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CONTRIBUTION TO THE KNOWLEDGE OF SAWFLY FAUNA (HYMENOPTERA, SYMPHYTA) OF THE LOW TATRAS NATIONAL PARK IN CENTRAL SLOVAKIA

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Abstrakt: Počas deviateho medzinárodného pracovného stretnutia špecialistov na hrubopáse blanokrídlovce (Hymenoptera, Symphyta) v júni 2005 bol vykonaný faunistický prieskum hrubopásych na viacerých lokalitách Národného parku Nízke Tatry. Celkovo bolo zaznamenaných 200 druhov a osem čeľadí hrubopásych. Ďalších dvanásť taxónov nebolo identifikovaných do druhu. *Dolerus altivolus*, *D. hibernicus*, *Eriocampa dorpatica*, *Euura hastatae*, *Fenella monilicornis*, *Nematus yokohamensis tavastiensis*, *Pachynematus clibrichellus*, *Phyllocolpa excavata*, *P. polita*, *P. rolleri*, *Pontania gallarum*, *P. virilis*, *Pristiphora breadalbanensis*, *P. coactula* a *Tenthredo ignobilis* boli zistené na Slovensku po prvýkrát. Významný počet faunisticky zaujímavých nálezov naznačuje vysokú zachovalosť študovaných prírodných stanovišť v širšom okolí Demänovskej a Jánskej doliny, Svarína a v Národnej prírodnej rezervácii Turková.

Kľúčové slová: Hymenoptera, Symphyta, Národný park Nízke Tatry, faunistický výskum

INTRODUCTION

Sawflies are the primitive phytophagous hymenopterans (suborder Symphyta), represented in Europe by 1366 species (LISTON, 1995; TAEGER & BLANK, 2004; TAEGER et al., 2006). In Slovakia, about 650 species belonging to 13 families of the Symphyta should occur (ROLLER, 1999). However, our knowledge of the Symphyta is insufficient in many areas of Slovakia including the Low Tatras (ROLLER, 2000). The Low Tatras are the second highest mountains and the most extensive protected area in Slovakia, but their sawfly fauna is almost unknown. MOCSÁRY (1878, 1918) recorded a total of 28 species of five families in Korytnica and Demänovská dolina. Records of two species from Mt. Ďumbier are to be found in the comprehensive works of GREGOR & BAĽA (1941, 1942). BENEŠ (1967) mentioned a record of *Pontania retusae* from Mt. Ďumbier. Recent data on Symphyta of the Low Tatras are lacking.

The 9th International Workshop on Symphyta was held in Liptovský Ján from June 17 – 22, 2005. Participants of the workshop conducted faunistic survey of sawflies in several localities of the Low Tatras. Due to favourable weather and optimal flight season for many sawflies the research yielded a rich species list which is reported and commented upon in this paper.

METHODS

Several localities were visited in the central and eastern parts of Low Tatras during the 9th International Workshop on Symphyta or in the course of its preparation. Their geographical

coordinates, altitudes and dates of visits are presented in Table 1. The studied localities ranged from submontane to alpine vegetation zone (Figs 1-2). In some cases material was collected between two sites characterized in Table 1 (e.g. between Rovná hoľa – Luková and Bystrá – Krakova hoľa).

Sampling of adult sawflies was performed using entomological nets. Larvae, galls and leaf mines were also collected and recorded. Voucher specimens are deposited in private collections of the authors, in the Institute of Zoology (Bratislava) and the Deutsches Entomologisches Institut (Müncheberg)¹.

Data on host plants and distribution of Symphyta are taken from LACOURT (1999) if not cited otherwise.



