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A NEW GENUS OF PHAONIINAE (DIPTERA: MUSCIDAE) FROM CENTRAL AMERICA

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Abstract.— *Maesia*, a new genus of Muscidae from Central America is described. The two rcognized species are described, as new, the type-species *M. nicaraguensis* **sp. nov.**, and *M. hernandezi* **sp. nov.**, both from Nicaragua. A key to their identification is provided. The new genus is included as one of the basal genera of the subfamily Phaoniinae, currently understood as a not monophyletic group.

Key words.— *Maesia*, Muscidae, Neotropical, Nicaragua, new genus, systematics, taxonomy.

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A REVIEW OF THE GENUS *HOMONEURA* FROM GUIZHOU, CHINA (DIPTERA: LAUXANIIDAE)

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Abstract.— A review of 5 species of the genus *Homoneura* from Guizhou (China) are provided. The following 3 species are described as new to science: *Homoneura guizhouensis*, *H. longa*, and *H. serrata*.

Key words.— Diptera, Lauxaniidae, *Homoneura*, new species, China (Guizhou).

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ON THE HISTORY OF THE DIPTERA-COLLECTION AT THE MUSEUM OF NATURAL HISTORY IN VIENNA

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Abstract.— An overview of the History of the Diptera-collection from its beginnings to the present is given. The paper contains a complete list of the Diptera collected by Johann Natterer in Brazil.

Key words.— Diptera-collection, Natural History Museum Vienna, Johann Natterer.

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THE SCUTTLE FLY GENUS *RHOPICA* SCHMITZ (DIPTERA: PHORIDAE)

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Abstract.— *Rhopica cecidocera* **sp. nov.** from Papua New Guinea, *R. howseae* **sp. nov.** from Australia, *R. mortimorei* **sp. nov.** from Sulawesi, and *R. papuana* **sp. nov.**, and *Rhopica sp.* A (only known in the female sex) from Papua New Guinea are described. A key to the eight species now known in the male sex is provided.

Key words.— Diptera, Phoridae, *Rhopica,* new species, key.

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COLD-ADAPTED SCUTTLE – FLIES SPECIES OF *TRIPHLEBA* RONDANI (DIPTERA: PHORIDAE)

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Abstract.— From six *Triphleba* species found in the area of Central Poland, Białowieża Forest, the Carpathian Mts and the Sudeten Mts, *T. trinervis* clearly predominated. Flies were active on the snow from November to March, in the temperature ranges of -4 to +4°C. Some adaptations of genus *Triphleba* to supranivean activity were found, such as unusual activity, frequently observed swarming, matured eggs in abdomens of *T. trinervis* in winter, incapability to fly and wings shredded on the outer margin, in adults individuals *T. trinervis*.

Key words.— Phoridae, *Triphleba*, winter activity, adapted to cold, phenology, Poland.

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A NEW SUBGENUS AND TWO NEW SPECIES OF THE GENUS *TRICHOCERA* MEIGEN, 1803 (DIPTERA: TRICHOCERIDAE)

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Abstract.— Within the genus *Trichocera* Meigen, 1803, a third subgenus, *Saltrichocera* **subgen. nov.**, type species: *Tipula saltator* Harris, 1776, is distinguished to comprise 47 species with simple gonostyles and gonocoxites, separated and highly arched bridge, and large aedeagal complex. Two new species: *Trichocera barraudi*, and *T. mishmi* are described from the Himalaya Mts; the latter of the *mutica* group of species. Present position and characteristics of the subgenus *Metatrichocera* Dahl, 1966 is discussed and the list of 21 species included is presented.

Key words.— Diptera, Trichoceridae, *Trichocera*, taxonomy, new subgenus, new species, Himalaya.

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THE IMMATURE STAGES OF TWO SPECIES OF *DASYBASIS* FROM THE SOUTHERN NEOTROPICAL REGION (DIPTERA: TABANIDAE: DIACHLORINI)

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Abstract.— The immature stages of *Dasybasis* (*Dasybasis*) *nigrifrons* (Philippi) and *D.*(*D.*) *bruchii* (Bréthes) are described and illustrated. *D.* (*D.*) *nigrifrons* and *D.*(*D.*) *bruchii* were collected from moss in wetlands in Central and northern Chile. The relationship of these species with other larvae of *Dasybasis* Macquart is discussed.

Key words.— Chile, *Dasybasis*, larva, pupa, morphology, Tabanidae, systematics.

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DESCRIPTION OF *ASPISTES NIPPONENSIS* SP. NOV. (DIPTERA: SCATOPSIDAE) FROM JAPAN

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Abstract.— The first known Japanese species of the genus *Aspistes*, *A. nipponensis* **sp. nov.** is described and figured from Kyoto prefecture, Honshu Island. An identification key to the males of the Palaearctic species of the genus is provided.

Key words.— Scatopsidae, *Aspistes*, new species, key, Japan.

