

## CHANGES MADE IN STN FILES SINCE THEIR LAST ISSUE

This text provides a summary of changes made in StN files since they were last issued. The current issue comprises updated versions of the StN spreadsheets and their associated Content and Glossary volume, the Species Accounts, the StN Key to Genera and its associated volume of Syrphid Portraits. A great quantity of information relevant to the content of the StN database has been published during the last four years. In addition, earlier publications have been discovered, containing information not previously incorporated into the database. A list of literature cited for the first time in StN 2020 files is also provided here.

Many small changes have been made to the coding of individual species in the spreadsheets since 2016. Similarly, many small changes have been made in the wording and figures in the text files since their last issue. These small changes are not detailed here.

- Section 1 summarises changes made in the spreadsheets since their last issue in 2016. Where these changes are in the form of addition of habitat categories, the requisite habitat definitions added to the 2020 StN Content and Glossary volume are also listed.
- Section 2 covers changes made in the Species Accounts since 2018 – mostly new species accounts.
- Section 3 deals with changes to other re-issued StN files.
- Section 4 lists literature cited for the first time.
- Section 5 provides citation details for this issue of StN files.

### Section 1: CHANGES MADE TO THE SPREADSHEETS

#### 1a Nomenclatural changes adopted in the StN 2020 spreadsheets

Nomenclatural changes already adopted in the StN Species Accounts volumes since 2016 are included in the following list. The origin of each of these nomenclatural changes is detailed in the Species Accounts volume.

##### **Stn spreadsheets 2020**

*Cheilosia gorodkovi* Stackelberg, 1963  
*Eupeodes nigroventris* (Fluke), 1933  
*Eurimyia lineata* (Fabricius), 1787  
*Chrysogaster cemiteriorum* (L.), 1758  
*Eumerus alpinus* Rondani, 1857  
*Eumerus hungaricus* Szilády, 1940  
*Eumerus vestitus* Bezzi, 1912  
*Ischiodon aegyptius* (Wiedemann), 1830  
*Ischiodon scutellaris* (Fabricius), 1805  
*Merodon femoratus* Sack, 1913  
*Merodon femoratus* Sack, 1913  
*Pseudopelecocera latifrons* (Loew), 1856  
*Sphaerophoria bengalensis* Macquart, 1842  
*Hammerschmidtia rufa* (Fallen), 1817

##### **StN spreadsheets 2016**

*Cheilosia kuznetzovae* Skufjin, 1977  
*Eupeodes rufipunctatus* (Curran), 1925  
*Anasimyia lineata* (Fabricius), 1787  
*Chrysogaster coemeteriorum* (L.), 1758  
*Eumerus olivaceus* auct. Not Loew, 1848  
*Eumerus elaverensis* Séguy, 1961  
*Eumerus efflatouni* (Curran, 1938)  
*Simosyrphus aegyptius* (Wiedemann), 1830  
*Simosyrphus scutellaris* (Fabricius), 1805  
*Merodon biarcuatus* Curran, 1939  
*Merodon elegans* Hurkmans, 1993  
*Pelecocera latifrons* Loew, 1856  
*Sphaerophoria turkmenica* Bankowska, 1964  
*Hammerschmidtia ingraca* Stackelberg, 1952

#### 1b Species removed from the StN spreadsheets in the 2020 issue

*Merodon auripilus* Meigen, 1830: not a European species (Vujić *et al*, 2018c)

#### 1c Species listed in the StN spreadsheets for the first time in 2020

In the following list species names are quoted in full, as they appear in the spreadsheets

*Cheilosia circassica* Ståhls & Barkalov, 2017

*Chrysotoxum antennalis* Vujić, Nedeljković & Hayat, in Vujić, Nedeljković, Hayat, Demirözer, Mengual & Kazerani, 2017

*Chrysotoxum bozdagensis* Nedeljković, Vujić & Hayat, in Nedeljković, Vujić, Hayat, Zorić & Djan, 2018

*Chrysotoxum claussenii* Vujić, Nedeljković & Hayat, in Vujić, Nedeljković, Hayat, Demirözer, Mengual & Kazerani, 2017

*Chrysotoxum persicum* Vujić, Nedeljković & Hayat, in Vujić, Nedeljković, Hayat, Demirözer, Mengual & Kazerani, 2017

