

PROF. HUGO DE SOUZA LOPES AND THE MODERN SYSTEM OF
SARCOPHAGIDAE (DIPTERA)

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Prof. Dr. Hugo de Souza Lopes is one of the authors of the phylogenetic classification of Sarcophagidae, especially Sarcophaginae. In this paper I present the taxonomic key of the tribes of Sarcophaginae according to his opinion; a list of the 48 genera and subgenera and the 356 species described by Prof. Lopes; and a review of subtribal construction of tribe Sarcophagini with a key of the subtribes. One new subtribe Boettcheriiscina Verves, subtr. nov. and two new monotypic genera (Mufindia Verves, gen. nov., and Sabiella Verves, gen. nov.) are described. The role of Prof. Lopes in the knowledge of taxonomy and ecology of American, Oriental, Australian and Oceanic Sarcophagidae is illuminated.

Key words: Lopes – Sarcophagidae – phylogenetic system – comparative morphology – ecology –
Sarcophagini – Boettcheriiscina

We celebrate the 80 years' birthday of the notable Brazilian dipterologist Prof. Dr. H. S. Lopes. His hole in the knowledge of Diptera, particularly Sarcophagidae is extremely important. He wrote more than 220 scientific works about system, morphology, fauna and ecology of sarcophagid flies. About 2,500 species of Sarcophagidae are known all over the world. Really this family includes 3,000 or more species according to intensiveness description of the new species (about 25-30 species for year during 1980-1988). Prof. Lopes has described 48 valid genera and subgenera and 369 species (14,8% of all species) of Sarcophagidae until the end of 1988.

The generally used classification of Sarcophagidae is absent. One of the usual system is based on opinions of North-American scientists (Roback, 1954; Downes, 1955, 1965). They divided Sarcophagidae into 2 subfamilies – Miltogrammatinae (original spelling “Miltogrammiae”) with tribes Miltogrammatini and Agriini (= Paramacronychiini) and Sarcophaginae. According to this classification, *Sarcophaga* Mg. (s. l.) consisted of more than 1,000 species, is the central genus of Sarcophaginae (approximately equal to tribe Sarcophagini *sensu* Lopes, 1982a). This classification is usual for some authors (Zumpt, 1961, 1972; Sugiyama & Kano, 1964; Dear, 1980; etc), but Paramacronychiinae is treated as a subfamily (Pape, 1986).

This system is not based on multifold analysis and practically presents a particular scheme. For example, Roback's (1954) system is reposed on the study of construction of distiphallus. Besides that, the union of different phylogenetical lines in one group makes impossible the analysis of geographical distribution; the evolution of trophic connections, etc of such miscellaneous taxa. This situation is demonstrated in particular by inconsistency in designation of size of “*Sarcophaga* s. l.”. Roback (1954) did not include in this composition the genera *Neobellieria* Blanch. (= *Sapromyia* Roback) and *Arachnidomyia* Town.; Zumpt (1972) – *Phallosarcophaga* Zumpt, *Poecilometopa* Vill. and others; Sugiyama & Kano (1984) – *Harpagophalla* Rohd., Sugiyama; Shinonaga & Kano (1987) – *Sarcosolomonia* Bar. In this meantime those genera are typically Sarcophagini and have not any principal differences from another members of “*Sarcophaga* s. l.”.

The next direction in systematic of Sarcophagidae is founded on analysis of the historical relationships which define the degree of affinity by means of comparative analysis of different morphological and ecological features and their modalities with accounting of correlations and parallel development of different structures and ecological peculiarities. One of the results of this way is the description of a large number of different genera and subgenera,

especially in Sarcophaginae, and distinction of tribal and subtribal taxa. Such process has been begun by C. Townsend (1908, 1912, 1917, 1918, 1935, 1937, 1942) and G. Enderlein (1928) and was passed by E. Séguay (1941) and S. Roback (1954). The most argumented system was proposed by B. B. Rohdendorf (1937, 1965, 1967). He divided Sarcophagidae into 5 subfamilies: Macronychiinae, Miltogrammatinae, Chrysogrammatinae, Sarcotachininae, Sarcophaginae (with tribes Sarcophagini and Agriini). He firstly demonstrated the polyphyletic nature of "Sarcophaga s. l." and dissected this group into many subtribes, genera and subgenera. Rohdendorf used the correlation between apo- and plesiomorphic character states in the systematic of sarcophagid flies.

The modern conception of the system of this family, especially Sarcophaginae, is treated by Prof. Lopes who has studied this problem during almost 60 years. At the first stage of his research Prof. Lopes has became Rohdendorf's and Townsend's systems applicable to Neotropical Sarcophagidae and after this he elaborated the original method of phylogenetic analysis. This method was founded on study of comparative morphology and ecology of male, female (Lopes, 1941, 1956; Lopes & Kano, 1968) and 1st stage larvae (Lopes, 1943, 1982a; Lopes & Leite, 1986) with grounding of a lot of plesio- and apomorphous character states (Lopes, 1982a, 1984, etc).

In my opinion the system of Sarcophagidae proposed by him (Lopes, 1969) is the most phylogenetical. He divided it into 4 subfamilies: Macronychiinae, Miltogrammatinae, Paramacronychiinae (I suppose that Chrysogrammatinae Rohd., Sarcotachininae Rohd. and Eumacronychiini Town. are the tribes of this subfamily) and Sarcophaginae. Macronychiinae and Miltogrammatinae are two not closely related phylogenetical lines; each of them has the specific autapomorphies, and Paramacronychiinae and Sarcophaginae are the sister groups.

The Neotropical fauna includes more than 750 sarcophagid species; the majority of them (about 700 species) belongs to Sarcophaginae. The most plesiomorphic and high specialized groups of this subfamily are endemic or sub-endemic for South and Central Americas. These taxa were partially included in different subtribes (Roback, 1954; Rohdendorf, 1967;

1970) but their detailed analysis had been absent. Prof. Lopes (1969, 1982a) performed such analysis and proposed the system of Sarcophaginae which consists into 11 tribes. I present as a key the differences among tribes.

KEY OF THE SARCOPHAGINAE'S TRIBES

1. cx₃ at hind surface bare or with 1-3 hairs. Frons of male broad, wider than eye, with proclinate orbita. Apical plate absent, lateral plates elongate, straight sclerotized Sarothromyiini Hall
- cx₃ at hind surface with numerous hairs. Frons of male generally narrower than eye, without proclinate orbita 2
2. Aedeagus entire. The internal parts of distiphallus with pair petiolate process (hillae). Apical plate generally absent, ventralia not developed, lateral plate elongate, well sclerotized . Raviniini Rohd.
- Aedeagus consists of mobily articulated basi- and distiphallus. Hillae absent 3
3. Postsutural acrostichals 2-5 pairs. Male cerci in apical part strongly curved dorsally. Ventralia small, membranous, lateral plate absent. The internal parts of distiphallus with pair conic or elongate process (limen). 7th and 8th sternites of female abdomen entire and shaped more or less elongate ovipositor. 1st stage larvae without clypeal arch Protodexiini Town.
- Postsutural acrostichals 1 pair or absent. Limen absent 4
4. Styli broad, not differentiated from another internal parts of distiphallus. Male cerci in apical part often curved dorsally. 6th-8th sternites of female abdomen almost so wide as 6th tergite. Clypeal arch of 1st stage larvae complete Impariini Roback
- Styli well differentiated from another internal parts of distiphallus 5
5. Prosternum very much developed. Females with elongate ovipositor, consists from 8th or entire 6th-8th sternites. 1st stage larvae without clypeal arch, with numerous long spines at pseudocephalon and segments Emblemasomatini Lopes
- Prosternum of medium size. Elongate ovipositor of female absent 6
6. Eyes green, head quadratish; the length at the level of antennal base is equal to the height. Arista bare or short-haired. 7
- Eyes red or brown, head short; the length at the level of antennal base is less than the

- height. Arista in order plumose, hairs distinctly longer than greatest aristal diameter 8
7. Postsutural dorsocentrals 1-2 pairs. Aedeagus very small. 8th abdominal sternite of female very large. Mandible of the 1st instar larvae is membranous. Sarothromyiopsini Lopes
- Postsutural dorsocentrals 3-5 pairs. Aedeagus common size. 8th abdominal sternite of female small. 1st instar larvae with conspicuous and sclerotized mandible Microcerellini Ség.
8. Ventralia and lateral plate well developed, elongate and well sclerotized. Males often with proclinate orbita. Body often with metallic colour. Styli conspicuous, medial process well developed, elongate. Clypeal arch of larvae absent .. Johnsoniini Rohd.
- Ventralia and lateral plate differently developed and sclerotized, especially absent. Males without proclinate orbita, metallic colours not developed. 1st stage larvae with complete clypeal arch. 9
9. The sides of scutellum with numerous yellow chetae. Ventralia and lateral plate well developed. 1st stage larvae without mandible, pseudocephalon and ventral surface of 1st segment with well sclerotized and pigmented plates.... Cuculomyiini Rohd.
- Scutellum without yellow chetae. 1st stage larvae with small pointed mandible, pseudocephalon without pigmented plates 10
10. Ventralia completely absent. 6th abdominal tergite of female divided in the middle. 1st stage larvae with furrows at metacephalon. Sarcodexiini Roback, 1954
- Ventralia present, occasionally small, protuberance- or awlshaped. 6th abdominal tergite of female divided or entire. 1st stage larvae without metacephalic furrows.... Sarcophagini Mcq.

Prof. Lopes revised the majority of American genera of Sarcophaginae, described a large number of taxa from this region and published a catalogue of Neotropical Sarcophagidae (Lopes, 1969). He has studied Sarcophagidae of Oceania (Lopes, 1958b, 1961, 1967; Lopes & Kano, 1971a,b, etc), Australia (Lopes, 1953b, 1954, 1955, 1958a, 1959, 1967, 1985b; Lopes & Kano, 1971a, 1978, 1981a; Kano & Lopes, 1971) and Oriental region (Lopes, 1967; Lopes & Kano, 1969, 1978, 1979b, 1981b; Kano & Lopes, 1969, 1970); he took part in the elabor-

ation of a catalogue of Oriental Sarcophagidae (Lopes et al., 1977); now he finished the catalogue of Sarcophagidae from Australia and Oceania. Prof. Lopes is the indefatigable collector and nice ecologist; the data on those sides of his scientific work he published in very interesting article (Lopes, 1973a). He has spent many time in the examination of the type materials (Lopes, 1932, 1936, 1938, 1945, 1953a, 1968a,b, 1973b, 1975a-c, 1976, 1978a,b, 1985a; Lopes & Kano, 1979a; Kano & Lopes, 1970) and the really systematic positions of large number of taxa were designated by him.

