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PSOCID TAXOCENOSES (INSECTA: PSOCOPTERA) IN THE FOREST ECOSYSTEMS OF THE *QUERCI-FAGETA* S. LAT. ZONE IN THE WESTERN CARPATHIAN MTS. AND POLONIC SUBPROVINCY

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Abstract

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Structure of psocid taxocenoses (*Psocoptera*) were intensively studied in forest ecosystems of the Western Carpathian Mts. and Polonic biogeographical subprovincy during 1997–2001 in the Czech Republic. Vegetation tiers (= altitudinal vegetation zones) were used as a study frame. Only a part of material, i.e. individuals that was found in the forest ecosystems of *Querci-fageta* s. lat. communities (= the 3rd oak-beech vegetation tier) was evaluated for purpose of this work. This vegetation tier is widespread in large part of the Opavská pahorkatina hills, in large parts of Podbeskydská pahorktina hills, in the Bílé Karpaty hills and in the foothills of the Vsetínské vrchy hills. 1201 adults comprising 29 species were found in total in the 3rd vegetation tier. As eudominant species, the following ones were found: *Peripsocus subfasciatus, Caecilius flavius* and *Stenopsocus lachlani*, as dominant species, the following ones were found: *Philotarsus parviceps* and *Caecilius piceus*. In natural geobiocenoses with the level of naturalness of 1 or 2, the following species were found: as eudominant species: *Caecilius flavidus, Peripsocus phaeopterus*, as dominant species, the following ones were found: *Caecilius piceus, Peripsocus subfasciatus, Philotarsus parviceps* and *Elipsocus moebiusi*. Taxocenoses of psocids were evaluated by Detrended Correspondence Analysis (DCA) and Divisive Cluster Analysis (DvClA). This material was compared to another material gained from various vegetation tiers in the Western Carpathians Mts. The characteristic species composition of psocids in the 3rd vegetation tier was as follows – *Elipsocus moebiusi – E. hyalinus – Philotarsus parviceps – Ectopsocus meridionalis – Caecilius flavidus.*

Psocoptera, taxocenoses, diversity, forest ecosystems, vegetation tier – *Querci-fageta* s. lat., Polonic biogeographical subprovincy, Western Carpathian Mts., Czech Republic

Order *Psocoptera* has not been in the Central Europe in focus of faunistic or ecological studies. Complex psocopterological research was initiated recently by author in a territory of the Czech Republic and Slovakia in 1997. The aim of the systematic study of psocids conducted in the Western Carpathian Mts. and Polonic biogeographical subprovincy was to define the species diversity and characteristic species composition of psocids in particular vegetation tiers (= altitudinal vegetation zone, further only vegetation tier) and to prove an applicability of vegetation zones or lower units of geobiocenological or forest-typological systems in zoocenological studies.

The aim of presented article is to analyse composition and diversity of psocid taxocenoses of the 3rd vegetation tier (*Querci-fageta* s. lat.) i.e. and to discuss the differences with other known vegetation tiers i.e. 4th vegetation tier (*Fageta abietis* s. lat.) (Holuša, 2012a), the 5th (*Abieti-fageta* s. lat.) (Holuša, 2009), the 6th (*Picei-fageta* s. lat.) (Holuša, 2011), the 7th (*Fageti-piceeta* s. lat.) and the 8th (*Piceeta* s. lat.) vegetation tiers

(Holuša, 2007c). Holuša (2001, 2003a, 2003b, 2007b, 2007c) published studies at ecological problem of psocid taxocenoses composition dependence on vegetation tiers and lower site classification units in the Moravskoslezské Beskydy Mts., in the Podbeskydská pahorkatina hills (Holuša, 2005) and in the alluvium of the Odra river (the Protected Landscape Area of Poodří) (Holuša, 2007a).

The aim of this study is the using of frames and units of forest site classification system for zoocenological studies with a view to processing zoocoenoses characteristics for forest site units.

METHODS

The net of equally distributed geobiocenological research plots was situated in regions of eastern Moravia, eastern Silesia and northern Slovakia in the territory of Polonic and Westcarpathian biogeographical subprovinces (i.e. in the region of the Western Carpathian Mts). Plots were selected in all vegetation tiers occurring in this region, i.e. from the 3rd (communities of *Querci-fageta* s. lat.) to the 9th (communities of *Pineta mugi* s. lat.) (cf. Holuša, 2003a). Plots were placed in such parts of forest stands which represent a particular vegetation tier and in which it was possible to collect a representative material of psocids. Approximately the same number of permanent plots was placed in all vegetation tiers. Permanent plots were marked out in the best-preserved parts of nature reserves (with the level of naturalness 1 or 2 according to Ellenberg (1973, 1978) and additional plots were selected in modified parts of nature reserves or in managed forests with the level of naturalness 3 or 4 according to Ellenberg (1973, 1978). Permanent plots were situated into Protected Reserve Dařanec (near Vřesina village, 268 m a.s.l.), Protected Reserve Černý les (the Šilheřovice village, 248 m a.s.l.), Protected Reserve Čertoryje (the Kněždub village, 350 m a.s.l.).

The material was collected during 1997–2001, at research plots material was collected 3 times during one vegetation season. The material was obtained from permanent sampling sites during the vegetation period (from the beginning of May to the middle of September). The samples were collected by sweeping with a sweep net of 50 cm mouth in diameter. Branches of trees and bushes were beaten with the same sweep net in the extent of about 1 m from the branch end and up to approximately 2.5 m height. Individual collection of adults also complemented this method. During sweeping and beating, 30 sweepings or beatings were carried out in each locality. Caught psocids were sucked into an exhauster and stored in a small test tube with 70% alcohol. All samples were collected and identified by the author. The evidence material is deposited in 70% alcohol in the author's collection. Papers of Günther (1974) and Lienhard (1998) were used for identification; nomenclature, zoogeographical distribution and ecological demands were used according to Lienhard (1977, 1998).

