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The occurrence of fungal and insect pests in riparian stands of the central Hron and Slatina rivers

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ABSTRACT: The paper deals with the occurrence of fungi and rusts, viruses and insects on main woody species in riparian stands along the middle courses of the Slatina and Hron rivers in Slovakia in 2002–2004. Forty fungal species, rusts and viruses and 79 insect species were found. The highest number of fungi occurred on the branches and twigs of poplar where *Cryptodiaporthe populea* (Sacc.) Butin and *Phellinus igniarius* (L.) Quél. had the highest representation and so the influence on the health condition. *Melampsora alliipopulina* Kleb., *Poplar mosaic carlavirus*, *Venturia populina* (Vuill.) Fabr. and *Venturia tremulae* Aderh dominated on the leaves. The most frequently present fungus on the aspen was *Armillaria* sp., *Phellinus igniarius* (L.) Quél., on the alder a new hybrid from the genus *Phytophthora* – alder *Phytophthora*, *Valsa oxystoma* Rehm., *Inonotus radiatus* (Sowerby) P. Karst. and *Inonotus obliquus* (Fr.) Pilát. From the insect species *Melasoma vigintipunctata* Scop. and *Phyllodecta vitellinae* L. caused total defoliation on willows. The highest occurrence on the black poplar was on the leaf stalks represented by *Pemphigus spirothecae* Pass. species, on the alder it was *Cryptorrhinchidius lapathi* L. on the twigs and *Agelastica alni* L. on the leaves.

Keywords: riparian stands; poplar; willow; aspen; alder; fungi; insects; health status

Riparian stands, which represent mostly line societies, are an important landscape factor. These societies are characterised by specific species composition and life forms different from those that are typical of the non-riparian climax (Jakubis 1998). The above-mentioned facts affect the occurrence of organisms that may often cause also the deterioration of health status. Because a riparian stand has to protect and ensure the stability of riverbanks, the health status cannot be ignored. It is necessary to state that neither in the past nor in the present has it been given a particular attention in the area of water and forest management. Frequent fluctuations of waters damaging stems by floating icebergs as well as frost penetration through trees crowns provide a suitable medium for fungi and insect pests. These pests can gradually eliminate woody species that are dominant in the riparian stands. In the past their occurrence, except poplars, was not as critical as to significantly influence the deterioration of the health status as it is now.

The worse health status, especially of poplars, is caused by the fact that they are overmature and so they are extremely susceptible especially to fungal diseases. In the past it was the fungus *Dothichiza populea* Sacc. et Briard and "brown wet spotting of bark" on the poplars (Leontovyč et al. 1959) while the black poplar *Populus nigra* L. and abele *Populus alba* L. had a certain resistance. Today even these species are equally endangered regarding their overmaturity. Another woody species that is dominant is the willow (*Salix*), which declines despite of the good sprouting capacity and becomes a victim of total insect defoliation. Neither does the common alder *Alnus glutinosa* L. meet the requirements for a good health condition. Many fungal diseases and insect pests occur on willows and alders that used to be negligible in the past.

Despite of these facts a more complex work dealing with the detailed range of fungal and insect pests of riparian stands is still missing. The most complex work on poplars was published by Leontovyč et al. (1959). In the literature there exist only contributions which deal with individual pests. From the older papers it was Urošević (1961, 1963, 1966) who dealt with poplar cancer caused by bacteria. The

occurrence of poplar pests was described by Farský (1961) and Kalandra (1951). The more complex works devoted to more pests and their impacts on the health condition were published e.g. by Hlaváč and Pravda (2003, 2004), Kodrík and Hlaváč (1999). Vaník et al. (1999) and Gregorová et al. (2003) described the withering of alders. A similar situation also applies to insect pests where the best known are works of Patočka (1954), Kudler and Hochmut (1958), Urban (2003) and others.

MATERIAL AND METHODS

Regarding the accessibility of riparian stands we focused on the area of Central Slovakia and especially on the Slatina course in the area of Hriňová, Detva, and Zvolen and on the Hron course in the area of Brezno, Slovenská Ľupča, Banská Bystrica, Zvolen and Žiar nad Hronom.

