Group Study Tour to Italy to attend the First European Congress on Chestnuts

Jane Casey Australian Chestnut Company

Project Number: CH09005

CH09005

This report is published by Horticulture Australia Ltd to pass on information concerning horticultural research and development undertaken for the chestnut industry.

The research contained in this report was funded by Horticulture Australia Ltd with the financial support of Chestnuts Australia Inc.

All expressions of opinion are not to be regarded as expressing the opinion of Horticulture Australia Ltd or any authority of the Australian Government.

The Company and the Australian Government accept no responsibility for any of the opinions or the accuracy of the information contained in this report and readers should rely upon their own enquiries in making decisions concerning their own interests.

ISBN 0734122349

Published and distributed by: Horticulture Australia Ltd Level 7 179 Elizabeth Street Sydney NSW 2000 Telephone: (02) 8295 2300

Fax: (02) 8295 2399

© Copyright 2010



CH09005

GROUP STUDY TOUR TO ITALY TO ATTEND THE FIRST EUROPEAN CONGRESS ON CHESTNUTS

(OCTOBER 2009)

Brian and Jane Casey Australian Gourmet Chestnuts

Horticulture Australia Project Number: CH09005

Project Leader: Jane Casey

Australian Gourmet Chestnuts

233 Hughes Lane Eurobin Vic 3739 Ph: (03) 5756 2788

Key Personnel: Brian Casey

Australian Gourmet Chestnuts

233 Hughes Lane Eurobin Vic 3739 Ph: (03) 5756 2788

Purpose of report:

Group Study Tour to Italy Attend the First European Congress on Chestnuts.

Acknowledgements

Horticulture Australia Ltd Chestnuts Australia Inc Australian Gourmet Chestnuts

4 January 2010

Any recommendations contained in this publication do not necessarily represent current Horticulture Australia policy. No person should act on the basis of the contents of this publication, whether as to matters of fact or opinion or other content, without first obtaining specific, independent professional advice in respect of the matters set out in this publication.

<u>Index</u>

Media Summary			4
Introduction			5
Group Participants			6
Itinerary Overview			6
Marradi Village and Chestnut Festival (Sagra delle Castagne)			6
Azienda Agricola Pian della Quercia			19
Ortofuitticola			22
Garfagnana			28
Museo del Castagno			36
The 1 st European Congress on Chestnuts			39
The Fiera Nazionale del Marrone, Cuneo (Chestnut Festival)			43
Visit to the Original Chuisa Pesio Tree			48
Conclusion			50
Recommendations for the Australian Industry			51
Information dissemination			52
Apper	ndix		
	(i)	Tour Participants	53
	(ii)	Detailed itinerary	54
	(iii)	Il Gusto di Viaggiare – The Taste of Travelling Brochure	58
	(iv)	Associazione Castanicoltori della Garfagnana - Brochure	63
	(v)	Museo del Castagno	65
	(vi)	First European Chestnut Congress Program	69
	(vii)	Fiera Nazionale del Marrone	99
	(viii)	Questionnaire Responses	100

Media Summary¹

A group of thirteen Australians attended the 1st European Congress on Chestnut - Castanea 2009, Cuneo, Italy 13 – 16 October 2009.

25 Countries with more than 150 delegates were present at this truly International event held at Cuneo, North West Italy on the border of the Italian/French Alps. Cuneo is the hub and capitol of Chestnuts in Italy.

Prior to the Congress starting, Study Tour organizers Brian and Jane Casey had arranged for the Australian delegates to experience a wonderful introduction into the culture of chestnuts in Italy. These included attending a "Castagna Fiera" (Chestnut Fair) in Marradi (2 hours north east of Florence), and before leaving Marradi the group were given the rare opportunity of touring the largest Marrons Glaces factory in Italy, seeing firsthand the process from the farmer bringing in the fruit to the final packaged product.

The group then travelled up to Castelnuovo di Garfagnana nestled below the Apuane Alps and the home of chestnut flour. Highlights from this visit was a 4 km walk through a chestnut plantation (we would describe it as a forest!); down to an ancient building that housed the remnants of a time past, a chestnut mill. Along the way we saw for ourselves the traditional way of drying the fruit in stone huts called "metato" using wood fire that allowed the smoke to permeate the fruit during the process adding to the flavor of the end product.

We then travelled to the mountain village Colognora val di Roggio for a private tour of the Museo del Castagno by the Curator Angelo Frati. This museum is dedicated to the cultivation and production of chestnuts dating back to 828BC.

Then it was onto the Congress in Cuneo (Piedmonte Provence). The Congress dates also coincided with the Fiera del Marrone held annually in Cuneo. The festival had stalls with every kind of chestnut product from fresh and roasted fruit (roasting was done over open fires in huge holed pans) to cakes, pastas, biscuits, bread, glaces and puree plus all the local produce and wares; it truly was a remarkable sight.

What was bought home to the delegates was the ancient tradition of the Chestnut culture in Italy and one of the reasons for holding the Congress was the many challenges facing their traditions hence the need for discussions to preserve, enhance and extend the tradition of chestnuts not only in Italy but worldwide.

4

¹ A media summary taken from an article published in the Myrtleford Times, written by Tanya Edwards

Introduction

The objectives of this study tour was to attend the 1st European Congress on Chestnuts, Castanea 2009, held in Cuneo in North West Italy from 13-16 October 2009 and to conduct a pre and post conference tour to experience first-hand Italian chestnut culture including growing, harvesting, value adding and marketing.

Chestnuts are not native to Australia and have only been commercially cultivated in the past 30 years. Because of this they have no history or tradition in Australian food culture however this is not the case in Europe where chestnuts have been part of the normal seasonal diet for centuries. The purpose of the study tour was to give key industry leaders and stakeholders information on the latest research being undertaken and to gain a broader understanding of chestnuts and their role in Italian culture. Italy currently produces approximately 55,000 tonnes of chestnut per anum and is considered one of the largest producers in Europe along with Spain and Turkey. The study tour will focus on Piedmonte and Tuscany, two of the major Italian chestnut producing regions.

There are over one hundred chestnut festivals held annually in Italy. These are wonderful events that celebrate the chestnut harvest and showcase the local chestnut specialities of the specific region. As well as the two chestnut festivals the tour also covered a visit to a Marrons Glaces factory in full production. Marrons Glaces are very seasonal and around 80% of sales occur at Christmas time. It was very opportune for us to be in the right place at the right time to see this factory in full operation.

There were visits to a number of chestnut orchards; one in particular was so old it now resembled a forest. A highlight was a very warm welcome we received by the owners of a seven hundred year old stone flour mill who had prepared for us a lovely spread of chestnut pancakes and other dishes cooked over an open fire just as they would have done a hundred years ago.