Fig. 1. View of Demänovská valley from Luková with indication of the studied localities in Demänovská valley area. Photo: L. Roller

Obr. 1. Pohľad do Demänovskej doliny z Lukovej s označením študovaných lokalít v tejto oblasti. Foto: L. Roller



Fig. 2. Plateau at Krakova hoľa, a habitat of *Acantholyda pumilionis*. Photo: L. Roller

Obr. 2. Náhorná planina na Krakovej holi, habitat ploskanky *Acantholyda pumilionis*. Foto: L. Roller

¹ Questions on tracing a particular specimen should be addressed to the corresponding author

Table 1. Description of the studied localities
 Tabuľka 1. Charakteristika študovaných lokalít

Locality	Orientation from geographic points	Geographical coordinates	Altitude	Collecting dates
Bystrá	Liptovský Ján S 9 km, Jánska dolina (valley), Pred Bystrou	48°58.46N; 19°40.89E	880 m	21.6.2005
Bystrá – sedlo Javorie, (meadow) 1000 m		48°58.17N; 19°39.67E	1000 m	21.6.2005
Bystrá – sedlo Javorie, (meadow) 1160 m		48°58.17N; 19°39.00E	1160 m	21.-22.6.2005
Čierny Váh E 5 km (wetland)	Čierny Váh (settlement) E 5 km	49°01.00N; 20°00.50E	790 m	27.5.2005
Čierny Váh W 3 km (wetland)	Čierny Váh (settlement) W 3 km, Liptovský Hrádok E 13 km	49°00.40N; 19°53.60E	725 m	19.6.2005
Demänovská slatina (fen)	Liptovský Mikuláš SW 5 km, Demänovská SSW 2 km,	49°02.05N; 19°34.75E	670 m	26.5., 18.6.2005
Jánska dolina	Liptovský Ján S 2-9 km, Liptovský Ján – Bystrá		up to 880 m	17.6.2005
Jasná	Liptovský Mikuláš S 14 km, Demänovská dolina (valley)	48°57.77N; 19°35.11E	1250 m	20.6.2005
Konský grúň Mt.	Demänovská dolina (valley)	48°57.03N; 19°36.00E	1770 m	20.6.2005
Krakova hoľa Mt.		48°58.08N; 19°38.00E	1751 m	21-22.6.2005
Liptovský Ján	Liptovský Ján env, up to 2.5 km from the village	49°03.00N; 19°40.99E	660 m	17.6.2005
Lúčky (mountain meadow)	Liptovský Mikuláš SW 11 km, Demänovská dolina (valley)	48°58.92N; 19°35.83E	920 m	18.6.2005
Luková	Demänovská dolina (valley), W up to Dereše	48°56.97N; 19°35.48E	1480-1800 m	20.6.2005
Pusté (subalpine meadow)	Liptovský Mikuláš S 9 km, Demänovská dolina (valley)	48°59.50N; 19°36.30E	1400 m	26.5.2005
Rovná hoľa Mt.	Demänovská dolina (valley)	48°57.41N; 19°35.82E	1480 m	20.6.2005
Sedlo Javorie (pass)		48°58.39N; 19°38.07E	1487 m	21-22.6.2005
Sedlo Javorie SSE 1.5 km	E slopes of Tanečnica Mt.	48°57.59N; 19°38.37E	1200-1450 m	21.6.2005
Svarínska dolina	Liptovský Hrádok ESE 11 km, Svarín S	49°00.55N; 19°51.18E	695-730 m	19.6.2005
Svarínske lúky (meadows)	Liptovský Hrádok ESE 9 km, Svarín W 2 km	49°00.71N; 19°49.38E	690 m	19.6.2005
Turková Nature Protection Reserve	Liptovský Hrádok ESE 15 km	49°00.87N; 19°55.82E	740 m	19.6.2005
Záhradky	Demänovská dolina (valley)	48°58.12N; 19°35.84E	1050 m	20.6.2005