Quantitative and qualitative analyses were carried out in 2002–2004 according to accessibility on both sides of the rivers. Fifteen research sites – transects were set up by a random choice and 20 trees were evaluated in each site. Altogether there were 120 willows, 90 alders, 60 poplars and 30 aspens, i.e. 300 trees evaluated. The other trees and bushes were not examined. The occurrence of pests and fungi was observed specifically on roots, stems, twigs and leaves. In the sites we used especially uprooted trees that were added by cut down trees. The white willow (*Salix alba* L.) dominated among the willows – 65%, followed by brittle willow (*Salix glabra* Scop.) – 15%, hemp willow (*Salix viminalis* L.) – 9%, purple osier (*Salix glabra* L.) – 6% and florist's willow (*Salix caprea* L.) – 5%. The poplars were represented by 25% of silver poplar (*Populus canadiensis* Moench.) and 3% of eastern cottonwood (*Populus deltoides* Marsch.). The poplar-aspen (*Populus tremula* L.) was evaluated separately. The alder was exclusively represented by the black alder (*Alnus glutinosa* L.).

To determine the pests we used a magnifying glass, binocular, electron microscope, available keys and atlases of fungal and insect pests (Reitter 1908; Stolina et al. 1961; Hrubík 1988; Gogola 1993; Hrubík, Juhásová 1977). Their occurrence was classified by the grades: scattered up to 5%, scarce 6–20%, medium 21–40%, heavy over 40%.

RESULTS AND DISCUSSION

Willows

There were 17 species of fungi on the willows. *Armillaria* sp. was present the most frequently especially on roots and stems. Similarly *Phellinus igniarius* (L.) Quél., which occurred considerably regularly in the whole area, especially on older and overmature willows. Sporocarps grew mainly at previously wounded places and on broken-off branches. The low occurrence of *Trametes suaveolens* (L.) Fr. is surprising compared to its frequent presence in the past (Příhoda 1959; Leontovyč et al. 1959). The occurrence of *Bjerkandera fumosa* (Pers.) P. Karst. and *Pholiota populnea* (Pers.) Kuyper et Tjall-Beuk in the downstream part of the Hron river and partially in the Slatina river was higher, at wounded places again. In the upstream part of the Slatina they occurred scarcely. The fungus imperfectus *Phoma salicinae* Sacc. occurred at a medium intensity everywhere on the leaves especially in 2004.

A wider range of insect pests which dominated on all sites occurred on willows. The most numerous were leaf pests. In total 48 insect pests were identified. The mass insect outbreak occurred on the willows in the Hron area, namely of *Melasoma vigintipunctata* Scop. and *Phyllodecta vitellinae* L. The first seat of *M. vigintipunctata* Scop. was recorded in 1995 in the riparian stands of the Hron river, near Podbrezová (Kodrík 1995). The heavy mass outbreak of *Phyllodecta vitellinae* L. was recorded in 2003, but without total defoliation on the Slatina. Surprisingly scarce occurrence was recorded for *Aromia moschata* L. and *Gallerucella lineola* F., which used to be very high according to Kalandra (1951). The species *Earias chlorana* L. and *Rhabdophaga salicis* Deg. occurred in seats in 4 research sites. Even though the family *Chrysomelidae* is very rich according to Pfeffer (1954), containing up to 23 species, we recorded only 7.

Poplars

Poplars had a higher representation in the past because during so called "poplar mania" different poplar clones were planted at different places. Out of them only domestic species were able to remain in riparian stands. In the present time the most frequent is still the fungus *Cryptodiaporthe populea* (Sacc.) Butin, mentioned in the past as *Dothichiza populea* Sacc. et Briard, which in many cases liquidates overmature poplars and influences their health status. In total 25 fungal species were found on the poplars, mostly on roots, stems and branches.

The most frequent was *Phellinus igniarius* (L.) Quél. and *Armillaria* sp. In all areas medium occurrence of *Valsa nivea* (Pers.) Fr. on branches was recorded. In 2002 and 2003 we recorded higher occurrence of fungi also on leaves. The virus mosaic

Table 1. Analyses of fungi, bacteria and virus diseases carried out in riparian stands in 2002–2004