It is true that seeing *is* believing and the visit enabled the participants the opportunity to experience firsthand how chestnuts are integrated into the food, drink and confectionary culture of Northern Italy.² The variety of chestnut based products on offer was extensive and these will be covered more fully in the report.

Heather and John Kane also received separate Horticulture Australia Ltd VC funding to attend the Congress and as they both have a background in research their report on the Congress will be both detailed and comprehensive. Therefore, this report will focus mainly on the study tour component that was undertaken before and after the congress to allow for a far greater perspective specifically on Italian chestnut culture.

The tour could not have taken place without the support of Horticulture Australia and Chestnuts Australia Incorporated. Thank you to both of these organisations.

Personally Brian and Jane would like to thank all the group members who made the trip so memorable. It was a pleasure to travel with such an enthusiastic group who embraced the chestnut culture of Italy.

² Helen McIntrye

The Participants³

The participants were made up of industry leaders and stakeholders. Most had served or are currently serving on the board of the national association (Chestnuts Australia Inc or its predecessor The Chestnut Growers of Australia). All are chestnut growers with the exception of Tanya Edwards who is currently the Administration Officer for Chestnuts Australia Inc and Lucas Shuttleworth who is currently undertaking chestnut research whilst working towards his PhD. The group came from a number of different chestnut growing regions covering the Adelaide Hills, Tumbarumba and North East Victoria. The group members were:

Jane & Brian Casey (tour leaders)

Graham Ahrens Frank Baldasso
Ray Borschmann Bill & Jan Connoley
Tanya Edwards David & Helen McIntyre

Sam Perna Sally Robbins

Lucas Shuttleworth

The Itinerary⁴

We left Australia and commenced the tour on Thursday 8 October and arrived in Florence via Milan. After a day to recuperate from the flight we attended the Marradi Chestnut Festival on Sunday 11 October. Monday morning included a visit to a Marrons Glaces factory before travelling to the Garfagnana region of northern Tuscany for an afternoon walk in an old chestnut orchard. Tuesday included a visit to the Museo del Castagno before arriving in Cuneo in the afternoon in time for the commencement of the Chestnut Congress on Wednesday. The Congress ran from Wednesday to Friday and on Saturday the group stayed in Cuneo to visit the Chestnut Festival (The Fiera Nazionale del Marrone) there. On Sunday the group visited a chestnut nursery and the original Chiuso Pesio trees near Cuneo (this variety is grown in Australia) before travelling onto Milan where the tour concluded.

Marradi Village and Chestnut Festival (Sagra delle Castagne)

Marradi is a small village located approximately 65 km North East of Florence. Each Sunday in October the village runs a Chestnut Festival to celebrate the harvest. When Brian and Jane attended the International Chestnut Conference in Portugal in 2004 they met Professor Elvio Bellini. Prof Bellini has spent many years in chestnut research based at the University in Florence and is very passionate about the special Marrone del Mugello chestnut variety.

He was instrumental in the submission of this variety for PGI (Protected Geographical Indication) recognition. "The PGI status protects the chemical-physical, nutritional and organoleptic qualities of agricultural and food products linked to a specific geographic region.... According to the PGI certification, producers must follow and apply a rigorous production process that is periodically verified by the inspection

³ See Appendix (i) for full details

⁴ Please see Appendix (ii) for a detailed itinerary.

Marradi Village and Chestnut Festival (Sagra delle Castagne) (con't)

body.... The inspection body verifies the compliance between the production requirements and the entire productive chain.

Hence, controls begin in the chestnut orchards and end once the product is packaged and ready for sale."⁵

Prof Bellini has a special passion for Marradi as it was were he was born and grew up. In his retirement he has established a Chestnut Study and Documentation Centre (Centro di Studio e Documentatzione sul Castagno) located in the heart of the Marradi village. This centre is a non profit organisation aimed at increasing the awareness of chestnuts by promoting the social and economic development of the industry whilst safeguarding their historical and cultural aspects.

It is difficult to describe the passion that the Italians have for the humble chestnut. It is so intrinsically linked to their culture and forms a part of their everyday life. The only way to experience this is to visit a chestnut festival like the one in Marradi and see and feel the love the community has for this product.



Group photo with Prof Bellini (back row, on left) outside the Chestnut Study and Documentation Centre

During the visit to the Marradi chestnut festival the group was fortunate to be invited to the Palazzo Torriani which is a majestic home in the middle of the Marradi township. The owner, Anna Maria T. Torriani Donati, is very passionate about chestnuts and after a guided tour of the building treated the group to a wonderful spread of home made chestnut dishes for us to try. When we thanked her she replied that she had prepared the chestnuts with her heart and that it was her pleasure to be able to share the dishes with us. It is typical of the people involved with chestnuts...

⁵ Elvio Bellini, Marrone Del Mugello PGI Tradition and Quality, 2009, p10



Outside the Palazzo Torriani



The beautiful table full of chestnut treats



Delicious chestnut cakes



Anna Maria at Palazzo Torriani

The festival itself was incredible. There were many growers selling fresh chestnuts, and we saw chestnuts being roasted with a variety of different methods. Some using wood fires, some with gas and even an electric machine. Many stalls also offered a local sweet red wine called Cagnina which traditionally accompanies the roasted nuts. There was also numerous and very inventive machinery that had been developed to 'mark' the nuts prior to roasting to stop them exploding. The most impressive display however was the extensive variety of value added products for sale; chestnut flour, cakes, chestnut beer and liqueurs, marrons glaces and more. This type of value-adding doesn't happen in Australia so it was something most in the group had not previously experienced. Here are some photos to give an indication of the wide variety of items we saw, tasted and experienced.



The village of Marradi during the festival.



Stall holders selling fresh nuts prepare their display



Growers take bins of nuts, which demonstrate the volumes of fresh nuts sold during the festival. Photo above show David and Helen McIntyre and Frank Baldasso assessing the quality of the fresh nuts.



Chestnuts graded into Piccolo (small), Medi (Medium) and Grossi (Large)



Cagnina - the sweet red wine traditionally served with hot roasted chestnuts.



A variety of different pans for roasting chestnuts were also on sale



More roasting equipment



In the background - roasting chestnuts over a wood fire using a mesh drum



A gas fired "cement mixer" roasting machine.



This roaster was gas fired and was a kind of combination of the tumble roaster and an oven.





Professor Bellini and Bill Connoley talk to a street roaster about his electric roasting machine.



A machine for 'marking' the chestnuts before roasting – five nuts at a time.



Another machine that marked the nuts one at a time.

Value added chestnut products





A delicious assortment of cakes made with chestnuts.



Swiss roll filled with jam and chestnut puree.



Canned chestnuts and sweetened chestnuts in jars as well as chestnut puree.



