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# CHARACTERISATION OF CROSS-AMPLIFIED MICROSATELLITE MARKERS IN THE RED-BREASTED FLYCATCHER *FICEDULA PARVA*

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**Abstract.**— We tested 24 microsatellite markers for the red-breasted flycatcher, *Ficedula parva*, using the primers for the PCR reaction described for other species from genus *Ficedula*. The amplification efficiency, specificity of the products, and polymorphism of cross-amplified microsatellites were determined based on the genotypes of 65 adult males from a natural population breeding in Białowieża Forest (Eastern Poland). Based on obtained results, we identified 9 highly polymorphic microsatellites, consistently amplifying in majority of individuals. Among those markers between 4 and 26 alleles per locus (mean 15.4) were found and the observed heterozygosity ranged from 0.393 to 0.939. The majority of loci (except for Fhy350 and Fhy458) were in Hardy-Weinberg equilibrium. Accordingly, the values of $F_{IS}$ did not significantly differ from zero 0, except for the locus Fhy350. We suggest that this locus could be loaded with high frequency of null alleles. The polymorphic information content (PIC) for the selected loci set was high and in all cases exceeded 0.82. In addition, we calculated, for each locus, the probability of excluding an improper parent. In majority of loci this parameter distinctly exceeded 0.5. These results demonstrate that tested microsatellite markers can be used to estimate the genetic variability within- and between populations and to establish paternity and parenthood in red-breasted flycatcher populations.

**Key words.**— microsatellites, cross-species amplification, heterozygosity, cavity-nesting birds, wild population, Białowieża Forest

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# A NEW GENUS OF SOIL MITES OF THE FAMILY ZERCONIDAE (ACARI: MESOSTIGMATA) FROM THE UNITED STATES OF AMERICA

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**Abstract.**— *Neomicrozercon nearcticus* gen. et sp. nov., a new genus and species of zerconid mites (Acari: Mesostigmata: Zerconidae) are described based on material of both sexes collected in the United States of America (Oregon).

**Key words.**— Acari, Mesostigmata, Zerconidae, soil fauna, taxonomy.

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# COLLEMBOLA FROM THE MOLDAVIAN BANKS OF DNIESTER RIVER. NEW RECORDS

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**Abstract.**— The study of Collembola communities of banks of the Dniester River revealed 54 species of Collembola belonging to 35 genera and 13 families. Five species were common for all studied sites: *Mesaphorura critica*, *Metaphorura affinis*, *Hemisotoma thermophila*, *Isotomodes productus* and *Parisotoma notabilis*. The whole list of Collembola is included, three species are new for Moldova. The study revealed three new species for the science of the genera *Micraphorura*, *Agraphorura* and *Mesaphorura*. Description of *Micraphorura gamae* sp. nov. the most similar to *Micraphorura pieninesis* Weiner, 1988 is provided.

**Key words.**— riverine zone, list of species, new species, chaetotaxy.

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# A NEW SPECIES OF *CHEILOTRICHIA* ROSSI, 1848 (DIPTERA: LIMONIIDAE) FROM BITTERFELD AMBER

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**Abstract.**— A new species of the genus *Cheilotrichia* Rossi, 1848 (Diptera: Limoniidae) from Bitterfeld amber is described. Bitterfeld amber (Saxonian amber) is contemporaneous with the Baltic amber deposited in Gdańsk Amber Bay area. The representatives of the same species are often found among inclusions of Bitterfeld and Baltic amber but the species described herein *Cheiliotrichia* (*Empeda*) *weitschati* **sp. nov.** have been found only in Bitterfeld amber.

**Key words.**— *Cheilotrichia* (*Empeda*) *weitschati* sp. nov., Limoniidae, Diptera, Bitterfeld amber, Eocene, taxonomy, new species.

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# *ATOPOMYCHUS LONGICORNIS*, NEW GENUS AND NEW SPECIES OF LYCOPERDININAE FROM THE NEOTROPICS (COLEOPTERA: ENDOMYCHIDAE)

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**Abstract.**— *Atopomychus* **gen. nov.** along with *A. longicornis* **sp. nov.** (Coleoptera: Endomychidae) from Ecuador is described and illustrated. Its placement within the subfamily Lycoperdininae is discussed. A key to genera of the Neotropical Lycoperdininae is updated.



**Key words.**— taxonomy, Cucujoidea, Lycoperdininae, new genus, new species, Neotropical Region.

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# GENERA OF DASCILLINAE (COLEOPTERA: DASCILLIDAE) WITH A REVIEW OF THE ASIAN SPECIES OF *DASCILLUS* LATREILLE, *PETALON* SCHONHERR AND *SINOCAULUS* FAIRMAIRE

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**Abstract.**— Phylogenetic relationships within the Dascillinae were investigated. Eighteen ingroup taxa and two outgroups were included in cladistic analysis, based on 30 characters derived from adult morphology. Six genera are recognised in Dascillinae: *Coptocera* Murray, *Dascillus* Latreille, *Metallidascillus* Pic, *Notodascillus* Carter, *Petalon* Schoenherr and *Sinocaulus* Farimaire. *Pseudolichas* Fairmaire, 1878 (TS: *P. sulcifrons* Fairmaire, 1878) is recognised as a junior synonym of *Petalon* Schoenherr, 1833 (TS: *Bruchus fulvulus* Wiedemann, 1819) **syn. nov.** All valid genera of Dascillinae are thoroughly described, illustrated and key to their identification is provided. Species level keys are provided for Old Wold *Dascillus*, *Petalon* and *Sinocaulus*.

