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ANNOTATED CATALOGUE OF THE TACHINIDAE (INSECTA: DIPTERA) OF CHINA

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ABSTRACT

The Tachinidae of mainland China and Taiwan (generally referred to as China herein for brevity) are catalogued. A total of 1109 valid species are recorded of which 403 species (36%) are recorded as endemic. Distributions within China are given according to the 33 administrative divisions of the country, and distributions outside China are given according to a scheme of geographical divisions developed for this catalogue and most finely divided for the Palearctic and Oriental Regions. The catalogue is based on examination of the primary literature comprising about 670 references and also includes a small number of records based on unpublished data from specimens examined in collections. Taxa are arranged hierarchically under the categories of subfamily, tribe, genus, subgenus (where recognized), and species. Nomenclatural details are provided for nominal genera and species. This includes synonyms at both levels for taxa described or recorded from China. For valid species, distributions are provided along with complete name-bearing type data for associated names. Additional information is given in the form of notes, numbering more than 300 in the catalogue section and about 50 in the references section. Six genera are newly recorded from China: *Calliethilla* Shima (Ethillini), *Chetoptilia* Rondani (Dufouriini), *Demoticoides* Mesnil (Leskiini), *Pseudalsomyia* Mesnil (Goniini), *Redtenbacheria* Schiner (Eutherini), and *Rutilia* Robineau-Desvoidy (Rutiliini). Fourteen species are newly recorded from China: *Actia solida* Tachi & Shima, *Atylostoma towadensis* (Matsumura), *Chetoptilia burmanica* (Baranov), *Demoticoides pallidus* Mesnil, *Dexiosoma lineatum* Mesnil, *Feriola longicornis* Mesnil, *Frontina femorata* Shima, *Phebellia laxifrons* Shima, *Prodegeeria gracilis* Shima, *Prooppia stulta* (Zetterstedt), *Redtenbacheria insignis* Egger, *Sumpigaster subcompressa* (Walker), *Takanomyia frontalis* Shima, and *Takanomyia rava* Shima. Two genera and 23 species are recorded as misidentified from China. New names are proposed for three preoccupied names: *Pseudodexilla* O'Hara, Shima & Zhang, *nomen novum* for *Pseudodexia* Chao, 2002; *Admontia longicornalis* O'Hara, Shima & Zhang, *nomen novum* for *Admontia longicornis* Yang & Chao, 1990; and *Erythroceria neolongicornis* O'Hara, Shima & Zhang, *nomen novum* for *Pexopsis longicornis* Sun & Chao, 1993. New type species fixations are made under the provisions of Article 70.3.2 of ICZN (1999) for 13 generic names: *Chetoliga* Rondani, *Discochaeta* Brauer & Bergenstamm, *Erycina* Mesnil, *Eurigaster* Macquart, *Microvibrissina* Villeneuve, *Oodigaster* Macquart, *Plagiopsis* Brauer & Bergenstamm, *Prooppia* Townsend, *Ptilopsina* Villeneuve, *Ptilotachina* Brauer & Bergenstamm, *Rhinotachina* Brauer & Bergenstamm, *Schaumia* Robineau-Desvoidy, and *Setigena* Brauer & Bergenstamm. Subgenus *Tachina* (*Servillia* Robineau-Desvoidy) is reduced to a synonym of subgenus *Tachina* (*Tachina* Meigen). The valid names of two species are reduced to *nomina nuda* and replaced by other available names with new status as valid names: *Siphona* (*Aphantorhaphopsis*) *perispoliata* (Mesnil) replaces *S. (A.) mallochiana* (Gardner), and *Zenillia terrosa* Mesnil replaces *Z. grisellina* (Gardner). The following 12 new combinations are proposed: *Carcelina shangfangshanica* (Chao & Liang), *Drino* (*Drino*) *interfrons* (Sun & Chao), *Drino* (*Zygobothria*) *hirtmacula* (Liang & Chao), *Erythroceria longicornis* (Sun & Chao) (a preoccupied name and replaced with *Erythroceria neolongicornis* O'Hara, Shima & Zhang, *nomen novum*), *Isosturmia aureipollinosa* (Chao & Zhou), *Isosturmia setamacula* (Chao & Liang), *Isosturmia setula* (Liang & Chao), *Paratrixa flava* (Shi), *Phryno jilinensis* (Sun), *Phryno tibialis* (Sun), *Prosopodopsis ruficornis* (Chao), and *Takanomyia parafacialis* (Sun & Chao). The following 19 new synonymies are proposed: *Atylomyia chinensis* Zhang & Ge with *Tachina parallela* Meigen (current name *Bessa parallela*), *Atylomyia minutiungula* Zhang & Wang with *Ptychomyia remota* Aldrich (current name *Bessa remota*), *Carcelia* (*Carcelia*) *hainanensis* Chao & Liang with *Carcelia rasoides* Baranov, *Carcelia frontalis* Baranov with *Carcelia caudata* Baranov, *Carcelia hirtspila* Chao & Shi with *Carcelia* (*Parexorista*) *delicatula* Mesnil (current name *Carcelia* (*Euryclea*) *delicatula*), *Carcelia septima* Baranov with *Carcelia octava* Baranov, *Carcelia* (*Senometopia*) *dominantis* Chao & Liang with *Carcelia quarta* Baranov (current name *Senometopia quarta*), *Carcelia* (*Senometopia*) *maculata* Chao & Liang with *Carcelia octava* Baranov, *Drino hersei* Liang & Chao with *Sturmia atropivora* Robineau-Desvoidy (current name *Drino* (*Zygobothria*) *atropivora*), *Eucarcelia nudicauda* Mesnil with *Carcelia octava* Baranov, *Isopexopsis* Sun & Chao with *Takanomyia* Mesnil, *Mikia nigribasicosta* Chao & Zhou with