Samples were sorted into vectors "habitats of psocids", where the following factors were taken into account: biogeographical region, ecological conditions (according to the forest type complexes) and tree or shrub species, from which the material was obtained (samples were also distinguished according to the capture method; captured either in a herb layer or by the Malaise trap). For example: *PB3Bbk*, where *PB* denotes the biogeographical region of the Podbeskydský region (cf. Culek, 1996), *3B* represents forest type complexes 3B (i.e. *Querci-fagetum eutrophicum*) and *bk* is an acronym for the tree species *Fagus sylvatica*.

Diversity was evaluated by Shannon-Wiener (H_S) and Brilouin diversity index (H_B). Both indexes, Shannon-Wiener and Brilouin, were computed according to Kaesler & Mulvany (1976a, 1976b). Diversity indexes of individual habitats were calculated from a total number of captured specimens (Tab. I). Some material was excluded from statistical processing because of a small number of collected specimens in some plots (i.e. species in a lower number than 5 specimens or 2 species even less than 3 specimens) to prevent a data distortion.

Detrended Correspondence Analysis – DCA

Detrended Correspondence Analysis (DCA), according to Gauch (1982), Hill (1974) and Hill & Gauch (1980), proceeds from the method of Principal Component Analysis (PCA), used for non-linear data. Axes were adjusted in order to prevent criteria deformation by the axis ends in the DCA-analysis. The unit length of axes corresponds with the average species dispersion. In different parts of axis it remains unchanged. The DCA ordination method has a quite heuristic character. Interpretation of axes and ordination positions of particular species is based on their ecology with a view to habitat characteristics. Modified SW Decorana was used to process the DCA analysis, which was adapted for zoocenological data processing (Povolný & Znojil, 1990).

Divisive Cluster Analysis – DvClA

Divisive Cluster Analysis (DvClA) represents a method of hierarchic divisive classification (Gower, 1967; Orlóci, 1975). The ordination of groups is performed twice by "Reciprocal averaging" (RA). All vectors are projected into the main axis as a super-ellipsoid. In the second phase, partial complexes of vectors are divided according to species ordinate in particular vectors and according to abundance of particular species (indicators) as well. These indicators are automatically selected by the program in compliance with the species spectrum of particular vectors (habitats) for the end parts of ordination axis. Used modification 'Twinspan algorithm' comes from a gradual division of habitats and species. Every processed file is ordinated by RA method, whereupon characteristic species (or biotopes) are associated with axes ends. Central parts of axes are ordinated consequently. On the base of gained results, it is searched for species combinations, which are characteristic of parts of ordination axes and can be used as appropriate "tools for cuts" (Hill, 1974). This method was modified for the purpose of this study, because the first version was defined for phytocenological studies only. Column heads represent abbreviations of biotopes. Numbers in columns below indicate the division of appropriate algorithm (every habitat is divided, marked 0 or 1). There are species names in the left column and on the right there is one algorithm division of species spectrums in groups. The main field represents the semiquantitative relative frequency of particular species in groups corresponding with their biotopes. Explanations: – species does not occur, 1 – rare species, 2 – very scarce, 3 – scarce, 4 – common, 5 – very common to subdominant, 6 – dominant. Groups of psocid species and groups of habitats were organized to increase their clearness so that there is an evident species transfer within biotopes in the diagonal direction from the left upper corner to the right lower corner.

Acronyms of trees and shrubs (investigated tree species): bb – *Acer campestre*, bc – *Sambucus nigra*, bk – *Fagus sylvatica*, dbl – *Quercus robur*, dbz – *Quercus petraea*, hb – *Carpinus betulus*, jb – *Malus sylvestris*, jlv – *Ulmus laevis*, js – *Fraxinus excelsior*, kl – *Acer pseudoplatanus*, kro – *Frangula alnus*, lis – *Coryllus avellana*, lpm – *Tilia cordata*, sm – *Picea abies*, ma – malaise trap, pod – undergrowth.

Acronyms of biogeographical regions: OP – the Opavský biogeographical region, PB – the Podbeskydský biogeographical region, BK – the Bělokarpatský biogeographical region, VS – the Vsetínský biogeographical region.

The characteristic of the 3rd vegetation tier (*Querci-fageta* s. lat.)

According to Holuša & Holuša (2008) 3rd vegetation tier (*Querci-fageta* s. lat.) represents geobiocenoses where *Fagus sylvatica* is a dominant tree, which creates the main level of geobiocenosis (with the height of 35–40 m) there. *Quercus* sp. (*Quercus robur, Quercus petraea*) have their ecological optimum there with the representation up to 30%. They reach also into the crown level. *Abies alba* occurs in the crown level with the representation up to 10%. In the co-dominant tree level individually *Tilia cordata*, *Tilia platyphyllos*, *Acer platanoides*, *Fraxinus excelsior*, *Ulmus scabra*, and *Padus avium* occur, locally also *Acer pseudoplatanus*, in the subordinate tree level individually *Carpinus betulus* (with the representation upto 10%), *Acer campestre* and *Malus sylvestris* occur. *Sorbus torminalis* occurs sporadically in the study area.

The 3rd VT occurs in the altitude from 190 m a.s.l. up to 430 m a.s.l. with the centre of occurrence in the interval of 270–290 m a.s.l. Soil types are represented by luvisols (typical, pseudogley, arenic) and cambisols (arenic, typical, pseudogley), sporadically pararendzinas, podzols and regosols are represented there).