Chestnut flour



Biscuits made using chestnut flour

Professor Bellini took us to lunch at a local restaurant overlooking the village of Marradi where we were treated to chestnut dishes such as chestnut filled ravioli with truffle sauce and pork with chestnuts. During lunch Professor Bellini spoke about the importance of the chestnut to the local economy of Marradi. During the period from the 1950's – 1980's the chestnut was much neglected and considered to be the food of the poor. Since the 1990's however there has been a resurgence of traditional foods and now the chestnut is held in great respect. The tree is used not only as a source of food but also as a source of fuel and timber for furniture and housing.

Azienda Agricola Pian della Quercia

In the afternoon, we visited a chestnut orchard approximately ten kilometres from Marradi. This orchard is owned and run by the Rino family and all members were involved in harvesting and grading the nuts. The orchard produced around 75 tonne of Marradi di Marone chestnuts from trees which ranged between 40-80 years old. Pollination was not a problem as the trees were pollinated from the many wild trees in the nearby forests. This was an important point as one of the criteria of a 'marone' is that it is pollen sterile.



Professor Bellini, David & Helen McIntyre ready to walk up to the orchard. Stacks of chestnut logs being stored for use as timber and fuel.



Professor Bellini explaining some details about chestnut cultivation to (from left) Ray Borschmann, Sam Perna and Frank Baldasso.



Grading was done in a small outside shed that was very basic. Chestnuts were graded to three sizes only being roughly equivalent to the Australia Medium, Standard and Large 1 sizes. The main difference with the Australian grading systems is that the Italians sort by size and then by quality taking out the bad nuts after size grading whereas in Australia we tend to do the quality sorting first and the size grading is done as the final step.



The group outside the small grading shed with Professor Bellini.

Ortofuitticola

On Monday morning the group travelled to an industrial area near Marradi to visit a marrons glace factory. This is the largest marrons glace producer in Italy and processes around 6500 tonne of fresh chestnuts per year using exclusively Italian grown chestnuts. The General Manager Guiseppe Bonardi took us for a tour showing us the flow of nuts from receipt of the fresh nuts to the packaging and dispatch of the final marrons glaces. The factory was in full operation manufacturing product for the upcoming Christmas season which is the main selling time for marrons glaces in Europe where they are a traditional gift.

It was very interesting to note that all the fresh chestnuts that come into the facility from the surrounding area are consolidated and then transported to the south of Italy (Avelino) where the company has a huge peeling facility. Avelino in southern Italy is now the major production area for chestnuts in Italy. The peeled nuts are frozen and stored and then shipped back to Marradi for transformation into marrons glaces as required. It is usual for the marrons glaces to be made with chestnuts from the previous year's harvest.

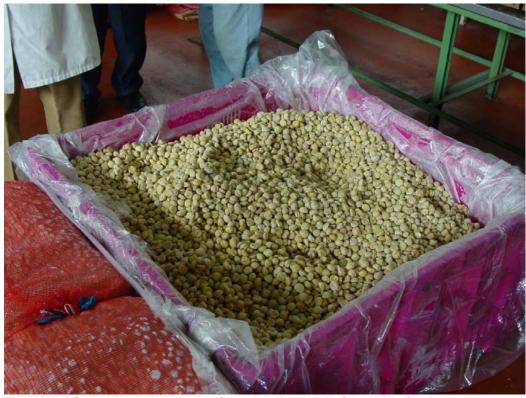
The basic process is to cook the chestnuts under pressure, then place them into warm sugar syrup. Over the course of one to two weeks the concentration of sugar is increased until the correct brix is achieved. During this time the vats of chestnuts in syrup are kept at around 60°C. The time taken for the process depends on the size and particular variety of chestnut.



A local grower delivering fresh chestnuts to the factory.



The fresh nuts are assessed for quality and 1kg is weighed immediately on arrival at the factory. The nuts are counted to give pieces /kg and this combined with the quality rating is what determines the price paid for the consignment.



A bin of frozen peeled chestnuts from Avelino ready for processing into Marrons Glaces.



Sweetened chestnuts being removed from their trays in preparation for final glazing.



Going through the 'curtain' of glaze.



After glazing and 'setting' in a heated tunnel.



Mr Bonardi explaining the importance of packaging. From left is Lucas Shuttleworth, Mr Bonardi, Graham Ahrens and Jan Connoley.

The company contract process for many different brands of marrons glaces and the range of packaging was from boxes of loose pieces of marrons glaces to individually gold foil wrapped premium marrons glaces.



Boxes of premium Marrons Glaces.



Boxes of smaller sized Marrons Glaces.



Mr Bonardi explained to us the concept of the group "Strada del Marrone del Mugello di Marradi". ⁶

This group has been formed to develop the agri-tourism aspects of chestnuts especially in the Marradi area. It is a group of chestnut processors and local growers many of whom offer tourist accommodation on farm. Their aim is to promote the area through the education and appreciation of the chestnut tree both for its fruit and also for its wood. Walks have been designed around a tight network of paths weaving through chestnut groves which can be taken on foot, by mountain bike or by horseback.

Mr Bonardi expressed his frustration at the limited work opportunities for young people in rural Italy and hoped this initiative would assist in development employment. The initiative was aimed at providing work in the tourist and hospitality areas in particular as well as in manufacturing. His company was committed to remain in the village as an employer rather than move the processing to Avelino or a large city such as Florence or Milan.

⁶ See Appendix (iii) for the brochure "Il Gusto di Viaggiare (The Taste of Travelling)

Garfagnana

After leaving Marradi we travelled to Castelnuovo di Garfagnana to meet Giovanni-Battista who is the Italian sales manager for the Associazione Castanicoltori della Garfagnana (The Association of Chestnut Growers of Garfagnana). Garfagnana is located in Northern Tuscany and is renowned for its chestnut flour.

He had arranged for us to do a chestnut walk. The walk was through an old chestnut orchard which now looked and felt more like a chestnut forest.



A map of the walking track.

⁷ See Apendix (iv) for more information on the Associazione Castanicoltori della Garfagnana



The trees varied in ages and many were coppiced for their timber as the photo below shows. The varieties grown in this region have been specifically selected because of their superior qualities for flour production.





The remnants of terracing and the regular layout of the trees indicate these trees were originally planted out as an orchard. The orchards are expensive to maintain and to assist in these costs a program to "Adopt a Tree" has been initiated. For €75 per year the subscriber is entitled to receive 10kg Fresh Chestnuts, 3kg Chestnut Flour and 2 kg Dried Chestnuts.



The walk was punctuated by stops at "Metato's" which are small huts used to dry the chestnuts. Rather than cart the chestnuts out of the orchard for drying the Metato's are built in the orchard itself. As the nuts are harvested they are placed in the Metato and once filled then the next one is used. The dried nuts are then peeled and stored for use later or milled into chestnut flour.



A Metato is a stone building of two levels separated by a slated floor. The chestnuts are placed in the top area above the slated floor. The photo below shows the Metato from behind. The nuts are placed into the top section of the Metato via the 'window'. Each metato can hold around 4.5 tonne fresh nuts.





