

PŘÍRODNÍ PODMÍNKY A TRVALÉ VÝZKUMNÉ PLOCHY

1.1 Map of relief and localization of longterm research plots

Trochta J., Jurek V., Král K., Adam D., Šamonil P.

Map of relief describing by digital terrain model and height map. Map show position of longterm research plots in the location. Plots are in 30 m grid.

1.2 Map of slope

Trochta J., Jurek V., Král K., Adam D., Šamonil P.

Map of slope demonstrate conditions of location. Few floors divided by rocky blocks can be observed. Aspect and slope can be important factors describing differences in succession in various parts of location.

1.3 Map of potential direct solar insolation

Trochta J., Jurek V., Král K., Adam D., Šamonil P.

Map of potential direct solar insolation is one of most important factor affecting succession after fire. Values represent sum of solar radiance from 1st april to 31th october. In map is big difference between canyons orientiered to north and flat areas orientiered to south.

FOREST STAND BEFORE AND AFTER THE FIRE

2.1 Map of landcover in year 2005

Trochta J., Král K., Adam D., Unar P., Vrška T.

Map represents result of data classification from year 2005 – before fire. Classes were representing cover as rock, soil and green vegetation divided into coniferous and broadleaves.

2.2 Map of landcover in year 2006

Trochta J., Král K., Adam D., Unar P., Vrška T.

Map represents result of data classification from year 2005 –after fire. Classes represents land cover are rock, soil, green vegetation and dry crowns.

2.3 Map of landcover in year 2007

Trochta J., Král K., Adam D., Unar P., Vrška T.

Map represents result of data classification from year 2007 –one year after fire. Classes represents land cover are rock, soil, green vegetation, dry crowns and broken crowns.

2.4 Map of stand canopy in year 2005

Trochta J., Král K., Adam D., Unar P., Vrška T.

Map of stand canopy represents proportion of green vegetation and other classes of land cover. For each pixel were made average value from circular neighborhood 15 m in diameter. Green vegetation represents 100 percent of stand canopy and other are 0.

In map can be observed red places were are rocky blocks or places with high slope were is massive soil movement.

2.5 Map of stand canopy in year 2006

Trochta J., Král K., Adam D., Unar P., Vrška T.

Map of stand canopy in year 2006 represents proportion of green vegetation and other classes of land cover. For each pixel were made average value from circular neighborhood 15 m in diameter. Green vegetation represents 100 percent of stand canopy and other are 0.

Map of stand canopy reveals places in stand, which were directly destroyed by forest fire.

2.6 Map of stand canopy in year 2007

Trochta J., Král K., Adam D., Unar P., Vrška T.

Map of stand canopy represents proportion of green vegetation and other classes of land cover. For each pixel were made average value from circular neighborhood 15 m in diameter. Green vegetation represents 100 percent of stand canopy and other are 0.

Map of stand canopy in year 2007 shows destroyed places by fire. Even places where fire have not destroyed crowns and those places were not revealed in year 2006.

2.7 Map of defoliation between year 2005 and 2006

Trochta J., Král K., Adam D., Unar P., Vrška T.

Defoliation is indicator of change in stand canopy during time period. The map shows change of canopy between year 2005 – before fire – and 2006 - after fire. Almost 20 % of area was fully defoliated by intermediate fire.

2.8 Map of defoliation between year 2006 and 2007

Trochta J., Král K., Adam D., Unar P., Vrška T.

Defoliation is indicator of change in stand canopy during time period. The map shows change of canopy between year 2006 – after fire – and 2007 – one year after fire.

Defoliation between those years is located in margins of location. those are places which can not be identified by airborne photography in year 2006.

2.9 Map of defoliation between year 2005 and 2007

Trochta J., Král K., Adam D., Unar P., Vrška T.

Map of defoliation between year 2005 and 2007 describe total defoliation during three years time period. This map represents total damage of stand canopy.

Some parts with zero defoliation ratio are mostly rocky blocks or soil uncovered by vegetation. Almost complete vegetation were defoliated by fire. Only around margins were places defoliated only partly.

SPECIES SUCCESSION AFTER THE FIRE

3.1 Map of quantitative representation in height class „seedling“ in year 2007

Trochta J., Jurek V., Janík D., Hort L., Šamonil P.

Map of quantitative representation shows amount and distribution of trees in height class „seedlings“. This height class is specific for merging two species of pine - scots pine and Easter white pine - into one, because of impossibility of difference them. Class „pine“ is the most representing for this year and this height class with 2/3 of total amount.

3.2 Map of quantitative representation in height class „seedling“ in year 2008

Trochta J., Jurek V., Janík D., Hort L., Šamonil P.

Map of quantitative representation shows amount and distribution of trees in height class „seedlings“. This height class is specific for merging two species of pine - scots pine and Easter white pine - into one, because of impossibility of difference them.

In year 2008 are recorded only classes „pine“ and class „other trees“ consist of climax species – spruce, hornbeam, rowen, etc.

3.3 Map of quantitative representation in height class „seedling“ in year 2009

Trochta J., Jurek V., Janík D., Hort L., Šamonil P.

In year 2009 prevails in the height class „seedlings“ class „pine“. Mainly in west part of area. Other trees represented on area are goat willow, silver birch and class „other trees“. Number of seedling rapidly decreased against year 2007

3.4 Map of quantitative representation in height class „seedling“ in year 2010

Trochta J., Švejnová A., Král K., Adam D., Janík D.