3rd VT occurs on the 45.6% of the area at present in the study area (including also non-forest land). It is dominant in the territory of Moravia and Silesia in the Středomoravské Karpaty hills, in the part of the Bílé Karpaty Mts., in the foothills of the Českomoravská vrchovina hills, in the foothills of the Nízký Jeseník hills, in the Zábřežská vrchovina hills, in the Moravská brána, in the lower parts of the Podbeskydská pahorkatina hills and the Opavská pahorkatina hills. The most widespread communities in 3rd VT in the study area are: forest type complexes (further FTC) 3H (*Querceto-Fagetum illimerosum trophicum*), FTC 3S (*Querceto-Fagetum mesotrophicum*), FTC 3D (*Querceto-Fagetum acerosum deluvium*), FTC 3B (*Querceto-Fagetum eutrophicum*) and FTC 3O (*Abieti-Querceto-Fagetum variohumidum trophicum*).

RESULTS AND DISCUSSION

1201 adults comprising 29 species were found in total in the 3rd vegetation tier. As eudominant species, the following ones were found: *Peripsocus subfasciatus, Caecilius flavidus* and *Stenopsocus lachlani*, as dominant species, the following ones were found: *Philotarsus parviceps* and *Caecilius piceus*. In natural geobiocenoses with the level of naturalness of 1 or 2, the following species were found: as eudominant species: *Caecilius flavidus, Peripsocus phaeopterus*, as dominant species, the following ones were found: *Caecilius piceus, Peripsocus subfasciatus*, *Philotarsus parviceps* and *Elipsocus moebiusi.* Resulting from the comparison of the tree colonization, the most numerous taxocenosis was found at *Picea abies,* which resulted in a significant change in dominance (see above). *Fagus sylvatica* inhabits the very poor range of psocids species in low abundances, large numerous of species inhabit *Quercus robur* (see Tab. I). In comparison with higher VTs (i.e. 5th and 6th), there was a change between species dominance. *Caecilius flavidus*, which is eudominant species of 3rd and 4th VTs, occurs in the higher VTs only as dominant species. This representation is related to the change in tree species composition – reducing the representation of broadleave tree species in 5th, then more in 6th VT and higher VTs. Similarly as in the 4th, species *Mesopsocus unipunctatus* and *Stenopsocus lachlani* also occur rarely in the 3rd, on the other hand they occur in 6th VT as a eudominant species. Resulting from the comparison of tree colonization, *Picea abies* was the most colonized tree species in all VTs: 3rd, 4th, 5th and 6th.

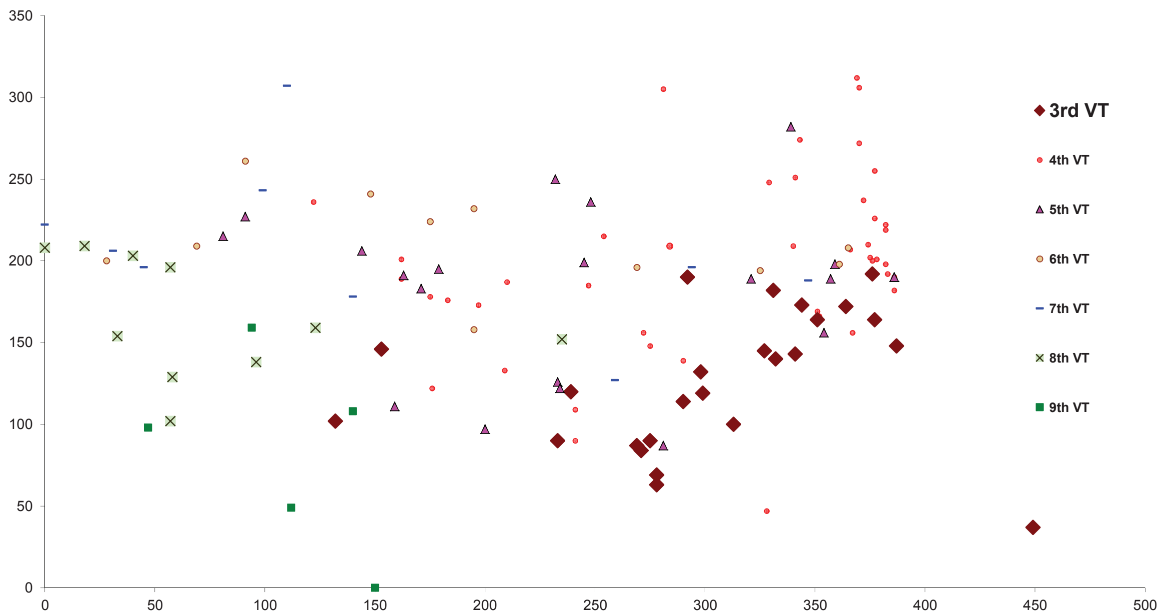
The DCA-analysis might be interpreted as follows: the x-axis denotes an influence of vegetation tiers i.e. vertical zonality and the q-axis refers to an influence of hydricity (cf. Holuša, 2007c). Habitats of the 3rd VT creates dotted field, which is linked to dotted field of floodplain geobiocenoses. From the point of hydricity the field is little shifted lower along the axis *q* (see Fig. 1). Generally, habitats of 3rd VT are "moister" than habitats of an 4th VTs. The position of dotted field of 3rd VT corresponds connection ecosystems in the landscape, where geobiocenoses of zonal 3rd VT follow the floodplain geobicenoses. Habitats of 4th VT create a large dotted elongated as in the gravity gradient vegetation (x-axis) as well as hydricity gradient (q-axis) (Holuša, 2012a). Dotted field is quite similarly to the field of the 5th VT, but more elongated along the q-axis. Extensiveness of dotted field corresponds to the large number of different tree species and the nature of the studied sites. Dotted field of the 4th VT in the x – q axis is shifted higher than field of the 3rd VT.