Eighteen new species are described: *Dascillus acutus* (China: Shanxi), *D. chifengi* (China: Taiwan), *D. compressus* (Nepal), *D. formosanus* (China: Taiwan), *D. lanceus* (China: Taiwan), *D. largus* (China: Hubei), *D. montanus* (China: Sichuan), *D. planus* (China: Yunnan), *D. russus* (India: Arunachal Pradesh), *D. tibetensis* (China: Tibet), *D. transversus* (China: Yunnan), *Petalon acerbus* (China-Yunnan), *P. allochroides* (Malaysia, Sabah), *P. annamensis* (Vietnam), *P. digitatus* (China: Yunnan), *P. iviei* (China: Yunnan), *Sinocaulus clypeatus* (China: Guizhou) and *S. omiensis* (China: Sichuan).

The following species level new synonyms are proposed (senior synonym listed first): *Dascillus congruus* Pascoe, 1860 (= *Dascillus perroudi* Pic, 1939, *D. klapperichi*, Pic, 1955, *D. taiwanus* Nakane, 1995 and *D. fortunei* Pic, 1913); *Dascillus calvescens* Bourgeois, 1892 (= *D. holzi* Pic, 1911, *D. rufocinctus* Pic, 1913, *D. brevesulcatus* Pic, 1933 and *D. rubropubens* Pic, 1934); *Dascillus renardi* Bourgeois, 1891(= *D. rufovillosus* Bourgeois, 1892); *Dascillus fulvulus* (Wiedemann, 1819) (= *D. striatus* Pic, 1911, *D. corporaali* Pic, 1923 and *D. obscuricolor* Pic, 1933); *D. obscuripes* Pic, 1912 (= *D. rufus* Pic, 1923); *Pseudolichas nivipictus* Fairmaire, 1904 (= *Pseudolichas ruficornis* Pic, 1914) and *Sinocaulus rubrovelutinus* Fairmaire, 1878 (= *Haematoides atriceps* Pic, 1910: 45).

Four taxa are transferred to *Dascillus* Latreille (*Cladotoma vittata* Pic, 1914; *Pseudolichas nigronotatus* Pic, 1914; *Pseudolichas nivipictus* Fairmaire, 1904; *Pseudolichas superbus* Pic, 1907 and *Therius jaspideus* Fairmaire, 1878) **comb. nov.**

Fifeteen species are transferred to *Petalon* Schonherr (*Dascillus bengalensis* Pic, 1911; *D. birmanicus* Pic, 1913; *D. calvescens* Bourgeois, 1892; *D. fruhstorferi* Pic, 1912; *D. fulvithorax* Pic, 1933; *D. indicus* Guérin-Méneville, 1861; *D. leopoldi* Pic, 1933; *D. major* Pic, 1933; *D. obscuripes* Pic, 1912; *D. pruinosus* Fairmaire, 1896; *D. renardi*

Bourgeois, 1891; *D. rufithorax* Pic, 1912; *D. rufovillosus* Bourgeois, 1892; *D. rufus* Pic, 1923 and *Pseudolichas sulcifrons* Fairmaire, 1878) **comb. nov.**

The neotypes are designated for: *Bruchus fulvulus* Wiedemann, 1819 (Indonesia: Java) and *Dascillus maculosus* Fairmaire, 1889 (China: Sichuan).

Lectotypes are designated for: *Dascillus bengalensis* Pic, 1911; *D. brevesulcatus* Pic, 1933; *D. calvescens* Bourgeois, 1892; *D. cavaleriei* Pic, 1930; *D. corporaali* Pic, 1923; *D. costatus* Pic, 1927; *D. fortunei* Pic 1913; *D. holzi* Pic, 1911; *D. klapperichi* Pic, 1955; *D. nigripennis* Guérin-Méneville, 1861; *D. obscuricolor* Pic, 1933; *D. obscuripes* Pic, 1912; *D. pallidofemoratus* Pic, 1911; *D. perroudi* Pic, 1939; *D. renardi* Bourgeois, 1891; *D. rubropubens* Pic, 1934; *D. rufocinctus* Pic, 1913; *D. rufovillosus* Bourgeois, 1892; *D. rufus* Pic, 1923; *D. striatus* Pic, 1911; *D. sublineatus* Pic, 1915; *Haematoides atriceps* Pic, 1910; *Pseudolichas sulcifrons* Fairmaire, 1878 and *Sinocaulus rubrovelutinus* Fairmaire, 1878.

**Key words.—** Dascillidae, Dascillinae, *Coptocera*, *Dascillus*, *Petalon*, *Sinocaulus*, Asia, keys, revision, new species.

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# TAXONOMY, DISTRIBUTION AND ECOLOGICAL NICHE MODELS OF THE AFROTROPICAL PLATYNOTOID PLATYNOTINA (TENEBRIONIDAE: PEDININI)

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**Abstract.**— The catalogue of all known species of the Afrotropical platynotoid lineage of the subtribe Platynotina Mulsant et Rey, 1853 is presented. Twenty one genera containing 127 species (132 subspecies) are listed. The data of primary and secondary types is provided. Based on the article 45.6.4. of the International Code of Zoological Nomenclature *Opatrinus edentatus* Koch, 1956 and *O. pinheyi* Koch, 1956 are consider as unavailable names. Distribution of the species is listed and illustrated on 152 maps. The relationship between species richness and Afrotropical ecoregions is analyzed and discussed. MaxEnt software was used to model the hypothetical range of chosen species.

**Key words.**— *Ectateus* generic group, Platynotina, Pedinini, Tenebrionidae, taxonomy, biogeography, catalogue, Africa, Madagascar, MaxEnt.