Fungi, bacteria and virus diseases	Poplar			Aspen			Willow			Alder		
	RS	B	L	RS	B	L	RS	B	L	RS	B	L
Alder *Phytophtora*										**	**	
Armillaria mellea (Vahl.) P. Kumm.	**			*			**					
Bjerkandera fumosa (Pers.) P. Karst.							*	*				
Cryptodiaporthe populea (Sacc.) Butin	***	***										
Diplodia alni Fuckl.										(*)	(*)	
Fomes fomentarius (L.) J. Kickx	*			*			*					
Gnomonia tubaeformis (Tode.) Auersw.												*
Heteroporus biennis (Bull. ex Fr.) Laz							(*)					
Hypoxylon mammatum (Wahl.) Mill.	*	*					*	*		*	*	
Inonotus obliquus (Fr.) Pilát											**	
Inonotus radiatus (Sowerby) P. Karst.										**	**	
Laetiporus sulphureus (Bull.) Murrill	*			*			*			*		
Lentinus tigrinus (Bull. ex Fr.) Fr.	*						*					
Marssonina populi (Lib.) Magn.			(*)									
Melampsora allii salicis albae Kleb.								*				
Melampsora alli-populina Kleb.			**									
Melanconis alni Tul. & C. Tul.											**	
Nectria cinabarina (Tode) Fr.		*			*			*				
Phellinus conchatus (Pers. ex Fr.) Quél.							*					
Phellinus pilatii Černý	*	*										
Phellinus tremulae (Bondartsev) Bondartsev et Borissov	*			***								
Phellinus igniarius (L.) Quél.	**	*					**	**				
Pholiota destruens (Brond.) Gill.	*	*										
Pholiota populnea (Pers.) Kuyper et Tjall-Beuk.	*	*					*	*				
Phoma colensoi Cooke	*	*										
Phoma salicinae Sacc.									**			
Polyporus squamosus (Huds.) Fr.	*	*										
Poplar mosaic carlavirus		*	**									
Rhytisma salicinum (Pers.) Fr.									*			
Schizophyllum commune Fr.	*			*			*					
Septoria populi Desm.			(*)									
Taphrina aurea (Pers.) Fr.			*									
Trametes suaveolens (L.) Fr.	*						*	*				
Valsa nivea (Pers.) Fr.		**			**							
Valsa oxystoma Rehm.										***		
Valsa salicina (Pers.) Fr.							*	*				
Venturia chlorospora (Ces.) Karst.									*			
Venturia populina (Vuill.) Fabr.			**									
Venturia tremulae Aderh			**			**						
Xantomonas populi (Ridé) Ridé et Ridé	*	*										

Occurrence: (*)sporadic, *low, **medium, ***high, RS – roots, stem, B – branches, L – leaves

of poplars *Poplar mosaic carlavirus* was the first to appear at places with louses or other sucking insects. Besides stains on the leaves it often causes swells in twigs. *Melampsora alliipopulina* Kleb., *Venturia populina* (Vuill.) Fabr. and *Venturia tremulae* Aderh were frequent on the leaves in the Hron area. The bacterial disease *Xanthomonas populi* (Ridé) Ridé et Ridé was numerous in some areas especially of the Hron river. Out of Fungi Imperfecti, *Marssonina populi* (Lib.) Magn. was detected, although very scarcely.

Among the insect pests, *Pemphigus spirothaecae* Pass. showed a high occurrence on the black poplar, especially in the riparian stands of the Slatina. The increasing occurrence was recorded for *Idocerus populi* L., *Leucoma salicis* L., *Pemphigus bursarius* L. and *Sciapteron tabaniforme (*Rott.). In total 33 insect species were found.

Aspen

Out of the 8 fungal species the most frequent was *Phellinus tremulae* (Bondartsev) Bondartsev et Borissov, which also caused the dying of aspens in some localities. *Venturia tremulae* Aderh and *Valsa nivea* (Pers.) Fr., which caused the overdrying of twigs, showed medium occurrence in higher number in the Hron area. The insect pests were the same as in poplars and willows, except for 5 species. In total, 16 insect species were recorded in aspens.

Black alder

From the past records and current findings we can state the deterioration of the health status of alder in riparian stands. The drying out of tree crowns which was attributed to frost penetration was frequent. Later, the fungus *Melanconis alni* Tul. et C. Tul., which is currently a representative of the tracheomycotic disease, was found in all observed sites even though the symptoms were very variable and overdrying is similar to frost penetration. This feature of dying out was also complicated by the stem hybrid of *Phytophthora*, so called alder *Phytophthora,* which was found in the riparian stands of Slatina in the area of Hriňová and Detva. So far it has appeared only in seats. It was found with a tube microscope during investigations of tracheomycosis.

Among the other fungi the most frequent was *Valsa oxystoma* Rehm together with *Inonotus radiatus* (Sowerby) P. Karst. and *Inonotus obliquus* (Fr.) Pilát. Sporocarps grew at wounded places on the stems. In total 9 fungal species were found.