*Dasysyrphus neovenustus* Soszynski, Mielczarek & Tofilski, 2013

*Eumerus alpinus* Rondani, 1857

*Eumerus anatolicus* Grković, Vujić & Radenković, in Chroni, Grković, Ačanski, Vujić, Radenković, Veličković, Dan & Petanidou, 2018

*Eumerus aurofinis* Grković, Vujić & Radenković, in Grković, Vujić, Radenković, Chroni & Petanidou 2016

*Eumerus azabense* Ricarte & Marcos-García, in Ricarte, Nencioni, Tubić, Grković, Vujić & Marcos-Garcia , 2018

*Eumerus banaticus* Nedeljković, Grković & Vujić, in Grković, van Steenis, Tubić, Nedeljković, Hauser, Hayat, Demirözer, Dan, Vujić & Radenković, 2019

*Eumerus bicornis* Grković, Vujić & Hayat, in Grković, van Steenis, Tubić, Nedeljković, Hauser, Hayat, Demirözer, Dan, Vujić & Radenković, 2019

*Eumerus bifurcatus* van Steenis & Hauser, in Grković, van Steenis, Tubić, Nedeljković, Hauser, Hayat, Demirözer, Dan, Vujić & Radenković, 2019

*Eumerus crassus* Grković, Vujić & Radenković, in Grković, Vujić, Radenković, Chroni & Petanidou 2016

*Eumerus gibbosus* Van Steenis, Hauser & Van Zuijlen, 2017

*Eumerus grallator* Smit, in Grković, Smit, Radenković, Vujić & van Steenis, 2019

*Eumerus hungaricus* Szilády, 1940

*Eumerus karyates* Chroni, Grković & Vujić, in Chroni, Grković, Ačanski, Vujić, Radenković, Veličković, Dan & Petanidou, 2018

*Eumerus montanum* Grković, Radenković & Vujić, in Grković, Vujić, Chroni, van Steenis, Dan & Radenković , 2017

*Eumerus phaeacus* Chroni, Grković & Vujić, in Chroni, Grković, Ačanski, Vujić, Radenković, Veličković, Dan & Petanidou, 2018

*Eumerus rubrum* Grković & Vujić, in Grković, Vujić, Chroni, van Steenis, Dan & Radenković, 2017

*Eumerus tenuitarsis* Grković & Vujić, in Grković, Smit, Radenković, Vujić & van Steenis, 2019

*Eumerus torsicus* Grković & Vujić, 2016

*Eumerus truncatus* Rondani, 1868

*Eumerus vestitus* Bezzi, 1912

*Katara connexa* Vujić & Radenković, in Vujić, Ståhls & Radenković, 2018

*Merodon adriaticus* Veselić, Vujić & Radenković, 2017

*Merodon albifasciatus* Macquart, 1842

*Merodon andriotes* Vujić, Radenković & Šašić, in Radenković, Šašić, Djan, Vidaković, Ačanski, Ståhls, Veličković, Markov, Petanidou, Tubić & Vujić, 2018

*Merodon atratus* (Oldenberg), 1919

*Merodon atricapillatus* Šašić, Ačanski & Vujić, in Šašić, Ačanski, Dan, Tubić, Veličković, Radenković & Vujić, 2018

*Merodon aurifer* Loew, 1862

*Merodon balkanicus* Šašić, Ačanski & Vujić, in Šašić, Ačanski, Vujić, Ståhls, Radenković, Milić, Vidaković & Dan, 2016

*Merodon erymanthus* Vujić, Ačanski & Šašić, in Radenković, Šašić, Djan, Vidaković, Ačanski, Ståhls, Veličković, Markov, Petanidou, Tubić & Vujić, 2018

*Merodon euri* Vujić & Radenković, in Radenković, Šašić, Djan, Vidaković, Ačanski, Ståhls, Veličković, Markov, Petanidou, Tubić & Vujić, 2018

*Merodon flavicornis* (Macquart), 1842

*Merodon longisetus* Vujić, Radenković & Likov, in Likov, Vujić, Tubić, Dan, Veličković, Rojo, Pérez-Bañon, Veselić, Barkalov, Hayat & Radenković, 2019