RESULTS AND DISCUSSION

In total 200 species belonging to eight families of the Symphyta were collected (Table 2). A further twelve taxa of Tenthredinidae were not identified to species level. In addition to sawflies which are common in mountains of Central Europe (e.g. many representatives of *Tenthredo*) we recorded considerable number of so called “rare species”. *Acantholyda pumilionis*, *Cephalcia alpina*, *Empria longicornis*, *Gilpinia abieticola*, *G. laricis*, *Macrophya albipuncta*, *M. recognata*, *Monoctenus obscuratus*, *Pachynematus lichtwardti*, *Pachynematus styx* and *Strongylogaster macula* are vulnerable species according to the red list of Slovak Hymenoptera (LUKÁŠ, 2001). *Abia candens* (collected in Turková) belongs to the endangered hymenopterans in Slovakia (LUKÁŠ, 2001). However, the current knowledge on the biology and the distribution of the majority of sawflies is insufficient to assess their degree of endangerment in Slovakia. In our opinion, nature protection management should also pay attention to the following species. *Acantholyda pumilionis*, *Aglaostigma pingue*, *Dolerus altivolus*, *D. hibernicus*, *D. frigidus*, *D. pseudoaeneus*, *Euura hastatae*, *Monoctenus obscuratus*, *Pachynematus clibrichellus*, *Phyllocolpa rolleri*, *Pristiphora breadalbanensis*, *P. carinata* and *P. coactula* are species indicating well preserved subalpine and lower alpine biotopes (Luková, Krakova hoľa, Rovná hoľa). *Dolerus bimaculatus*, *Eutomostethus gagathinus*, *Phyllocolpa excavata*, *Pontania collactanea* and *Pseudodineura enslini* are species characteristic for wet submontane meadows (Čierny Váh, Demänovská slatina, Svarínske lúky). Records of *Abia candens*, *A. sericea*, *Fenella monilicornis*, *Macrophya albipuncta*, *M. carinthiaca*, *M. recognata*, *M. rufipes*, *Megalodontes cephalotes*, *Tenthredo ignobilis* and *T. bifasciata* suggest the presence of valuable submontane and montane mesophilic grasslands (Bystrá – sedlo Javorie, Demänovská slatina, Svarínske lúky, Turková). *Aneugmenus temporalis*, *Nematus yokohamensis tavastiensis* and *Pamphilius aurantiacus* indicate well preserved primeval forest of the nature protection reserve Turková. *Allantus coryli*, *Cephalcia fulva*, *Eriocampa dorpatica*, *Hoplocampoides xylostei*, *Nematus ferrugineus*, *Tenthredo cunyi* and *T. silensis* are species that were recorded in various transient biotopes (usually ecotones of spruce forest) of submontane and montane zones. Moreover 15 species were recorded in Slovakia for the first time. A considerable number of interesting records indicate presence of valuable assemblages of the Symphyta in the studied area, in particular in Demänovská and Jánska valley areas, environs of Svarín and in the nature protection reserve Turková.

Notes on species (Table 2)

1. Adults were swept from *Pinus mugo*, larvae were extracted from staminate cones of *P. mugo*.
2. Adults were swept from *Juniperus sibirica*.
3. Adults were swept from *Rosa* sp.
4. Leaf bundles were recorded on *Salix purpurea*.
5. Aneugmenini spec.

The Tatra-specimen could not be placed with certainty into *Aneugmenus*, *Birka* or *Nesoselandria*. It possesses the following diagnostic characters: obsolete frontal area (not distinctly or sharp delimited), evenly domed head between eyes, missing occipital carina, the apex of mandible not bent at right angle and the base of mandible without a large pit, anal cell of the hind wing not petiolate, black tegulae, large subapical tooth of the claws, sawsheath in dorsal view resembles that of *Birka alpina* Lacourt, 1990.

6. Larvae were boring in twigs of *Rosa* sp.
7. Larvae and leaf rolls were found on *Rosa* sp.

8. *Dolerus altivolus*

This species has been recorded only from alpine zone of the French and Savoy Alps (LACOURT, 1988). The larval host plant is unknown, but it probably belongs to Poaceae or Cyperaceae. The collected female of *D. altivolus* is similar to *D. aeneus*, but antennae are shorter and terga I to IV completely smooth. It is the first record of *D. altivolus* in Slovakia. All *Dolerus* species discussed in notes 8-11 belong to the *D. aeneus* group.

9. *Dolerus* sp. near *chevini*

Shape of the penis valve in two recorded males fits *D. chevini* well. However, we could not find other morphological differences (shape of head, size; LACOURT, 1988) between the specimens and ones identified as *D. hibernicus* collected in the same locality, Rovná hoľa – Luková. *D. chevini* has been recorded from the Massif Central and Alsace in France (LACOURT, 1999). Larva and host plant are unknown.

10. *Dolerus hibernicus*

Records of this species have so far only been from the subalpine and alpine zones of the Alps. *D. hibernicus* is recorded in Slovakia for the first time. It appears to be quite abundant in Rovná hoľa – Luková area. The host plant is unknown, but it probably belongs to Poaceae or Cyperaceae.

