 3.

Sarcophila cinerea Fab.

Fab., Ent. Syst., IV, p. 331 (1794). S. White, Rec. Ind. Mus., XXVI p. 257 (1924).

Vizagapatam, 3-9-vii-26, 1 ♂ 2 ♀.

REFERENCES.

- Patton & Senior White (1924). "Oriental species of the genus Musca." Rec. Ind. Mus., XXVI, pp. 553-577.
- Senior White (1924). "A Revision of the Sarcophaginae of the Oriental Region." Rec. Ind. Mus., XXVI, pp. 193-283.
- Senior White (1925). "A Revision of the sub-family Rhiniinae in the Oriental Region." Rec. Ind. Mus., XXVII, pp. 81-96.
- Senior White (1926). "A Revision of sub-family Calliphorinae in the Oriental Region." Rec. Ind. Mus., XXVIII, pp. 127-140.