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AN OUTLINE OF A RECLASSIFICATION OF THE EPHEMEROPTERA¹

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At the present time the writers have in preparation a more extended paper on the suprageneric classification of the Ephemeroptera. It will be some time before this manuscript will be completed, and in the meantime we have some papers in press in which the new classification will be used. Also some of our colleagues have urged us to make the classification available. Although hesitant to publish our new arrangement without explaining the reasons for our decisions, we find it desirable to do so under the present circumstances.

Until such time as a discussion of the origin and authorship of the family names can be given, and until some of the protested decisions of the Copenhagen Meetings of the International Commission of Zoological Nomenclature concerning family and superfamily names are clarified, we reluctantly omit the authors of family and superfamily names. We are, in accordance with the new rules, restoring the well-known family names Polymitarcidae (in place of Ephoridae or Ephoronidae) and Prosopistomatidae (for Binoculidae), the family names being based upon available subjective synonyms of the type genera. We are tentatively including as valid genera a few generic names of doubtful validity. The names *Procloeon* and *Pseudocloeon* of S. Matsumura (1931) are impossible to apply in the present state of our knowledge. Both names are homonyms of valid genera of Baetidae; they are referred to the family Ephemerellidae in Zoological Record.

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Superfamily **HEPTAGENIOIDEA** (= Siphonuroidea, Baetoidea)

~~X~~~~X~~~~X~~ Family **Siphonuridae**

Subfamily SIPHLONURINAE.—The following genera are included: *Ameletoides* Tillyard, *Ameletopsis* Phillips, *Ameletus* Eaton (= *Paleoameletus* Lestage, new synonymy), *Andromina* Navas, *Chiloporter* Lestage, *Chimura* Navas, *Dipteromimus* McLachlan (= *Dipteromimodes* Matsumura), *Edmundsius* Day, *Metamonius* Eaton, *Metreletus* Demoulin, *Metreturus* Burks, *Nesameletus* Tillyard, *Parameletus* Bengtsson (= *Potameis* Bengtsson, *Sparrea* Esben-Peterson, *Palmenia* (Aro, MS) Lestage, *Siphonuroides* McDunnough), *Siphonisca* Needham, *Siphonurus* Eaton (= *Siphylurus* Eaton, *Siphylurella* Bengtsson), *Siphyluriscus* Ulmer.

Subfamily ONISCIGASTRINAE, new rank.—The following genera are included: *Oniscigaster* McLachlan, *Siphlonella* Needham and Murphy, *Tasmanophlebia* Tillyard, *Tasmanophlebioides* Lestage.

~~X~~~~X~~ Family **Isonychiidae**, new rank

Subfamily ISONYCHIINAE.—The following genera are included: *Coloburiscoides* Lestage, *Coloburiscus* Eaton (= *Coloburus* Eaton nec Dumeril), *Murphyella* Lestage (= *Dictyosiphon* Lestage), *Isonychia* Eaton (= *Chirotonetes* Eaton, *Jolia* Eaton), *Mirawara* Harker.

~~X~~~~X~~ Family **Oligoneuriidae**

Subfamily PSEUDOLIGONEURIINAE (= Chromarcyinae).—The following two genera are included: *Pseudoligoneuria* Ulmer, *Chromarcy* Navas.

Subfamily OLIGONEURIINAE.—The following genera are included: *Elassoneuria* Eaton, *Homoeoneuria* Eaton, *Lachlania* Hagen (= *Neophlebia* Navas nec Selys, *Noya* Navas, *Noyopsis* Navas, *Alloydia* Needham), *Oligoneuria* Pictet, *Oligoneuriella* Ulmer, *Oligoneuriopsis* Crass, *Oligoneurisca* Lestage, *Spaniophlebia* Eaton.