I had tried to generalize the deposit of Prof. Lopes in the knowledge of system of Sarcophaginae; the results are given below. The data on generic revisions and descriptions of new genera (subgenera) and species are given under the tribal names.

TRIBE SAROTHROMYIINI HALL, 1932

This tribe has been described as subfamily; Lopes (1975d) gave tribal status to it. In the cited paper he divided this tribe into the subtribes Rettenmeyerina Lopes, 1975, Nephochaetoptericina Lopes, 1975 and Sarothromyiina Hall, 1932.

Revision of the genera – Anapunaphyto Dodge, 1978; Lopes, 1975: *Rev. Brasil. Biol.* (1974), 34: 515-516. *Duochaeta* Dodge, 1968: Kano & Lopes, 1969: *An. Acad. Brasil. Cienc.*, 41: 91. *Sarcophagula* v. d. Wulp, 1887: Lopes, 1955: *Mem. Inst. Oswaldo Cruz* (1954), 52: 587-602; 1978: *Rev. Brasil. Biol.*, 38: 222-223. *Sarothromyia* Brauer & Bergenstamm, 1891: Lopes, 1986: *Rev. Brasil. Biol.*, 46: 79-87. *Tricharea* Thomson, 1869: Lopes, 1973: *Rev. Brasil. Biol.*, 33: 143-152.

Descriptions of the new genera – Duckemyia Lopes & Kano, 1969: *An. Acad. Brasil. Cienc.*, 41: 91 (Type-species: *D. latifrons* Kano & Lopes, 1969). *Pacatuba* Lopes, 1975: *Rev. Brasil. Biol.* (1974), 34: 284 (Type-species: *P. matthewsi* Lopes, 1975). *Phagita* Lopes, 1941: *Arq. Zool. S. Paulo*, 3: 263 (Type-species: *P. natiuscula* Lopes, 1941). *Wulpisca* Lopes, 1978: *Rev. Brasil. Biol.*, 38: 223 (Type-species: *Sarcophagula imbecilla* v. d. Wulp, 1896).

Description of the new species – Anapunaphyto beninensis Lopes, 1982: *Rev. Brasil.*

Biol., 42: 282. *A. wygodzinskyi* Lopes, 1976: *Rev. Brasil. Biol.*, 36: 72. *Duckemyia latifrons* Kano & Lopes, 1969: *An. Acad. Brasil. Cienc.*, 41: 92. *Nephochaetopteryx affinis* Lopes, 1936: *Arq. Inst. Biol. Veg.*, 3: 88. *N. angustifrons* Lopes, 1942: *Rev. Chil. hist.-nat.*, 44 (1940): 187. *N. cyaneiventris* Lopes, 1936: *Arq. Inst. Biol. Veg.*, 3: 86. *N. flavipalpis* Lopes, 1936: *ibid.*: 85. *N. fuscipennis* Lopes, 1941: *Arq. Zool. S. Paulo*, 2: 361. *N. limpidi-pennis* Lopes, 1976: *Rev. Brasil. Biol.*, 36: 70. *N. molinai* Lopes, 1942: *Rev. Chil. hist.-nat.* (1940), 44: 186. *N. pacatubensis* Lopes, 1975: *Rev. Brasil. Biol.* (1974), 34: 279. *N. pallidifacies* Lopes, 1975: *ibid.*: 280. *N. travassosi* Lopes, 1938: *Livro Jubilar Prof. L. Travassos*, RJ: 279. *Pacatuba matthewsi* Lopes, 1975: *Rev. Brasil. Biol.* (1974), 34: 283. *Phagita natiuscula* Lopes, 1941: *Arq. Zool. S. Paulo*, 2: 363. *Sarcophagula indonata* Lopes, 1955: *Mem. Inst. Oswaldo Cruz* (1954), 52: 597. *S. macrophthalma* Lopes, 1955: *ibid.*: 599. *Sarothromyia indivisa* Lopes, 1986: *Rev. Brasil. Biol.*, 46: 85. *Wulpisca arnaudi* Lopes, 1988: *Rev. Brasil. Biol.*, 48: 127.

TRIBE RAVINIINI ROHDENDORF, 1937

H. S. Lopes (1975d) divided this tribe into 2 subtribes: *Raviniina* Rohdendorf, 1937 and *Oxysarcodexiina* Lopes, 1975.

Revision of the genera – Andinoravinia Townsend, 1917: Lopes, 1962: *Mem. Inst. Oswaldo Cruz*, 60: 165-173. *Hybopygia* Enderlein, 1928: Lopes & Albuquerque, 1955: *Rev. Chil. Entomol.*, 4: 113-116. *Oxysarcodexia* Townsend, 1917: Lopes, 1946: *Bol. Esc. Nac. Vet.*, 1: 62-134; 1975: *Rev. Brasil. Biol.*, 35: 461-483. Lopes & Tibana, 1987: *Rev. Brasil. Biol.*, 47: 329-347. *Oxyvinia* Dodge, 1966: Lopes, 1982: *Rev. Brasil. Biol.*, 42: 288-291.

Description of the new species – Andinoravinia columbiana Lopes, 1962: *Mem. Inst. Oswaldo Cruz*, 60: 170. *A. intermedia* Lopes, 1962: *ibid.*: 169. *Chaetoravinia almeidai* Lopes, 1946: *Livro Homenagem R. F. d'Almeida*, S. Paulo: 227. *C. dampfi* Lopes, 1946: *Mem. Inst. Oswaldo Cruz*, 44: 135. *Oxysarcodexia admixta* (Lopes, 1933): *Rev. Ent.*, 3: 156, *Sarcophaga*. *O. adunca* Lopes, 1975: *Rev. Brasil. Biol.*, 35: 475. *O. angrensis* (Lopes, 1933): *Rev. Ent.*, 3: 153, *Sarcophaga*. *O. augusta* Lopes, 1946: *Bol. Esc. Nac. Vet.*, RJ, 1: 84.

O. avuncula (Lopes, 1933): *Rev. Ent.*, 3: 156, *Sarcophaga*. *O. berlai* Lopes, 1975: *Rev. Brasil. Biol.*, 35: 473. *O. bicolor* Lopes, 1946: *Bol. Esc. Nac. Vet.*, RJ, 1: 127. *O. carvalhoi* Lopes, 1946: *ibid.*: 92. *O. confusa* Lopes, 1946: *ibid.*: 96. *O. cyanea* Lopes, 1975: *An. Acad. Brasil. Cienc.* (1973), 45: 475. *O. diana* (Lopes, 1933): *Rev. Ent.*, 3: 154, *Sarcophaga*. *O. eberti* Lopes & Tibana, 1987: *Rev. Brasil. Biol.*, 47: 336. *O. edwardsi* Lopes, 1946: *Bol. Esc. Nac. Vet.*, RJ, 1: 123. *O. favorabilis* (Lopes, 1935): *Rev. Ent.*, 5: 318, *Sarcophaga*. *O. festiva* Lopes & Tibana, 1987: *Rev. Brasil. Biol.*, 47: 338. *O. flavipes*, *ibid.*: 335. *O. floricola* Lopes, 1975: *Rev. Brasil. Biol.*, 35: 487. *O. fluminensis* Lopes, 1946: *Bol. Esc. Nac. Vet.*, RJ, 1: 104. *O. fraterna* Lopes, 1946: *Mem. Inst. Oswaldo Cruz*, 44: 143. *O. grandis* Lopes, 1946: *Bol. Esc. Nac. Vet.*, RJ, 1: 82. *O. inflata* Lopes, 1975: *Rev. Brasil. Biol.*, 35: 470. *O. insolita* Lopes, 1946: *Bol. Esc. Nac. Vet.*, RJ, 1: 89. *O. major* Lopes, 1946: *ibid.*: 88. *O. mitifica* Lopes, 1953: *Rev. Brasil. Biol.*, 13: 50. *O. modesta* Lopes, 1946: *Bol. Esc. Nac. Vet.*, RJ, 1: 129. *O. occulta* Lopes, 1946: *ibid.*: 112. *O. parva* Lopes, 1946: *ibid.*: 97. *O. peculiaris* Lopes, 1975: *Rev. Brasil. Biol.*, 35: 477. *O. peruviana* (Lopes, 1975): *Rev. Brasil. Biol.* (1974), 34: 575, *Sarcophaga*. *O. petropolitana* Lopes, 1975: *Rev. Brasil. Biol.*, 35: 471. *O. plebeja* Lopes, 1946: *Mem. Inst. Oswaldo Cruz*, 44: 142. *O. riograndensis* Lopes, 1946: *Bol. Esc. Nac. Vet.*, RJ, 1: 103. *O. sarcinata* Lopes, 1953: *Rev. Brasil. Biol.*, 13: 48. *O. similata* Lopes & Tibana, 1987: *Rev. Brasil. Biol.*, 47: 335. *O. simplicoides* (Lopes, 1933): *Rev. Ent.*, 3: 156, *Sarcophaga*. *O. villosa* Lopes, 1945: *Rev. Brasil. Biol.*, 5: 458. *O. wygodzinskyi* Lopes & Tibana, 1987: *Rev. Brasil. Biol.*, 47: 336. *Oxyvinia excisa* (Lopes, 1950): *Rev. Brasil. Biol.*, 10: 361, *Dexosarcophaga*. *O. grata* (Lopes), 1953: *Rev. Brasil. Biol.*, 13: 44, *Dexosarcophaga*. *O. grisea* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 290. *O. panamensis* Lopes, 1988: *Rev. Brasil. Biol.*, 48: 132. *O. wicharti* (Lopes, 1953): *Rev. Brasil. Biol.*, 13: 46, *Dexosarcophaga*. *O. vittata* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 288. *Ravinia heithausi* Lopes, 1975: *Rev. Brasil. Biol.*, 35: 485.