From the lower level the nuts can be seen on top of the slated floor. A fire is lit in the lower section using chestnut wood and the skins of last years peeled nuts and left to smoulder. The temperature should not rise above 30°C. The drying process takes 40 days and after twenty days the nuts are stirred to ensure they are evenly dried. Once drying is completed the slates are broken and the dried nuts fall to the floor and are collected.



Once all the metato's in the orchard are filled the harvest is stopped and the rest of the nuts are left on the ground.

At the end of the walk we came to a river and an old stone mill that was being restored. This mill once produced chestnut flour from the nuts that are grown and dried nearby.





The millstone was estimated to be 700 years old and whilst not operational when we visited the owners had plans to re-commission it as part of their restoration.

On arrival at the mill the owners greeted us warmly and had prepared some lovely chestnut dishes for us to try. This was quite unexpected. They cooked traditional pancakes made of chestnut flour over an open fire, made a traditional chestnut cake called castagnaccio and small chestnut pikelets as well as hot roasted chestnuts for us. All washed down with home-made red wine which was delicious.



The open fire with the chestnut pancakes to the left of the fire and the pikelets on the right.



Tasting all the delicious goodies.



As previously mention, Giovanni-Battista is the Italian sales manager for the Associazione Castanicoltori della Garfagnana (The Association of Chestnut Growers of Garfagnana). After dinner that evening he presented the range of products which the association produce. They make a huge variety of chestnut based products including pasta, biscuits, breakfast bars, chestnut flour, liqueurs, beer, chestnut purees and chestnut honey. In fact, we had their chestnut pasta for dinner served with a basic burnt butter and sage sauce which was absolutely delicious.

Museo del Castagno

On Tuesday morning we travelled to the small hilltop village of Colognora Val di Roggio near Lucca to visit the Chestnut Museum there. This museum was established in 1985 by Angelo Frati with the aim of "collecting, studying and spreading the knowledge of the many life experiences which have revolved around the chestnut."

It has twenty sections and focuses on two major aspects of chestnuts; that of a food source and the other as a source of timber. One member of our group commented later "What a wonderful heritage that has been preserved to give us an indication of a time past..."

Angelo was born in the village and is very passionate about the preservation of the history of the chestnut in the Garfagnana region. His knowledge was shared freely and he was a warm host to the group.

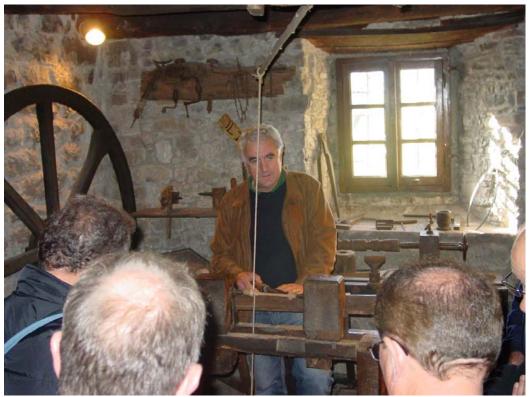


Angelo Frati showing how the production of charcoal from chestnut wood was produced.

-

⁸ See Appendix (v) for the brochure on the Museo del Castagno – Chestnut Museum.

⁹ Tanya Edwards



Angleo Frati demonstrating chestnut wood turning using a treadle lathe. The museum had an extensive range of tools and equipment made from chestnut wood.



Chestnut tannin was used in leather tanning and this is a bottle of chestnut tannin.



Engineering plans for a water powered mill to produce chestnut flour.



Equipment used to peel the dried chestnuts before milling. Note the boots in the photo. These were used to stomp in large tubs of dried chestnuts similar to the old fashioned crushing of grapes. The spikes removed the outer shell and pellicle of the dried nut.

The 1st European Congress on Chestnuts¹⁰

This congress featured over four hundred pre-eminent researchers from twenty four countries to present the findings of their current research and discuss the focus of further projects. The congress also provided an opportunity for the chestnut research community to connect with each other and develop co-operative linkages.

But the congress was not only relevant to researchers with many commercial growers also in attendance. The topics covered included the history of the chestnut in Europe, its spread and the importance to the Italian mountain communities. The biology and genetic resources of the tree and the nuts was discussed and then aspects of chestnut cultivation and the effects of pests and diseases. One of the main points picked up by group members was just how fortunate we are in Australia to be free of chestnut weevils, chestnut blight and gall wasps. Papers on the economics and marketing of chestnuts as well as harvest, post-harvest quality and processing were also presented. There was even a session of speakers on the use of chestnut wood as a fuel and timber which is something not considered in Australia. With the current debate on climate change there was also a session on biomass and the potential of carbon sequestration of chestnut systems (of the Iberian Peninsula).

With over eighty presentations over the two days of the congress it was very intense and to accommodate the numbers sessions were run concurrently. The group members attended all sessions and each evening the day's proceedings were discussed so that everyone had an overview of the sessions missed. The Australian delegation was the largest from outside Europe and the organisers acknowledged our group and paid a special tribute to us for travelling so far to be there.



¹⁰ See Appendix (vi) for full details of the Congress Program

39

Opening session of the congress. Congress convenor Prof Giancarlo Bounous centre. The key note speaker was J.R. Pitte and it was a particularly interesting presentation. He spoke of the origin of the chestnuts as being around the Coccus Mountains near South Armenia and South Georgia. From here they spread to Turkey and Greece then on to Italy, France, Spain and England. It is thought that chestnuts replaced rye and wheat because the chestnut provides three times the energy source of wheat and can feed 100 persons per hectare of production. His research has revealed that cereals were planted first, then chestnut trees. When the trees were young and small, cereals were grown around the chestnut trees. As the trees grew and created shade then cereals stopped being planted. With the introduction of corn, the superiority of chestnuts was reduced but the main issue affecting production levels was the replacement of chestnuts with wine grapes. The economics were more favourable as people preferred to drink wine rather than eat chestnuts.

Other presentations that members of the group thought valuable was one by Alfonso Martins on Chestnut Orchard Management in Northern Portugal for multiple use: effects on productivity and sustainability. It was very similar in theme to the current Landcare Sustainability Program research currently underway in the chestnut industry in Australia. "This research looked at the fungi indicator of soil quality and its relation to water and nutrients. The presentation reinforced our reading (Anderson, Jones & Hill), thinking and experience with regards to complex rhizosphere diversity in promoting soil health & nutrient levels; as well as the role that fungi species and number play in the soil matrix toward its improvement; and function as a visual indicator." ¹¹

One tour participant was very interested to learn about a breeding programme that was breeding for chestnut cultivars that are resistant to *Phytophthora Cinnamoni* which was a particular problem personally in their orchard.¹²

The presentation that was voted by the group as one of the best presented was from our very own Australian researcher Lucas Shuttleworth who travelled with us on our tour. He did us very proud and gave a comprehensive presentation on the Australian Chestnut Industry and his research. It was valuable for us to hear about his work and for him to meet researchers from Italy who are doing similar work investigating internal nut rot and getting similar results.

