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Forests, Science and People



1.01.13 - ECOLOGY AND SILVICULTURE OF CHESTNUT

Coordinator: Stacy Clark

Deputies: Veronica Loewe, Maria Patricio and Enrico Marcolin

Nr. 4 / 2022 - November

Come and join us at: <https://www.iufro.org/science/divisions/division-1/10000/10100/10113/>

This is the newsletter from the IUFRO working party 1.01.13 'Ecology and Silviculture of Chestnut'. With this newsletter, we aim at sharing information, exchanging research ideas, and build a network among chestnut researchers. The newsletter will be published every 3 months (see here for previous numbers: <https://www.iufro.org/science/divisions/division-1/10000/10100/10113/publications/>).

If you have an item of interest to share, such as meetings, publications, research projects or job opportunities, please see the Newsletter contributions section below.

***** FORECO Special Issue on Ecology and Management of Chestnut: acceptance has been closed. *****

(papers remaining in the queue hurry to finish the submission process)

***** Currently published for the SPECIAL ISSUE:**

Preferential allocation of carbohydrate reserves belowground supports disturbance-based management of American chestnut (*Castanea dentata*)

Madeline S. Montague, Simon M. Landhäusser, Gordon G. McNickle, Douglass F. Jacobs

1 April 2022 - <https://doi.org/10.1016/j.foreco.2022.120078>

Preferences of avian seed-hoarders in advance of potential American chestnut reintroduction

James R. Wright, Stephen N. Matthews, Cornelia C. Pinchot, Christopher M. Tonra

1 May 2022 - <https://doi.org/10.1016/j.foreco.2022.120133>

Phenology, cold injury and growth of American chestnut in a Range-Wide provenance test

Paul G. Schaberg, Paula F. Murakami, Kendra M. Collins, Christopher F. Hansen, Gary J. Hawley

1 June 2022 - <https://doi.org/10.1016/j.foreco.2022.120178>

Mixed-effects generalized height-diameter model: A tool for forestry management of young sweet chestnut stands

Maria Sameiro Patrício, Cremildo R.G. Dias, Luís Nunes

15 June 2022 - <https://doi.org/10.1016/j.foreco.2022.120209>

Deer browse susceptibility limits chestnut restoration success in northern hardwood forests

Cornelia C. Pinchot, Alejandro A. Royo, John S. Stanovick, Scott E. Schlarbaum, ... Sandra L. Anagnostakis

1 November 2022 - <https://doi.org/10.1016/j.foreco.2022.120481>

Temperate coppice forests in north-western Italy are resilient to wild ungulate browsing in the short to medium term

Alessandra Bottero, Fabio Meloni, Matteo Garbarino, Renzo Motta

1 November 2022 - <https://doi.org/10.1016/j.foreco.2022.120484>

Optimizing quality wood production in chestnut (*Castanea sativa* Mill.) coppices

Maria Chiara Manetti, Marco Conedera, Francesco Pelleri, Piergiuseppe Montini, ... Enrico Marcolin

1 November 2022 - <https://doi.org/10.1016/j.foreco.2022.120490>

Restoring a keystone tree species for the future: American chestnut assisted migration plantings in an adaptive silviculture experiment

Peter W. Clark, Alissa J. Freeman, Anthony W. D'Amato, Paul G. Schaberg, ... Christopher W. Woodall

1 November 2022 - <https://doi.org/10.1016/j.foreco.2022.120505>

Effectiveness of chemical and physical methods for stump sprout control in *Castanea sativa* Mill

Pau Vericat, Jaime Coello, Mario Beltrán, Míriam Piqué

1 December 2022 - <https://doi.org/10.1016/j.foreco.2022.120537>

Comparisons of interspecies field performance of Fagaceae (*Castanea* and *Quercus*) planted in the southeastern United States with attention to soil fungal impacts on plant performance

Shawn P. Brown, Stacy L. Clark, Emerald Ford, Ari Jumpponen, ... Richard Baird

1 December 2022 - <https://doi.org/10.1016/j.foreco.2022.120569>

For updates on the progress of the Special Issue:

<https://www.sciencedirect.com/journal/forest-ecology-and-management/special-issue/10RX05B62LH>

and on the group's activities:

<https://www.researchgate.net/project/IUFRO-Working-Party-10113-Ecology-and-silviculture-of-chestnut>

Group members



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News from the working party

Our working party was officially formed in May 2021. We have held several virtual meetings to discuss future projects and opportunities for collaboration. In addition to this newsletter, our first project is to develop a special issue on chestnut ecology and silviculture (see above). We are also working on a synthesis paper on *Castanea sativa* and *C. dentata* for this special issue and we are nearing completion of this work.

We also submitted on these days a special session proposal (focused on *Castanea* species) to the IUFRO World Congress to be held in Stockholm in 2024 (see <https://iufro2024.com/> for more information). Please contact us if you would like to collaborate with us on this special session proposal. We are particularly interested in collaborating with other IUFRO Divisions or Working Parties.

News from the chestnut world

2022

- The **NE-1833 chestnut conference** was held from August 26th and 27th 2022 at the Virginia Department of Forestry, 900 Natural Resources Drive in Charlottesville, VA, USA. Contact Tom Saielli for more information. Tel:+1- 828-450-9100; tom.saielli@acf.org
- **VIII National Conference on Chestnut (Italy) – VIII Convegno Nazionale del Castagno**, Portici, Napoli: September 14-16, 2022
<https://www.soihs.it/content.aspx?idct=3&id=2240/>
- **IV Simpósio Nacional da Castanha (Portugal) - IV National Chestnut Symposium**, UTAD, Vila Real: July 7-9, 2022
<http://iv.simposiodacastanha.pt/>

2023

- **VII International Chestnut Symposium Lugo**, Spain: June 26-29, 2023
<https://www.chestnutsymposium.com/>
Abstract submission: September 15th, 2022 through December 1st, 2022
Manuscript submission: May 15th, 2023

Others

- **[An online course on the American chestnut](#)** is available that provides information on the history of its demise, silvics, and ecological and cultural significance. It is free and available to anyone.
 - These two videos complement the course:
[Introduction \(https://srs.fs.usda.gov/video/restoration-research-chestnut-1/\)](https://srs.fs.usda.gov/video/restoration-research-chestnut-1/)
[Science in Action \(https://srs.fs.usda.gov/video/restoration-research-chestnut-2/\)](https://srs.fs.usda.gov/video/restoration-research-chestnut-2/)

- **WEBINAR** Lecture by D.E. Davis is available online at [2021 Lecture - Forest History Society](#)
- **RESEARCH PROJECT** on American chestnut field trials in the southeastern United States (contact: stacy.l.clark@usda.gov)

Call for Papers

- **Forest Ecology and Management - Special Issue: Ecology and Management of Castanea:**
<https://www.sciencedirect.com/journal/forest-ecology-and-management/special-issues>

Pending Submissions will be processed and would reach completion even beyond the deadline (31 October 2022).

Planned publication date: immediately after the acceptance of the manuscript.

Check for your manuscript to: <https://www.editorialmanager.com/foreco/default.aspx>

News on R&D

As part of a historical research on the evolution of management and silvicultural methods applied on chestnut forests, we look for any collaborations and suggestions for historical references, local uses and indigenous experiences, documents or useful information.

The goal is to describe where possible the evolution of management and cultivation methods and what factors have influenced these changes over time to get to the present day.

In case of interest please contact: Enrico Marcolin – email: enrico.marcolin@unipd.it

Featured Papers and Books

We ask for your cooperation in case you want to report news (see the section Newsletter contributions).

Phenology, cold injury and growth of American chestnut in a Range-Wide provenance test. 2022. Forest Ecology and Management, Volume 513, 120178.

Paul G. Schaberg, Paula F. Murakami, Kendra M. Collins, Christopher F. Hansen, Gary J. Hawley,
<https://doi.org/10.1016/j.foreco.2022.120178>

Balancing stand productivity and wood quality in chestnut coppices using chronosequence approach and productivity model. 2022. European Journal of Forest Research.