~~X~~ Family **Heptageniidae** (= Ecdyonuridae, Ecdyuridae, Arthropleidae) with
singer

Subfamily HEPTAGENIINAE.—The following genera are included: *Afnurus* Lestage, *Anepeorus* McDunnough, *Arthroplea* Bengtsson (= *Haplogenia* Blair, *Remipalpus* Bengtsson), *Atopopus* Eaton, *Bleptus* Eaton, *Cinygma* Eaton, *Cinygmina* Kimmins, *Cinygmula* McDunnough, *Compsoneuria* Eaton, *Compsoneuriella* Ulmer, *Ecdyonurus* Eaton (= *Ecdyurus* Eaton, *Cinygmoides* Matsumura), *Epeorella* Ulmer, *Epeorus* Eaton [with subgenera *Epeorus* Eaton, *Iron* Eaton, *Ironodes* Traver, *Ironopsis* Traver], *Heptagenia* Walsh (= *Kageronia* Matsumura), *Notonurus* Crass, *Ororotsia* Traver, *Paegniodes* Eaton, *Rhithrogena* Eaton, *Rhithrogeniella* Ulmer, *Stenonema* Traver, *Thalerosphyrus* Eaton.

Subfamily PSEUDIRONINAE, new subfamily.—Only a single genus is included: *Pseudiron* McDunnough.

~~X~~~~X~~ Family **Ametropodidae** (= Siphloplectonidae) ²

Subfamily AMETROPODINAE.—A single genus is included: *Ametropus* Albarda.

Subfamily METRETOPODINAE.—The two following genera are included: *Metretopus* Eaton, *Siphloplecton* Clemens.

X Family Baetidae

Subfamily BAETINAE.—The following genera are included: *Baetiella* Ueno, *Baetis* Leach (= *Heterocloeon* McDunnough, new synonymy; *Acentrella* Bengtsson, *Brachyphlebia* Westwood), *Baetodes* Needham and Murphy, *Callibaetis* Eaton, *Centroptiloides* Lestage (= *Haplobaetis* Navas), *Centroptilum* Eaton, *Cloedes* Traver, *Cloeon* Leach (= *Cloe* Burmeister, *Cloopsis* Eaton, *Austrocloeon* Barnard), *Neobaetis* Navas, *Neocloeon* Traver, *Procloeon* Bengtsson (= *Pseudocloeon* Bengtsson nec Klapalek), *Pseudocloeon* Klapalek, *Pseudocentroptilum* Bogesco.

Superfamily LEPTOPHLEBIOIDEA, new superfamily

X Family Leptophlebiidae

Subfamily LEPTOPHLEBINAE.—The following genera are included: *Adenophlebia* Eaton (= *Esbenophlebia* Lestage), *Adenophlebiodes* Ulmer (= *Euphlebia* Crass), *Aprionyx* Barnard, *Atalonella* Needham and Murphy, *Atalomicria* Harker, *Atalophlebia* Eaton, *Atalophlebioides* Phillips, *Borinquena* Traver, *Calliarcys* Eaton, *Castanophlebia* Barnard, *Choroterpes* Eaton, *Choroterpides* Ulmer, *Cryptopenella* Gillies, *Deleatidium* Eaton, *Dipterophlebiodes* Demoulin, *Euthraulius* Barnard, *Fulleta* Navas, *Habroleptoides* Schoenemund, *Habrophlebia* Eaton, *Habrophlebiodes* Ulmer, *Hagenulodes* Ulmer, *Hagenulopsis* Ulmer, *Hagenulus* Eaton, *Hermanella* Needham and Murphy, *Isca* Gillies, *Jappa* Harker, *Kirra* Harker, *Leptophlebia* Westwood [with subgenera *Leptophlebia* Westwood (= *Euphyurus* Bengtsson), *Blasturus* Eaton], *Massartella* Lestage, *Neohagenulus* Traver, *Nousia* Navas, *Paraleptophlebia* Lestage, *Simothraulius* Ulmer, *Thraulodes* Ulmer, *Thraululus* Ulmer, *Thraululus* Eaton, *Traverella* Edmunds.

X Family Ephemerellidae

Subfamily EPHEMERELLINAE.—The following genera are included: *Ephemerella* Walsh [with subgenera *Eurylophella* Tiensuu (? = *Melanameletus* Tiensuu), *Chitonophora* Bengtsson, *Drunella* Needham (= *Eatonella* Needham), *Ephemerella* Walsh, *Timpanoga* Needham, *Torleya* Lestage], *Ephemerellina* Lestage, *Lithogloea* Barnard, *Melanemerella* Ulmer, *Teloganella* Ulmer, *Teloganodes* Eaton, *Teloganopsis* Ulmer.