Habitats of 3rd VT, similarly as habitats of 4th VT, are represented in more groups in the DvClA-analysis, according to species, where it was collected. Habitats 3rd VT are sorted into following groups: mainly in group of A-II-a-1, which characterized the 3rd and 4th VTs, individually in group of A-I-b and also in group of A-II-a-2 (see Fig. 2.). Very rarely are represented in groups of A-I-a, B-I-a and B-I-b.

Generally speaking, the indexes of diversity H_S are in the interval of 0.42–1.91 and the H_B indexes are in the interval of 0.60–2.12. There were found higher values of diversity indexes in the 3H community for the OP3Hdbl biotope i.e. H_S 1.91 and H_B 2.02 and high value was also found for the PB3Hsm psocids biotope, i.e. H_S 1.81 and H_B 2.01, and also for the PB3Hdbl psocid biotope, i.e. H_S 1.64 and H_B 2.12 (see Tab. I).

The characteristic species combination of psocids for the 3rd vegetation tier was established as follows: *Elipsocus moebiusi – E. hyalinus – Philotarsus parviceps – Ectopsocus meridionalis – Caecilius flavidus – Stenopsocus stigmaticus.* Significant species are further: *Peripsocus subfasciatus*, *Peripsocus phaeopterus*, *Lachesilla quercus*. Species *Ectopsocus meridionalis*, *Stenopsocus stigmaticus* are indicators of 3rd VT (and maybe lower VTs). The characteristic species combination of psocids for the 4th vegetation tier was established as follows: *Caecilius flavidus – Elipsocus moebiusi – Peripsocus parvulus* (Holuša 2012a). Unlike 3rd VT species *Ectopsocus meridionalis* is totally missing in 4th VT. Compared with species combinations of 5th VT, which was identified as follows: *Caecilius flavidus – C. burmeisteri – C.despaxi – Metylophorus nebulosus – Philotarsus picicornis*, Species *Elipsocus moebiusi* is missing in 5th VT, in contrast to 3rd and 4th VT. On the other hand the occurrence of *Caecilius despaxi* (indicator for 5th and higher VTs) was found as the differential feature between 4th and 5th VTs, in 3rd is totally missing. The "spruce" corticolous species are starting to dominate in the changed vegetation (i.e. spruce stands) such as *Caecilius burmeisteri*, *Stenopsocus lachlani*, just that at this tree species "descend" to lower VTs.

In conclusion, it is the first step towards to the knowledge of taxocenoses of model group of psocids in the forest site classification frames – vegetation tiers, 3rd VTs a last VT in scale of VTs of study are i.e. from 3rd to 9th VT. The data is based on relatively small sample of the material, and should take in account the short-term of study (two growing seasons). It is therefore necessary to continue research and to monitor changes of psocid taxocenoses.



1: *DCA analysis of psocid biotopes with marked biotopes of Querci-fageta (3rd vegetation tier) tier (axis x – gradient of vegetation tiers, axis q – gradient of hydricity)*

	OD1Lbre	PB1Lhb	PB1Ljv	PB1Lstr	PB1Lvrk	PB2Llpm	PB2Lbre	PB2Lhh	PB1Llpm	PB1Lsvk	PB2Lhb	PB1Ljs	PB2Ljs	**PB3Blpm**	PB3Ljs	OD1Lsvk	VS2Ljlv	PB2Lsvk	**PB3Gkro**	**PB3Hkro**	PB4Bjd	OD1Lolx	PB1Ldbl	PB1Ljlv	PB3Los	PB4Ajlh	PB4Ajv	**VS3Bjs**	VS4Bdbz	VS4Esv	PB4Bpod	VS4Bjb	BE4Bdbl	BE4Bbk	BE4Bhb	BE4Blpm	BE5Fbk	BE5Ubk	BE6Fbk	OR6Bbk	**PB3Hhb**	**PB3Hpod**	PB4Ajs	PB4Bbk	PB4Bhb	PB4Blpm	PB4Dbk	PB4Wsvk	VS4Bbb	VS4Bbk	VS4Bhb	VS4Blpm	VS4Ejb	VS4Fbk	VS5Bbk	VS5Dbk	VS5Dsm	BE6Bbk	BE7Sbk	BE7Sjr	BE7Zbk	VS4Ddbz	VS5Fsm	BE4Sdbl	BE5Fpod	BE5Sjiv	OD1Uvrk	**OP3Hpod**	**PB3Oma**	PB4Ddbl	VS4Bdbl	VS4Bpod	PB4Hsm
Groups of biotopes	**A-I-a**																				**A-I-b**																																																					
Elipsocus moebiusi	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	1	1	1	-	1	2	3	3	4	1	3	1	1	-	1	-	1	1	-	1	1	1	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mesopsocus laticeps	-	-	-	-	-	-	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stenopsocus immaculatus	1	1	1	1	-	1	2	2	1	2	3	1	1	1	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stenopsocus stigmaticus	3	2	4	4	5	3	4	2	4	3	4	1	1	1	1	1	1	-	-	-	-	1	1	2	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius flavidus	2	2	3	3	5	4	2	2	3	3	3	1	1	-	1	2	3	1	2	2	-	2	1	2	1	1	1	1	1	1	1	1	3	2	4	3	4	3	4	2	3	3	4	4	4	3	3	4	2	4	5	3	2	2	4	2	2	2	2	1	3	2	1	1	1	1	1	1	1	1	2	1	1
Elipsocus pumilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amphigerontia contaminata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius gynapterus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lachesilla quercus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ectopsocus meridionalis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Graphopsocus cruciatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Psococerastis gibbosa	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	1	-	-
Peripsocus phaeopterus	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Philotarsus parviceps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peripsocus subfasciatus	-	-	-	-	-	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius atricornis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-
Peripsocus parvulus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Trichadenotecnum majus	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Blaste quadrimaculata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kolbia quisquiliarum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Epipsocus lucifugus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liposcelis corrodens	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Elipsocus abdominalis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enderleinella obsoleta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hemineura dispar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reuterella helvimaculata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius piceus	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peripsocus didymus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peripsocus alboguttatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metylophorus nebulosus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loensia fasciata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loensia variegata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius fuscopterus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Elipsocus hyalinus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stenopsocus lachlani	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trogium pulsatorium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius burmeisteri	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	1	-	-	-	-	1	-	1	-	-	1	1	-	-	-	-	1	-	1	1	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-	1	-	-	-	-
Loensia pearmani	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Philotarsus picicornis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Cuneopalpus cyanops	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Amphigerontia bifasciata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichadenotecnum sexpunctatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lachesilla pedicularia	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-
Mesopsocus unipunctatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
Caecilius despaxi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	1	1	0	0	1	1	1	0	0	0	1	0	0	1	1	1	0	1	1	1	1	1	1	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	1