Lucas Shuttleworth during his presentation.



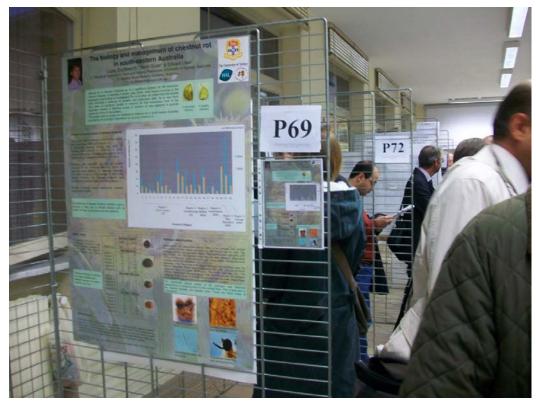
40

¹¹ David McIntrye

¹² Sally Robbins

As part of the Congress there was a poster display and also a display of huge variety of value-added chestnut products from around the world. Here is a snapshot of some of the products.





The poster display.

The third day of the congress was a field day where groups were taken on bus trips outside of Cuneo. There were two tours, one which focused on trees and aspects of growing chestnuts and the other tour focused on post harvest and value-added products.

Both tours visited commercial orchards and saw first hand the effects of the Gall Wasp which is fortunately not present in Australia.



The effects of gall wasp

"The gall wasp is believed to have come to Europe from China in 2002 as a stowaway aboard imported tree saplings. The insect emerges between the end of May and July to deposit its eggs in the trees' shoots and buds, transforming the world-be chestnuts into larva-filled lumps called "galls". Production in the hardest hit orchards in Piedmont have fallen by as much as 80%. Italian chestnut growers considered it to be the chestnuts worst enemy." ¹³

The insect is travelling south moving through the natural forests which are around 20% chestnut at the rate of around 20 km per year and there is little to stop its spread. Researchers presenting at the Congress felt the solution would be a biological one but in the short-term growers are using severe pruning techniques to remove all buds so there is no where for the wasps to lay eggs. Some cultivars have been found that are not compatible with the gall wasps and although they still lay eggs in the bud the biochemicals in the cultivar kill the larvae. As one of our group commented – this is a lesson that we must be ever vigilant in our biosecurity measures. ¹⁴

42

Smith. J: Chinese Gall Wasp Threatens Italian Chestnuts
 (www.ansa.it/notiziari/engmediaservice/2009-06-17_117375038.html)
 Bill & Jan Connoley

The Fiera Nazionale del Marrone, Cuneo (Chestnut Festival)¹⁵

This is one of the largest chestnut festivals held in Italy. It runs for four days in October and features wonderful open air chestnut roasters who shake large pans of chestnuts over wood fires sending burning sparks into the air.



The roasters during the day (above) and at night (right).



¹⁵ See Appendix (vii) for more the brochure on the Fiera Nazionale del Marrone

The whole township of Cuneo becomes "Chestnut Mania". The shops regardless of what they sell have chestnut displays. There are cakes and confectionary featuring chestnuts as well as chestnut gelato and magnificent tortes.





The main street of Cuneo the Via Roma during the festival.



A delicious assortment of chestnut cakes on offer at the wonderful Café Arione which was frequently visited by all during the stay in Cuneo.



Chestnut Kebabs – hot roasted nuts, grapes, cheese.



Fresh nuts for sale.



More cakes and the Torta "Cuneo" al Marrone



Chestnut "Food Art" from the competition held during the festival.



Chestnut shaped and flavoured ice creams



Chestnut Ice cream cakes.

Visit to the Original Chiusa Pesio Tree

On the last day of our tour we travelled from Cuneo to Milan. Near Cuneo in the small village of Chiusa Pesio is a stand of trees which like the Marone di Marradi are considered to be a superior variety. The Chiusa Pesio chestnut is well known in Italy and in fact we also grow this variety in Australia. Joe Rinaudo a chestnut grower from Stanley in North East Victoria visited the area in the early 1990's and arranged for the wood to be imported through the Australian Quarantine and Inspection Service (AQIS). As many of our group grow this variety we thought a visit to the 'mother' trees was appropriate. Guido Bassi a local nurseryman and chestnut grower who Brian and Jane Casey had met in 2002 accompanied the group and discussed practical aspects of growing chestnuts in Italy. It was his father who supplied the wood to Joe Rinaudo almost twenty years ago.

Guido also invited the group to visit his nursery where he grows grafted trees for industry. His nursery range includes stone fruit, apples, pears and some ornamentals as well as chestnuts, hazelnuts and walnuts.



Guido Bassi (centre) talks about the Chiusa Pesio trees with the group.



Graham Ahrens picking chestnuts.

Conclusion

Experiencing another culture is best achieved by physically being enveloped in the culture. Study tours such as this enable the participants to learn in a very interactive way. Most of the group had not travelled to Italy before but were aware that chestnuts were popular there.

To give an illustration of the difference between what was known through reading and research before travelling and what was learned during the tour the group members were asked "What surprised you about the chestnut culture in Italy?" The response was greatly varied which demonstrates the value of having a group visit rather than one or two individuals. Each person picked up something unique which was different to their preconceived ideas. This is the kind of knowledge demonstrates the merit of undertaking study tours. The full questionnaire responses are in Appendix (vii) but here are some of the comments:

"The fact that the traditional culture is considered to be in need of affirmative action to ensure its preservation - a conscious effort to revive the place of the chestnut in the Italian psyche appears to be on the agenda of many in the chestnut industry. I assumed that it was so embedded in Italian culture that it naturally promulgated itself across the generations. The establishment of chestnut museums, the revival of traditional flour production methods, programs to preserve natural forests and old plantations are examples of strategies to ensure the chestnut retains a place in Italian culture. The concern of the Australian chestnut industry that the main consumers of chestnuts are the older generation of Mediterranean descent and that the demand for chestnuts will decline unless the younger generations embrace the traditions and food culture of their parents seems to be a concern that is not confined to Australia." ¹⁶

"The regional rivalry- Italy is a relatively small country, yet I detected a sense of parochialism when it came to chestnuts with each region apparently convinced that their local variety was superior. This is something we don't really experience in Australia, probably because our industry is young and based on selected cultivars which are grown Australia wide, or perhaps it is because our industry is so small we need to work together." ¹⁷

"The very steep terrain, the age of the orchards, the labour intensiveness of the orchard management and harvest process." 18

"The sheer amount of value added products available and how entrenched the chestnut is as an everyday foodstuff, not only that it's part of their cultural heritage dating back 1,000 years! (Probably more!) This awareness of the product and traditions that have been handed down certainly changes the dynamics and marketing focus between their industry and ours. We still are in the process of raising awareness!" 19

¹⁷ Sally Robbins

¹⁶ Sally Robbins

¹⁸ David McIntyre

¹⁹ Tanya Edwards

The decision to visit Italy for the Study Tour was taken due to the location of the First European Chestnut Congress in Cuneo. Future tours taking in France, Turkey and Spain in Europe or Japan and South Korea in Asia could be considered. These are all major chestnut producing countries. Even a visit to the south of Italy, which is now the largest region in terms of chestnut production (in Italy), would be worthwhile as in this region there are newly established orchards which are more comparable to the Australian industry rather than in the north of Italy where the chestnut trees are older and more historical.