We recorded a higher occurrence of acarids, namely *Eriophyes laevis* Nal. and *Eriophyes inanquilis* Nal. (especially in the Hron area), *Agelastica alni* L. and *Melasoma aenea* L. The omnipresent *Aphrophora alni* Falb. was noticeable. We can consider *Cryptorrhinchidius lapathi* L. as the frequent species with medium occurrence. The other species did not occur to such an extent to endanger the health status of alders.

In total 16 species of insects were found. Tables 1 and 2 show the overview of all fungal species.

CONCLUSION

Parasitic fungi and insect pests detected in the main woody species in riparian stands and also their impact on the health status were reviewed. On the poplar 25 species of fungi occurred, among which *Cryptodiaporthe populea* (Pers.) Butin dominated while on the aspen it was *Phellinus tremulae* (Bondartsev) Bondartsev et Borissov and on the alder *Valsa oxystoma* Rehm. The virus disease *Poplar mosaic carlavirus* can also significantly deteriorate the health status of poplars as well as a new hybrid of the stem *Phytophthora*, so called "alder-*Phytophthora*" found on the alder, which was identified in the Czech Republic in 2001 by Gregorová et al. (2003). In total 40 species of fungi were found.

In the evaluation of insect pests (79 species) the most dangerous was considered *Pemphigus spirothecae* Pass. on the black poplar, *Melasoma vigintipunctata* Scop. and *Phyllodecta vitellinae* L., which caused total defoliation in some localities. *Cryptorrhinchidius lapathi* L. and *Agelastica alni* L. can also cause the deterioration of the health status even though their occurrence was at a medium level.

The other species from the family *Chrysomelidae* did not cause such an insect outbreak to significantly influence the health status of woody species whereas their species representation is not as wide as it is cited in the literature (Pfeffer 1954). We can assume that their occurrence is higher in the downstream courses of rivers as well as in floodplain forests. Similarly, the occurrence of insect species from the family *Stigmellinae* is also lower, and they are not present on the alder and poplar. The family *Sesűdae* is strongly represented. *Curculionidae* are represented to a small extent, there occurred only 3 species.

The three-year study confirmed that the occurrence of pests in riparian stands of the Hron and the Slatina rivers has been investigated little so far. In total 40 fungal species and 79 species of insects were

Table 2. Analyses of insect pests carried out in riparian stands in 2002–2004

Insect pests and nutes	Poplar			Aspen			Willow			Alder		
	RS	B	L	RS	B	L	RS	B	L	RS	B	L
Aceria dispar L.			*		*	*						
Aegeria apiformis Cl.	*						*					
Aegeria formicaeformis Ochs.		*						*				
Agelastica alni L.												**
Agrilus viridis L.										*		
Agromyza alni-betulae Hend												*
Agromyza albitarsis Mg.			*			*						
Aphis farinosa Gmel.								*	*			
Aphrophora alni Falb.								**			**	
Aphrophora salicina Geoze.		*						**				
Aromia moschata L.							(*)					
Bycticus betulae (L.)			*						*			
Bycticus populi L.			*									
Chalcoides nitidula L.			*			*			*			
Cerura vinula L.			*						*			
Cimbex connata Schr.					*			*			*	
Cimbex lutea L.								*	*			
Cossus cossus L.	*			*			*			*		
Cryptorrhinchidius lapathi L.								*			**	
Dorytomus salicis Walt.								*				
Dorytomus tortrix L.								*				
Earias chlorana L.									**			
Eriophyes tetanothrix Nal.									*			
Eriophyes triradiatus Nal.									*			
Eriophyes populi Nal.			*			*						
Eriophyes laevis Nal.												*
Eriophyes inanqulis Nal.												*
Euura amerinae L.		*			*			*				
Euura laeta Zadd.								*				
Euura venusta Zadd.									*			
Galerucella lineola F.									(*)			
Harmandia cavernosa Rűbs			*			*						
Helicomyia saliciperda Duf.								*				
Hemichroa alni L.												*
Idiocerus populi L.			**			(*)						
Iteomyia caprae Winn.									*			
Lamia textor L.	(*)						*					
Leucoma salicis L.			**						*			
Lithocolletis tremulae Zell.			*			*			*			
Lithocolletis populi Fil.			*									
Lithocolletis pastorella L.									*			
Lochmaea capreae L.									**			
Melasoma aenea L.												**
Melasoma collaris L.			*									
Melasoma populi L.			*			*			*			*

