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1.01.13 - ECOLOGY AND SILVICULTURE OF CHESTNUT

Coordinator: Stacy Clark
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Nr. 10 / 2026 - February

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 building a network among chestnut researchers.

The newsletter is published every 3 months or more - depending on the events or publications of the period (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 contact us.

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News from the working party

IUFRO Working Party 1.01.13 (Ecology and Silviculture of Chestnut) is seeking your input on a possible

CROSS-UNIT FAGACEAE WORKSHOP ##

TO BE HELD IN 2027

in coordination with the **1.01.06 (Ecology and Silviculture of Beech)** and **1.01.07 (Ecology and Silviculture of Oak) working parties.**

Please respond to Stacy Byrd at slayclark@yahoo.com with answers to the following questions as well as any other ideas or questions you have related to a possible Fagaceae workshop.

1. **What is the most important research question(s) facing Fagaceae species?**

2. **What is the most difficult challenge(s) for science-based management of Fagaceae species?**

3. **If a workshop or meeting was held focusing on Fagaceae species, what topics would benefit you the most from a research and/or management perspective?**

4. **What would be your preferred format for a meeting (e.g., outdoor field tours, indoor presentations/discussion, a mixture of different formats)?**

News from the chestnut world

CASTANEA EXPO 2025

Echoes from CASTANEA EXPO 2025
12 – 14 December 2025
in Firenze (Italy), Fortezza da Basso

Firenze Fiera spa organized an exhibition event dedicated to the regions' chestnut industry to provide a national picture. A "supply chain fair" to bring together the many entities involved in genetic research, nursery, agronomy, technology, processing, food innovation, trade, tourism, and the promotion of sustainable economic models in mountain realities. Chestnut cultivation is spread over all regions of Italy and it is an important source of income for communities in mountainous areas.
Among the many CASTANEA EXPO's initiatives connected to the production of the fruit, two activities presented concern the silviculture and cultivation of the chestnut tree for timber:

- Results of the WORKSHOP "Production and supply chain of TIMBER from CHESTNUT FORESTS - present and prospects.

At a time when the widespread abandonment of chestnut coppices (for poles and timber production) seriously threatens their future, the conference held in Arezzo in June 2025 (see WORKSHOP 2025 within the previous Newsletter –nr. 9-2025) brought together for two days all the stakeholders in the supply chain — owners, managers, legislators, users, processors, market operators, and researchers — to analyze the main critical issues and define strategies and operational proposals aimed at reviving chestnut cultivation for timber and counteracting the abandonment of chestnut coppices.
The complete summary of the WORKSHOP can be downloaded here:
https://www.rivistasherwood.it/t/gestione/filiera-della-castanicoltura-da-legno-presente-e-prospettive.html
The main critical issues that emerged:
- Regulations: High regional heterogeneity and bureaucratic procedures slow down rather than promote forestry planning and interventions.
- Ownership: High land fragmentation, with a prevalence of small plots and difficulty finding owners.
- Forest management: Abandonment of forestry and/or lack of regularity in cultivation practices, which affects the quality of the timber.
- Supply and assortments: Insufficient availability of quality wood assortments for structural and high-quality uses, resulting in increased imports.
- Market and processing: Limited ability of primary processing companies to meet the size and quality requirements of carpentry and joinery.
- Skills: Lack of designers and operators trained in the use of chestnut timber for construction and in applying innovative silvicultural systems for chestnut coppices.
- Employment: Scarcity of skilled labor, seasonality, and difficulty in generational turnover.
- Potential for the valorization of residues (tannin, wood chips, pellets) not fully exploited due to organizational and qualitative limitations.
- Mechanization and infrastructure: Regulatory obstacles that limit the mechanization of processes and the adaptation of forestry infrastructure.
- Circular economy: Potential for the valorization of residues (tannin, wood chips, pellets) not fully exploited due to organizational and qualitative limitations.
Info: enrico.marcolin@unipd.it

- Presentation: Management of aged chestnut coppices

A pilot project on chestnut cultivation for timber funded by Regione Toscana (Italy).
Analysis and evaluation of silvicultural methods to be applied to long-rotation chestnut coppices in the regeneration phase.