TRIBE PROTODEXIINI TOWNSEND, 1912

Prof. Lopes made the review of the generic construction of this tribe (Lopes, 1971) and divided it be into the subtribes *Acanthodothe-*

cina Lopes, 1982 and *Protodexiina* Townsend, 1912 (Lopes, 1982a).

Revision of the genera – Acanthodotheca Townsend, 1918; Lopes & Downs, 1951: *Mem. Inst. Oswaldo Cruz* (1949), 47: 571-603. *Amblycoryphenes* Townsend, 1918: Lopes, 1975: *Rev. Brasil. Biol.*, 35: 265. *Mantidophaga* Townsend, 1919: Lopes, 1971: *Rev. Brasil. Biol.*, 31: 8-12. *Tephromyiella* Townsend, 1917: Lopes & Alves, 1988: *Rev. Brasil. Biol.*, 48: 933-939.

Description of the new species – Acanthodotheca acridiophagooides Lopes & Downs, 1951: *Mem. Inst. Oswaldo Cruz* (1949), 47: 588. *A. arnaudi* Lopes, 1976: *Rev. Brasil. Biol.*, 36: 63. *A. azteca* Lopes & Downs, 1951: *Mem. Inst. Oswaldo Cruz* (1949), 47: 578. *A. cigana* Lopes, 1976: *Rev. Brasil. Biol.*, 36: 62. *A. exuberans* Lopes & Downs, 1951: *Mem. Inst. Oswaldo Cruz*, (1949), 47: 573. *A. inornata* Lopes & Downs, 1951: *ibid.*: 573. *A. lanei* (Lopes, 1938): *Mem. Inst. Oswaldo Cruz*, 33: 336. *Sarcophaga*. *A. minense* Lopes & Downs, 1951: *Mem. Inst. Oswaldo Cruz*, (1949), 47: 575. *A. pauciseta* Lopes & Downs, 1951: *ibid.*: 575. *A. rocciai* Lopes, 1981: *Rev. Brasil. Ent.*, 25: 311. *A. singularis* Lopes, 1976: *Rev. Brasil. Biol.*, 36: 65. *Amblycorephenes rufipes* Lopes, 1975: *Rev. Brasil. Biol.*, 35: 267. *Blaesoxipha hardyi* Lopes, 1955: *Rev. Brasil. Biol.*, 15: 318. *B. palauensis* Lopes, 1958: *Insects of Micronesia*, 13: 21. *Lopesimyia blanchardi* Lopes & Tibana, 1982: *Rev. Brasil. Biol.*, 42: 144. *Mantidophaga lanei* Lopes, 1971: *Rev. Brasil. Biol.*, 31: 11. *Servaisia (Acridiophaga) spinosa* (Lopes, 1978) (comb. nov.): *Rev. Brasil. Biol.*, 38: 602. *Acridiophaga* (Remark: according to my opinion (Verves, 1985). *Acridiophaga* is a subgenus of *Servaisia*).

TRIBE IMPARIINI ROBACK, 1954

This taxon has been described as a subtribe and its modern status was designated by H. S. Lopes (1982a). The subtribal system is badly treated: it consists of the subtribes *Hystricocnemina* Roback, 1954, *Impariina* Roback, 1954 and *Kellymyiina* Rohdendorf, 1967, but the distribution of the majority of genera among this subtribes is not clear.

Revision of the genera – Gigantotheca Townsend, 1917: Lopes, 1978: *Rev. Brasil. Biol.*, 38: 606. *Orobrachycoma* Townsend,

1927: Lopes, 1979: *Canad. Entomol.*, 111: 156. *Spirobolomyia* Townsend, 1917: Lopes, 1975: *Rev. Brasil. Biol.*, 35: 155-160.

Description of the new genera – Carranca Lopes, 1988: *Rev. Brasil. Biol.*, 48: 130 (Type-species: *C. californiana* Lopes, 1988). *Sinopiella* Lopes & Tibana, 1982: *Mem. Inst. Oswaldo Cruz*, 77: 296 (Type-species: *S. rufopilosa* Lopes & Tibana, 1982).

Description of the new species – Carranca californica Lopes, 1988: *Rev. Brasil. Biol.*, 48: 130. *Kurtomyia mexicana* Lopes, 1976: *Rev. Brasil. Biol.*, 36: 68. *Peckiamyia expuncta* (Lopes, 1935): *Rev. Ent.*, 5: 38. *Sarcophaga*. *Sinopiella rufopilosa* Lopes & Tibana, 1982: *Mem. Inst. Oswaldo Cruz*, 77: 296.

TRIBE EMBLEMASOMATINI LOPES, 1975

This tribe has been described as subtribe (Lopes, 1975a) and after that was raised to tribal rank (Lopes, 1982a).

Revision of the genera – Emblemasoma Aldrich, 1916: Lopes, 1971: *Rev. Brasil. Biol.*, 31: 90-92. *Pessoamyia* Lopes, 1938: Lopes, 1971: *Rev. Brasil. Biol.*, 31: 92-97.

Description of a new genus – Pessoamyia Lopes, 1938: *Mem. Inst. Oswaldo Cruz*, 33: 333 (Type-species: *P. prosternalis* Lopes, 1938).

Description of the new species – Emblemasoma neotropicum Lopes, 1971: *Rev. Brasil. Biol.*, 31: 91. *Pessoamyia fumipennis* Lopes, 1971: *ibid.*: 94. *P. lutzi* Lopes, 1971: *ibid.*: 97. *P. prosternalis* Lopes, 1938: *Mem. Inst. Oswaldo Cruz*, 33: 333. *P. zikani* Lopes, 1971: *Rev. Brasil. Biol.*, 31: 95.

TRIBE SAROTHROMYIOPSINI LOPES, 1982

This tribe was described (Lopes, 1982a) for a single genus *Sarothromylops* Townsend, 1917 from Galapagos, which has been revised before (Lopes, 1978: *Rev. Brasil. Biol.*, 38: 599-600).

TRIBE MICROCERELLINI SÉGUY, 1928

The review of genera was given by Lopes (1982b,c). The subtribal construction is not well known (*Microcerellina* Séguy, 1928 and *Hypopeltina* Roback, 1954).

Revision of the genera – Austrohartigia Townsend, 1937: Lopes, 1981: *Rev. Brasil. Biol.*, 41: 327-338. *Aulacophyto* Townsend, 1919: Lopes, 1978: *Rev. Brasil. Biol.*, 38: 757-765. *Boettia* Dodge, 1965: Lopes, 1982: *Rev. Brasil. Biol.*, 42: 607-615. *Catheteronychia* Townsend, 1927: Lopes, 1972: *Studia entomol.*, 15: 346. *Doringia* Weyenbergh, 1875: Lopes, 1969: *Studia entomol.*, 12: 152-158; 1980: *Rev. Brasil. Biol.*, 40: 231-235. *Euparaphyto* Townsend, 1912: Lopes, 1982c: 493-495. *Mimophytomyia* Hall, 1937: Lopes, 1982c: 489-493. *Townsendomyia* Prado & Fonseca, 1932: Lopes, 1973: *Rev. Brasil. Biol.*, 33: 195-197. *Xanthobrachycoma* Townsend, 1927: Lopes, 1954: *Rev. Brasil. Biol.*, 14: 65-70; Lopes, 1982: *Rev. Brasil. Biol.*, 42: 616-617. *Xenoppia* Townsend, 1915: Lopes, 1980: *Rev. Brasil. Biol.*, 40: 235-238.

Description of the genera – Aulacophytoides Lopes, 1978: *Rev. Brasil. Biol.*, 38: 765 (Type-species: *A. alvarengai* Lopes, 1978). *Boettcherimima* Lopes, 1950: *Mem. Inst. Oswaldo Cruz*, 48: 706 (Type-species: *B. hypopygialis* Lopes, 1950). *Borgmeierisca* Lopes, 1972: *Studia entomol.*, 15: 349 (Type-species: *B. pilicoxa* Lopes, 1972). *Carchia* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 368 (Type-species: *C. andina* Lopes, 1982). *Cuzcomyia* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 367 (Type-species: *C. rufipes* Lopes, 1982). *Jujuyia* Lopes, 1980: *Rev. Brasil. Biol.*, 40: 238 (Type-species: *J. alvarengai* Lopes, 1980). *Mallochisca* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 364 (Type-species: *Mimophytomyia mallochi* Hall, 1933). *Penaisca* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 365 (Type-species: *P. quimaliensis* Lopes, 1982). *Townsendisca* Lopes, 1973: *Rev. Brasil. Biol.*, 33: 193 (Type-species: *T. matucanensis* Lopes, 1973). *Xenoppina* Lopes, 1975: *Rev. Brasil. Biol.* (1974), 34: 573 (Type-species: *X. andina* Lopes, 1975).