*Merodon luteofasciatus* Vujić, Radenković & Ståhls, in Vujić, Ståhls, Ačanski, Rojo, Pérez-Bañon & Radenković, 2018

*Merodon luteomaculatus* Vujić, Ačanski & Šašić, in Radenković, Šašić, Djan, Vidaković, Ačanski, Ståhls, Veličković, Markov, Petanidou, Tubić & Vujić, 2018

*Merodon megavidus* Vujić & Radenković, in Ačanski, Vujić, Djan, Vidaković, Ståhls & Radenković, 2016

*Merodon naxius* Vujić & Šašić, in Radenković, Šašić, Djan, Vidaković, Ačanski, Ståhls, Veličković, Markov, Petanidou, Tubić & Vujić, 2018

*Merodon neofasciatus* Ståhls & Vujić, in Vujić, Ståhls, Ačanski, Rojo, Pérez-Bañon & Radenković, 2018

*Merodon neolydicus* Vujić, in Vujić, Radenković & Likov, 2018

*Merodon nisi* Veselić, Vujić & Radenković, 2017

*Merodon obstipus* Vujić, Radenković & Likov, in Likov, Vujić, Tubić, Dan, Veličković, Rojo, Pérez-Bañon, Veselić, Barkalov, Hayat & Radenković, 2019

*Merodon peloponnesius* Vujić, Radenković, Ačanski & Šašić, in Radenković, Šašić, Djan, Vidaković, Ačanski, Ståhls, Veličković, Markov, Petanidou, Tubić & Vujić, 2018

*Merodon robustus* Veselić, Vujić & Radenković, 2017

*Merodon rojoi* Radenković & Vujić, in Šašić, Ačanski, Vujić, Ståhls, Djan & Radenković, 2019

*Merodon virgatus* Vujić & Radenković, in Šašić, Ačanski, Vujić, Ståhls, Radenković, Milić, Vidaković & Dan, 2016

*Merodon vladimiri* Vujić & Tubić, in Tubić, Ståhls, Ačanski, Djan, Vidaković, Hayat, Khaghaninia, Vujić & Radenković 2018

*Platycheirus troll* Mutin, in Mutin & Barkalov, 1999

*Sphegina calthae* Mutin, 1984

*Xanthogramma aeginae* Ricarte, Nedeljković & Vujić, in Nedeljković, Ricarte, Zorić, Djan, Vidaković & Vujić, 2018

*Xanthogramma pilosum* Nedeljković, Ricarte & Vujić, in Nedeljković, Ricarte, Zorić, Djan, Vidaković & Vujić, 2018

### **1d Species for which macrohabitat data are coded into the StN spreadsheets for the first time, in 2020**

*Brachyopa bimaculosa* Doczkal & Dziock, 2004

*Dasysyrphus neovenustus* Soszynski, Mielczarek & Tofilski, 2013

*Eumerus aurofinis* Grković, Vujić & Radenković, in Grković, Vujić, Radenković, Chroni & Petanidou 2016

*Eumerus azabense* Ricarte & Marcos-García, in Ricarte, Nencioni, Tubić, Grković, Vujić & Marcos-García, 2018

*Eumerus bicornis* Grković, Vujić & Hayat, in Grković, van Steenis, Tubić, Nedeljković, Hauser, Hayat, Demirözer, Dan, Vujić & Radenković, 2019

*Eumerus bifurcatus* van Steenis & Hauser, in Grković, van Steenis, Tubić, Nedeljković, Hauser, Hayat, Demirözer, Dan, Vujić & Radenković, 2019

*Eumerus crassus* Grković, Vujić & Radenković, in Grković, Vujić, Radenković, Chroni & Petanidou 2016

*Eumerus emarginatus* Loew, 1848

*Eumerus gibbosus* Van Steenis, Hauser & Van Zuijlen, 2017

*Eumerus grillator* Smit, in Grković, Smit, Radenković, Vujić & van Steenis, 2019

*Eumerus karyates* Chroni, Grković & Vujić, in Chroni, Grković, Ačanski, Vujić, Radenković, Veličković, Dan & Petanidou, 2018

*Eumerus lucidus* Loew, 1848

*Eumerus montanum* Grković, Radenković & Vujić, in Grković, Vujić, Chroni, van Steenis, Dan & Radenković, 2017