In year 2010 is the most common class silver birch followed by common aspen and goat willow. Class „pine is now in higher height class and new generation of trees has grown under the succession. Because of fight for light is number of seedling very rare.

3.5 Map of quantitative representation in height class „till 30 cm“ in year 2007

Trochta J., Jurek V., Janík D., Hort L., Šamonil P.

In map is showned number of trees smaller in south and east parts of hillside. The most common species are common aspen followed by silver birch and goat willow. Silver birch is most common in higher west parts of area. Possibly thanks to mature trees of silver birch. In class "other trees" is the most common beech close to old mature tree.

3.6 Map of quantitative representation in height class „till 30 cm“ in year 2008

Trochta J., Jurek V., Janík D., Hort L., Šamonil P.

In height class „till 30 cm“ reflects following development: class „pine in year 2007 and height "seedling" came to higher class and divided into species. The most common tree is scots pine and aspen followed by silver birch. Eastern white pine has only 7% of total amount of all trees in this height class.

3.7 Map of quantitative representation in height class „till 30 cm“ in year 2009

Trochta J., Jurek V., Janík D., Hort L., Šamonil P.

In year 2009 is still the most common scots pine and common aspen. Represented are all species. The number of trees is decreasing according to year 2008. Distribution of species is similar, but due to competition is smaller.

3.8 Map of quantitative representation in height class „till 30 cm“ in year 2010

Trochta J., Švejnohová A., Král K., Adam D., Janík D.

In this year 2010 and height class „till 30 cm“ has scots pine the strongest position Among silver birch, goat willow, common aspen and others species. Deciduous species already grown up to higher height class. Distribution of species is similar, but due to competition is smaller than in year 2009

3.9 Map of quantitative representation in height class „30 – 60 cm“ in year 2007

Trochta J., Jurek V., Janík D., Hort L., Šamonil P.

In height class “30 – 60 cm” was presented only 7 plots. The biggest number of subjects is in places where was fire limited. Those places are edges of rocky blocks with scots pine, common aspen or silver birch. In margins are some individuals of hornbeam.

3.10 Map of quantitative representation in height class „30 – 60 cm“ in year 2008

Trochta J., Jurek V., Janík D., Hort L., Šamonil P.

Map of quantitative representation in year 2008 in height class “30 – 60 cm” shows dominance of common aspen thru whole area. Second in numbers is silver birch with centre of occurrence in west part of locality. Distribution of tree species has similarity to year 2007 in height class “till 30 cm”. Only number of subject is smaller.

3.11 Map of quantitative representation in height class „30 – 60 cm“ in year 2009

Trochta J., Jurek V., Janík D., Hort L., Šamonil P.

Map shows dominance of common aspen with less number than in year 2008 followed by silver birch and goat willow. In few places scotch pine has reach this height class. The greater number of common aspen is now in height class “60 – 130 cm”.

3.12 Map of quantitative representation in height class „30 – 60 cm“ in year 2010

Trochta J., Švejnhová A., Král K., Adam D., Janík D.

Number of common aspen tree decreased to half of previous number. Still it is the most common tree in this year and height class. Similar development has silver birch. Increasing number has scots pine and “other species” mainly european beech and alder.

3.13 Map of quantitative representation in height class „60 - 130 cm“ in year 2008

Trochta J., Jurek V., Hort L., Šamonil P., Vrška T.

Dominance of common aspen and silver birch is presented in year 2008 and height class „60 – 130 cm“. From other species can be found european beech or hornbeam in east part of locality. In NW parts is dominant silver birch and in N and E common aspen.

3.14 Map of quantitative representation in height class „60 - 130 cm“ in year 2009

Trochta J., Jurek V., Šamonil P., Unar P., Vrška T.

Dominance of common aspen and silver birch is presented in year 2009 and height class „60 – 130 cm“. First individuals of goat willow and species of pine. From competition is smaller number in all species. On the other hand first individuals of smaller trees grown up this year.

3.15 Map of quantitative representation in height class „60 - 130 cm“ in year 2010

Trochta J., Švejnohová A., Janík D., Unar P., Vrška T.

This height class is settled by new species that grown up. Number of individuals has increased in every species. Common aspen and silver birch has height around the higher level of class and have 85 % of all subjects.

3.16 Map of quantitative representation in height class „over 130 cm“ in year 2008

Trochta J., Jurek V., Hort L., Unar P., Vrška T.

Map of quantitative representation in height class „over 130 cm“ in year 2008. It can be seen that common aspen has rapid development after forest fire. From another species are present silver birch, goat willow and mountain ash.

3.17 Map of quantitative representation in height class „over 130 cm“ in year 2009

Trochta J., Jurek V., Hort L., Šamonil P., Unar P.

In year 2009 new individuals of silver birch common aspen and goat willow has grown. Common aspen is still the most common tree species followed by silver birch. The greater number of individuals can be found in west parts of locality. Other species lost their positions in competition.

3.18 Map of quantitative representation in height class „over 130 cm“ in year 2010

Trochta J., Švejnohová A., Král K., Adam D., Hort L.

More and more individual of common aspen and mainly silver birch grow up. Common aspen and silver birch has the same number of individuals in this year and height class. Distribution is concentrated in higher west parts of area.