Recommendations for the Australian Chestnut Industry

Biosecurity

Much of the Congress was devoted to the research into the many varied pests and diseases of chestnuts in the Northern Hemisphere. In Australia we are very fortunate not to have chestnut weevils, gall wasps or chestnut blight. The importance of maintaining our strict quarantine policies that currently prohibit the importation of fresh chestnuts (except from New Zealand) cannot be stressed enough. Chestnut blight and chestnut weevils have been a serious problem for the European chestnut industry for many years however to see first hand the devastating impact of the recent outbreak of the Oriental Gall Wasp in the Piedmonte region of Italy should be of serious concern to all Australian producers. Even though rigid quarantine controls are in place it is still possible for gall wasps, weevils or even blight to enter Australia on illegally imported plant material. It is therefore critical that the industry conduct an awareness campaign to educate producers on the serious damage to our industry should and incursion ever occur.

• Potential for Value-Added Products within the Australian Chestnut Industry.

The huge variety of chestnut products that was seen during the tour indicates that there is great potential for the development of new products for consumers in Australia. Chestnuts in Italy are seen as a traditional and healthy whole food and are gaining in popularity with the younger generation as a wider range of chestnut products are becoming available. In recent years there has been some development of peeled chestnut products in Australia as well as chestnut flour and chestnut cake mixes. There are many opportunities in this area and success will involve the coordinated efforts of processors and Chestnuts Australia Inc to promote the availability of these products to increase consumer awareness and demand for a wider range of chestnut products.

• Development and Promotion of Chestnuts through Agri-Tourism and Festivals

Italy has over 100 chestnut related festivals each year. These are not simply celebrations of the harvest but also help to financially sustain small mountain communities. The Strada Del Marrone of the Marradi region has integrated the chestnut into walks and tours. They are benefiting from the historical chestnut culture of the region to provide a vehicle to attract tourists which in turn provides employment and opportunities for their local young people. With the North East of Victoria producing some 70% of the total Australian chestnut crop it would be a perfect region to undertake a similar project to the Strada Del Marrone with a mapped "Chestnut Trail" and open farms during the season. There is a strong association in Italy between the land, the produce grown there and regional cuisine produced in the local restaurants and cafes. This theme should also be endorsed in the main chestnut producing regions of Australia with local restaurateurs encouraged to include chestnut dishes during the Autumn and Winter months.

Information dissemination

A presentation has been made at the Chestnuts Australia Inc Annual General Meeting held in November by Brian and Jane regarding the recommendations from the outcomes of the study tour. Tanya Edwards in her role as Administration Officer of Chestnuts Australia also made a presentation on the value of the tour to her role within the industry. An article has been published in the summer edition of the Australian Nutgrower magazine as well as the "Nuts and Burrs" Newsletter.

Appendix (i) Tour Participants

NAME	ADDRESS			PHONE NO	
GRAHAM AHRENS	5 ZIG ZAG ROAD	BEECHWORTH	VIC	3747	03 5728 1240
FRANK BALDASSO	28 KINTYRE RD	WOODFORDE	SA	5072	0412 677 722
RAY BORSCHMANN	13 ASHWOOD AVE	BRIGHT	VIC	3741	03 5755 2035
BRIAN CASEY	233 HUGHES LANE	EUROBIN	VIC	3739	03 5756 2788
JANE CASEY	233 HUGHES LANE	EUROBIN	VIC	3739	03 5756 2788
BILL CONNOLEY	3230 TUMBARUMBA RD	BATLOW	NSW	2730	02 6949 1364
JAN CONNOLEY	3231 TUMBARUMBA RD	BATLOW	NSW	2730	02 6949 1365
TANYA EDWARDS	41 O'DONNELL AVE	MYRTLEFORD	VIC	3737	03 5751 1385
DAVID MCINTYRE	P.O. BOX 129	BEECHWORTH	VIC	3747	03 5728 6591
HELEN MCINTYRE	P.O. BOX 130	BEECHWORTH	VIC	3747	03 5728 6592
SAM PERNA	P.O. BOX 22	FOREST RANGE	SA	5139	08 8389 8000
SALLY ROBBINS	P.O. BOX 23	FOREST RANGE	SA	5139	08 8389 8001
LUCAS SHUTTLEWORTH	7 / 197 WILSON ST	NEWTOWN	NSW	2042	0407 297 191

Appendix (ii) Detailed Itinerary

Program for Tour to Italy to Attend First European Chestnut Congress – Cuneo October 2009

Thur 8 October	Depart Australia (main group)	
Fri 9 October		
6:30 am	Arrive Milan	
	Shuttle Bus from Airport to Milan Train Station	
10:30 am	Train Milan to Florence	
12.40 pm	Arrive Florence	
	Walk to Hotel – Hotel Atlantic Palace	Hotel Atlantic Palace Via Nazionale 12 Nero / 72 Rosso 50123 Firenze – Italy info@atlanticpalace.it www.atlanticpalace.it Tel +39 055 213031 Fax +39 055 268353
Afternoon	Rest / Free Time	
Dinner	No planned activity. Tim to allow tour members to adjust to time zone.	
Sat 10 October	Free day in Florence	
6.00 pm	Welcome Dinner	CAF Tour & Travel Via Sant' Antonino 6r 50123 Florence +39 055 2302283 email: incoming@caftours.com
Sun 11 October		
8.30 am	Depart Hotel	FLORENTIA BUS Via dei Larici, 49 (Loc. Neri) 52022 Cavriglia (Ar) Tel. +39 055 967024 Fax +39 055 967451 riccardo@florentiabus.it