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RHAETANIIDAE, A NEW FAMILY OF THE DIPTERA FROM THE UPPER TRIASSIC OF GREAT BRITAIN (DIPTERA: NEMATOCERA)

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Abstract.— *Rhaetania dianae* **gen.** and **sp. nov.**, from the Upper Triassic (Rhaetian of Strensham) of Great Britain is a representative of the new fossil nematoceran family, Rhaetaniidae. The combination of wing venation characters allow to place it phylogenetically close to two Upper Triassic families, Tillyardipteridae and Nadipteridae.

Key words.— Upper Triassic, Rhaetian, Diptera, Rhaetaniidae, fossil insects, new species, new genus, new family.

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CYTOTAXONOMICAL CHARACTERISTICS OF GENUS *CHIRONOMUS* MEIGEN (DIPTERA: CHIRONOMIDAE) FROM DIFFERENT LOCALITIES OF POLAND

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Abstract.— The salivary gland chromosomes of seven species of the genus *Chironomus* from Poland were described. Six of them (*Chironomus plumosus* L., *Chironomus balatonicus* Devai, Wülker et Scholl, *Chironomus muratensis* Ryser, Scholl et Wülker, *Chironomus agilis* Shobanov et Dyomin, *Chironomus annularius* Mg., *Chironomus nuditarsis* Strenzke) belong to thummi complex with chromosome arm combinations: AB CD EF G. *Chironomus bernensis* Wülker et Klotzli is from lacunarius complex with chromosome arm combinations: AD BC EF G. Four species: *C. plumosus, C. balatonicus, C. muratensis*, and *C. agilis* are included in plumosus group. Together with *C. bernensis* they are found in fish pool Mydlniki. The other two species: *C. annularius* and *C. nuditarsis* are from artificial lake Tarnobrzeg. Chromosome rearrangements and functional alterations of the species from the studied localities are discussed. A cytogenetically comparative analysis with different European populations is made. Cytotaxonomically are found six new for the fauna of Poland species.

Key words.— *Chironomus, Chironomus plumosus* group, polytene chromosomes, aberrations.

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THE LARVAE OF THE GENUS *PROTOCALLIPHORA* HOUGH, 1899 (DIPTERA: CALLIPHORIDAE) PARASITIC ON BIRDS IN POLAND

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Abstract.— The second-instar larvae of *Protocalliphora azurea* (Fallén) and of *P. rognesi* Thompson et Pont, 1993 (new name for *P. chrysorrhoea* (Meigen), preocc. Scopoli 1763) are described from specimens collected in Poland and in the U.S. A key to the second-instar larvae of Polish blowfly parasites of birds is given.

Key words.— *Protocalliphora azurea*, *P. rognesi*, *P. chrysorrhoea*, immature stages, larval morphology, blowflies parasitising birds, Diptera, Calliphoridae, Poland, U.S.

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ADDITIONS AND CORRECTIONS TO CHLOROPIDAE (DIPTERA) OF POLAND

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Abstract.— The history of the investigation of the fauna of Chloropidae in Poland is presented. 33 species of Chloropidae are added to and 8 species are deleted from the Checklist of Chloropidae of Poland. From 33 added species 17 species were recorded earlier for the fauna of Poland but were omitted in the Checklist and 16 species are new for Chloropidae fauna of Poland. Now 170 species of Chloropidae are recorded in Poland and the list is increased in number by 22.9%. Zoogeographical aspect is shortly discussed. *Dicraeus vallaris* Collin, 1946 is synonymized with *D. styriacus* (Strobl, 1898).

Key words.— Diptera, Chloropidae, synonymy, checklist, Poland.

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A NEW SPECIES OF *SARCOFAHRTIOPSIS* HALL, 1933 FROM PANAMA (DIPTERA: SARCOPHAGIDAE)

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Abstract.— A new species of *Sarcofahrtiopsis* Hall, 1933, *S. carcini* **sp. nov.**, is described from Panama. The species was bred from dead semiterrestrial crabs on the Caribbean coast. A key to all species of *Sarcofahrtiopsis* currently known is provided.

Key words.— Flesh flies, *Sarcofahrtiopsis*, new species, key, semiterrestrial crab, Panama.

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CYTOGENETIC CHARACTERISTICS OF *CHIRONOMUS BERNENSIS* KLOTZLI (DIPTERA: CHIRONOMIDAE) FROM A HEAVY METAL POLLUTED STATION IN NORTHERN ITALY

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Abstract.— Polytene chromosomes of *Chironomus bernensis* from a heavy metal polluted reservoir in Northern Italy were studied. 2n=8: AD, CB, EF, G (*lacunarius* complex). Chromosome arms B, C, D, and G were mapped, while arms A, E, and F were mapped by Wuelker and Klotzli (1973). Structural chromosome rearrangements (inherited heterozygous inversions and shift-translocations, amplifications and somatic deficiencies) as well as changes of functional activity of NORs, telomeres, and puffs were observed. Chromosome G turns out to be the most variable: often in this chromosome asynapsis of homologues, amplification of centromere and interstitial heterochromatin were detected. We suggest that structural and functional rearrangements of polytene chromosomes were caused by higher than usual concentration of heavy metals in the studied water reservoir.

Key words.— *Chironomus bernensis*, polytene chromosomes, heavy metals, structural rearrangements, functional alterations.