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Barbara Mariotti
Pietro Castellucci
Riccardo Dolce

Maria Chiara Manetti
Gianluigi Mazza

Daniele Rappuoli
Mirko Benanchi
Francesco Giubbilei
Alice Angelini

Portuguese National Chestnut Symposium – Sabugal, Portugal, 3–5 July 2025

From 3 to 5 July, Sabugal hosted the 5th Portuguese National Chestnut Symposium, organised by REFCAST – Portuguese Chestnut Association, the Municipality of Sabugal, SCAP – Portuguese Society of Agricultural Sciences, and CCDR Centro.

The Portuguese National Chestnut Symposium is a reference event for the chestnut sector in Portugal, bringing together researchers, technicians, and producers to promote a more sustainable, competitive, and resilient chestnut value chain.

The meeting was strongly focused on chestnut nut production and agroforestry systems, with particular emphasis on traditional and modern chestnut orchards, as well as the main problems and challenges currently facing the sector.

The three-day programme included scientific presentations, an exhibition area, technical sessions for producers, and field visits to local chestnut orchards (soutos).

The symposium also hosted a scientific award competition for the Best PhD Thesis and Best Master's Dissertation related to chestnut, promoted by REFCAST and SCAP, highlighting work with strong scientific merit and potential relevance for the development of chestnut cultivation and the chestnut value chain.

SABUGAL SURPREENDA OS SENTIDOS · REFCAST · SCAP · CCDR CENTRO · REPÚBLICA PORTUGUESA COESÃO TERRITORIAL

XV European Chestnut Conference – Eurocastanea 2025

Aracena, Huelva, Spain **[**10–14 September 2025]

The **15th European Chestnut Conference (Eurocastanea 2025)** was held in Aracena (Huelva, Spain), bringing together the European chestnut community, including researchers, technicians, producers, and other stakeholders.

The conference was strongly focused on **chestnut nut production and agroforestry systems**, with particular emphasis on **traditional and modern chestnut orchards, current constraints, and emerging opportunities for chestnut-based systems in Europe.**

The programme included **scientific and technical sessions, roundtable discussions, and field visits**, providing a platform to exchange knowledge, discuss current challenges, and strengthen collaboration across countries and disciplines.

International exchange: A group of chestnut producers from San Fabián (Ñuble Region, Chile) visited Portugal and were welcomed by chestnut researchers at the Polytechnic Institute of Bragança (IPB), leading to a valuable exchange of experiences on chestnut cultivation and management systems.

From the U.S.: Department of Agriculture (USDA) is considering deregulation of transgenic chestnut.

The deregulation is being sought by the State University of New York (SUNY) after years of research on creating a genetically modified tree designed for blight resistance. If approved, transgenic chestnuts could be publicly released into the wild and sold commercially. This follows a labelling mistake at the SUNY lab when researchers discovered that they were unknowingly experimenting with the wrong tree. After years of collaborating with SUNY, The American Chestnut Foundation, the lead organization in North America dedicated to developing blight resistant chestnuts, decided to discontinue collaborations with SUNY on development of the transgenic lines, called 'Darling 59'. TACF claims that Darling 58 trees have inferior blight resistance and field performance, and they are not aligned with SUNY's goal to commercially market the trees once released. The USDA is now seeking public input on the deregulation.

For more information: https://content.govdelivery.com/accounts/USDAAPHIS/bulletins/3e3c2be

Chestnut Chat Series:

- Rescue and Restoration of the American Chestnut.
- The Transgenic Darling 58 American Chestnut Tree

All Chestnut Chats are LIVE via Zoom, so you can attend from anywhere!
Chat series registration web-page

Call for Papers

[Forests] (IF: 2.5, ISSN: 1999-4907) - Forest Management: Silvicultural Practices and Management Strategies

This special issue belongs to the section "Forest Ecology and Management".