10:30 am	Arrive Piano Rosso	www.pianorosso.com
11:00 am	Arrive Marradi Meet Prof Bellini, attend festival	Loredana Ungaro Marradi Tourist Information Office +39 055 8045170
1:00 pm	Lunch La Colombaia – Marradi	www.lacolombaia.info
Afternoon	Free time to visit the festival Afternoon visit to chestnut farm	
Dinner and accommodation	Piano Rosso	
Mon 12 October		
9:30 am	Visit to Ortofrutticola del Mugello	Ortofrutticola del Mugello, Zona Industriale S. Adriano Marradi (FI).
11:00 am	Depart Ortofrutticola on bus	
2:00 pm	Arrive Castelnuovo di Garfagnana	
	Meet with Giovani-battista Terni Visit chestnuts wood, the old drier and the mill.	Giovanni-battista Terni is the Italy Trade Manager of "Associazione castanicoltori della Garfagna". Tel: 0583641498 Mobile: 3293075752
5:00 pm	Hotel La Lanterna	La Lanterna Loc. Le Monache Piano Pieve Castelnuovo di Garfagnana +39 0583 639364 informazioni@lalanterna.eu www.lalanterna.eu
8.00 pm	Dinner at Agriturismo - Podere san Biagio Featuring traditional chestnut dishes of northern Tuscany	
10:00 pm	Return to hotel for evening	
Tues 13 October		
9:00 am	Depart Garfagnana	
10:00 am	Arrive Museo del Castagno Colognora di Pescaglia	Tour by the curator Angelo Frati

11:30 am	Depart for Cuneo	
4:30 pm	Arrive Cuneo	
	Check into hotel	Hotel Ligure Cuneo Via Savigliano, 11 12100 Cuneo Tel & Fax +390171634545
7:00 pm	Pizza / Pasta Dinner at a restaurant close to hotel	Bella Napoli
Wed 14 October		
8.00 am	Congress Registration	
9.00 am	Congress	
8.00 pm	Board bus for Congress Dinner	
Thurs 15 October		
9.00 am	Congress	
7.00 pm	Banquet followed with concert by the Cuneo "B. Bruni" orchestra.	
Fri 16 October		
8.00 am	Congress – Day tour	
Dinner	Dinner	
Sat 17 October		
Morning	Free time to visit festival	
Lunch	Lunch	
Afternoon	Free to visit festival	
5.00 pm	Walking tour of Cuneo with a guide	
Dinner	Dinner	We are guests of the Organizing Committee
Sun 18 October		
9:00 am	Depart Cuneo (on bus)	CAVOURESE <i>S.p.A.</i> Via Pinerolo, 73 10061 CAVOUR (TO) Tel +39 0121 69031 Fax +39 0121 69155 Mob +39 335 1939870 www.cavourese.it

9.30 am	Visit to the original Chiusa Pesio tree near Cuneo	
10.30 am	Tour of Barolo Wine district with winery tour and tastings.	Marchesi di Barolo http://www.marchesibarol o.com
1.30 pm	Lunch at Ca del Lupo Restaurant	Ristorante Ca del Lupo Restaurant Via Ballerina n. 15 - 12050, Montelupo Albese (CN) Ph: 0173/617249
4.15 pm	Departure for Milan	
6.30 pm	Check into hotel (near airport) Hotel Cardano	Hotel Cardano Via al Campo, 10 21010 - Cardano al Campo - (VA) tel: +39 0331 261011 fax: +39 0331 1986895 info@cardanohotel.com www.cardanohotel.com
7.30 pm	Farewell Dinner La Cueva Restaurant (pizza / pasta)	
Mon 19 October	Various shuttle-bus departures for Malpensa airport – please arrange time at check-in.	





Soleggiati crinali, boscose vallate, fiumi e ruscelli che si alternano a secolari castagneti, è questo il territorio dove si trova Marradi. Ricco di cultura e antiche tradizioni, il paese si offre al turista con il calore di un'ospitalità genuina che fa da cornice ai colori del suo paesaggio. Accanto ad un ambiente naturale incontaminato, la forte spiritualità dei secoli X-XII, ha lasciato in eredità significativi luoghi di fede: dall'Abbazia di Santa Reparata, che conserva opere della scuola del Ghirlandaio, all'Abbazia di Crespino, dove si trovano pregevoli affreschi del XII sec., dalla Badia di San Giovanni in Acerreta, fondata da San Pier Damiano, al suggestivo Eremo di Gamogna. Altrettanto interessante la Rocca di Castiglionchio che per la sua posizione strategica è il punto panoramico migliore per ammirare la Valle del fiume Lamone. Marradi, con le abitazioni e i suoi palazzi signorili come il Palazzo Cannone, Palazzo Torriani, Palazzo Fabroni e il delizioso Teatro degli Animosi, si caratterizza per una struttura urbanistica difficilmente riscontrabile in un paese montano ma che ricorda più le vie del centro storico di una città d'arte come Firenze. Il piccolo centro del Paese offre ancora caratteristici scorci come Via Fabbrini e Vicolo della Torre dove si può osservare un'antica meridiana recentemente restaurata. Infine, a Dino Campana, il Comune di Marradi ha dedicato il nuovo Centro Studi Campaniani, fonte bibliografica e punto di riferimento a livello mondiale per studiosi e amanti della vita e della poesia di questo grande poeta del Novecento. Per gli amanti dello sport e dell'aria aperta sono disponibili campi da tennis, da calcio, da calcetto, pista d'atletica, palazzetto dello sport, campo da motocross, maneggi, piscina con ampio parco e aree sosta camper immerse nel verde a pochi passi dal centro.

Sunny hill-slopes, forest-filled valleys, rivers and streams that wind their way through century-old chestnut groves, this is where the Tuscan town of Marradi is situated. Rich in culture and ancient traditions, the town offers the tourist a truly warm hospitality that is a perfect backdrop for the colours of its countryside. In addition to a natural, uncontaminated location, the strong spirituality of the X-XII centuries, has, through time. passed down important sacred sites: the Abbey of Santa Reparata, where works of the Ghirlandaio school are conserved: the Abbey of Crespino, where it is possible to admire frescoes of the XII century; the Badia church of San Giovanni in Acerreta, founded by San Pier Damiano and the suggestive Eremo hermitage - of Gamogna.

The Rocca castle of Castiglionichio is just as interesting, and thanks to its strategic location is the best point for admiring the underlying Lamone river valley. Marradi, and its lordly-like homes and buildings, like the Palazzo Cannone, Palazzo Torriani, Palazzo Fabroni and the delightful Teatro degli Animosi Theatre, can boast of an urban layout that is unusual for a mountain town, but that rather recalls the streets of historic centres of a city of art, like for example

> Fabbrini and Vicolo della Torre, where it is possible to see an antique, recently restored sundial. Finally, the Municipal of Marradi has dedicated the new "Centro Studi Campaniani" Study Centre to the famous poet Dino Campana.

Florence. The town's small centre

still has typical niches like Via

This centre is a perfect international reference point and bibliographic source for those authorities and buffs of the life and poetry of this great eighteenth century poet. For the sports fans and lovers of the open air, there are tennis courts, football and mini-football fields, an athletics track, a sports stadium, a motor cross track, horse

riding, a swimming pool with surrounding park and parking areas for motor homes that are immersed in green surroundings and just a short walk from the centre.