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EOPTYCHOPTERIDAE (DIPTERA) FROM THE MIDDLE JURASSIC OF CHINA

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Abstract.— Three new species of the extinct family Eoptychopteridae from the Middle Jurassic of NE China (Jiulongshan Formation) are described: *Eoptychoptera jurassica* **sp. nov.**, *Eoptychoptera ansorgei* **sp. nov.** (Eoptychopterinae) and *Eoptychopterina elenae* **sp. nov.** (Eoptychopterininae). This is the first record of the family from China.

Key words.— Diptera, Eoptychopteridae, fossil insects, new species, Middle Jurassic, Jiulongshan, China.

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NEW SYNONYMS OF EUROPEAN BITING MIDGES (DIPTERA: CERATOPOGONIDAE)

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Abstract.— New synonyms are proposed for the following species: *Alluaudomyia needhami* Thomsen, 1935 (=*A. pentaspila* Remm et Glukhova, 1971), *A. riparia* Clastrier, 1978 (=*A. falcata* Knoz et Ratajsky, 1987, *A. bohemiae* Boorman, 1997), *Atrichopogon luteicollis* Becker, 1903 (=*Ceratopogon flavoscutellatus* Becker, 1908), *Brachypogon* (*B.*) *beaufortanensis* Delécolle et Rieb, 1992 (= *B. sudowicus* Szadziewski, 2001), *Ceratoculicoides moravicus* Knoz, 1987 (= *Ceratopogon gracilipes* Remm, 1967 preoccupied, *Ceratoculicoides havelkai* Wirth et Grogan, 1988, *Ceratoculicoides remmi* Gosseries, 1989), *Culicoides tbilisicus* Dzhafarov, 1964 (= *Culicoides dendriticus* Boorman, 1976).

Key words.— Diptera, Ceratopogonidae, synonymy.

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FIRST DISCOVERY OF BOUVIEROMYIINI (DIPTERA: TABANIDAE: CHRYSOPSINAE) IN BALTIC AMBER

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Abstract.— Five genera and seven species of Bouvieromyiini have been found for the first time in Baltic amber. Three genera represent extant taxa distributed in NE Australia, New Guinea, Java, Borneo and S Africa. The other two are described as new. The morphological similarity of fossil Bouvieromyiini to extant genera indicates their relation to wet and dry tropical climate.

Key words.— Diptera, Tabanidae, Bouvieromyiini, new taxa, key to genera, Baltic amber.

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A REVISION OF THE GENUS *ORASIOPA* ZATWARNICKI ET MATHIS (DIPTERA: EPHYDRIDAE)

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Abstract.— The genus *Orasiopa* Zatwarnicki et Mathis of the tribe Discocerinini is revised. The following 12 new species: *O. daiman*, *O. dora*, *O. egdun*, *O. ememii*, *O. geibu*, *O. grootaerti*, *O. koriwa*, *O. mathisi*, *O. nga*, *O. opa*, *O. rapkap* and *O. tajlandica* from Southeast Asia and Australia are described and illustrated. A key to the identification of 14 known species of *Orasiopa* is provided and a modified key to genera of the Discocerinini is proposed. The asymmetrical male terminalia, unique and for the first time reported in the Discocerinini are found in all species of the *mera* group. Relationships of the species within the genus are discussed and the phylogenetic pattern is suggested.

Key words.— Diptera, Ephydridae, *Orasiopa*, new species, taxonomy, Southeast Asia, Australia.

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COMMUNITIES OF CHIRONOMIDAE (DIPTERA) ABOVE AND BELOW A RESERVOIR ON A LOWLAND RIVER: LONG-TERM STUDY

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Abstract.— Chironomidae responses to environmental changes arising from flow regulations in a large lowland river, central Poland are presented. Two sites were studied: one below (WAB) and the other, control one, above (WAA) of the man-made Jeziorsko Reservoir. The investigations began in 1988/1989 and were repeated through annual cycles: 1991/1992, 1992/1993 and 1995/1996. Upstream, flow was mostly natural. The highest chironomid abundance was recorded close to the riverbank and decreased sharply toward mid-river. At WAB the dam's sluice operations resulted in periodic flow alternations, mostly reductions below natural flow level: the shoreline region enlarged and contracted in response to dam operations and the bottom was sometimes exposed to air. As a result, in the downstream habitat only *G. gripekoveni* and *C. thummi* were able to exist. *Cladophora glomerata* and macrophytes developed in a habitat located several meters from the banks and were responsible for a substantial percentage of macroinvertebrate abundance, especially of Orthocladiinae. Additionally, the retention of FPOM due to a dense bed of macrophytes created favourable conditions for large pelophilous taxa of Chironomini. In spite of this the total chironomid density calculated for the area of the entire sites was similar, reaching 2221 ind. m^{-2} in the backwater and 1900 ind. m^{-2} in the tailwater over the last annual cycle. Tiny psammophilous Chironomini, such as *Robackia* and *Paratendipes,* dominated among midges in mid-river beds at both sites.

Key words.— Insecta, Diptera, Chironomidae, dam reservoir, lowland river, hydraulic