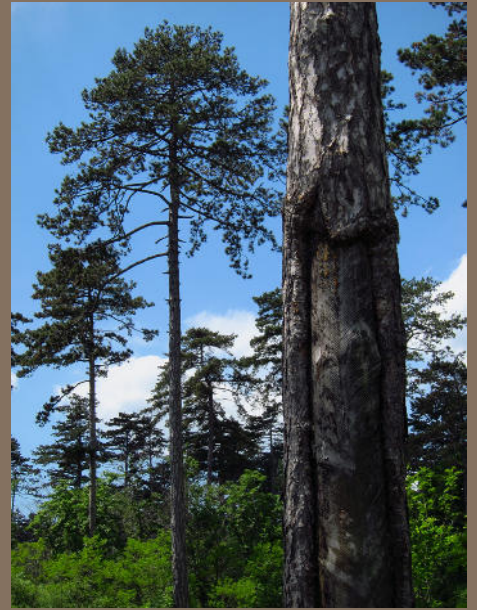


XXXI. gozdarski študijski dnevi

Premene malodonosnih in vrstno spremenjenih gozdov

ZBORNİK RAZŠIRJENIH POVZETKOV



Ljubljana - Sežana, 9. - 10. april 2014

Univerza v Ljubljani
Biotehniška fakulteta
Oddelek za gozdarstvo in
obnovljive gozdne vire



UNIVERZA V LJUBLJANI
BIOTEHNIŠKA FAKULTETA
ODDELEK ZA GOZDARSTVO IN OBNOVLJIVE GOZDNE VIRE

XXXI. GOZDARSKI ŠTUDIJSKI DNEVI

**PREMENE MALODONOSNIH IN VRSTNO
SPREMENJENIH GOZDOV**

Zbornik razširjenih povzetkov

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PROGRAM XXXI. GOZDARSKIH ŠTUDIJSKIH DNI

Sreda, 9. april 2014 (7:30 – 15:00)

Registracija udeležencev (7:30-8:30)

Pozdravni nagovori in otvoritev (8:30-9:00)

I. sklop (9:00 – 10:55)

Anič I.

Silviculture of Black Pine (*Pinus nigra* J.F. Arnold) Forests in the Croatian Mediterranean
Gojenje gozdov črnega bora (*Pinus nigra* J. F. Arnold) v mediteranskem območju Hrvaške

Lingua E., Marchi N., Garbarino M., Marzano R.

Dealing with degraded or unstable forest systems: the case of conifer plantations in Italy
Obnavna degradiranih in nestabilnih gozdnih ekosistemov: primer nasadov iglavcev v Italiji

Veselič Ž., Matijašič D., Grecs Z., Pisek R.

Premena malodonosnih gozdov v Sloveniji

Grecs Z.

Gospodarjenje z enovrstnimi nenaravnimi gozdovi v Sloveniji

Bončina A., Dakskobler I., Kadunc A., Poljanec A., Rozman A.

Ocena ohranjenosti naravne drevesne sestave in izkoriščenosti rastiščnih potencialov gozdov

ODMOR (10:55 do 11:30)

II. sklop (11:30 – 13:00)

Jurc D., Jurc M.

»Pa so padali bolestno, nemo, bor za borom...«* – boru na Krasu so šteti dnevi

Kaligarič M., Ivajnsič D.

Kraška travišča nekoč, danes in jutri

Diaci J., Adamič T., Grce D., Rozman A., Roženberger D.

Premena kraških gozdov črnega bora (*Pinus nigra* J.F. Arnold) z naravno obnovo

Marenče J.

Pridobivanje lesa v premenah borovih gozdov na Krasu

Šinko M., Roženberger D., Diaci J.

Ekonomska primerjava pristopov premen sestojev črnega bora na Krasu

Jerina K.

Vplivi in vloge prostoživečih živali v premenah malodonosnih in vrstno spremenjenih gozdov

KOSILO (13:00 do 14:00)

III. sklop (14:00 – 15:00)

Brus R.

Uporaba gozdnega reprodukcijskega materiala pri premenah v Sloveniji

Kadunc A.

Plemeniti listavci: pomen in perspektive pri gospodarjenju z gozdovi

Marinšek A., Čarni A., Šilc U.

Vpliv zasmrečenosti na floristične in talne značilnosti podgorskih bukovih gozdov

Vilhar U., Kutnar L., Kobal M., Urbančič M., Simončič P.