Table 2 to be continued

Insect pests and nutes	Poplar			Aspen			Willow			Alder		
	RS	B	L	RS	B	L	RS	B	L	RS	B	L
Melasoma saliceti Wse.			**			*			**			
Melasoma vigintipunctata Scop.									***			
Melasoma tremulae F.			*			*	*		*			
Oberea oculata L.								*				
Phyllobius calcaratus F.												*
Phyllocnistis suffusella Zall.			*			*			*			
Phyllocnistis unipunctella Steph.			*									
Phyllocoptes populi Nal.			*									
Phyllodecta vulgatissima L.									**			
Phyllodecta tibialis Suffr.									*			
Phyllodecta vitellinae L.									***			
Phyllotoma vagans Fall.												*
Phynchaenus salicis L.						*			*			
Phytodecta pallida L.									*			
Phytogramyza tremulae Hg.						*						
Pemphigus spirothecae Pass.			***									
Pemphigus lactuarius Pass.			*									
Pemphigus bursarius (L.)			**									
Rhynchaenus populi (Frb.)			**						*			
Pontania proxima Leb.									*			
Pontania viminalis L.									*			
Rhabdophaga salicis Schr.								*				
Rhynchaenus alni L.												*
Saperda carcharias (L.)		*										
Saperda populnea L.		**										
Sciapteron tabaniforme Rott.	*	**										
Stigmella asimiella Zll.						*						
Stigmella trimaculella Hw.			*									
Syndiplosis petioli Kieff.			*									
Tenthredo ferruginea Schr.									*			
Trichiocampus viminalis (Fall.)			*									
Xyloterus domesticus L.										*		
Xyleborus saxeseni Ratz.	*			*			*			*		
Vespa crabro L.		*										

Occurrence: (*)sporadic, *low, **medium, ***high, RS – roots, stem, B – branches, L – leaves

identified. The research indicated that some present pests could significantly influence the health status of the main woody species and could substantially lower their occurrence.

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Výskyt hubových a hmyzích škodcov v brehových porastoch stredného Hrona a Slatiny

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ABSTRAKT: Práca pojednáva o výskyte húb, hrdzí, vírusov a hmyzu na hlavných drevinách brehových porastov v rokoch 2002–2004 na stredných tokoch Slatiny a Hrona na Slovensku. Bolo zistených 40 druhov húb, hrdzí a vírusov a 79 druhov hmyzu. Na topoľoch sa vyskytlo najviac húb na kmeni a vetvičkách, kde najväčšie zastúpenie a tým aj vplyv na zdravotný stav mala *Cryptodiaporthe populea* (Sacc.) Butin a *Phellinus igniarius* (L.) Quél. Na listoch dominovala *Melampsora alliipopulina* Kleb., *Poplar mosaic carlavirus*, *Venturia populina* (Vuill.) Fabr. a *Venturia tremulae* Aderh. Na osike najviac vyskytujúcou sa hubou bola *Armillaria* sp., *Phellinus igniarius* (L.) Quél., na jelši nový hybrid z rodu *Phytophthora* alder – *Phytophthora* a *Valsa oxystoma* Rehm. a *Inonotus radiatus* (Sowerby) P. Karst. a *Inonotus obliquus* (Fr.) Pilát. Z hmyzu na vŕbach spôsobili holožer na listoch *Melasoma vigintipunctata* Scop. a *Phyllodecta vitellinae* L. Najväčší výskyt na stopkách listov bol zaznamenaný na topole čiernom *Pemphigus spirothecae* Pass., na jelši na vetvičkách *Cryptorrhinchidius lapathi* L. a *Agelastica alni* L. na listoch.

Kľúčové slová: brehové porasty; topoľ; vŕba; osika; jelša; huby; hmyz; zdravotný stav

Brehové porasty ako líniové spoločenstvá sú charakteristické svojím klimaxom. Táto skutočnosť vplýva aj na výskyt organizmov, ktoré často môžu spôsobiť aj zhoršenie zdravotného stavu drevín. Medzi dominantné dreviny brehových porastov patria vŕby, topole a jelše, na ktoré sa viaže množstvo húb a hmyzu. Zhoršujúci sa zdravotný stav brehových porastov je vyvolaný aj tým, že najmä

