



HAL
open science

Pine reforestation in Mediterranean mountains. An ecological problem or an opportunity?

Kevin Cianfaglione

► **To cite this version:**

Kevin Cianfaglione. Pine reforestation in Mediterranean mountains. An ecological problem or an opportunity?. XVII OPTIMA Society Congress, Sep 2023, Palermo, France. 10.7338/pls2015522/04 . hal-04259095

HAL Id: hal-04259095

<https://univ-catholille.hal.science/hal-04259095v1>

Submitted on 25 Oct 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Pine reforestation in Mediterranean mountains. An ecological problem or an opportunity?

Kevin Cianfaglione

Faculte de Gestion, Economie et Science (FGES), Université Catholique de Lille, France.

* Corresponding author: kevin.cianfaglione@univ-catholille.fr



Three aspects of black pine forests, in order: the Villetta Barrea pine forest. A splendid example of secondary succession facilitation in pine forests on Monte Morrone. The Morrone pine forest and beech forest have now both burned together.

Conifer reforestation plantations in central Italy were massively made since the end of 1800 until the end of 1900, mainly with *Pinus nigra* and *Pinus halepensis*. They were made for forest restoration purpose, to foster the secondary succession, to stabilize slopes and for hydrogeological balance.

If these reforestations have been well carried out and well managed (i.e. they have not undergone cuts, cleanings, fires, etc.), they are working well in the Apennines; for this reason, we must not promote campaigns for their eradication. We need to wait for these formations to slowly turn towards more natural stages. Thinning cuts are not necessary, given that these trees are easily knocked to the ground by natural events.

These areas could be destined for ex-situ protection of threatened species, and the reforestation by native conifers could be considered as compensation for the destruction or the reduction of the original populations of those species.

They now consist of semi natural, historical and cultural formations of ecological, naturalistic, landscape and hydrogeological balance interest. Despite this, they are considered to be eliminated because of forest fire risks and for their artificial origin.

As with the secondary formations, these conifers too can enter that circuit of areas to contribute to an eco-systemic and the landscape discontinuity, contributing to the aesthetic of the landscape and enhancing its ecological value.

It is true that these formations are very subject to fires, but this does not mean that they should be mistreated and destroyed, given that other formations such as the Mediterranean macchia, garriga, oak woods, crops and secondary successions shrublands are equally subject to this risk induced by man.

Among the most important characteristics of those formations are the presence of dead wood, and of a favorable environment for micro-mammals and mushrooms, which has a cascade interest for all the food chain, for biodiversity and for the landscape mosaic. Some researches are carried out to study those formations, that are quickly disappearing due to harvesting and wildfires. This is happening also for the most natural pine forests, even in core areas of protected areas.

For those reasons, we should follow a more precaution principle, in a more objective and science-based way, with more sustainable actions.

Bibliography:

- Bonari, G., Acosta, A.T.R. & Angiolini, C. EU priority habitats: rethinking Mediterranean coastal pine forests. *Rend. Fis. Acc. Lincei* 29, 295–307 (2018). <https://doi.org/10.1007/s12210-018-0684-9>
- C. Ottaviani, G. Tesei, S. Ballelli, G. Iorio, S. Montecchiari, M. Allegranza, 2015 - Vegetation dynamics in *Pinus nigra* Arnold subsp. *nigra* 100 years after reforestation: two case studies in the central Apennines. *Plant Sociology*, 52 (2) 79-94. DOI 10.7338/pls2015522/04
- Cianfaglione K., 2014. L'importanza dell'albero e del bosco. *Scienza, cultura e coscienza del territorio*. Temi ed., Trento.
- Colazilli A. & Cianfaglione K., 2014. L'albero tra arte, territorio ed ecologia; con particolare riferimento all'Abruzzo. In: Pirone G., 2014. *Alberi, arbusti e liane d'Abruzzo*. 2a edizione. Cogecstre Edizioni, Penne (PE).
- Conti G., 1995 – Omaggio al lavoro dei Forestali. *Scritti sul rimboscimento nell'Abruzzo sulmonese*. Club Alpino d'Italia, Sulmona, Italy. 105 p.
- Gianmaria Bonari*, Ilona Knollová, Pavla Vlčková, Fotios Xystrakis, Süleyman Çoban, Coşkun Sağlam, Yakiv P. Didukh, Stephan M. Hennekens, Alicia T.R. Acosta, Claudia Angiolini, Erwin Bergmeier, Andrea Bertacchi, José C. Costa, Emanuele Fanfarillo, Daniela Gigante, Riccardo Guarino, Marco Landi, Carlos S. Neto, Simone Pesaresi, Leonardo Rosati, Federico Selvi, Alexandros Sotiriou, Adriano Stinca, Claudia Turcato, Rossen Tzonev, Daniele Viciani & Milan Chytrý. CircumMediterranean and Submediterranean pine forest vegetation data. *Phytocoenologia*, 49 (3): 311–318. DOI: 10.1127/phyto/2019/0311.
- K. Cianfaglione, G. Damiani, B. Schirone, G. Pirone, G. Ciaschetti, A. Manzi, P.L. Di Felice, A. Colazilli & T. Marras. Relevant aspects of the Abruzzo coast transformation during last centuries (Central Adriatic Italy). *Plant Sociology* 51 (2) S1 2014: 73-80.
- Marchesoni V. Importanza del Pino nero, dell'Abete, del Tasso e dell'Agrifoglio nella storia climatico forestale dell'Appennino Umbro-marchigiano. *Monti e boschi*. 1958; 10: 535–540.
- Marchesoni V. Storia climatico-forestale dell'Appennino umbro-marchigiano. *Annali di Botanica*. 1957; 25: 459–497.
- Paganelli A. Histoire paleobotanique. In: *Guide-Itinéraire Excursion Internationale de Phytosociologie en Italie Centrale* (ed. Pedrotti F). 1982; 39–74.
- Pedrotti F., 1982. Les pinédes à pin d'Alepis de la Vallée de la Serra (Terni). In: *Guide-Itinéraire Excursion Internationale Phytosociologie en Italie centrale* (2 - 11 juillet 1982)". Camerino, Centro Stampa Università: 400-407.