Description of the new species – Aulacophyto penai Lopes, 1978: *Rev. Brasil. Biol.*, 38: 762. *A. peruana* Lopes, 1978: *ibid.*: 762. *Aulacophytoides alvarengai* Lopes, 1978: *ibid.*: 765. *Austrohartigia bicoloricauda* Lopes, 1981: *Rev. Brasil. Biol.*, 41: 334. *A. chilensis* Lopes, 1981: *ibid.*: 334. *A. cortesi* Lopes, 1981: *ibid.*: 330. *A. cortesiana* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 136. *A. globulipennis* Lopes, 1982: *ibid.*: 137. *A. jujuyensis* Lopes, 1981: *Rev. Brasil. Biol.*, 41: 336. *A. multidentata* Lopes, 1981: *ibid.*: 336. *A. nigriventris* Lopes, 1981: *ibid.*:

336. *A. shannoni* Lopes, 1981: *ibid.*: 332. *Boettcherimima hypopygialis* Lopes, 1950: *Mem. Inst. Oswaldo Cruz*, 48: 706. *Boettia argentina* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 609. *B. ecuatoriana* Lopes, 1982: *ibid.*: 613. *B. pilifacies* Lopes, 1982: *ibid.*: 613. *B. taurina* Lopes, 1982: *ibid.*: 612. *B. weyrauchi* (Lopes, 1954): *Rev. Brasil. Biol.*, 14: 69. *Xanthobrachycoma*. *B. wygodzinskyi* (Lopes, 1954): *ibid.*: 67. *Xanthobrachycoma*. *Borgmeierisca pilicoxa* Lopes, 1972: *Studia entomol.*, 15: 349. *Carchia andina* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 368. *Cuzcomyia rufipes* Lopes, 1982: *ibid.*: 367. *Doringia erythropyga* (Lopes, 1936). *Arq. Inst. Biol. Veg.*, 3: 71. *Xenoppia D. travassosi* Lopes, 1980: *Rev. Brasil. Biol.*, 40: 232. *D. weyrauchi* Lopes, 1969: *Studia entomol.*, 12: 154. *Euparaphyto cinerea* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 493. *E. ecuatoriana* Lopes, 1982: *ibid.*: 495. *Jujuyia alvarengai* Lopes, 1980: *Rev. Brasil. Biol.*, 40: 239. *Mallochisca curicoensis* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 365. *Mimophytomyia aurigaster* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 491. *M. boliviiana* Lopes, 1982: *ibid.*: 493. *Penaisca quimaliensis* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 365. *Townsendisca matucanensis* Lopes, 1973: *Rev. Brasil. Biol.*, 33: 193. *Xenoppina andina* Lopes, 1975: *Rev. Brasil. Biol.* (1974), 34: 573.

TRIBE JOHNSONIINI ROHDENDORF, 1967

Prof. H. S. Lopes (1979c) proposed the subtribal system of this tribe and made the cladistic analysis of subtribe Notochaetina (Lopes, 1984). This tribe consists of the following subtribes: *Neophytoina* Lopes, 1979, *Lepidodexiina* Lopes, 1979, *Emdenimyiina* Lopes, 1975 (*Rev. Brasil. Biol.* (1974), 34: 272), *Notochaetina* Lopes, 1969: 11, *Johnsoniina* Rohdendorf, 1967. I described (Verves, 1988) a new subtribe, *Sarcotachinellina* Verves, 1988 for a single monotypical holarctic genus *Sarcotachinella* Townsend, 1892.

Revision of the genera – Anolisomyia Dodge, 1955: Lopes, 1979c: 941; 1985: *Rev. Brasil. Ent.*, 29: 561. *Archimimus* Reinhard, 1952: Lopes, 1979c: 927-928: Lopes & Tibana, 1988: *Rev. Brasil. Biol.*, 48: 324-331. *Asilodexia* Townsend, 1927: Lopes, 1979c: 932. *Camptops* Alderich, 1916: Lopes, 1979c: 930. *Chloronesia* Townsend, 1912: Lopes, 1979: *Canad. Entomol.*, 111: 20; 1979c: 934. *Emdenimya* Lopes, 1946: Lopes, 1969: *Rev. Brasil. Biol.*, 29: 429-436. *Eufletcherimyia* Townsend, 1934: Lopes, 1979c: 935. *Eunotochaeta* Town-

send, 1934; Lopes, 1979c: 934. *Gymnocamp-*
tops Townsend, 1927; Lopes, 1968b: 345-348.
Harpagopyga Aldrich, 1916; Lopes, 1951: *Rev.*
Brasil. Biol., 11: 275-288. *Johnsonia* Coquillett,
1895; Lopes, 1969: *Studia entomol.*, 12: 137-
140; 1979c: 928-929. *Lepidodexia* Brauer &
Bergenstamm, 1891; Lopes, 1951: *Mem. Inst.*
Oswaldo Cruz, 49: 641-658. *Mononotochaeta*
Townsend, 1935; Lopes, 1979c: 934. *Neophyto*
Townsend, 1908; Lopes, 1979c: 920. *Neophytodes*
Townsend, 1931; Lopes, 1979c: 930. *Notochaeta*
Aldrich, 1916; Lopes, 1946: *Mem. Inst.*
Oswaldo Cruz, 42: 503-550; 1983: *ibid.*,
78: 71-81; 1985: *Rev. Brasil. Ent.*, 29: 561-569.
Notochaetomima Lopes, 1973: 1983: *Rev.*
Brasil. Ent., 27: 259-266. *Oppiopsis* Townsend,
1915; Lopes, 1979c: 920-921. *Orodexia* Town-
send, 1927; Lopes, 1985: *Rev. Brasil. Ent.*, 29:
559-560. *Pachygraphia* Brauer & Bergenstamm,
1891; Lopes, 1980: *Rev. Brasil. Biol.*, 40: 415-
417. *Petriana* Lopes, 1945: 1979c: 927.
Phytodes Coquillett, 1910; Lopes, 1975: *Rev.*
Brasil. Biol. (1974), 34: 505-510. *Villegasia*
Dodge, 1966; Tibana & Lopes, 1985: *Rev.*
Brasil. Ent., 29: 191-194. *Xylocampotopsis*
Townsend, 1927; Lopes, 1979c: 926.

Description of the new genera — *Chilopodomyia* Lopes & Tibana, 1984: *Rev. Brasil. Ent.*, 28: 417 (Type-species: *C. boraceana* Lopes & Tibana, 1984). *Emdenimyia* Lopes, 1946: *Rev. Brasil. Biol.*, 6: 117 (Type-species: *Dexomyiophora myersi* Curran, 1938). *Fergusonomyia* Lopes, 1958: *Studia entomol.*, 1: 547 (Type-species: *Sarcophaga bancrofti* Johnston & Tiegs, 1921). *Gerskesia* Lopes, 1945: *Rev. Brasil. Biol.*, 5: 295 (Type-species: *G. brevigaster* Lopes, 1945). *Hallimyia* Lopes, 1979c: 926 (Type-species: *Sarcophaga egregia* Hall, 1933). *Halliosca* Lopes, 1975: *Rev. Brasil. Biol.*, 35: 49 (Type-species: *Sarcophaga declinata* Hall, 1933). *Notochaetomima* Lopes, 1973: *Rev. Brasil. Biol.*, 33: 196 (Type-species: *N. oliveirai* Lopes, 1973)*. *Pachygraphomima* Lopes, 1980: *Rev. Brasil. Biol.*, 40: 417 (Type-species: *P. lenti* Lopes, 1980). *Petriana* Lopes, 1945: *Rev. Brasil. Biol.*, 5: 453 (Type-species: *P. brevicornis* Lopes, 1945).

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Brasil. Biol., 48: 319. *A. rufiananlis* (Lopes, 1975): *An. Acad. Brasil. Cienc.* (1973), 45: 469, *Notochaeta*. *Archimimus brevigaster* Lopes & Tibana, 1988: *Rev. Brasil. Biol.*, 48: 328. *A. longespinus* Lopes, 1988: *ibid.*, 4: 918. *A. pallipes* Lopes & Tibana, 1988: *ibid.*, 2: 319. *A. propinquus* Lopes & Tibana, 1988: *ibid.*: 331. *A. pseudoturbatus* Lopes & Tibana, 1988: *ibid.*: 328. *Asilodexia wygodzinskyi* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 286. *Chilopodomyia boraceana* Lopes & Tibana, 1984: *Rev. Brasil. Ent.*, 28: 417. *Emdenimyia korytkowskyi* Lopes, 1969: *Rev. Brasil. Biol.*, 29: 431. *E. lanei* Lopes, 1969: *ibid.*: 434. *E. limai* Lopes, 1969: *ibid.*: 433. *E. spinosa* Lopes, 1948: *Mem. Inst. Oswaldo Cruz* (1947), 45: 556. *E. travassosi* Lopes, 1969: *Rev. Brasil. Biol.*, 29: 432. *Euslettcherimyia downsi* Lopes, 1985: *Rev. Brasil. Ent.*, 29: 113. *Gerskesia brevigaster* Lopes, 1945: *Rev. Brasil. Biol.*, 5: 295. *Harpagopyga albida* Lopes, 1951: *Rev. Brasil. Biol.*, 11: 287. *H. cubana* Lopes, 1951: *ibid.*: 279. *H. flavopilosa* Lopes, 1951: *ibid.*: 285. *H. reinhardi* Lopes, 1979c: 932. *Johnsonia robacki* Lopes, 1975: *An. Acad. Brasil. Cienc.* (1973), 45: 473. *Lepidodexia apolinari* Lopes, 1951: *Mem. Inst. Oswaldo Cruz*, 49: 644. *L. cingulata* Lopes, 1961: *Rev. Brasil. Biol.*, 21: 254. *L. currani* Lopes, 1951: *Mem. Inst. Oswaldo Cruz*, 49: 646. *L. distincta* Lopes, 1951: *ibid.*: 655. *L. grisea* Lopes, 1951: *ibid.*: 651. *L. nigropilosa* Lopes, 1951: *ibid.*: 649. *L. tungurauensis* Lopes & Tibana, 1988: *Rev. Brasil. Biol.*, 48: 316. *Notochaeta affinis* Lopes, 1983: *Mem. Inst. Oswaldo Cruz*, 78: 77. *N. bufonivora* Lopes & Vogelgand, 1953: *An. Acad. Brasil. Cienc.*, 25: 324. *N. carthaginiensis* Lopes & Tibana, 1988: *Rev. Brasil. Biol.*, 48: 140. *N. carvalhoi* Lopes, 1984: *Rev. Brasil. Ent.*, 28: 384. *N. chapadensis* Tibana & Lopes, 1985: *Rev. Brasil. Ent.*, 29: 189. *N. costaricensis* Lopes & Tibana, 1988: *Rev. Brasil. Biol.*, 48: 322. *N. confusa* Lopes, 1946: *Mem. Inst. Oswaldo Cruz*, 42: 537. *N. cyaneiventris* Lopes, 1946: *ibid.*: 542. *N. distincta* Lopes, 1947: *Rev. Brasil. Biol.*, 7: 378. *N. diversa* Lopes, 1946: *Mem. Inst. Oswaldo Cruz*, 42: 528. *N. dodgei* Lopes, 1985: *Rev. Brasil. Ent.*, 29: 115. *N. ecuatoriana* Lopes, 1984: *Rev. Brasil. Ent.*, 28: 380. *N. flavipes* Lopes, 1983: *Mem. Inst. Oswaldo Cruz*, 78: 74. *N. fumipennis* Lopes, 1946: *Mem. Inst. Oswaldo Cruz*, 42: 525. *N. huixtlaensis* Lopes, 1983: *Mem. Inst. Oswaldo Cruz*, 78: 76. *N. ignota* Lopes, 1947: *Rev. Brasil. Biol.*, 7: 380. *N. mexicana* Lopes, 1985: *Rev. Brasil. Ent.*, 29: 119. *N. napoensis*

* Lopes & Tibana (1988: *Rev. Brasil. Biol.*, 48: 317) proposed for this preoccupied name (Rohdendorf, 1937: 273) new name, *Notochaetisca* Lopes & Tibana, 1988.