*Eumerus niveitibia* Becker, 1921

*Eumerus phaeacus* Chroni, Grković & Vujić, in Chroni, Grković, Ačanski, Vujić, Radenković, Veličković, Dan & Petanidou, 2018

*Eumerus rubrum* Grković & Vujić, in Grković, Vujić, Chroni, van Steenis, Dan & Radenković, 2017

*Eumerus tenuitarsis* Grković & Vujić, in Grković, Smit, Radenković, Vujić & van Steenis, 2019

*Eumerus torsicus* Grković & Vujić, in Grković, Vujić, Radenković, Chroni & Petanidou, 2016

*Eumerus truncatus* Rondani, 1868

*Eumerus vestitus* Bezzi, 1912

*Melanogaster nigricans* (Stackelberg), 1922

*Merodon adriaticus* Veselić, Vujić & Radenković, 2017

*Merodon albifasciatus* Macquart, 1842

*Merodon andriotes* Vujić, Radenković & Šašić, in Radenković, Šašić, Djan, Vidaković, Ačanski, Ståhls, Veličković, Markov, Petanidou, Tubić & Vujić, 2018

*Merodon atratus* (Oldenberg), 1919

*Merodon atricapillatus* Šašić, Ačanski & Vujić, in Šašić, Ačanski, Dan, Tubić, Veličković, Radenković & Vujić, 2018

*Merodon aurifer* Loew, 1862

*Merodon auripes* Sack, 1913

*Merodon balkanicus* Šašić, Ačanski & Vujić, in Šašić, Ačanski, Vujić, Ståhls, Radenković, Milić, Vidaković & Dan, 2016

*Merodon femoratooides* Paramonov, 1925

*Merodon flavicornis* (Macquart), 1842

*Merodon latifemoris* Radenković & Vujić, in Radenković, Vujić, Ståhls, Pérez-bañón, Rojo, Petanidou & Simić 2011

*Merodon luteofasciatus* Vujić, Radenković & Ståhls, in Vujić, Ståhls, Ačanski, Rojo, Pérez-Bañón & Radenković, 2018

*Merodon megavidus* Vujić & Radenković, in Ačanski, Vujić, Djan, Vidaković, Ståhls & Radenković, 2016

*Merodon naxius* Vujić & Šašić, in Radenković, Šašić, Djan, Vidaković, Ačanski, Ståhls, Veličković, Markov, Petanidou, Tubić & Vujić, 2018

*Merodon neofasciatus* Ståhls & Vujić, in Vujić, Ståhls, Ačanski, Rojo, Pérez-Bañón & Radenković, 2018

*Merodon neolydicus* Vujić, in Vujić, Radenković & Likov, 2018

*Merodon nisi* Veselić, Vujić & Radenković, 2017

*Merodon peloponnesius* Vujić, Radenković, Ačanski & Šašić, in Radenković, Šašić, Djan, Vidaković, Ačanski, Ståhls, Veličković, Markov, Petanidou, Tubić & Vujić, 2018

*Merodon pulveris* Vujić & Radenković, in Radenković, Vujić, Ståhls, Pérez-bañón, Rojo, Petanidou & Simić 2011

*Merodon puniceus* Vujić, Radenković & Pérez-Bañón, in Radenković, Vujić, Ståhls, Pérez-bañón, Rojo, Petanidou & Simić 2011

*Merodon robustus* Veselić, Vujić & Radenković, 2017

*Merodon rojoi* Radenković & Vujić, in Šašić, Ačanski, Vujić, Ståhls, Djan & Radenković, 2019

*Merodon rufipes* Sack, 1913

*Merodon virgatus* Vujić & Radenković, in Šašić, Ačanski, Vujić, Ståhls, Radenković, Milić, Vidaković & Dan, 2016

*Platycheirus troll* Mutin, in Mutin & Barkalov, 1999

*Sphegina calthae* Mutin, 1984

### **1e Macrohabitat categories added in the 2020 issue of the StN spreadsheets**

Here, the new macrohabitat categories are treated in ascending order of the category numbers assigned to them. For each of them, category number, spreadsheet column title and habitat definition is given, in that sequence. The habitat definitions are as they appear in the StN 2020 Content and Glossary volume