X Family Tricorythidae

Subfamily TRICORYTHINAE.—The following two genera are included here: *Tricorythus* Eaton (= *Tricorythurus* Lestage), *Neurocaenis* Navas.

Subfamily LEPTOHYPHINAE, new subfamily.—The following genera are included: *Bruchella* Navas, *Leptohyphes* Eaton, *Leptohyphodes* Ulmer, *Tricorythafer* Lestage (= *Caenopsis* Needham nec Bach, *Needhamoecenis* Lestage), *Tricorythodes* Ulmer.

Subfamily DICERCOMYZINAE, new subfamily.—A single genus is included: *Diceromyzon* Demoulin.

Superfamily CAENOIDEA

✓X X X Family Caenidae

Subfamily CAENINAE.—The following genera are included: *Austrocaenis* Barnard, *Brachycerus* Curtis (= *Oxycypha* Burmeister, *Eurycaenis* Bengtsson), *Caenis* Stephens (= *Ordella* Campion), *Caenodes* Ulmer, *Tasmanocoenis* Lestage.

✓X X X Family Neophemeridae

Subfamily NEOPHEMERINAE.—The following two genera are included: *Neophemera* McDunnough (= *Oreianthus* Traver), *Neophemeropsis* Ulmer.

Superfamily EPHEMEROIDEA

Family Behningiidae

Subfamily BEHNINGIINAE.—A single genus is included: *Behningia* Lestage.

✓X X X Family Potamanthidae

Subfamily POTAMANTHINAE.—The following genera are included: *Leucorhoenanthus* Lestage, *Neopotamantodes* Hsü, *Potamantellus* Lestage (= *Rhoenanthodes* Lestage), *Potamantindus* Lestage, *Potamantodes* Ulmer, *Potamantus* Pictet, *Rhoenanthopsis* Ulmer, *Rhoenanthus* Eaton.

Family Euthyplociidae, new rank

Subfamily EUTHYPOCINAE.—The following genera are included: *Afroplocia* Lestage, *Campylocia* Needham and Murphy (= *Longinella* Gros and Lestage), *Euthyplocia* Eaton, *Ezeuthyplocia* Lestage, *Mesoplocia* Demoulin, *Polyplocia* Lestage.

✓ X X X Family Ephemeridae

Subfamily EPHEMERINAE.—The following genera are included: *Eatonica* Navas, *Eatonigenia* Ulmer, *Ephemera* Linnaeus (= *Nirvius* Navas), *Hexagenia* Walsh [with subgenera *Hexagenia* Walsh, *Pseudeatonica* Spieth], *Ichthybotus* Eaton, *Pentagenia* Walsh.

✓X X X Family Polymitarciidae (= Ephoridae, Ephoronidae)

Subfamily POLYMITARCINAE.—A single genus is included: *Ephoron* Williamson (= *Eopolymitarceys* Tshernova, new synonymy; *Polymitarceys* Eaton).

Subfamily CAMPSURINAE.—The following two genera are included: *Campsurus* Eaton, *Tortopus* Needham and Murphy.

Subfamily ASTHENOPODINAE, new subfamily (type, *Asthenopus*).—The following genera are included: *Asthenopodes* Ulmer, *Asthenopus* Eaton, *Povilla* Navas.

Family Palingeniidae

Subfamily PALINGENINAE.—The following genera are included: *Ana-*

genesis Eaton, *Chankagensia* Buldovskii (= *Chankogenesis* Buldovskii), *Cheirogenesis* Dembulin, *Mortogenesis* Lestage, *Palingenia* Burmeister, *Plethogenesis* Ulmer (= *Tritogenesis* Lestage).

Superfamily **PROSOPISTOMATOIDEA**, new rank (= Baetiscoidea)

X X X Family **Baetiscidae**

Subfamily **BÆTISCINAE**.—A single genus is included here: *Baetisca* Walsh.

Family **Prosopistomatidae** (= Binoculidae)

Subfamily **PROSOPISTOMATINAE**.—A single genus is included here: *Binoculus* Geoffroy (= *Prosopistoma* Latreille, *Chelysentomon* Joly and Joly).

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