Marziliano PA, Tognetti R, Mercuri M, Labate A, Lombardi F.
<https://doi.org/10.1007/s10342-022-01488-y>

Castanea dentata Interactions and Ectomycorrhizal Colonization in Novel Ecosystems. 2022. Ecological Restoration, 40(3), 179-190.

Bauman, J.M., Franklin, J., and Santas, A.

<http://doi.org/10.3368/er.40.3.179>

European and American chestnuts: An overview of the main threats and control efforts. 2022. Frontiers in Plant Science. 13:951844.

Fernandes, P., Colavolpe, M.B., Serrazina, S., and Costa, R.L.

<https://doi.org/10.3389/fpls.2022.951844>

Phenology and Monitoring of the Lesser Chestnut Weevil (Curculio sayi). 2022. Insects, 13(8), 713.

Filgueiras, C.C., and Willett, D.S.

<https://doi.org/10.3390/insects13080713>

Forest management scenarios to reduce the fire risk in chestnut coppices in the Mediterranean area. 2022. Annals of Silvicultural Research, 47(2).

Garfi, V., Marziliano, P.A., Chirici, G., Nicolaci, A., et al.

<http://dx.doi.org/10.12899/asr-2387>

Optimizing quality wood production in chestnut (Castanea sativa Mill.) coppices. 2022. Forest Ecology and Management, 523, 120490.

Manetti, M.C., Conedera, M., Pelleri, F., Montini, P., Maltoni, A., Mariotti, B., Pividori, M. and Marcolin E.

<https://doi.org/10.1016/j.foreco.2022.120490>

The Continued Spread of a Wild Population of American Chestnuts. 2022. Northeastern Naturalist, 29(3), 321-334.

Mazurowski, J., Heinrich, B., Heinrich, L., Loeb, C., et al.

<https://doi.org/10.1656/045.029.0302>

First Report of Chestnut Blight Caused by Cryphonectria parasitica on Chestnut (Castanea seguinii) in Gansu Province, China. 2022. Plant Disease (ja).

Ni, Chunhui, Yurong Liu, Yonggang Liu, Huixia Li, Mingming Shi, Min Zhang, and Bian Han

<https://doi.org/10.1094/PDIS-03-22-0556-PDN>

Deer browse susceptibility limits chestnut restoration success in northern hardwood forests. 2022. Forest Ecology and Management, 523, 120481.

Pinchot, C.C., Royo, A.A., Stanovick, J.S., Schlarbaum, S.E., et al.

<https://doi.org/10.1016/j.foreco.2022.120481>

Detected changes of population structure within a Cryphonectria parasitica population at the site Osoj, North Macedonia, during a time-span of over two decades. 2022. In Book of Abstracts, Intern. Sci. Conf. Better Forestry, for Better Forest, for a Better Planet. "Hans Em" Faculty for Forest Sciences, Landscape Architecture and Environmental Engineering, Skopje.

Risteski, M., Cokoski, K., Tanovski, V., and Sotirovski, K.

<http://hdl.handle.net/20.500.12188/22450>

Frozen in time: rangewide genomic diversity, structure, and demographic history of relict American chestnut populations. 2022. Molecular Ecology, 31(18), pp. 4640-4655.

Sandercock, A.M., Westbrook, J.W., Zhang, Q., Johnson, H.A., et al.

<https://doi.org/10.1111/mec.16629>

Temperate coppice forests in north-western Italy are resilient to wild ungulate browsing in the short to medium term. 2022. *Forest Ecology and Management*, 523, p.120484.

Bottero, A., Meloni, F., Garbarino, M. and Motta, R.

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Restoring a keystone tree species for the future: American chestnut assisted migration plantings in an adaptive silviculture experiment. 2022. *Forest Ecology and Management*, Volume 523, 120505.

Peter W. Clark, Alissa J. Freeman, Anthony W. D'Amato, Paul G. Schaberg, Gary J. Hawley, Kevin S. Evans, Christopher W. Woodall.