1129

- **rhithral riparian *Alnus/Fraxinus*, humid/mesophilous forest**

CORINE 44.32 : ash-alder woods of fast-flowing rivers ; *Stellario-Alnetum glutinosae* ; alder, or ash-alder galleries of the banks of fast-flowing rivers and large brooks, replacing the peri-alpine *Alnus incana* galleries in upland areas of western Europe. They are usually co-dominated by *Alnus glutinosa*, *Fraxinus excelsior* and *Acer pseudoplatanus*, accompanied by *Acer platanoides*, *Ulmus glabra*, *U.laevis*. *Prunus padus* is frequent in the undergrowth ; shrubs include *Ribes rubrum*, *R. uva-crispa*, *Corylus avellanae* ; the herb layer comprises *Stellaria nemorum*, *Impatiens noli-tangere*, *Aconitum vulparia*, *Allium ursinum*, *Geum rivale*, *Athyrium filix-femina*, *Dryopteris carthusiana*, *Matteuccia struthiopteris*, *Ranunculus ficaria*, *R. platanifolius*, *Urtica dioica*, *Primula elatior*, *Lamium galeobdolon* or *Filipendula ulmaria*, *Luzula sylvatica*. The gallery may be enclosed within other forest or reduced to a thin line of trees along rivers traversing farmland.EUNIS G1.212.

1614

- ***Cytisus* thickets, Atlantic/Medio-European thickets**

CORINE 31.841: MEDIO-EUROPEAN BROOM FIELDS; *Sarrothamnus scoparii* (*Pruno-Rubion-fruticosi*: *Sarrothamnenion*.

1643

- **Eastern Med., maquis,**

CORINE 32.313: Eastern Mediterranean maquis of Greece and the Balkan peninsula, with *Erica arborea*, *Arbutus unedo*, *Arbutus andrachne*, *Myrtus communis*, *Pistacia terebinthus*, *Phillyrea latifolia*, *Juniperus oxycedrus*, *Quercus coccifera*, *Quercus ilex*. EUNIS F5.213.

23116

● **steppic**, lowland unimproved grassland

sub-continental steppic grasslands, Festucetalia valesiacae: open grasslands of sub-continental climates with *Festuca valesiaca*, *F. rupicola*, *F. pseudovina*, *F. duvalii*, *F. trachyphylla*, *Stipa capillata*, *S. joannis*, *S. pulcherrima*, *S. tirsia* (= *S. stenophylla*), *S. dasyphylla*, *Chrysopogon gryllus*, *Danthonia alpina*, *Koeleria micrantha*, *Agrostis capillaris*, *Poa bulbosa*, *P. molinerii* (= *P. badensis* var. *xerophila*), *P. perconcinna* (= *P. carniolica*), *Melica ciliata*, *Brachypodium pinnatum*, *Carex supina*, *C. stenophylla*, *C. humilis* and herbs such as *Adonis vernalis*, *Pulsatilla montana*, *P. pratensis*, *P. grandis*, *P. patens*, *P. pusilla*, *Veronica spicata*, *Allium flavum*, *A. sphaerocephalon*, *Silene otitis*, *Artemisia campestris*, *Achillea collina*, *A. nobilis*, *A. setacea*, *Centaurea rhenana* (*C. stoebe*), *Inula spiraeifolia*, *Verbascum phoenicium*, *Armeria alliacea*, *Kochia prostrata*, *Euphorbia seguieriana*, *E. cyparissias*, *Campanula sibirica*, *Iris pumila*, *I. variegata*, *Linum flavum*, *Onosma taurica*, *O. arenaria*, *Potentilla arenaria*, *P. cinerea*, *Aster rinosyris*, *Onobrychis arenaria*, *Oxytropis pilosa*, *O. halleri*, *Ononis pusilla*, *O. cenisia*, *Astragalus onobrychis*, *A. exscapus*, *A. danicus*, *A. vesicarius*, *A. austriacus*, *A. alopecuroides*, *Eryngium campestre*, *Dianthus carthusianorum*, often of oriental, mostly sarmatic affinities. CORINE 34.312: central European steppic grasslands, Festucion valesiacae, Cirsio-Bracipodion. Dry grasslands, developed in areas with a locally high degree of continentality, of Alsace, the Upper Rhine valley and hills, Franconia, Thuringia, Saxony and Brandenburg. Habitats Directive 6240; EUNIS E1.22