topole sú vekovo prestarlé a tak sa stávajú veľmi disponnými pre škodcov. V minulosti to bola hlavne na topoľoch *Dothichiza populea* Sacc. et Briard a hnedý miazgotok (Leontovyč 1958). Podobne aj vŕba a jelša nespĺňajú kritériá dobrého zdravotného stavu. Napriek tomu v literatúre sa vyskytovali práce, ktoré si všímali len jedného škodlivého činiteľa. Súbornejšie dielo chýba od roku 1959, kedy takéto dielo publikoval Leontovyč. Z tohoto dôvodu sme sa pokúsili o zistenie výskytu hubových a hmyzích škodcov brehových porastov a ich odraz na zdravotný stav vyskytujúcich sa drevín. Kvantitatívny a kvalitatívny rozbor sa vykonal v rokoch 2002–2004 podľa dostupnosti na oboch stranách riek Hron a Slatina v ich stredných častiach. Bolo založených 15 výskumných plôch, kde sa hodnotilo 20 stromov. Celkove bolo vyhodnotených 120 vŕb, 90 jelší, 60 topoľov a 30 osík. Výskyt sa osobitne sledoval na koreňoch, kmeňoch, vetvičkách a listoch. Na vyhodnotených transektoch prevládala vŕba biela (*Salix alba* L.) 65 %, vŕba holá (*Salix glabra* Scop.) 15 %, vŕba košíkarská (*Salix viminalis* L.) 9 %, vŕba purpurová (*Salix purpurea* L.) 6 % a vŕba rakyta (*Salix caprea* L.) 5 %. Topole boli zastúpené takto: topoľ čierny (*Populus nigra* L.) 52 %, topoľ biely (*Populus alba* L.) 20 %, topoľ kanadský (*Populus canadiensis* Moench) 25 %, topoľ deltovitý (*Populus deltoides* Marsch.) 3 %. Zvlášť bola hodnotená osika (*Populus tremula* L.). Jelša bola zastúpená druhom jelša lepkavá (*Alnus glutinosa* L.). Na vŕbach sa vyskytlo 17 druhov húb, najčastejšie *Bjerkandera fumosa (*Pers.) P. Karst., *Pholiota populnea* (Pers.) Kuyper et Tjall-Beuk. Na listoch to bola *Phoma salicinae* Sacc. Z hmyzích škodcov bolo identifikovaných 48 druhov. Kalamitné premnoženie spôsobila *Melasoma vigintipunctata* Scop. a *Phyllodecta vitellinae* L. Na topoľoch z 25 druhov húb dominovala *Cryptodiaporthe populea* (Sacc.) Butin, ďalej *Phellinus igniarius* (L.) Quél. a *Armillaria* sp. Na vetvách a listoch sa vo zvýšenej miere vyskytovala *Valsa nivea* (Pers.) Fr., vírusová mozaika *Poplar mosaic carlavirus, Melampsora alliipopulina* Kleb., *Venturia populina* (Vuill.) Fabr. a *Venturia tremulae* Aderh. Častá bola na Hrone aj bakteriálna choroba *Xantomonas populi* (Ridé) Ridé et Ridé, podobne *Marssonina populi* (Lib.) Magn.

Z hmyzích škodcov z celkového počtu 33 druhov najčastejší výskyt na topole čiernom dosiahol druh *Pemphigus bursarius* L. a *Sciapteron tabaniforme* Rott. Na osike najčastejšia huba bola *Phellinus tremulae* (Bondartsev) Bondartsev et Borissov. Ostatní huboví a hmyzí škodcovia boli totožní s topoľmi. Na jelši z celkového počtu 9 druhov húb sa objavil zatiaľ v dvoch ohniskách na rieke Slatina hybrid rodu *Phytophthora* – alder *Phytophthora*. Zvýšený výskyt sa zaznamenal u druhu *Valsa oxystoma* Rehm. spolu s *Inonotus radiatus* (Sowerby) P. Karst. a *Inonotus obliquus* (Fr.) Pilát, ktoré rástli na poranených miestach. Z celkového počtu 15 druhov hmyzu najčastejšie sa vyskytoval *Cryptorrhinchidius lapathi* L., na listoch roztoče a to druhy *Eriophyes laevis* Nal. a *Eriophyes inanqulis* Nal., z čeľade *Chrysomelidae, Agelastica alni* L. a *Melasoma aenea* L. Ostatné druhy sa nevyskytli v takej miere, aby ohrozovali zdravotný stav jelší. Celkove sa v brehových porastoch zistilo 40 druhov húb vrátane baktérií a vírusov a 79 druhov hmyzu a roztočov.

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