11. *Dolerus* sp. near *pseudoaeneus*

D. pseudoaeneus has been recorded from the French Alps and only males have been collected (LACOURT, 1988). The description given by Lacourt for the male fits best with the females collected in the Low Tatras. These females are very similar to *D. aeneus*. The following differences were found: the head is clearly larger and not contracted behind eyes, the antennae are shorter (the 5th antennal segment is shorter than the 4th one), only little areas on the sides of the 1st tergum are smooth, the middle as well as all following terga are dull with transverse coriaceous structure.

12. *Empria* sp.

Several unusual leaf galls on *Sanguisorba officinalis* were recorded in Svarínske lúky (first found by Alexandra Kehl). Larvae in the galls were identified as *Empria* sp. This is the first report on *Sanguisorba officinalis* as a host plant for *Empria*. Rearing of larvae and examination of the adults will be necessary for species identification.

13. *Eriocampa dorpatica*

This species is distributed in North and Eastern Europe and its larva is associated with *Ribes* spp. *E. dorpatica* is recorded in Slovakia for the first time.

14. Galls were recorded in twigs of *Salix pentandra* (Fig. 3).

15. *Euura hastatae*

The monophagous species has been recorded in Alps and North Europe (KOPELKE, 2001) and its larvae inhabit bud-galls on young twigs of *Salix hastata*. This is the first record of *E. hastatae* in Slovakia.

16. *Fenella monilicornis*

This boreo-subalpine species occurs in North and Central Europe and in



Fig. 3. Galls of *Euura amerinae* in twig of *Salix pentandra* found in Čierny Váh E 5 km. Photo: L. Roller

Obr. 3. Hálky piliarky *Euura amerinae* na konáriku vrby päťtyčinkovej na lokalite Čierny Váh E 5 km. Foto: L. Roller

Mongolia. The larva mines leaves of *Geranium silvaticum*. It is the first record of *F. monilicornis* in Slovakia.

17. A leaf mine was recorded from *Ulmus glabra*.

18. Old galls were recorded in twigs of *Lonicera xylosteum* and *Lonicera* sp.

19. Adult was swept from *Alnus incana* in Bystrá – sedlo Javorie, 1160 m.

20. From larvae collected on *Salix* sp., two adults emerged on June 27, 2005.

21. *Nematus yokohamensis tavastiensis*

The description of Finnish subspecies of a Japanese species (VIKBERG, 1972) fits best with the collected member of the *Nematus wahlbergi* group. Larvae of this group all eat leaves of *Lonicera* species. ZINOVJEV (1978) synonymized this taxon with *N. wahlbergi* but with the remark that more material would need to be studied to decide properly. Two females of *N. wahlbergi* from Germany (in Ewald Jansen collection) differ from the Tatra specimen in color of hind femora and in a structure of saw. *N. yokohamensis tavastiensis* is known from Finland and it was recorded in Slovakia for the first time. The Tatra specimen was collected on *Lonicera xylosteum*.

22. *Pachynematus clibrichellus*

This arctic species is distributed in North Europe, Siberia and Canada. The larva is known to feed on *Carex* sp. This is the first record of *P. clibrichellus* in Slovakia.

23. *Phyllocolpa excavata*

This holarctic species is the only European *Phyllocolpa* associated with *Salix pentandra*. The larva lives in a leaf-fold. *P. excavata* is recorded in Slovakia for the first time.

24. Larvae were found on *Salix fragilis*.

25. *Phyllocolpa polita*

Larvae of this species live in folded-over leaf-edges of *Salix purpurea*. *Pontania purpureae* is also monophagous on *Salix purpurea* (also see note 33). Old Slovak records on *P. purpurea* may refer to *P. polita*. This is however the first definite record of *P. polita* in Slovakia.

26. *Phyllocolpa rolleri*

This is a new species described from specimens collected on *Salix hastata* in Krakova hoľa (LISTON, 2005). Adults were swarming around the host plant and young leaf-rolls with eggs were also observed.