Groups of biotopes	OP3Hdbl	OP3Hhb	OP3Hjb	OP3Hjlv	OP3Hlis	PB3Lolx	OD1Ldbl	OD1Ltrn	VS4Btrn	BE5Bbk	BK3Bhb	OD1Lbb	OD1Lhb	OD1Lhh	OD1Ljs	OD1Ljv	OD1Llpm	OD1Lstr	OD1Lvrk	OP3Hlpm	PB2Ldbl	PB2Lolx	PB2Lstr	PB2Lvrk	PB3Ghb	PB3Gjs	PB3Glpm
	A-II-a-1																										
Elipsocus moebiusi	4	1	1	-	1	2	1	1	-	1	-	1	1	-	1	-	1	-	-	1	1	1	-	-	1	1	1
Mesopsocus laticeps	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-
Stenopsocus immaculatus	-	-	-	-	-	1	1	1	-	-	-	1	1	1	1	1	1	2	1	-	2	1	2	-	3	-	3
Stenopsocus stigmaticus	-	1	-	-	-	1	3	4	-	-	-	1	2	2	3	1	2	1	2	-	3	1	3	4	1	1	3
Caecilius flavidus	4	4	2	-	2	1	6	4	4	2	1	2	4	2	4	3	4	2	3	3	4	2	2	2	3	-	3
Elipsocus pumilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amphigerontia contaminata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius gynapterus	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lachesilla quercus	2	1	-	1	-	-	2	-	-	-	-	1	1	-	-	1	-	-	-	1	1	-	-	-	-	-	-
Ectopsocus meridionalis	1	1	-	1	-	-	1	-	-	-	-	-	1	1	1	-	-	1	-	1	-	-	-	-	-	-	-
Graphopsocus cruciatus	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-
Psococerastis gibbosa	1	-	-	-	-	1	1	-	-	1	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-
Peripsocus phaeopterus	3	1	1	1	1	1	3	3	2	-	1	1	1	-	1	1	1	1	1	1	1	1	1	1	2	-	-
Philotarsus parviceps	4	1	2	3	2	4	2	2	2	-	1	1	1	1	1	-	1	1	1	1	-	-	-	1	1	1	1
Peripsocus subfasciatus	5	3	4	2	4	2	3	4	-	1	1	2	3	3	1	1	2	2	1	1	1	1	2	1	1	-	2
Caecilius atricornis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Peripsocus parvulus	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Trichadenotecnum majus	3	1	1	-	1	1	-	-	-	1	-	-	-	-	1	-	-	-	1	1	-	1	1	1	-	-	1
Blaste quadrimaculata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kolbia quisquiliarum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Epipsocus lucifugus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liposcelis corrodens	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Elipsocus abdominalis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enderleinella obsoleta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hemineura dispar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reuterella helvimaculata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius piceus	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peripsocus didymus	1	1	1	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Peripsocus alboguttatus	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metylophorus nebulosus	3	1	1	1	1	1	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loensia fasciata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loensia variegata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius fuscopterus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Elipsocus hyalinus	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-
Stenopsocus lachlani	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Trogium pulsatorium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius burmeisteri	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loensia pearmani	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Philotarsus picicornis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Cuneopalpus cyanops	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amphigerontia bifasciata	1	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichadenotecnum sexpunctatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lachesilla pedicularia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mesopsocus unipunctatus	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius despaxi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Groups of biotopes	PB3Lbc	PB3Ldbl	PB3Ljlh	PB3Lvrp	VS4Ssm	OD1Lbc	OD1Ljlh	OD1Lols	OP1Loll	OP3Hkl	PB1Ljv	PB2Lbc	PB2Ljv	PB2Llis	PB2Loll	PB3Gbc	PB3Lkro	PB3Lsm	PB3Lstr	BK2Ctrn	OP1Lvrk	PB3Lkl	VS4Bos	BE6Obk	BK2Cdbp	BK3Bdbz	OD1Lkl
	A-II-a-1																			A-II-a-2							
Elipsocus moebiusi	1	3	-	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mesopsocus laticeps	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	-	-	-	-
Stenopsocus immaculatus	1	1	-	1	1	-	-	1	-	-	1	1	1	1	-	-	-	1	1	-	-	-	-	-	-	-	-
Stenopsocus stigmaticus	1	2	1	1	-	-	-	1	-	-	2	1	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-
Caecilius flavidus	1	5	1	1	1	1	1	-	-	1	1	1	1	1	1	-	1	1	-	1	1	1	1	1	1	1	1
Elipsocus pumilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amphigerontia contaminata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius gynapterus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lachesilla quercus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Ectopsocus meridionalis	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Graphopsocus cruciatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-
Psococerastis gibbosa	-	1	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peripsocus phaeopterus	1	2	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	1	1	1	-
Philotarsus parviceps	1	2	1	2	1	-	-	-	-	1	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-
Peripsocus subfasciatus	2	1	1	1	3	1	1	1	1	1	2	1	1	-	-	1	-	1	-	-	-	-	-	-	-	1	1
Caecilius atricornis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Peripsocus parvulus	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Trichadenotecnum majus	1	1	-	-	-	-	-	-	1	1	-	-	1	1	1	-	-	1	1	-	-	-	-	-	-	-	-
Blaste quadrimaculata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kolbia quisquiliarum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Epipsocus lucifugus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liposcelis corrodens	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Elipsocus abdominalis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enderleinella obsoleta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hemineura dispar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reuterella helvimaculata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius piceus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
Peripsocus didymus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peripsocus alboguttatus	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Metylophorus nebulosus	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
Loensia fasciata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loensia variegata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
Caecilius fuscopterus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Elipsocus hyalinus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Stenopsocus lachlani	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-
Trogium pulsatorium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius burmeisteri	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Loensia pearmani	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Philotarsus picicornis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cuneopalpus cyanops	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amphigerontia bifasciata	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
Trichadenotecnum sexpunctatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lachesilla pedicularia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mesopsocus unipunctatus	-	-	-	1	2	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius despaxi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	1	1	1	1	1