This Special Issue aims to provide an integrative overview of current advances in silviculture, forest ecology, and forest management with a particular focus on tree adaptation, efficient resource use, and sustainable provision of ecosystem services under changing conditions.

Potential topics include, but are not limited to: Innovative silvicultural systems and stand treatments; Forest management for resilience, stability, and multifunctionality; Tree adaptation, assisted migration, and genetic resources; Resource use efficiency (water, nutrients, light) and productivity; Impacts of climate change and disturbances on forest dynamics; Decision-support tools and modelling for adaptive forest management.

The submission deadline is 31 October 2026.

https://www.mdpi.com/journal/forests/special_issues/BKR47428SB

[Forests] (IF: 2.5, ISSN: 1999-4907) - Ecological Responses of Forests to Climate Change

This special issue belongs to the section "Forest Ecology and Management".

This Special Issue focuses on quantifying the multidimensional responses of forest ecosystems to varying intensities of extreme weather events. Key areas of interest include abnormal litter production and decomposition, physiological responses of different forest types, changes in hydrological cycles, changes in fauna and microorganisms in forests, shifts in soil's physical and chemical properties, etc. In addition, particular attention has been paid to the selection of evaluation indicators for the impact of extreme weather events on forest ecosystems.

The submission deadline is 30 March 2026.

https://www.mdpi.com/journal/forests/special_issues/1YF7IER4R8

Featured Newly Published Papers and Books

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

Antipova, T. V., et al. (2025). Secondary metabolites of phytopathogenic Cryphonectria parasitica (Murrill) and their in vitro phytotoxicity. Journal of Plant Pathology: 1-13.

Atherton, K. F., et al. (2025). Disruption of the oak tree microbiome with urbanization. Nature Cities: 1-11.

Ćurković-Perica, M., et al. (2025). Trilateral interaction between chestnut, chestnut blight fungus and the biocontrol agent Cryphonectria hypovirus 1: the role of chestnut. VI International Mycovirus Symposium, Abstracts, Helsinki: N/A.

Davosir, D., et al. (2025). Exploring the bacterial, fungal and viral microbiota of chestnut blight-induced bark cankers by traditional and metagenomic approaches. Book of Abstracts-International Workshop From Genomic Analysis to Functional Models in Microbiomes and Synthetic Consortia–BiomeFUN 2025, Beograd: University of Belgrade-Faculty of Biology.

Demertzi, A., et al. (2025). Influence of Forest Structural Complexity and Management Intensity on Woodpecker Communities in Mediterranean Chestnut (Castanea sativa) Forests. Ecologies 6(2): 37.

Fontana, E. V., et al. (2025). Ambrosia beetles (Coleoptera: Curculionidae: Scolytinae and Platypodinae) in chestnut-growing areas in north-west Italy. EPPO Bulletin.

Harman, İ., et al. (2025). Changes in gall density and morphology of Dryocosmus kuriphilus (Hymenoptera: Cynipidae) along an elevation gradient in the Northeastern Türkiye. Applied Entomology and Zoology: 1-13.

Ježić, M., et al. (2025). Variability in sweet chestnut susceptibility to chestnut blight disease. Forest Protection and Today's Challenges-Switzerland, Slovenia and Croatia, book of abstracts: 11-11.

Kara Alaşalvar, M. and Ö. Sağıroğlu Demirci (2025). Experimental Investigation on the Material Properties of Historical Chestnut and Elm Structural Timbers. Kastamonu Üniversitesi Orman Fakültesi Dergisi 25(2).

Klaus, J. M. and N. A. Klaus (2025). Modelling the historic distribution and habitat of American chestnut (Castanea dentata) in Georgia, USA using edaphic and landform predictors. Frontiers of Biogeography 18: e161937.

Maccioni, L., et al. (2025). Evolution and Classification of Chestnut Harvesting Mechanisms. International Workshop IFToMM for Sustainable Development Goals, Springer.

Pezzi, G., et al. (2025). Perception and management of the understorey vegetation by chestnut growers: the study case of the chestnut orchards in the Bologna and Modena Apennines (Italy). Rendiconti Lincei. Scienze Fisiche e Naturali: 1-16.