Lopes, 1983: *Mem. Inst. Oswaldo Cruz*, 78: 73. *N. obscura* Lopes, 1950: *Rev. Brasil. Biol.*, 10: 354. *N. parva* Lopes, 1946: *Mem. Inst. Oswaldo Cruz*, 42: 519. *N. peculiaris* Lopes, 1985: *Rev. Brasil. Ent.*, 29: 120. *N. petersoni* Lopes, 1984: *Rev. Brasil. Ent.*, 28: 386. *N. quadriseptata* Lopes, 1984: *ibid.*: 384. *N. rustica* Lopes, 1950: *Rev. Brasil. Biol.*, 10: 354. *N. setifacies* Lopes, 1984: *Rev. Brasil. Ent.*, 28: 386. *N. sinopii* Lopes & Tibana, 1982: *Mem. Inst. Oswaldo Cruz*, 77: 286. *N. trinidadensis* Lopes, 1985: *Rev. Brasil. Ent.*, 29: 118. *N. uniseta* Lopes, 1950: *Rev. Brasil. Biol.*, 10: 353. *N. vittata* Lopes, 1968: *Rev. Brasil. Biol.*, 28: 286. *N. woodi* Lopes, 1985: *Rev. Brasil. Ent.*, 29: 120. *N. zeledoni* Lopes, 1985: *ibid.*: 114. *Noctochaetomima dominicensis* Lopes, 1975: *An. Acad. Brasil. Cienc.* (1973), 45: 471. *N. malacophaga* Lopes, 1983: *Rev. Brasil. Ent.*, 27: 262. *N. oliveirai* Lopes, 1973: *Rev. Brasil. Biol.*, 33: 196. *N. rosaliae* Lopes, 1983: *Rev. Brasil. Ent.*, 27: 262. *N. santista* Lopes, 1983: *ibid.*: 266. *N. travassosi* Lopes, 1983: *ibid.*: 265. *Pachygraphia bocainensis* Lopes, 1980: *Rev. Brasil. Biol.*, 40: 417. *Pachygraphomima fulviventris* Lopes, 1980: *ibid.*: 422. *P. gomesi* Lopes, 1980: *ibid.*: 421. *P. lenti* Lopes, 1980: *ibid.*: 418. *Petriana brevirostris* Lopes, 1945: *Rev. Brasil. Biol.*, 5: 453. *Villegasia almeidai* (Lopes, 1938): *Mem. Inst. Oswaldo Cruz*, 33: 346. *Sarcophaga*. *V. pernambucana* Tibana & Lopes, 1985: *Rev. Brasil. Ent.*, 29: 193.

TRIBE CUCULOMYIINI ROHDENDORF, 1967

This taxon has been described as subtribe; Lopes (1982a) attached to it tribal status, and detailed the subtribal composition: Cuculomyiina Rohdendorf, 1967, Panavina Lopes, 1975a: 511, Sarconeivina Lopes, 1975d: 292, Dexosarcophagina Lopes, 1975d: 287, Malacophagomyina Lopes, 1982a: 318, Udamopygina Lopes, 1975d: 291.

Revision of the genera – Chlorosarcophaga Townsend, 1919: Lopes, 1986: *Rev. Brasil. Biol.*, 46: 89-97. *Chrysagria* Townsend, 1935: Lopes, 1971: *An. Acad. Brasil. Cienc.*, 43: 228-231; Lopes & Achoy, 1986: *Rev. Brasil. Biol.*, 46: 273-276. *Cuculomyia* Roback, 1954: Lopes, 1976: *Rev. Brasil. Biol.*, 36: 745-757. *Dexosarcophaga* Townsend, 1917: Lopes, 1946: *Rev. Brasil. Biol.*, 6: 126-130; 1975: *An. Acad. Brasil. Cienc.* (1973), 45: 480-482. *Panava* Dodge, 1968: Lopes, 1975: *Rev. Brasil. Biol.* (1974), 34: 511-512; 1978: *Rev. Brasil. Biol.*,

38: 801-805. *Retrocitomyia* Lopes, 1982: 1985: *Bul. Mus. Nac., RJ, N. S., Zool.*, 309: 1-8. *Titanogrypa* Townsend, 1917: Lopes, 1956: *Rev. Brasil. Biol.*, 16: 207-208. *Udamopyga* Hall, 1938: Lopes, 1940: *Rev. Ent.*, 11: 931-954.

Description of the new genera – Bezzisca Lopes, 1975: *Rev. Brasil. Biol.* (1974), 34: 259 (Type-species: *B. angrensis* Lopes, 1975). *Chamayamyia* Lopes, 1969: *Studia entomol.*, 12: 147 (Type-species: *C. pilosa* Lopes, 1969). *Malacophagomyia* Lopes, 1966: *Rev. Brasil. Biol.*, 26: 316 (Type-species: *Sarcophaga filamenta* Dodge, 1963). *Retrocitomyia* Lopes, 1982: *Rev. Brasil. Ent.*, 26: 319 (Type-species: *Sarcophaga retrocita* Hall, 1933). *Sarconeiva* Lopes, 1940: *Rev. Ent.*, 11: 949 (Type-species: *Sarcophaga larvivorax* Lopes, 1935). *Tapacura* Tibana & Lopes, 1985: *Rev. Brasil. Ent.*, 29: 195 (Type-species: *T. mariarum* Tibana & Lopes, 1985).

Description of the new species – Airypel *cryptopyga* (Lopes, 1956): *Rev. Brasil. Biol.*, 16: 208. *Titanogrypa*. *Bezzisca angrensis* Lopes, 1975: *Rev. Brasil. Biol.* (1974), 34: 260. *B. aurescens* Lopes, 1975: *Rev. Brasil. Biol.*, 35: 487. *B. aurifacies* Lopes, 1975: *Rev. Brasil. Biol.* (1974), 34: 263. *B. bicolor* Lopes, 1975: *ibid.*: 263. *B. dodgei* Lopes, 1975: *ibid.*: 266. *B. inaequalis* Lopes, 1975: *ibid.*: 269. *B. limitata* Lopes, 1975: *ibid.*: 264. *B. montana* Lopes, 1975: *ibid.*: 266. *B. succincta* Lopes, 1975: *ibid.*: 265. *B. uruguayensis* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 291. *Chamayamyia minensis* Lopes, 1980: *Rev. Brasil. Biol.*, 40: 5. *C. pilosa* Lopes, 1969: *Studia entomol.*, 12: 147. *Chlorosarcophaga ecuatoriana* Lopes, 1986: *Rev. Brasil. Biol.*, 46: 94. *C. occulta* Lopes, 1986: *Rev. Brasil. Biol.*, 46: 94. *C. peruana* Lopes, 1986: *ibid.*: 93. *Chrysagria alticophaga* Lopes & Achoy, 1986: *ibid.*: 274. *C. andina* Lopes & Achoy, 1986: *ibid.*: 275. *Cuculomyia albuquerquei* Lopes, 1976: *Rev. Brasil. Biol.*, 36: 750. *C. alvarengai* Lopes, 1976: *ibid.*: 752. *C. larvicida* (Lopes, 1935): *Rev. Ent.*, 5: 470. *Sarcophaga*. *C. luculenta* (Lopes, 1938): *Rev. entomol.*, 8: 209. *Sarcophaga*. *Dexosarcophaga dominicensis* Lopes, 1975: *An. Acad. Brasil. Cienc.* (1973), 45: 480. *D. metamasii* Lopes, 1946: *Rev. Brasil. Biol.*, 6: 127. *D. pusilla* Lopes, 1975: *Rev. Brasil. Biol.* (1974), 34: 289. *D. termitaria* (Lopes, 1939): *Boll. Labor. zool. agric. Portici*, 31: 63. *Sarcophaga*. *Farrimyia carvalhoi* Lopes, 1980:

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TRIBE SARCODEXIINI ROBACK, 1954

Lopes (1982a) gave to this taxon a new status and proposed the system of subtribes: *Sarcodexiina* Roback, 1954, *Paraphrissopodina* Rohdendorf, 1967, *Adiscochaetina* Lopes, 1982a: 310, *Helicobiina* Rohdendorf, 1967, *Argoraviniina* Lopes, 1975d: 292 and *Lipoptilocnemina* Rohdendorf & Gregor, 1973.

Revision of the genera – Argoravinia Townsend, 1917: Lopes, 1976: *Rev. Brasil. Biol.*, 36: 693-696. *Helicobia* Coquillett, 1895: Lopes, 1939: *Rev. Ent.*, 10: 497-517. *Lipoptilocnema*

Townsend, 1934: Lopes, 1975: *Rev. Brasil. Biol.*, 35: 55-56. *Pattonella* Enderlein, 1928: Lopes, 1941: *Arq. Zool. S. Paulo*, 2: 365-370. *Peckia* Robineau-Desvoidy, 1830: Lopes, 1958: *An. Acad. Brasil. Cienc.*, 30: 211-243. *Rafaelia* Townsend, 1917: Lopes, 1953: *Rev. Brasil. Biol.*, 13: 225-235.