Groups of biotopes	OP3Hbk	OP3Hkro	PB3Hbk	PB3Hdbl	VS3Lols	VS3Lolx	BE5Ejb	PB4Djd	PB1Tkro	PB1Toll	PB1Tvrp	PB2Ltrn	PB3Hlpm	PB3Loll	BE5Hsm	PB2Lsm	VS5Bsm	VS4Bsm	VS3Lbk	BE5Ljv	BK3Bbb	BE5Ljs	BE5Loll	BE5Lolx	VS4Bhh
	A-II-a-2																		A-II-b						
Elipsocus moebiusi	1	-	1	2	-	-	3	1	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-
Mesopsocus laticeps	-	-	-	-	-	-	1	-	2	4	1	1	1	1	-	-	-	1	-	-	-	-	-	-	-
Stenopsocus immaculatus	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	2	-	-	-	-	-	-	-	-	-
Stenopsocus stigmaticus	-	-	-	-	-	-	-	-	2	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius flavidus	1	1	1	1	2	1	-	-	1	1	1	-	3	-	-	1	1	2	1	1	1	1	1	2	2
Elipsocus pumilis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amphigerontia contaminata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius gynapterus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lachesilla quercus	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ectopsocus meridionalis	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Graphopsocus cruciatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Psococerastis gibbosa	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	2	3	-	1	-	1	-
Peripsocus phaeopterus	1	-	1	1	1	1	-	-	2	1	1	1	2	-	-	1	-	4	-	-	-	-	-	-	1
Philotarsus parviceps	-	2	-	-	-	-	-	-	3	1	-	-	1	2	3	1	-	2	-	-	-	-	-	-	-
Peripsocus subfasciatus	1	1	-	1	1	1	-	1	1	1	1	-	-	1	5	3	5	5	-	-	-	-	-	-	-
Caecilius atricornis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Peripsocus parvulus	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	1	-	3	-	-	-	-	-	-	-
Trichadenotecnum majus	-	-	-	1	-	-	1	1	-	1	-	-	-	-	1	1	-	2	-	1	1	-	1	1	-
Blaste quadrimaculata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kolbia quisquiliarum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Epipsocus lucifugus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liposcelis corrodens	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Elipsocus abdominalis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
Enderleinella obsoleta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	5	-	-	-	-	-	-	-
Hemineura dispar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Reuterella helvimaculata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius piceus	2	-	-	-	-	-	-	-	-	1	-	-	-	-	3	3	1	5	-	-	1	-	-	-	-
Peripsocus didymus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	-	-	-	-	1	-
Peripsocus alboguttatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
Metylophorus nebulosus	-	1	-	-	-	-	1	-	-	-	1	-	-	-	3	1	1	4	1	-	-	1	1	1	1
Loensia fasciata	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-
Loensia variegata	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius fuscopterus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Elipsocus hyalinus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Stenopsocus lachlani	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	2	1	2	-	-	-	-	-	-	-
Trogium pulsatorium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caecilius burmeisteri	-	-	-	1	-	-	-	1	-	1	-	-	-	-	2	2	4	6	-	-	-	-	-	-	-
Loensia pearmani	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Philotarsus picicornis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	3	4	6	-	-	-	-	-	-	-
Cuneopalpus cyanops	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	5	-	-	-	-	-	-	-
Amphigerontia bifasciata	-	-	-	-	-	-	-	-	3	5	2	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Trichadenotecnum sexpunctatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lachesilla pedicularia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-	-	-	-	-	-	-
Mesopsocus unipunctatus	-	-	-	1	-	-	-	-	1	-	-	-	1	-	1	-	1	4	-	-	-	-	-	-	-
Caecilius despaxi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	1	-	-	-	-	-	-	-
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	1
	1	1	1	1	1	1	0	0	1	1	1	1	1	1	0	0	0	1							