Rico, S., et al. (2025). Transcriptional reprogramming of defense responses in chestnut genotypes against Phytophthora cinnamomi infection.

Rodriguez, C. M., et al. (2025). Integrated Pest Management protocol against chestnut ink disease. LIFE FAGESOS. Part of deliverable D4.1 of workpackage 4. Large-scale application of new customized IPM protocols.

Serrazina, S., et al. (2025). Overexpression of Ginkbilobin-2 homologous domain gene to enhance the tolerance to Phytophthora cinnamomi in plants of European chestnut.

Siccardi, E., et al. (2025). Effects of anthropogenic drivers of change on the taxonomic and functional diversity of local plant communities in chestnut groves on the island of Elba, Tuscan Archipelago, Italy. 5MPCW CY-2025 5th Mediterranean Plant Conservation Week. Building alliances for plant diversity conservation in the Mediterranean. April 07-11, 2025 Limassol, Cyprus. Book of Abstracts, Andreou M., Thanos CA: 24-24.

Sousa, F., et al. (2025). Physiological responses of Marsol and CA-90 chestnut plants to high temperature and water scarcity co-exposure: a comparative study. Plant Physiology and Biochemistry: 110663.

Spinelli, R., et al. (2025). Managing invasive tree stumps in the restoration of legacy chestnut orchards. iForest-Biogeosciences and Forestry 18(6): 350.

Stoltz, S. S. (2025). Genetic Diversity and its Implications for Evolutionary Rescue of the Endangered American Chestnut, University of Guelph.

Tulowiecki, S. J. (2025). A legacy ecological survey and species distribution models reveal the mid-20th century niche of American chestnut (Castanea dentata [Marsh.] Borkh.) in Monroe County, New York State, US. Forest Ecology and Management 590: 122819.

Wang, H. and S. Yu (2025). Comparative Study on Yield and Ecological Benefits of Different Intercropping Models in Chestnut Economic Forests. Tree Genetics and Molecular Breeding 15.

Wang, S., et al. (2025). Field-Deployable Detection of Chestnut Blight Pathogen Cryphonectria parasitica Using Enzyme-Mediated Duplex Exponential Amplification. Current Issues in Molecular Biology 47(9): 762.

Wegner, T. M. (2025). Growth and Physiology Assessments of Darling 54 Transgenic American Chestnuts in Two Experimental Plots, College of Environmental Science and Forestry, State University of New York. Master's Thesis.

Wegner, T. M., et al. (2026). Evaluating transgenic Darling 54 American chestnuts for reintroduction: Insights from survivorship, growth, and respiration in a common garden. Forest Ecology and Management 602: 123361.

Yussif, T. S. (2025). Identification of Chestnut Hybrids Using SSR Markers and Bioinformatic Tools. Instituto Politécinco de Bragança-Escola Superior Agrária, Portugal. Master's Thesis.

T. Wang, Y. Pu, S. Yu, X. Gao, F. Zou, J. Masabni, D. Yuan, H. Xiong (2025).
Accumulation of trifolin inhibits adventitious root formation in mature cuttings of Castanea henryi.
Plant Physiology and Biochemistry: 110932.
https://doi.org/10.1016/j.plaphy.2025.110932

Castro-Camba, R., Sánchez, C., Rico, S., Vidal, N., Aldrey, A., Cernadas, M. J., Covelo, P., & Vielba, J. M. (2025).
Pretreatment with Silver Thiosulfate Increases the Auxin-Inductive Effect for Rooting Mature Chestnut Shoots.
Plants, 14(24), 3756.
https://doi.org/10.3390/plants14243756

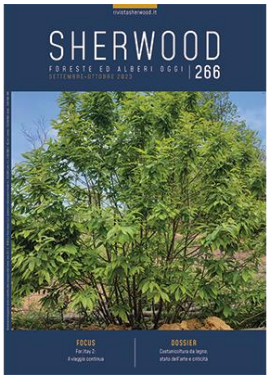
Kajita, R., Kajimura, H. (2025). Foraging strategy of wood mice for undamaged and moth-infested Castanea crenata nuts on forest floor. Sci Rep 15, 43508.
https://doi.org/10.1038/s41598-025-25025-0