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Description of the new species – Argoravinia alvarengai Lopes, 1976: *Rev. Brasil. Biol.*, 36: 693. *Encelimyia aurigena* Lopes, 1969: *Studia entomol.*, 12: 149. *E. pelenguensis* Lopes, 1988: *Mem. Inst. Oswaldo Cruz*, 83: 248. *Euboettcheria abrupta* (Lopes, 1955): *Mem. Inst. Oswaldo Cruz* (1954), 52: 85. *Paraphrissopoda*. *E. alvarengai* Lopes & Tibana, 1982: *Mem. Inst. Oswaldo Cruz*, 77: 294. *E. anatina* Lopes, 1953: *Rev. Brasil. Biol.*, 13: 42. *E. dominicana* Lopes, 1982: *Rev. Brasil. Biol.*, 42: 291. *E. epimelia* (Lopes, 1938): *Physis*, 17: 284. *Sarcophaga*. *E. gagnei* Lopes, 1975: *An. Acad. Brasil. Cienc.* (1973), 45: 478. *E. nicasia* Lopes, 1941: *Arq. Zool. S. Paulo*, 2: 375. *E. percussa* (Lopes, 1938): *Mem. Inst. Oswaldo Cruz*, 33: 37. *Sarcophaga*. *E. perlita* Lopes, 1953: *Rev. Brasil. Biol.*, 13: 41. *E. roppai* Lopes & Tibana, 1982: *Mem. Inst. Oswaldo Cruz*, 77: 294. *E. subducta* (Lopes, 1935): *Rev. Ent.*, 5: 41. *Sarcophaga*. *E. trejosi* (Lopes, 1955): *Mem. Inst. Oswaldo Cruz* (1954), 52: 83. *Paraphrissopoda*. *Helicobia borgmeieri* Lopes, 1939: *Rev. Ent.*, 10: 510. *H. iheringi* Lopes, 1939: *ibid.*: 513. *H. neglecta* Lopes, 1936: *Mem. Inst. Oswaldo Cruz*, 44: 127. *H. pilifera* Lopes, 1939: *Rev. Ent.*, 10: 508. *H. pilipleura* Lopes, 1939: *ibid.*: 514. *H. setinervis* Lopes, 1939: *ibid.*: 515. *Helicobiomima chapadensis* Lopes & Tibana, 1985: *Rev. Brasil. Ent.*, 29: 193. *Lipoptilocnema crispina* (Lopes, 1938): *Livro Jubilar Prof. L. Travassos*, RJ: 82, *Sarcophaga*. *L. crispula* (Lopes, 1938): *ibid.*: 281, *Sarcophaga*. *L. misella* (Lopes, 1938): *Mem.*

Inst. Oswaldo Cruz, 33: 335, *Sarcophaga*.
L. salobrensis Lopes, 1942: *Rev. Ent.*, 13: 301.
Paraphrissopoda ecuatoriana Lopes, 1958: *An. Acad. Brasil. Cienc.*, 30: 223. *P. hutzi* Lopes, 1958: *ibid.*: 224. *P. nephele* Lopes, 1941: *Arq. Zool. S. Paulo*, 2: 272. *Pattonella resonata* (Lopes, 1935): *Rev. Ent.*, 5: 320, *Sarcophaga*.
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T. pilipes Lopes, 1976: *Studia entomol.*, 19: 506.

TRIBE SARCOPHAGINI MACQUART, 1835

Prof. Lopes (1982a) strongly limited the composition of this tribe, which permits me to define more accurately the subtribal and generic taxons of Sarcophagini (Verves, 1987, 1989a,b). The results are given as a subtribal key.

KEY OF THE SUBTRIBES OF SARCOPHAGINI MCQ.

1. Ventralia membranous, bordershaped, or not paired, digitated, awl- and protuberanceshaped. 2
- Ventralia well sclerotized, strongly protruding 7
2. Dorsal clawshaped processes of paraphallus (= corpus) well developed. Ventralia short, bordershaped, occasionally with distal protuberance; lateral plates absent, apical plate without processes, membranous or spined. 6th tergite of female abdomen bilobed, other tergites absent.
 . . *Helicophagellina* Lopes et al., 1977: 576
- Dorsal processes of paraphallus absent, if present, then ventralia awlshaped. 6th tergite of female abdomen in order entire; as a rule the membranous remains of 7th and 8th tergites presented. 3
3. Hind angle of epandrium elongate. Lateral plates well developed, rostrumshaped or lobeshaped.
 . . . *Heteronychiina* Rohdendorf, 1965
- Hind angle of epandrium short. Lateral plates others or absent 4
4. Lateral plates very elongate, well sclerotized, multipointed, asymmetrical. Frons of male wider than head. Body colour very light *Leucomyiina* Rohdendorf, 1965
- Lateral plates symmetrical or absent. Frons of male narrow, body colour more dark. . 5
5. Styli long and wide, apically funnelshaped widened. Apical plate strongly reduced, membranous. Lateral plates absent
 *Kozloveina* Verves, 1989
- Styli long and thin, occasionally slightly widened at apex. Apical plate well developed. Lateral plates usually present . . . 6
6. Apical plate short, bilobed, in the shape of dorsal hooks.
 *Erwinlindneriina* Rohdendorf, 1967
- Apical plate elongate, not curved dorsally
 *Phytosarcophaginas* Verves, 1989
7. Apical plate membranous, without processes 8
- Apical plate well sclerotized, if membranous, then with elongate lateral processes or spinous 10
8. Styli widened, at apex usually funnelshaped. Lateral plates bristleshaped, ventralia widened, well sclerotized, placed in the apex of paraphallus.
 *Sarcophagina* Macquart, 1835
- Styli normally bristleshaped, if widened, then lateral plates absent. Ventralia placed ventrally 9
9. Base of wing light-yellow, abdomen entirely shining black or with black spots at the tergites, without checkered pattern. Ventralia well sclerotized, rostrumshaped or multipointed
 *Xanthopteriscina* Rohdendorf, 1967
- Base of wing hyaline or slightly fuscous. Abdomen covered by checkered pattern. Ventralia otherwise constructed
 *Harpagophallina* Rohdendorf, 1965
10. 3-4 pairs of postsutural dorsocentrals of relatively equal size 11
- 4-7 pairs of postsutural dorsocentrals, the fore of them strongly shorter than hind. 14
11. Ventralia widened and elongated, considerably longer than apical plate, projected apically. Paraphallus (= corpus) very small, shorter than apical plate. Lateral plates absent *Boettcheriina* Roback, 1954
- Ventralia considerably shorter than apical plate, paraphallus not shorter than apical plate or longer it 12
12. Epiphallus (= spinus titillatorius) well developed, elongated. The tip of ventralia directed to the basis of aedeagus, ventralia

- feather-like serrated. Cerci usually with a tuft of long flattened bristles at base
 . . . *Metoposarcophagina* Rohdendorf, 1967
- Epiphallus reduced; ventralia other constructed; cerci without a tuft of basal bristles 13
13. Between paraphallus and placed ventrally apical plate the long membranous distance is presented, distiphallus strongly asymmetrical
 *Seniorwhiteina* Rohdendorf, 1965
- Apical plate borders upon paraphallus, distiphallus symmetrical
 *Phallanthina* Rohdendorf, 1965
14. Styli elongate and narrow, occasionally shortened or covered by membranous "envelope" (genus *Liopygia* Enderlein, 1928)
 *Parasarcophagina* Rohdendorf, 1965
- Styli widened, complicated, often spinous or with processes
 *Boettcheriscina* Verves, subtr. nov.

A review of the Prof. Lopes's revisions and descriptions of sarcophagid taxons and a description of *Boettcheriscina* are placed below.

SUBTRIBE HARPAGOPHALLINA ROHDENDORF, 1965

Revision of the genus — *Harpagophalla* Rohdendorf, 1937: Lopes & Kano, 1981: *Rev. Brasil. Biol.*, 41: 645-647.

Description of a genus and a species — *Mindanaoa* Lopes & Kano, 1979: *Rev. Brasil. Biol.*, 39: 483 with the type-species *M. villipes* Lopes & Kano, 1979: *ibid.*: 483.

SUBTRIBE BOETTCHERIINA ROBACK, 1954

Revision of the genus — *Boettcheria* Parker, 1914: Lopes, 1950: *Mem. Inst. Oswaldo Cruz*, 48: 687-730.

Description of a new genus — *Boettcheriodes* Lopes, 1988: *Rev. Brasil. Biol.*, 48: 920 (Type-species: *B. petersoni* Lopes, 1988).

Description of the new species — *Boettcheria arnaudi* Lopes, 1950: *Mem. Inst. Oswaldo Cruz*, 48: 692. *B. aurifera* Lopes, 1950: *ibid.*: 690. *B. cubana* Lopes, 1950: *ibid.*: 697. *B. elegans* Lopes, 1975: *An. Acad. Brasil. Cienc.* (1973), 45: 484. *B. mexicana* Lopes, 1950: *Mem. Inst. Oswaldo Cruz*, 48: 702. *B. parkeriana* Lopes,

1976: *Rev. Brasil. Biol.*, 36: 74. *B. peruviana* Lopes, 1950: *Mem. Inst. Oswaldo Cruz*, 48: 691. *B. retroversa* (Lopes, 1935): *Rev. Ent.*, 5: 44, *Sarcophaga*. *B. similis* Lopes, 1946: *Mem. Inst. Oswaldo Cruz*, 44: 126. *Boettcheriodes petersoni* Lopes, 1988: *Rev. Brasil. Biol.*, 48: 920.

SUBTRIBE METOPOSARCOPHAGINA ROHDENDORF, 1967

Redescription of the species — *Sarcodexiopsis biseriata* (Aldrich, 1916): Neck & Lopes, 1973: *Rev. Brasil. Biol.*, 33: 187. *Tripanurga albicans* (Wiedemann, 1830): Lopes, 1978: *Canad. Entomol.*, 110: 1141.

SUBTRIBE SENIORWHITEINA ROHDENDORF, 1965

Revision of the genus — *Seniorwhitea* Rohdendorf, 1937: Lopes, 1964: *Mem. Inst. Oswaldo Cruz*, 62: 161-168.