Fig. 4. Gall of *Pontania collectanea* on leaf of *Salix repens* forma *rosmarinifolia* found in Demänovská slatina. Photo: L. Roller

Obr. 4. Hálka piliarky *Pontania collectanea* na liste vřby rozmarinolistej na lokalite Demänovská slatina. Foto: L. Roller

27. Leaf rolls with larvae were found on *Salix cinerea*.

28. Galls with larvae were recorded on leaves of *Salix repens* forma *rosmarinifolia* (Fig. 4).

29. Galls were found on leaves of *Salix hastata*.

30. *Pontania gallarum*

This species occurs in North and Central Europe. Its larva inhabits a leaf gall on *Salix caprea*. *P. gallarum* belongs to the taxonomically difficult *P. viminalis* species group (KOPELKE, 1991) and it may have already been reported under a different name from Slovakia. However, this is the first definite record of *P. gallarum* in Slovakia.

31. Galls were found on leaves of *Salix eleagnos*.

32. Galls with larvae were found on leaves of *Salix fragilis*.
33. Twisted leaf rolls (whole leaf rolled and twisted) with larvae were recorded on *Salix purpurea*.
34. Galls with larvae were found on leaves of *Salix purpurea*.
35. *Pontania virilis*

The species is distributed in Central and South Europe, North Africa, Transcaucasia and Central Asia. Its larva lives in a leaf gall on *Salix purpurea*. *P. virilis* belongs to taxonomically difficult *P. dolichura* group (KOPELKE, 1994) and it has probably been reported as *P. dolichura* from Slovakia. However, this is the first definite record of *P. virilis* in Slovakia.

36. *Pristiphora breadalbanensis*

This arcto-alpine species occurs in North and Central Europe and its larva may feed on herbaceous *Salix* spp., or *Vaccinium*. *P. breadalbanensis* is recorded in Slovakia for the first time.

37. *Pristiphora coactula*

This boreo-subalpine species is distributed throughout the Holarctic realm. *Vaccinium* and possibly *Salix* are reported as host plants of the larva. This is the first record of *P. coactula* in Slovakia.

38. Larvae were found on leaves of *Thalictrum aquilegiifolium*.

39. Leaf mines were recorded in *Trollius altissimus* (Fig. 5).

40. Leaf mines were recorded in *Ranunculus* sp.

41. *Tenthredo ignobilis*

The species occurs in North and Central Europe and Central Asia. The larva is known to feed on *Sedum telephium* agg. It is the first record of *T. ignobilis* in Slovakia. Additional material from Slovakia: SW Slovakia, Malé Karpaty Mts., Devínska Kobyla, 10. – 12. 5. 1994, 1♀, coll. Malaise trap, leg. L. Roller; W Slovakia, Považský Inovec Mts., NPR Tematínske vrchy, 3. – 10. 5. 1999, 1♀, coll. Malaise trap, leg. L. Roller.

42. Several mating couples were observed after light rain started in Bystrá-sedlo Javorie, 1160m (Fig. 6).

43. Males of *Tenthredopsis nassata* and *T. scutellaris* are not identifiable at species level. All collected males of *T. nassata*/*scutellaris* are listed under *T. nassata*.

44. A female was swept from yellow Asteraceae flower in Bystrá.

45. *Acantholyda* individuals were swept from or near to *Pinus mugo*.



Fig. 5. Mining larva of *Pseudodineura enslini* in leaf of *Trollius altissimus* found in Svarínske lúky. Photo: T. Nyman

Obr. 5. Míňujúca larva piliarky *Pseudodineura enslini* v liste žltohlava najvyššieho na lokalite Svarínske lúky. Foto: T. Nyman



Fig. 6. Mating couple of *Tenthredo trabeata* in Bystrá – sedlo Javorie 1160 m. Photo: L. Roller

Obr. 6. Párenie piliarky *Tenthredo trabeata* na lokalite Bystrá – sedlo Javorie 1 160 m. Foto: L. Roller