Park, J.-M., Kim, H.-J., Won, S.-J., & Na, S.-J. (2025). Variation in Floral Nectar Traits of Four Chestnut (Castanea spp.) Cultivars: Implications for Pollinators and Apiculture. Agriculture, 15(22), 2358.
https://doi.org/10.3390/agriculture15222358

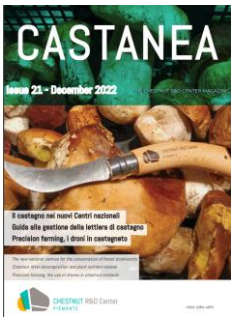
Fernandes, P., Serrazina, S., Pavese, V., Martín, A., Mattioni, C., Martínez, M., Piñeiro, P., Fraga, M., Cuenca, B., Moglia, A., Costa, R. L., & Corredoira, E. (2026). Biotechnological Advances for Enhancing European Chestnut Resistance to Pests, Diseases, and Climate Change. Horticulturae, 12(1), 11. https://doi.org/10.3390/horticulturae12010011

Olichney, J. A., Newhouse, A. E., Franklin, M. Z., Holliday, J. A., Klopf, S. K., Powell, W. A., ... & Drake, J. E. (2026). Evaluating restoration candidates: Performance of blight-tolerant American chestnut varieties in open field and shelterwood silvicultural conditions. Forest ecology and management, 599, 123302. https://doi.org/10.1016/j.foreco.2025.123302

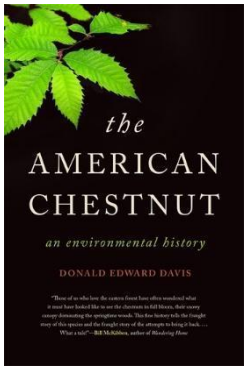
Trenti, W., De Feudis, M., Marinari, S., Murolo, S., Tabanelli, G., Puliga, F., Marabottini, R., Zambonelli, A., Gardini, F., & Vittori Antisari, L. (2025). Hillslope Morphological Features Modulate Soil Microbial Communities and Chestnut Ink Disease via Clay and Water Redistribution. Applied Sciences, 15(21), 11695. https://doi.org/10.3390/app152111695



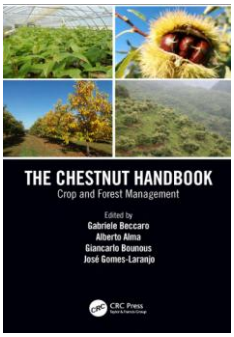
DOSSIER - Castanicoltura da legno: stato dell'arte e criticità
(Chestnut cultivation for timber production: state of the art and critical points).
Sherwood nr. 266
An Italian journal of forestry (in Italian) presenting a special issue on chestnut silviculture & techniques for timber production.
https://www.rivistasherwood.it/t/pubblicazioni/dossier-castagno.html



THE CHESTNUT R&D CENTER MAGAZINE
News about R&D concerning Castanea sativa
(in Italian and English)
https://centrocastanicoltura.org/magazine/



The American Chestnut: An Environmental History. 2021, University of Georgia Press. Athens, Georgia, USA. ISBN: 9-780-8203-6045-4.
Davis, D. E
https://ugapress.org/book/9780820360454/the-american-chestnut/



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Beccaro, G., Alma, A., Bounous, G., Gomes-Laranjo, J. (Eds.).
https://doi.org/10.1201/9780429445606

Manual de Boas Práticas do Castanheiro.
Manual de Buenas Prácticas del Castaño.
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.).

Multimedia

- A traditional song dedicated to the chestnut leaf with a new twist. “The chestnut leaf of the Botanica Album by Abe Rábade”: http://www.youtube.com/watch?v=Adwf90oNiGQ
- A series on the American chestnut. These are fun and entertaining short videos: https://www.youtube.com/shorts/tulIws1xH9U

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).