Bombyliomyia apicalis Matsumura (current name *Mikia apicalis*), *Parasetigena jilinensis* Chao & Mao with *Phorocera* (*Parasetigena*) *agilis takaoi* Mesnil (current name *Parasetigena takaoi*), *Phebellia latisurstyla* Chao & Chen with *Phebellia latipalpis* Shima (current name *Prooppia latipalpis*), *Servillia linabdomenalis* Chao with *Servillia cheni* Chao (current name *Tachina* (*Tachina*) *cheni*), *Servillia planiforceps* Chao with *Tachina sobria* Walker, *Spiniabdomina* Shi with *Paratrixa* Brauer & Bergenstamm, *Tachina kunmingensis* Chao & Arnaud with *Tachina sobria* Walker, and *Thecocarcelia tianpingensis* Sun & Chao with *Drino* (*Isosturmia*) *chatterjeeana japonica* Mesnil (current name *Isosturmia japonica*). *Musca libatrix* Panzer is a *nomen protectum* and *Musca libatrix* Scopoli and *Musca libatrix* Geoffroy are *nomina oblita*. Similarly, *Redtenbacheria insignis* Egger is a *nomen protectum* and *Redtenbacheria spectabilis* Schiner is a *nomen oblitum*. Lectotypes are designated for the following 12 nominal species based on name-bearing type material in CNC: *Akosempomyia caudata* Villeneuve, *Blepharipoda schineri* Mesnil, *Carcelia puberula* Mesnil, *Comptosia phoenix* Villeneuve, *Ectophasia antennata* Villeneuve, *Gymnosoma brevicorne* Villeneuve, *Kosempomyia tibialis* Villeneuve, *Phasia pusilla* Meigen, *Tachina fallax pseudofallax* Villeneuve, *Tachina chaoi* Mesnil, *Wagneria umbrinervis* Villeneuve, and *Zambesa claripalpis* Villeneuve.

INTRODUCTION

China is an expansive country of 9.6 million square kilometers in eastern Asia. It is a land of physical and ecological extremes: southern subtropical and tropical forests, richly diverse southwestern mountains, towering Himalayas, harsh and inhospitable Tibetan Plateau, western Tien Shan range, dry Taklimakan and Goli Deserts, northeastern temperate broadleaf and coniferous forests, and eastern fertile plains and lesser mountains. Along its southern and western borders are portions of four of the world's 34 "biodiversity hotspots", places recognized by Conservation International for their high endemism and threatened habitat. These are the Indo-Burma hotspot, Mountains of Southwest China hotspot (particularly Hengduan Shan), Himalaya hotspot, and Mountains of Central Asia hotspot (represented in China by Tien Shan) (<http://www.biodiversityhotspots.org>). These biodiversity hotspots, and other biodiverse places in China, have given rise to an endemic fauna and flora of significant size. In the plant world, for example, the Hengduan Shan is known as the hotbed of *Rhododendron* evolution with about 230 species. Among the vertebrates are such Chinese endemics as the giant panda (*Ailuropoda melanoleuca*), golden monkeys (*Rhinopithecus* spp.), baiji (*Lipotes vexillifer*), and brown eared pheasant (*Crossoptilon mantchuricum*). Less conspicuous, but many times more numerous in species, are the endemic invertebrates that have evolved within present-day China.

Biogeographically, China is unique among the countries of the world in lying at the crossroads of the Palaearctic and Oriental Regions. Hence, for most groups of organisms, the species of China consist of a combination of Palaearctic, Oriental, and endemic elements. This is true also of the Tachinidae of China.

The Tachinidae are one of the largest families of Diptera with almost 10,000 described species and many thousands of undescribed species (Stireman *et al.* 2006). The family is correspondingly diverse in China, but because the Chinese tachinid fauna is still in a period of discovery and study, it must be significantly larger than the numbers given here might suggest. We record 1109 species and 257 genera of Tachinidae from mainland China and Taiwan, the former number representing about 11% of the world's described tachinid species. From mainland China we record 1040 species, which compares to 754 and 832 species recorded from the same area by Chao *et al.* (1998) and Hua (2006), respectively. Our higher number is partly a reflection of species described from China since those works, or described from elsewhere and recently recognized from China, but a significant number of species were presumably overlooked by Chao *et al.* (1998) and Hua (2006) in the voluminous literature that exists on Chinese insects. The Chinese tachinid fauna has very few endemic genera and none of significant size, but has 403 species recorded as endemic to China plus Taiwan. This represents 36% of the total tachinid fauna. We record 343 species as endemic to mainland China and 32 species as endemic to Taiwan. The total number of species recorded from Taiwan is 231; some of these species are shared with the Oriental Region but not with mainland China.