26

● **Aegean phrygana**, scrub/thickets

CORINE: 33.3 Low, thorny formations of hemispherical shrubs of the coastal thermo-Mediterranean zone of Aegean islands, of mainland Greece and the Ionian islands, of coastal Anatolia and Crete (up to 1000 m a.s.l.), with *Sarcopoterium spinosum*, *Centaurea spinosa*, *Satureja thymbra*, *Thymus capitatus*, *Genista acanthoclada*, *Anthyllis hermanniae*, *Euphorbia acanthothamnus*, *Stachys spinosa*, *Ballota pseudodictamnus*, *Ballota acetabulosa*, *Erica manipuliflora*, *Rhamnus oleoides*, *Lithospermum hispidulum*, *Fumana arabica*, *Fumana thymifolia*, *Cistus creticus*, *Cistus parviflorus*, *Cistus salvifolius*, *Pistacia lentiscus*, *Teucrium brevifolium*, *Teucrium divaricatum*, *Teucrium polium*, *Calicotome villosa*, *Micromeria graeca*, *Micromeria juliana*, *Micromeria nervosa*, *Salvia triloba*, *Ononis spinosa*, *Helichrysum italicum* ssp. *microphyllum*, *Helichrysum italicum* ssp. *italicum*, *Phagnalon graecum*, *Phlomis fruticosa*, much more widespread and diverse than the western Mediterranean formations. The subunits are based on physiognomically significant dominants. EUNIS S7-21.

5551

● **mature canopy trees (gen)**, canopy trees, urban parks  
stands of mature, European conifers or deciduous trees.

55511

● **deciduous (gen)**, mature canopy trees, urban parks, 55511  
stands of mature European deciduous trees (e.g. *Acer*, *Aesculus*, *Castanea*, *Fagus*, *Fraxinus*, *Populus*, *Quercus*).

55512

● **Picea**, coniferous, mature canopy trees, urban parks  
stands of mature *Picea*

55513

● **Pinus sylvestris**, coniferous, mature canopy trees, urban parks, 55513  
stands of mature *Pinus sylvestris*

5552

● **overmature canopy trees (general)**, urban parks, 5552  
ten or more overmature, deciduous trees of *Fagus*, *Fraxinus*, *Populus nigra* or *Quercus*.

55521

- **Fagus**, overmature canopy trees, urban parks  
ten or more overmature trees of *Fagus*.

55522

- **Fraxinus**, overmature canopy trees, urban parks  
ten or more overmature trees of *Fraxinus*.

55523

- **Populus nigra**, overmature canopy trees, urban parks  
ten or more overmature trees of *Populus nigra*

55524

- **Quercus**, overmature canopy trees, urban parks  
ten or more overmature trees of deciduous *Quercus* species.

558

- **flower meadow**, urban parks, 558  
open grassy areas cut mechanically once each autumn to sustain flowering plants of lowland hay meadow, based on either existing unimproved/improved grassland areas or modified (e.g. nutrient-deprived by topsoil stripping) lawn areas resown with flowering meadow seed mixes.

5581

- **cut flower meadow**, urban parks, 5581  
flowering meadow mechanically cut once each year, in the autumn.

5582

- **partly cut flower meadow**, urban parks  
flowering meadow with one third or more of surface remaining uncut each year, the rest of the surface mechanically cut in the autumn (each sector cut in rotation, so that a different sector remains uncut each year).

78o

- **Rumex alpinus stands**, open ground supplementary habitats  
CORINE 37.88: Glechometalia hederaceae: Rumicion alpine; subalpine and montane nitrophilous tall herb formations characteristic of the vicinity of cattle and game resting places, with *Rumex alpinus*, *Senecio alpinus*, *Cirsium spinosissimum*, *Peucedanum ostruthium*

791c

- **Allium stands**, urban supplementary habitats  
stands of *Allium* species, including cultivars.

792c

- **Artemisia stands**, urban supplementary habitats  
stands of *Artemisia vulgaris*.

793c

- **Narcissus stands**, urban supplementary habitats  
stands of *Narcissus* species, including cultivars.