Mikrorastiščne razmere kot pomemben dejavnik premene smrekovih monokultur na bukovih rastiščih

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Dealing with degraded or unstable forest systems: the case of conifer plantations in Italy

dr. Lingua Emanuele¹, Marchi Niccolò¹, dr. Garbarino Matteo², dr. Marzano Raffaella³

¹Dept. TESAF, University of Padova, ²Dept. D3A, Università Politecnica delle Marche, ³Dept. DISAFA, University of Torino

Keywords: pine plantation, restoration, natural disturbances, gap cutting, broadleaved regeneration

Starting by the end of the XIX century, different afforestation campaigns involving millions of ha were realized throughout Italy (Lingua and Motta, 2005). All over the country mainly conifer plantations were established with the main aim to cover bare land, degraded and overgrazed pastures in order to prevent soil erosion and recover damages from past forest overexploitation. Another principal goal, especially after the WWII, was the promotion of employment in disadvantaged rural territories.

Conifers were among the most used species, due to their expected higher timber value, together with seedling availability and pioneer traits. Species like spruce [*Picea abies* (L.) Karst.], black pine (*Pinus nigra* Arnold), larch (*Larix decidua* Miller), and exotic conifers such as eastern white pine (*Pinus strobus* L.) and douglas fir [*Pseudotsuga menziesii* (Mirb.) Franco] were the preferred ones. At the national level *P.nigra* was the most widespread, due to its capability to thrive in sites characterized by shallow soils and harsh climatic conditions.

Since these afforestation campaigns were mainly addressing socio-economic and soil protection tasks, no particular attention was devoted to the future ecological stability of the newly established forest stands. Furthermore from a technical point of view, almost all the planting operations were carried on based on traditional afforestation methods, without almost any mechanization, applying the same homogenous planting system everywhere without taking into account differences in latitude and altitude among sites.

In the majority of cases after the planting phase, no further silvicultural intervention was accomplished in these anthropogenic forests. Without tending and intermediate cutting, stands developed into low stability structures, thus being characterized by reduced resistance to perturbations. Furthermore both species and structural diversity usually show low values in these monospecific, single layered stands, at least unless colonization by native species has reached a good rate of development.

Pine plantations are often embedded in disturbance –prone environments. The susceptibility of these forests to disturbances is in fact exacerbated not only by their internal characteristics (high density, low stability, low species diversity), but also by their being located, giving their main purposes, in sites characterized by harsh conditions in terms of temperatures, amount of precipitation, slope steepness, soil shallowness, etc. Moreover, changes in disturbance regimes are most likely to affect this kind of stands.

Wildfires are among the main disturbances in pine plantations, together with windthrows and insect outbreaks. These artificial stands are frequently more susceptible to severe fire effects than other forests. Their increased susceptibility to high severity fire is due to their structural characteristics including high stocking densities and uniform canopies.

Potential fire behaviour due to the amount of fuel accumulation, horizontal and vertical continuity is often leading to the spread of stand replacing wildfires. Lack of specific adaptations to wildfires of

the planted species results in high mortality rates of the pre-disturbance stand, with regeneration dynamics mostly depending on external seed sources.

Wildfires and other disturbances may anyway prove as good opportunities for stand naturalization, particularly when broadleaved regeneration is already present in the understory before the disturbance or conditions are particularly favourable to its establishment in the post-disturbance environment.

Apart from increasing local employment, in many sites plantations accomplished at least another of their main purposes. In these stands the role of site amelioration has thus been effective, creating favourable condition for the establishment of native broadleaved species beneath pine cover. However, both within more successful and unsuccessful plantations, the question is now how to intervene in order to foster successional pathways toward more natural systems.

Managing aged pine plantations is a challenging issue for current Italian forestry. Anyway, turning these simplified systems into stands characterised by a more complex structure and composition is both a challenge and an opportunity. In this contribution, examples will be reported about possible management options, taking also into account the different services provided by these ecosystems.

Silvicultural interventions, their feasibility, timing and actual necessity will be discussed providing information from undisturbed and severely disturbed case studies.

Among possible silvicultural practices, an alternative from different types of thinning is the gap cutting system, such as the removal of all trees on a very small surface, thus "punching a hole" in the continuous forest cover (Mercurio and Spinelli, 2012). Gap cutting with openings from 200-400 m² can be quite effective in promoting the succession toward mixed stands, increasing the recruitment of native species, with low environmental and aesthetic impact, decreased harvesting cost and increased revenues.

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