SUBTRIBE PHALLANTHINA ROHDENDORF, 1965 (= PIERRETIINA VERVES, 1987)

The greatest part of the taxa from subtribe "Bellieriina Rohdendorf, 1965" (*Helicophagellina* Lopes et al., exceptly nominative genus, and partly *Pierretiina* Verves) belongs to this subtribe. The combinations of generic and specific names are adapted according to my system for this subtribe (in press).

Revision of the genera and subgenera — *Arachnidomyia* Townsend, 1934: Lopes, 1981: *Rev. Brasil. Ent.*, 25: 307-310. *Malacophagula* Bequaert, 1925: Lopes, 1968: *Studia entomol.*, 12: 138-139 (I place this taxon as a subgenus in *Microplagia* Townsend, 1915). *Microplagia* Townsend, 1915 (*s. str.*): Lopes, 1979: *Canad. Entomol.*, 111: 156-157. *Pseudothyrsocnema* Rohdendorf, 1937: Shinonaga & Lopes, 1975: *Pacif. Insects*, 16: 455-463. *Tolucamyia* Dodge, 1965: Lopes, 1976: *Rev. Brasil. Biol.*, 36: 84-86.

Description of the new genera and subgenera — *Fijimyia* Lopes & Kano, 1971: *Pacif. insects*, 13: 603 (Type-species: *Sarcophaga tephrrura* Bezzi, 1927). *Johnsonimima* Kano & Lopes, 1971: *Pacif. insects*, 13: 597 (Type-species: *J. bivittata* Kano & Lopes, 1971). *Weyrauchiomyia* Lopes, 1969: *Studia entomol.*, 12: 133 (Type-species: *W. peruviana* Lopes, 1969) (I place this taxon in *Microplagia* Town.).

Description of the new species – Arachnidomyia guyanensis Lopes, 1946: *Rev. Brasil. Biol.*, 6: 125. *A. insularis* Lopes, 1946: *ibid.*: 123. *A. silbergliedi* Lopes, 1981: *Rev. Brasil. Ent.*, 25: 308. *Bellieriomima simplex* (Lopes, 1967): *Entomol. Med.*, 35: 145, *Heteronychia* (comb. nov.). *Johnsonimima aurescens* Kano & Lopes, 1971: *Pacif. insects*, 13: 600. *J. bivittata* Kano & Lopes, 1971: *ibid.*: 598. *Microplagia (Weyrauchimyia) andina* (Lopes & Tibana, 1982): *Rev. Brasil. Biol.*, 42: 141, *Weyrauchimyia* (comb. nov.). *M. (W.) bicoloricaudas* (Lopes, 1969): *Studia entomol.*, 12: 136, *Weyrauchimyia* (comb. nov.). *M. (W.) peruviana* (Lopes, 1969): *ibid.*: 136, *Weyrauchimyia* (comb. nov.). *M. (W.) ruficauda* (Lopes & Tibana, 1982): *Rev. Brasil. Biol.*, 42: 142, *Weyrauchimyia* (comb. nov.). *M. (W.) schlingeri* (Lopes, 1988): *Rev. Brasil. Biol.*, 48: 135, *Weyrauchimyia* (comb. nov.). *Pseudothrysocnema borneensis* Shinonaga & Lopes, 1975: *Pacif. insects*, 16: 463. *P. indica* Shinonaga & Lopes, 1975: *ibid.*: 459. *P. longistylata* Shinonaga & Lopes, 1975: *ibid.*: 459.

SUBTRIBE PARASARCOPHAGINA ROHDENDORF, 1965

Revision of the genera and subgenera – Phalacrodiscus Enderlein, 1928: Kano & Lopes, 1970: *Rev. Brasil. Biol.*, 30: 315. *Sarcorhendorfia* Baranov, 1938: Lopes, 1954; Lopes & Kano, 1979: *Rev. Brasil. Biol.*, 39: 657-670; Kano & Lopes, 1979: *ibid.*: 615-625. *Sarcosolomonia* Baranov, 1930: Lopes & Kano, 1969: 181-185.

Description of the new genera and subgenera – Baranovisca Lopes, 1985: *Austral. entomol. Mag.*, 12: 51 (Type-species: *B. arachnivora* Lopes, 1985) (I placed this taxon in genus *Parasarcophaga* Johnston & Tiegs, 1921 as a subgenus). *Hardyella* Lopes, 1959: 38 (Type-species: *Sarcophaga littoralis* Johnston & Tiegs, 1921). *Parkerimyia* Lopes & Kano, 1969: 181 (as subgenus of *Sarcosolomonia* Bar.) (Type-species: *Sarcophaga crinita* Parker, 1917). *Taylorimyia* Lopes, 1959: 47 (Type-species: *Sarcophaga iota* Johnston & Tiegs, 1921).

Description of the new species – Liosarcophaga (s. str.) juncta (Lopes, 1967): 173, *Parasarcophaga (Liosarcophaga)* (comb. nov.). *L. (s. str.) promiscua* (Lopes, 1967): 171, *Parasarcophaga (Liosarcophaga)* (comb. nov.). *Parasarcophaga (Baranovisca) arachnivora* (Lopes,

1985b): 51, *Baranovisca* (comb. nov.). *P. (B.) insularis* Lopes, 1967: 168, *Parasarcophaga (Pandelleisca)*. *P. (B.) fatua* (Lopes, 1967): 147, *Johnsonimyia* (comb. nov.). *P. (B.) loren-gauensis* Lopes, 1967: 166, *Parasarcophaga (Pandelleisca)*. *P. (B.) praelibera* (Lopes, 1959): 64, *Rosellea* (comb. nov.). *P. (B.) reposita* (Lopes, 1959): 65, *Rosellea* (comb. nov.). *Neobellieria offecta* (Lopes, 1938): *Mem. Inst. Oswaldo Cruz*, 33: 342, *Sarcophaga*. *Sarcorhendorfia aureifacies* (Lopes, 1967): 161, *Tricholioproctia*. *S. bidentata* (Lopes, 1953b): 21, *Tricholioproctia*. *S. darwiniana* Kano & Lopes, 1979: *Rev. Brasil. Biol.*, 39: 616. *S. emuensis* Lopes & Kano, 1979: *ibid.*: 661. *S. longestylata* (Lopes, 1967): 160, *Tricholioproctia*. *S. nigriventris* (Lopes, 1967): 164, *Tricholioproctia*. *S. separata* (Lopes, 1967): 163, *Tricholioproctia*. *S. spinigera* (Lopes, 1953b): 23, *Tricholioproctia*. *S. variabilis* (Lopes, 1958b): 34, *Tricholioproctia*. *Sarcosolomonia (Parkerimyia) fabea* (Lopes, 1959): 46, *Bezziola*. *S. (P.) nathani* Lopes & Kano, 1969: *Pacif. insects*, 11: 184. *S. (s. str.) baranovi* (Lopes, 1967): 154, *Bezziola*. *S. (s. str.) carolinensis* (Lopes, 1958b): 26, *Bezziola*. *S. (s. str.) confusa* (Lopes, 1967): *Entomol. Med.*, 35: 157, *Bezziola*. *S. (s. str.) occulta* Lopes & Kano, 1969: *Pacif. insects*, 11: 184. *S. (s. str.) setifacies* (Lopes, 1967): 152, *Bezziola*. *S. (s. str.) spinifera* Lopes & Kano, 1969: *Pacif. insects*, 11: 181. *S. (s. str.) sumunensis* (Lopes, 1967): 156, *Bezziola*. *S. (s. str.) versatilis* (Lopes, 1959): 45, *Bezziola*.

SUBTRIBE BOETTCHERISCINA VERVES, SUBTR. NOV.

Boettcheriscina is closely related to *Parasarcophagina* by these synapomorphic features: 3rd joint of antennae elongate, postsutural dorsocentrals multiplied, ventralia and apical plate well developed. The specific autapomorphies of *Boettcheriscina* is the widened styli with different processes or spinous. Ventralia and lateral plates often spinous too. 13 genera and about 50 species of this subtribe distribute in the Old World, Oceania, Australia and Nearctica. The larvae schizophagous, can be the facultative parasites or predators of different invertebrate and vertebrate animals. Some species are hemisynthropic. The differences among genera and subgenera, including the short characters of the new genera, are presented as a key.

KEY OF THE GENERA AND SUBGENERA OF
BOETTCHERISCINA (MALE ONLY)

1. 5th sternite of abdomen with ventral process 2
- 5th sternite without process 3
2. Process of 5th sternite digitate. Styli spinous. Lateral plates without apical processes *Phallosphaera* Rohd.
- Process of 5th sternite conic. Styli without spines. Lateral plates with elongate apical processes *Rosellea* Rohd.
3. Antennae, palpi and legs red. Styli spinous, with elongate processes of their basal part (parastyli). Lateral plates without apical processes *Robackina* Lopes
- Antennae, palpi and legs black 4
4. Abdomen with black spots and bands, wings with 3 black spots. Apical part of cerci narrow and pointed. Apical plate widened, bilobed, without lateral processes *Mufindia*, gen. nov.
- Abdomen and wings without black spots 5
5. Apical plate partly reduced, more shorter than elongate spinous styli 6
- Apical plate well developed, so long or longer than styli 7
6. Apical processes of lateral plates elongate and narrow, hookliked, parastyli present and curved dorsally *Sclerophalla* Rohd.
- Apical processes of lateral plates poor developed or absent, parastyli absent *Johnstonimyia* Lopes
7. Lateral processes of apical plate elongate and narrow, bristleshaped 8
- Lateral processes of apical plate short, widened or poor developed 9
8. Ventralia petiolate, trilobed. Pregonites bifurcated. Apical processes of lateral plates elongate, narrow, in the middle strongly curved, at the tip with a pair of digitate appendages. Apical part of cerci s-shaped curved, with dorsal ctenidium of spines *Sabiella*, gen. nov.
- Ventralia elongated, entire. Pregonites hookshaped. Apical processes of lateral plates foliaceous, with short spine at the tip. Apical part of cerci straight, without spines *Ziminisca* Rohd.
9. Cerci short and widened, spinous. Propleura haired. Distiphallus short and widened. Styli, ventralias and lateral plates spinous *Kramerea* Rohd.
- Cerci with another shape. Propleura haired or bare 10
10. Styli short, parastyli well developed, skittleshaped. 4th sternites of abdomen with long hairs. Apical processes of lateral plates well developed. Propleura bare *Takanoa* Rohd.
- Styli elongate, if shortened, then parastyli absent. 4th abdominal sternite shortly haired 11
11. Apical plate without spines, cerci spinous in apical part. Apical processes of lateral plates well developed, ventralia widened and short, with numerous spines. Propleura usually haired *Boettcherisca* Rohd.
- Apical plate with numerous spines. Apical processes badly developed or absent, ventralia without spines 12
12. Ventralia paired, petiolate, in apical part elongate and widened. Cerci with a tuft of short spines at subapical dorsal protuberance. Propleura bare. Abdomen without checkering pattern, with golden pollinosity and longitudinal dark stripe at tergites *Chrysosarcophaga* Town.
- Ventralia not petiolate. Cerci without spines. Propleura usually haired, occasionally bare. Abdomen with checkering pattern *Lioproctia* End.
- a. Genae entirely white haired. Apical processes of lateral plates absent, ventralia well sclerotized, multipointed. Propleura sometimes bare s/g *Burmanomyia* Fan
- Genae in fore parts black haired. Apical processes present, ventralia bipointed. Propleura haired b
- b. Apical plate longer than short styli. Medial process elongate, with spinuses at the tip. Head with golden pollinosity, parafacials with a row of short setae s/g *Lioproctia* s. str.
- Apical plate so long as styli. Medial process very short. Head with white or silver pollinosity, parafacials without row of setae, with irregular hairs s/g *Coonoria* Fan