## **1f New section added to the StN spreadsheets in 2020**

**FRANCE: distribution at departmental level**



In this new section of the spreadsheets there are 95 columns, each column representing one French département, identified by the number (dpt.no.) allocated to it in the French postal system. A published distribution record of a species from a département is coded “1” in the relevant column. Blanks denote lack of reliable published records.

## **Section 2: CHANGES MADE TO THE SPECIES ACCOUNTS**

### **2a Species for which an account is provided for the first time, in the StN 2020 Species Accounts**

In the following list an abbreviated form of the species name is used, where three or more authors' names are associated with the publication containing the original description. This abbreviated form is also used in the Species Accounts volume.

*Eumerus anatolicus* Grković, Vujić & Radenković, in Chroni *et al*, 2018

*Eumerus banaticus* Nedeljković, Grković & Vujić, in Grković *et al*, 2019

*Eumerus bicornis* Grković, Vujić & Hayat, in Grković *et al*, 2019

*Eumerus bifurcatus* van Steenis & Hauser, in Grković *et al*, 2019

*Eumerus emarginatus* Loew, 1848

*Eumerus grillator* Smit, in Grković, *et al*, 2019

*Eumerus karyates* Chroni, Grković & Vujić, in Chroni *et al*, 2018

*Eumerus phaeacus* Chroni, Grković & Vujić, in Chroni *et al*, 2018

*Eumerus tenuitarsis* Grković & Vujić, in Grković, *et al*, 2019

*Merodon atricapillatus* Šašić, Ačanski & Vujić, in Šašić *et al*, 2018

*Merodon aurifer* Loew, 1862

*Merodon longisetus* Vujić, Radenković & Likov, in Likov *et al*, 2019

*Merodon obstipus* Vujić, Radenković & Likov, in Likov *et al*, 2019

*Platycheirus troll* Mutin, in Mutin & Barkalov, 1999

*Sphegina calthae* Mutin, 1984

## **Section 3: CHANGES MADE TO OTHER STN FILES RE-ISSUED IN 2020**

### **3a Key to Genera**

*Eurimyia*, *Katara* and *Pseudopelecocera* have been added to the key to genera

### **3b Portraits volume**

Photos of the genera *Copestylum* and *Palumbia* have been added, together with photos of 20 more species representative of other genera.

## **Section 4: LITERATURE CITED IN THE STN FILES FOR THE FIRST TIME IN 2020**

This list includes publications from which data have been incorporated into the spreadsheets, since their last issue in 2016, plus publications from which data have been added to the Species Accounts since their last issue in 2018.

Barkalov, A.V. & Mutin, V.A. (2018) Checklist of the hover-flies (Diptera, Syrphidae) of Russia. *Euroasian Entomological Journal*, 17: 466 – 510.

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## Section 5: CITATION DETAILS FOR THIS ISSUE OF STN FILES

### 5a Spreadsheets

- Speight, M.C.D., Castella, E. & Sarthou, J.-P. (2020) StN 2020. In: Syrph the Net on CD, Issue 12. Speight, M.C.D., Castella, E., Sarthou, J.-P. & Vanappelghem, C. (Eds.) ISSN 1649-1917. Syrph the Net Publications, Dublin.

### 5b Text files

- Speight, M.C.D. (2020) Species accounts of European Syrphidae, 2020. *Syrph the Net, the database of European Syrphidae (Diptera)*, vol. 104, 314 pp., Syrph the Net publications, Dublin
- Speight, M.C.D (2020) StN key for the identification of the genera of European Syrphidae (Diptera) 2020. *Syrph the Net, the database of European Syrphidae*, Vol. 105, 46 pp, Syrph the Net publications, Dublin.
- Speight, M.C.D. & Castella, E. (2020) StN Database: Content and Glossary of terms, 2020. *Syrph the Net, the database of European Syrphidae (Diptera)*, Vol. 107, 98 pp , Syrph the Net publications, Dublin.
- Speight, M. C. D. and de Courcy Williams, M. (2020) European Syrphid Genera: Portraits of representative species 2020/ Portraits d'espèces représentatives de genres de Syrphidae Européens 2020. *Syrph the Net, the database of European Syrphidae (Diptera)*, Vol. 106, 104 pp, Syrph the Net publications, Dublin.