	BE6Psm	BE6Rsm	VS4Bbo	BE4Bjd	OP3Hsm	VS3Lsm	VS4Bjd	BE6Ojiv	PB4Bma	BE6Pjd	BE6Ppod	BK3Bsm	BK4Bsm	OR6Bjd	OD1Lsm	BE5Hsm	PB2Lsm	VS5Bsm	VS4Bsm	BE6Psm	BE6Rsm	BE5Lsm	BE5Ssm	BE6Osm	BE5Bjd	BE5Bsm	BE5Nsm	BE6Pbk	PB4Bsm	PB3Hma	PB3Hsm	
Groups of biotopes								B-I-a															B-I-b									
Elipsocus moebiusi	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 0 0 1
Mesopsocus laticeps	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	0 0 0 1
Stenopsocus immaculatus	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 0 0 0
Stenopsocus stigmaticus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 0 0 0
Caecilius flavidus	-	-	-	-	-	-	1	1	2	-	-	-	-	-	-	-	1	1	2	-	-	-	-	-	-	-	-	1	1	3	1	0 0 1 0
Elipsocus pumilis	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	0 0 1 0
Amphigerontia contaminata	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 0 1 1
Caecilius gynapterus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 1 0 0 0
Lachesilla quercus	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	0 1 0 0 0
Ectopsocus meridionalis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0 1 0 0 1
Graphopsocus cruciatus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	0 1 0 1 0
Psococerastis gibbosa	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	0 1 0 1 0
Peripsocus phaeopterus	-	-	-	-	-	-	1	1	-	1	-	-	-	-	1	-	1	-	4	-	-	-	2	-	-	-	-	-	-	1	1	0 1 0 1 1
Philotarsus parviceps	1	4	-	-	-	-	-	-	-	-	-	2	-	-	6	3	1	-	2	1	4	1	-	1	-	-	-	-	-	-	-	0 1 0 1 1
Peripsocus subfasciatus	3	6	-	-	4	2	1	1	1	-	-	-	1	-	1	5	3	5	5	3	6	1	1	2	3	-	1	-	-	2	1	0 1 1 0 0
Caecilius atricornis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	0 1 1 0 1
Peripsocus parvulus	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-	-	-	1	-	-	1	-	-	-	-	0 1 1 0 1
Trichadenotecnum majus	-	3	-	-	1	-	1	1	1	-	-	-	-	-	1	1	1	-	2	-	3	1	2	1	1	1	-	2	1	1	-	0 1 1 1
Blaste quadrimaculata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 1 0 0 0
Kolbia quisquiliarum	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 1 0 0 0
Epipsocus lucifugus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1 1 0 0 1 0
Liposcelis corrodens	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	1 1 0 0 1 0
Elipsocus abdominalis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1 1 0 0 1 1
Enderleinella obsoleta	4	6	-	-	1	-	1	1	-	-	-	-	-	-	-	1	1	1	5	4	6	3	2	4	1	1	-	1	2	1	3	1 1 0 0 1 1
Hemineura dispar	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1 1 0 0 1 1
Reuterella helvimaculata	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	1 1 0 0 1 1
Caecilius piceus	5	5	-	-	3	-	-	1	1	1	1	-	-	1	1	3	3	1	5	5	5	1	2	1	-	1	-	1	2	6	2	1 1 0 1
Peripsocus didymus	3	3	-	-	-	1	1	-	-	1	-	-	-	-	-	-	1	-	4	3	3	4	4	2	-	-	-	-	1	-	1	1 1 0 1
Peripsocus alboguttatus	2	4	-	-	-	-	-	-	-	-	-	-	-	-	6	1	-	-	-	2	4	-	-	1	-	-	-	-	-	2	-	1 1 1 0
Metylophorus nebulosus	2	2	1	-	1	-	1	-	-	2	1	2	2	1	-	3	1	1	4	2	2	-	4	-	2	-	1	1	1	1	1	1 1 1 1 0 0
Loensia fasciata	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	1	2	-	-	-	1	-	-	-	-	-	-	-	-	1 1 1 1 0 1
Loensia variegata	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1 1 1 1 0 1
Caecilius fuscopterus	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1 1 1 1 1
Elipsocus hyalinus	-	-	-	1	4	-	1	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1 1 1 1 1
Stenopsocus lachlani	4	5	-	-	-	-	-	1	1	1	-	-	-	1	1	1	2	1	2	4	5	3	5	1	1	-	-	1	1	6	4	1 0 1 0 0
Trogium pulsatorium	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 0 1 0 0
Caecilius burmeisteri	6	6	-	1	2	-	2	1	1	1	1	1	3	2	3	2	2	4	6	6	6	2	6	1	3	5	4	3	4	4	3	1 0 1 0 1
Loensia pearmani	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1 0 1 1 0
Philotarsus picicornis	4	6	1	-	-	-	1	-	-	1	-	-	-	1	1	5	3	4	6	4	6	3	5	2	-	2	1	1	-	-	-	1 0 1 1 0
Cuneopalpus cyanops	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2	5	1	-	-	1	-	-	-	-	-	-	-	-	1 0 1 1 1
Amphigerontia bifasciata	2	3	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	2	3	1	2	-	1	-	-	-	-	-	-	1 0 0 0
Trichadenotecnum sexpunctatum	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 0 0 1 0 0
Lachesilla pedicularia	-	-	-	-	1	-	-	1	-	-	-	-	-	-	2	1	1	-	1	-	-	-	1	-	-	-	-	-	-	-	-	1 0 0 1 0 1
Mesopsocus unipunctatus	1	-	-	-	2	1	1	-	-	-	-	-	-	-	3	1	-	1	4	1	-	-	2	-	-	-	-	-	-	-	1	1 0 0 1 0 1
Caecilius despaxi	3	6	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	1	3	6	4	4	3	1	-	1	-	1	-	-	1 0 0 1 1
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	
	1	1		1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1	1	
	0	0		0	0	0	0	1	1	0	0	0	0	0	1	0	0	0	1	0	0	1	1	1	0	1	1	1	1			