<i>Arge enodis</i> (Linné, 1767)																				0:1	0:1	
<i>Arge gracilicornis</i> (Klug, 1814)																						1:0
<i>Arge melanochra</i> (Gmelin, 1790)		2:2																				
<i>Arge nigripes</i> (Retzius, 1783)		2:4																			1:1	
<i>Arge ochropus</i> (Gmelin, 1790)																						
<i>Arge pagana</i> (Panzer, 1798)			1:0																		0:1	
<i>Arge ustulata</i> (Linné, 1758)																					0:1	0:1
Tenthredinidae																						
<i>Aglaostigma atcupariatae</i> (Klug, 1817)																					0:1	
<i>Aglaostigma discolor</i> (Klug, 1817)				1:0																	2:0	0:1
<i>Aglaostigma fuhripes</i> (Scopoli, 1763)			8:1																		0:1	1:0
<i>Aglaostigma lichitwardi</i> (Konow, 1892)																					0:1	1:2
<i>Aglaostigma pingue</i> (Klug, 1817)			1:0																		1:0	3:0
<i>Allantus calceatus</i> (Klug, 1818)										0:2												
<i>Allantus cingulatus</i> (Scopoli, 1763)																						
<i>Allantus cinctus</i> (Linné, 1758)			0:1							0:1											1:0	
<i>Allantus corvili</i> (Stritt, 1937)																						0:1
<i>Allantus rufocinctus</i> (Retzius, 1783)																						
<i>Amauronematus (Brachycoluma) sp.</i>										1:r.												1:0
<i>Amauronematus sp.</i>											1:0											
<i>Aneugmenus temporalis</i> (C.G.Thomson, 1871)																						
<i>Aneugmenini sp.</i>																						
<i>Ardis sp.</i>		2L																				
<i>Athalia circularis</i> (Klug, 1815)			2:3																		0:1	1:0
<i>Athalia cordata</i> Servile, 1823			0:1																		0:2	
<i>Athalia liberta</i> (Klug, 1815)																					1:1	
<i>Birka cinereipes</i> (Klug, 1816)																						0:1
<i>Blennocampa phylocolpa</i> Viitasaari et Vilkberg, 1985			2:1								1:0											
<i>Cladius pectinicornis</i> (Geoffroy, 1785)											1:r.											1:r.
<i>Clarenmontia alternipes</i> (Klug, 1816)			0:2																			1:0
<i>Clarenmontia brevicornis</i> (Brischke, 1883)																						0:1
<i>Clarenmontia tenuicornis</i> (Klug, 1816)											1:0											
<i>Clarenmontia uncta</i> (Klug, 1816)			1:2																		1:0	
<i>Dineura testaceipes</i> (Klug, 1816)										0:1												
<i>Dolerus aeneus</i> Hartig, 1837																					55:13	
<i>Dolerus alrivoltus</i> Lacourt, 1988			8:1							4:3											0:1	
<i>Dolerus bajulus</i> Serville, 1823																						
<i>Dolerus sp. near chevini</i> Lacourt, 1988										0:1												2:0