The taxa of this subtribe are presented as a list below. The genera and species, described by Prof. Lopes, are underlined. In the list of species the data on geographical distribution are presented too (abbreviations of zoogeographical regions — Pa: Palaearctic; H: Holarctic; Ne: Nearctic; Or: Oriental; Oc: Oceanic; Au: Australian; Ae: Afrotropical; Md: Madagascan).

Genus *Boettcherisca* Rohdendorf, 1937
(Type-species: *Myophora peregrina* Robineau-

Desvoidy, 1830). References: Lopes, 1961: *Mem. Inst. Oswaldo Cruz*, 59: 71-82. Kano & Sugiyama, 1983; Kurahashi & Kano, 1984. Species: *B. cabrerai* Kano & Sugiyama, 1983 – Or. *B. dumoga* (Sugiyama & Kurahashi, 1988) (comb. nov.) – Or. *B. formosensis* Kirner & Lopes, 1961: *Mem. Inst. Oswaldo Cruz*, 59: 65 – Pa, Or. *B. invaria* (Walker, 1859) – Au. *B. javanica* Lopes, 1961: *Mem. Inst. Oswaldo Cruz*, 59: 79 – Or. *B. karnyi* (Hardy, 1927) – Or, Oc. *B. koimani* Kano & Shinonaga, 1977 – Or. *B. nathani* Lopes, 1961: *Mem. Inst. Oswaldo Cruz*, 59: 79 – Or. *B. nepalensis* Kano & Sugiyama, 1983 – Or. *B. peregrina* (R.-D.) – Pa, Or, Oc, Au, Md. *B. septentrionalis* Rohdendorf, 1937 – Pa. *B. timorensis* Kano & Shinonaga, 1977 – Or.

Genus *Chrysosarcophaga* Townsend, 1932 (Type-species: *C. superba* Townsend, 1932). Reference: Lopes & Kano, 1978: *Pacif. insects*, 18: 223-226. Species: *C. superba* – Au.

Genus *Johnstonomyia* Lopes, 1959: 48 (Type-species: *Sarcophaga kappa* Johnston & Tiegs, 1921). Reference: Kano & Lopes, 1981: *Rev. Brasil. Biol.*, 41: 295-297. Species: *Gressitti* Kano & Lopes, 1981: *Rev. Brasil. Biol.*, 41: 2: 297 – Au. *J. kappa* (J. T.) – Au. *J. lincta* Lopes, 1959: 52 – Au. *J. multicolor* (Johnston & Tiegs, 1922) – Au. *J. notabilis* (Kano & Lopes, 1969b): 521 – Or. *J. taiwanensis* (Kano & Lopes, 1969b): 522 – Or.

Genus *Kramerea* Rohdendorf, 1937 (Type-species: *Sarcophaga schuetzei* Kramer, 1909). Species: *K. schuetzei* (Kr.) – Pa.

Genus *Lioproctia* Enderlein, 1928s (Type-species: *L. aurifrons* Enderlein, 1928). References: Kano & Lopes, 1970: *Rev. Brasil. Biol.*, 30: 313.

Subgenus *Burmanomyia* Fan, 1964 (Type-species: *Sarcophaga beesoni* Senior-White, 1924). Species: *L. (B.) alcicornis* (Hardy, 1932) – Au. *L. (B.) beesoni* (S.-W.) – Pa, Or. *L. (B.) compta* (Walker, 1859) – Au.

Subgenus *Coonorria* Fan, 1964 (Type-species: *Sarcophaga pattoni* Senior-White, 1924). Species: *L. (C.) pattoni* (S.-W.) – Or.

Subgenus *Lioproctia* s. str. Species: *L. (s. str.) aurescens* (Lopes, 1967): 148, *Johnstonomyia* – Au. *L. (s. str.) enderleini* Kano & Lo-

pes, 1970: 313 (New name for *L. aurifrons* Enderlein, 1928) – Au. *L. (s. str.) imitatrix* (Lopes, 1959): 56, *Johnstonomyia* – Au. *L. (s. str.) spinifera* (Hardy, 1932) – Au. *L. (s. str.) torvida* (Lopes, 1959): 54, *Johnstonomyia* – Au.

Genus *Mufindia* Verves, gen. nov. (Type-species: *Sarcophaga tanzaniae* Zumpt, 1972). Species: *M. tanzaniae* (Zumpt) (comb. nov.) – Ae.

Genus *Phallophaera* Rohdendorf, 1938 (Type-species: *P. konakovi* Rohdendorf, 1938). Reference: Kano & Lopes, 1981: *Rev. Brasil. Biol.*, 41: 375-378. Species: *P. amica* – Ma, 1964 – Pa. *P. gravelyi* (Senior-White, 1924) – Pa, Or. *P. konakovi* Rohd. – Pa. *P. kurahashii* Shinonaga & Tumrasvin, 1979 – Or. *P. metzgeri* Kano & Shinonaga, 1964 – Pa.

Genus *Robackina* Lopes, 1975: *Rev. Brasil. Biol.*, 35: 159 (Type-species: *Sarcophaga triplasia* v. d. Wulp, 1896). Species: *R. triplasia* (v. d. Wulp) – Ne.

Genus *Rosellea* Rohdendorf, 1937 (Type-species: *Sarcophaga aratrix* Pandellé, 1896). Species: *R. aratrix* (Pand.) – H. *R. czernyi* (Böttcher, 1912) – Pa. *R. gigas* (Thomas, 1949) – Pa. *R. khasiensis* (Senior-White, 1924) – Or. *R. paularnaudi* (Lehrer, 1981) – Pa. *R. spinipenis* (Shinonaga & Tumrasvin, 1979) – Or.

Genus *Sabiella* Verves, gen. nov. (Type-species: *Sarcophaga freyi* Zumpt, 1953). Species: *S. freyi* (Zumpt) (comb. nov.) – Ae.

Genus *Sclerophalla* Rohdendorf, 1963 (Type-species: *Sarcophaga santosiasi* Zumpt, 1951). Species: *S. santosiasi* (Zumpt) – Ae.

Genus *Takanoa* Rohdendorf, 1965 (Type-species: *Sarcophaga hakusana* Hori, 1954). Species: *T. hakusana* (Hori) – Pa. *T. rugosa* Rohdendorf, 1969 (= *T. kolomyitzi* Artamonov, 1980, syn. nov.) – Pa.

Genus *Ziminisca* Rohdendorf, 1965 (Type-species: *Sarcophaga semenovi* Rohdendorf, 1925). Species: *Z. semenovi* (Rohd.) (comb. nov.) – Pa.

SUBFAMILY PARAMACRONYCHIINAE
BRAUER & BERGENSTAMM, 1889

Prof. Lopes studied the morphology of some genera, which systematic position has been little known: *Chrysogramma* Rohd. and *Sarcotachina* Port. (Lopes, 1981: *Rev. Brasil. Biol.*, 41: 205-209), *Eumacronychia* Town. (Lopes, 1982: *Rev. Brasil. Biol.*, 42: 425-429), *Galapagomyia* Bischof (Lopes, 1978: *Rev. Brasil. Biol.*, 38: 598-599), *Cattasoma* Reinhard (Lopes, 1982a: 297-300). This data help me during the work on the system of Paramacronychiinae (in press).

Description of the new species – Goniophyto bryani Lopes, 1938: *Occas. papers B. P. Bishop Mus.*, 14: 195. *G. boninensis* Lopes, 1958b: 19. *Cattasoma mcalpinei* Lopes, 1988: *Mem. Inst. Oswaldo Cruz*, 83: 240.

Prof. Lopes has collaborated in study of Sarcophagidae with different scientists (D. O. Albuquerque, W. Downs, S. Shinonaga, E. Vogelgang, etc). The particularly resultative collaboration in the study of Sarcophagidae from Australia, Oceania and Oriental region is between Prof. Lopes and notable Japanese dipterologist Prof. R. Kano. They published more than 20 team-works and described many new taxa. Prof. Lopes has educated several students, who studied Sarcophagidae conducted by him (R. M. Achoy, M. T. Alves, A. C. R. Leite, R. Tibana). I put down Prof. Lopes as my teacher on a level with Prof. Rohdendorf. The scientific conceptions of them are the foundation of my taxonomic work. Dr Lopes sent me a lot of Neotropical species of Sarcophagidae, especially specimens of *Macronychia* Rd., which permitted me to revise the American species of this genus (Verves, 1983).

Finally I congratulate Prof. Lopes upon his birthday and wish him health, happiness and new successes in study of Diptera.

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