2: *Results of DvClA-analysis 'Twinspan algorithm'; biotopes of the 3rd are marked with vertical columns with grey color (with regard to the table extent, right and central parts of the whole table is illustrated only)*

I: *Values of Indexes of diversity and equitability for particular „habitats of psocids" in the vegetation tier of Querci–fageta s.lat.*

biotope	Nsp	N	N				biotope	Nsp	N	N				biotope	Nsp	N	N			
			H_S	E_S	H_B	E_B				H_S	E_S	H_B	E_B				H_S	E_S	H_B	E_B
BK3Bbb	3	4	0.621	1.000	1.040	0.946	OP3Hlis	7	46	1.156	0.672	1.335	0.686	PB3Hbk	4	6	0.798	0.922	1.242	0.896
BK3Bdbz	5	10	1.054	0.906	1.471	0.914	OP3Hlpm	11	30	1.430	0.736	1.799	0.750	PB3Hdbl	10	21	1.644	0.924	2.124	0.923
BK3Bhb	7	10	1.262	0.969	1.834	0.943	OP3Hpod	2	6	0.451	0.904	0.637	0.918	PB3Hhb	4	19	0.716	0.624	0.898	0.647
BK3Bsm	3	15	0.890	0.987	1.085	0.988	OP3Hsm	10	93	1.621	0.766	1.775	0.771	PB3Hkro	3	11	0.427	0.502	0.600	0.546
OP3Hbk	6	16	1.221	0.883	1.581	0.882	PB3Blpm	2	5	0.461	1.000	0.673	0.971	PB3Hlpm	8	28	1.094	0.638	1.364	0.656
OP3Hdbl	14	204	1.908	0.763	2.019	0.765	PB3Gbc	3	4	0.621	1.000	1.040	0.946	PB3Hma	15	387	1.414	0.540	1.476	0.545
OP3Hhb	11	69	1.391	0.648	1.582	0.660	PB3Ghb	8	44	1.301	0.717	1.509	0.726	PB3Hpod	3	14	0.372	0.418	0.509	0.463
OP3Hjb	8	67	1.262	0.669	1.420	0.683	PB3Gjs	4	8	0.928	0.948	1.321	0.953	PB3Hsm	12	81	1.805	0.805	2.010	0.809
OP3Hjlv	6	22	1.155	0.789	1.430	0.798	PB3Gkro	2	6	0.299	0.598	0.451	0.650	PB3Oma	2	4	0.448	1.000	0.693	1.000
OP3Hkl	4	10	0.875	0.863	1.194	0.861	PB3Glpm	7	57	1.479	0.843	1.649	0.847	VS3Bjs	3	3	0.597	1.000	1.099	1.000
OP3Hkro	4	14	0.974	0.894	1.240	0.894														

Nsp – number of species
N – number of specimens
H_S – Shannon-Wiener index of diversity
E_S – Equitability
H_B – Brillouin index of diversity
E_B – Equitability

CONCLUSION

The results of this work with previous results for the 4th *Fageta abietis* s.lat. (Holuša, 2012a), 5th *Abieto-fageta* s. lat. (Holuša, 2009), 6th *Piceeti-fageta* s. lat. (Holuša, 2011), 7th *Fageti-piceeta* s. lat and 8th *Piceeta* s. lat. vegetation tiers (Holuša, 2007c) and 9th *Pineta mugi* s.lat. (Holuša, 2012b) create a survey of compositions of psocid taxocenoses in the majority of vegetation tiers in the Western Carpathian Mts. and Polonic biogeographical subprovincy.

3rd vegetation tier (*Querci-fageta* s. lat.) represents geobiocenoses where *Fagus sylvatica* is a dominat tree, *Quercus* sp. (*Quercus robur, Quercus petraea*) have their ecological optimum there. Generally, species richness of trees, as an edificators, is very high, same as in 4th VT. 3rd VT occurs on the 45.6% of the area at present in the study area.

Species richness is a similar to the 4th VT, compared to psocid taxocenoses, there is a noticeable difference to the higher VTs, which also corresponds phytocenological consequently geobiocenological characteristics of VTs. Each VT has its own characteristic species combination, for the 3rd it is. Each species has a characteristic species combination, for the 3rd vegetation tier was established as follows: *Elipsocus moebiusi – E. hyalinus – Philotarsus parviceps – Ectopsocus meridionalis – Caecilius flavidus – Stenopsocus stigmaticus.*

This work verifies the hypothesis that units of geobiocenological or forest site ty classification system i.e. at first vegetation tiers, have proved to be a suitable frame for zoocenological studies. Is the final contribution to the individual vegetation tiers, i.e. from 3rd to 9th VT, which are represented in study area.

These units, as characteristics of a potential state of ecosystems, together with the description of the present tree species composition and the level of naturalness form a perfect base for studies focused on the animal taxocenoses structure. Therefore vegetation tiers are an ideal frame for animal (entomological) studies. And on the other side, the order of psocids can be used for geobiocenological classification of ecosystems and also for evaluation of potential ecosystem changes.

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