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	Z
<i>Dolerus hibernicus</i> Lacourt, 1988																	12:28						10
<i>Dolerus bimaculatus</i> (Geoffroy, 1785)						4:9							0:2								1:0	1:0	
<i>Dolerus frigidus</i> Benson, 1965																	1:1						
<i>Dolerus germanicus</i> (Fabricius, 1775)						1:2													0:1	0:1			
<i>Dolerus gonager</i> Fabricius, 1781					1:0																		
<i>Dolerus liogaster</i> C.G.Thomson, 1871					0:1																		
<i>Dolerus niger</i> (Linné, 1767)				1:7		0:2					0:1												
<i>Dolerus nigratus</i> (Müller, 1776)						0:1																0:1	
<i>Dolerus picipes</i> (Klug, 1818)				0:5								1:5											
<i>Dolerus</i> sp. near <i>pseudaeolus</i> Lacourt, 1988			0:1														0:6						11
<i>Dolerus varispinus</i> Hartig, 1837																	0:3						
<i>Dolerus (Dolerus) vestigialis</i> (Klug, 1818)												0:1									1:0		
<i>Empria excisa</i> (C.G.Thomson, 1871)																0:1							
<i>Empria liturata</i> (Gmelin, 1790)								0:1															
<i>Empria longicornis</i> (C.G.Thomson, 1871)				8:3													0:1	1:0			1:0	1:0	
<i>Empria pallimacula</i> (Serville, 1823)							1:0															0:1	
<i>Empria sexpunctata</i> (Serville, 1823)			5:3																				
<i>Empria tridens</i> (Konow, 1896)																0:1							
<i>Empria</i> sp. near <i>tridens</i> (Konow, 1896)			1:0													1:0							
<i>Empria</i> sp.				2:3	0:1																	15g,L	12
<i>Eriocampa dorpatica</i> Konow, 1887																							13
<i>Eriocampa ovata</i> (Linné, 1767)		0:1																				0:1	
<i>Eutomostethus ephippium</i> (Panzer, 1798)		0:1																				1:0	
<i>Eutomostethus gagathinus</i> (Klug, 1816)							0:1															1:0	
<i>Eutomostethus luteiventris</i> (Klug, 1816)			0:1		0:1	0:3																0:2	
<i>Euura americana</i> (Linné, 1758)						g										0:1						g	14
<i>Euura hastatae</i> Malaise, 1920											0:7												15
<i>Fenella monilicornis</i> (Dahlbom, 1835)																					m		16
<i>Fenusa ulmi</i> Sundevall, 1875																					m		17
<i>Heterarthrus leucomela</i> (Klug, 1818)				0:1																		g	18
<i>Hoplocampoides xylostei</i> (Vallot, 1836)			g																				
<i>Macrophya albipuncta</i> (Fallén, 1808)						0:1																	
<i>Macrophya annulata</i> (Geoffroy, 1785)				2:1																		1:0	
<i>Macrophya carinthiaca</i> (Klug, 1817)							11:8															0:1	
<i>Macrophya diversipes</i> (Schränk, 1782)																							
<i>Macrophya duodecimpunctata</i> (Linné, 1758)			0:1																				
<i>Macrophya montana</i> (Scopoli, 1763)				1:2			2:10	0:1														1:0	
<i>Macrophya cognata</i> Zombori, 1979			0:1				1:1															2:2	1:1
			1:0																				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	Z
<i>Pontania cf. proxima</i>																				1:0			
<i>Pontania purpureae</i> (Cameron, 1884)							L,i,r													1:0			33
<i>Pontania vesicator</i> (Bremi-Wolf, 1849)							IL,g	1:0													g		34
<i>Pontania viminidis</i> (Linné, 1758)							g																
<i>Pontania virilis</i> Zirmgöhl, 1955							g					g								1L			35
<i>Pristiphora abietina</i> (Christ, 1791)				0:2																			
<i>Pristiphora breadabonensis</i> (Cameron, 1882)															3:0								36
<i>Pristiphora carinata</i> (Hartig, 1837)															2:4								
<i>Pristiphora cineta</i> Newman, 1837				1:0																			
<i>Pristiphora coactula</i> (Ruthe, 1859)																							1:0
<i>Pristiphora compressa</i> (Hartig, 1837)				0:7							0:2				0:2								37
<i>Pristiphora decipiens</i> (Enslin, 1916)			0:1																				
<i>Pristiphora geniculata</i> (Hartig, 1840)				0:1																			
<i>Pristiphora gerula</i> (Konow, 1898)				1:6																			
<i>Pristiphora leucopodia</i> (Hartig, 1837)				1:2										1:0									0:1
<i>Pristiphora mollis</i> (Hartig, 1837)											0:1						6:3						1:1
<i>Pristiphora nigriceps</i> (Hartig, 1840)			0:1									0:1											
<i>Pristiphora pallidiventris</i> (Fallén, 1808)															0:1								
<i>Pristiphora pseudodecipiens</i> Beneš et Křístek, 1976				0:4																			
<i>Pristiphora saxeseni</i> (Hartig, 1837)				1:7										1:0									
<i>Pristiphora thalictri</i> (Kriechbaumer, 1884)				L																			38
<i>Pseudodineura enslini</i> (Hering, 1923)						2m															2m		39
<i>Pseudodineura fuscula</i> (Klug, 1816)																					2m		40
<i>Rhogogaster (Cytisogaster) chambersi</i> Benson, 1947											0:2												
<i>Rhogogaster chlorosoma</i> Benson, 1943							0:1													0:1		1:1	
<i>Rhogogaster punctulata</i> (Klug, 1817)											1:2									0:1			
<i>Rhogogaster viridis</i> (Linné, 1758)							0:1														0:2	1:7	
<i>Selandria serva</i> (Fabricius, 1793)							4:0														1:0		
<i>Sharliphora nigella</i> (Forster, 1854)											0:2					0:1							
<i>Stethomostus funereus</i> (Klug, 1816)																					4:0		
<i>Sromboeceros delicatulus</i> (Fallén, 1808)				12:8			1:0										1:1						0:1
<i>Srombologaster macula</i> (Klug, 1817)																0:1	1:0						
<i>Taxonus agrorum</i> (Fallén, 1808)				3:1			0:1															1:0	0:1
<i>Tenthredo (Zonuledo) amoena</i> Gravenhorst, 1807																						0:3	0:1
																							0:1