<https://doi.org/10.1016/j.foreco.2022.120505>

Mixed-effects generalized height-diameter model: A tool for forestry management of young sweet chestnut stands. 2022. *Forest Ecology and Management*, Volume 514, 120209.

Maria Sameiro Patrício, Cremildo R.G. Dias, Luís Nunes.

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From Chestnut Tree (Castanea sativa) to Flour and Foods: A Systematic Review of the Main Criticalities and Control Strategies towards the Relaunch of Chestnut Production Chain. *Sustainability* 2022, 14, 12181.

Aglietti, C.; Cappelli, A.; Andreani, A.

<https://doi.org/10.3390/su141912181>

Fruit characteristics, defoliation, forest floor and soil properties of sweet chestnut (Castanea sativa Mill.) forests in İstanbul-Turkey. 2022. *Turkish Journal of Agriculture and Forestry*: Vol. 46: No. 5, Article 8.

Özer, Gülçin and Makineci, Ender.

<https://doi.org/10.55730/1300-011X.3036>

Comparisons of interspecies field performance of Fagaceae (Castanea and Quercus) planted in the southeastern United States with attention to soil fungal impacts on plant performance. 2022. *Forest Ecology and Management*. 2022 Dec 1;525:120569.

Brown, S.P., Clark, S.L., Ford, E., Jumpponen, A., Saxton, A.M., Schlarbaum, S.E. and Baird, R.

<https://doi.org/10.1016/j.foreco.2022.120569>

Origin of traditional sweet chestnut (Castanea sativa Mill.) varieties from the Northwest of the Iberian Peninsula. 2022. *Tree Genetics & Genomes* 18, 34 (2022).

Fernández-Cruz, J., Míguez-Soto, B. & Fernández-López, J.

<https://doi.org/10.1007/s11295-022-01564-9>

Molecular evidence of introgression of Asian germplasm into a natural Castanea sativa forest in Spain. 2022. *Forestry: An International Journal of Forest Research*, Volume 95, Issue 1, January 2022, Pages 95–104.

Francisco Alcaide, Alejandro Solla, Beatriz Cuenca, M Ángela Martín.

<https://doi.org/10.1093/forestry/cpab030>

Morphological and Chemical Variation of Wild Sweet Chestnut (Castanea sativa Mill.) Populations. 2022. *Forests*, 13(1), p.55.

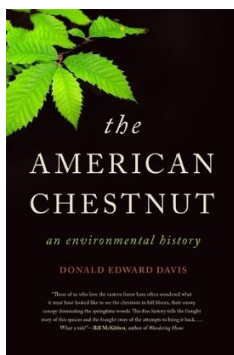
Poljak, I., Vahčić, N., Liber, Z., Šatović, Z. and Idžojtić, M.

<https://doi.org/10.3390/f13010055>

The Roman Legacy on European Chestnut and Walnut Arboriculture. 2022. *Environmental Archaeology*, DOI: 10.1080/14614103.2022.2137648

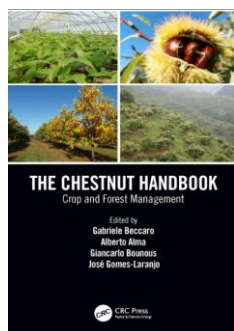
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Davis, D.E

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Bento, A. and Ribeiro, A. C. (Eds.).

<http://esa.ipb.pt/pdf/ManualBoasPraticasCastanheiro.pdf>



Le selve castanili della Svizzera italiana. Aspetti storici, paesaggistici, ecologici e gestionali. Memorie della Società ticinese di scienze naturali, 13, 249 p.

Moretti M., Moretti G. & Conedera M. (eds.).

Newsletter contributions

Do you have news for us? Newsletter contributions are welcome (i.e. upcoming Seminars, Scholarships, Workshops, Conferences, Blogs, Websites...).

If you would like to contribute to the newsletter, please contact Stacy Clark (stacy.l.clark@usda.gov), Veronica Loewe (vloewe@infor.cl), Maria Patricio (sampat@ipb.pt) or Enrico Marcolin (enrico.marcolin@unipd.it)