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	Z	
<i>Tenthredo (Tenthredella) solitaria</i> Scopoli, 1763				3;4		0;1	1;0					0;1										0;3		
<i>Tenthredo (Temuledo) temula</i> Scopoli, 1763		0;1	0;1			1;1															3;4	2;0		
<i>Tenthredo (Maculedo) trabecata</i> Klug, 1817				41;14		0;3												3;0			1;3	3;7	42	
<i>Tenthredo (Tenthredella) velox</i> Fabricius, 1798				1;17			0;1								0;1			1;0			0;1		0;2	
<i>Tenthredo (Zonuledo) zonula</i> Klug, 1817				3;0		1;5													0;3	0;1	0;1			
<i>Tenthredopsis friesii</i> (Konoiv, 1884)				3;0		1;3																		
<i>Tenthredopsis litterata</i> (Geoffroy, 1758)					1;0	2;1																		
<i>Tenthredopsis nassata</i> (Linné, 1767)				30;9	0;2	14;7	2;0				0;2	0;1				3;2		1;0			7;3	1;3	43	
<i>Tenthredopsis ornata</i> (Serville, 1823)				1;4		0;2						0;1									2;3	0;5	0;2	
<i>Tenthredopsis soridada</i> (Klug, 1817)				0;2		0;1																		
<i>Tenthredopsis scutellaris</i> (Fabricius, 1804)				0;4		0;1																	0;5	43
<i>Tenthredopsis stigma</i> (Fabricius, 1798)				0;1															0;1					
<i>Tenthredopsis tarsata</i> (Fabricius, 1804)																					1;0			
Megalodontesidae																								
<i>Megalodontes cephalotes</i> (Fabricius, 1781)	0;1																			1;0		1;0	44	
Pamphiliidae																								
<i>Acantholyda posticalis pinivora</i> Enslin, 1918									3;0	0;1							6;3						45	
<i>Acantholyda pumilionis</i> (Giraud, 1816)										3;0						1;0							45	
<i>Celphactia abietis</i> (Linné, 1758)						1;0																		
<i>Celphactia alpina</i> (Klug, 1808)			0;1																					
<i>Celphactia arvensis</i> Panzer, 1805											4;0													
<i>Celphactia erythrogaster</i> (Hartig, 1837)			0;1	23;0	1;0	3;0					1;0													
<i>Celphactia fulva</i> Battisti et Zanocco, 1994			1;1																					
<i>Pamphilus aurantiacus</i> (Giraud, 1857)																							0;2	
<i>Pamphilus balteatus</i> (Fallén, 1808)	0;1																							
<i>Pamphilus hortotum</i> (Klug, 1808)	0;1																					0;1	0;1	
<i>Pamphilus kontiumemii</i> Shinohara, 2003				1;6														1;0						
Cephiidae																								
<i>Calameuta filiformis</i> (Eversmann, 1847)						0;1																		
<i>Calameuta pallipes</i> (Klug, 1816)				1;1									0;2											
<i>Cephus nigrinus</i> C.G.Thomson, 1871					1;0															0;2				
<i>Cephus spinipes</i> (Panzer, 1801)			4;1			2;0														1;1	0;2	2;1		
<i>Cephus pygmaeus</i> (Linné, 1767)																				0;1				
<i>Trachelus troglodyta</i> (Fabricius, 1787)				1;0																				

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