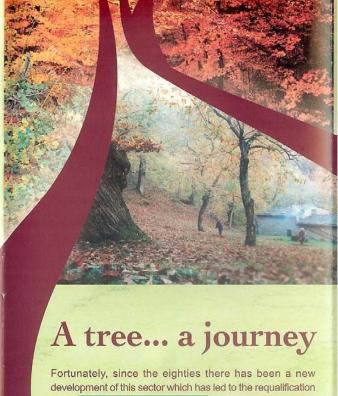


Qui, dove i castagneti dominano il paesaggio e dove i marroni sono l'emblema della nostra tradizione culturale e gastronomica, è nata la

Strada del Marrone del Mugello di Marradi.

Il castagno, con i suoi frutti, ha sfamato per secoli le genti della nostra montagna che, in segno di riconoscenza, lo hanno soprannominato l'"Albero del pane". Infatti, fino a non molti decenni fa, la base dell'alimentazione della popolazione locale era costituita dalla polenta di farina di castagne, dalle ballotte, dalle bruciate e dalle frittelle. Questo spiega l'attenzione con cui ogni famiglia preparava il proprio castagneto in occasione della raccolta durante il mese di ottobre.

Della coltivazione del castagno si hanno notizie certe fin dall'alto medioevo, ma il suo massimo sviluppo si ebbe con la contessa Matilde di Canossa (1046-1115), che stabilì la distanza corretta di impianto fra un albero e l'altro: il cosiddetto "Sesto Matildico". Fino agli anni '50 il castagno rappresentò la fonte primaria di sostentamento, ma con l'abbandono della montagna da parte della popolazione, perse la sua importanza e gran parte degli impianti furono inglobati dal bosco. A questo si aggiunse la diffusione di specifiche malattie che ne ridussero notevolmente il numero.



Fortunately, since the eighties there has been a new development of this sector which has led to the requalification of the *century old chestnut groves* and to the appreciation of the quality of the chestnut. The love for this tree and the desire to create a biological project that represents it in all its aspects, have brought about the creation of the "strada del Marrone del Mugello di Marradi" - the Chestnut Road of the Mugello di Marradi. This initiative involves the entire territory of the municipal and offers the tourist a real chestnut based "journey".

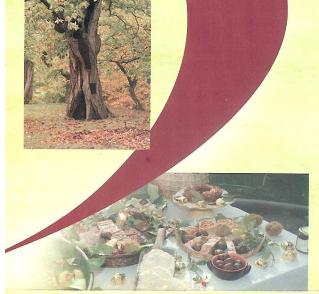


Conflice a stamper Lingworth Pabris - Modigilana (PC) - Potes Laca Sarroni, Pongramma - Marradi (PC)

Un Albero per viaggiare

sviluppo di questo settore che ha portato al recupero di castagneti secolari e alla valorizzazione della qualità del marrone. L'amore per questa pianta e la volontà di creare un progetto organico che la rappresentasse in tutti i suoi aspetti, hanno fatto nascere la strada del Marrone del Mugello di Marradi. Questa iniziativa coinvolge tutto il territorio del Comune e propone al turista un vero e proprio "viaggio" attorno al castagno.

Fortunatamente dagli anni '80 si sta verificando un nuovo



The land of the "Marron Buono" of the good chestnut-history and traditions

Here, where chestnut groves dominate the countryside and where chestnuts are an emblem of our cultural and culinary tradition, the Strada del Marrone del Mugello di Marradi has been created. The chestnut, and its fruit, were a source of nutrition for the people of our surrounding mountains and, as a sign of recognition, called it the "Bread tree". In fact, up to no more than a few decades ago, the staple diet of the local population included polenta made from chestnut flour, "ballotte" boiled chestnuts, "bruciati" chestnuts roasted over an open fire and pancakes. This is the reason why every family prepared its chestnut groves with great care when it is time for chestnut gathering during the month of October.

Records concerning the cultivation of the chestnut tree date back to the late middle ages, but the real "boom" took place with the Countess Matilde di Canossa (1046-1115), who established the right distance to set between one tree and another: the so-called "Sesto Matildico" measurement. Right up until the fifties the chestnut was a primary source of income for the mountain communities, but with the migration from the mountains, the groves lost their importance and a great many woods were overgrown by forests. In addition, there was the spread of specific illnesses that cut the population considerably.







Appendix (iv) – Associazione Castanicoltori della Garfagnana - Brochure



L'Associazione Castanicoltori della Garfagnana nasce nel marzo 1998 per volontà di un grúppo di appassionati cultori del castagno il cui intento è la valorizzazione di questa pianta che è stata una delle risorse agricolo-forestali più importanti del territorio.

Legate alla sua coltivazione si sono sviluppate nel tempo molte tradizioni locali che oggi vanno scomparendo e che l'Associazione si prefigge di mantenere in vita, valorizzando il castano nonsolo nei suoi aspetti produttivi ma anche culturali. Le azioni che l'Associazione intende intraprendere, in linea con gli obietivi generali sovva esposti, si posso no ricondurre a tre fond a me nta li ca mpi di azione:

1) Azioni di promozione del prodotto castagna e de is su oi deriva ti (farina)

2) Azione di informazione e di innovazione tecnica

3) Azioni svolte a riconoscimento di qualità del prodotto castagna e

www.associazionecastanicoltori.it

E-mail: castanicoltori@virgilio.it info@associazionecastanicoltori.it



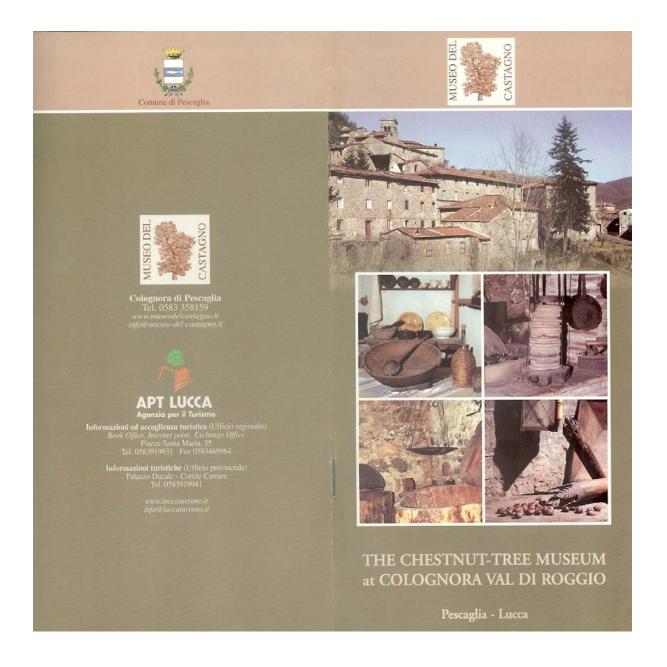


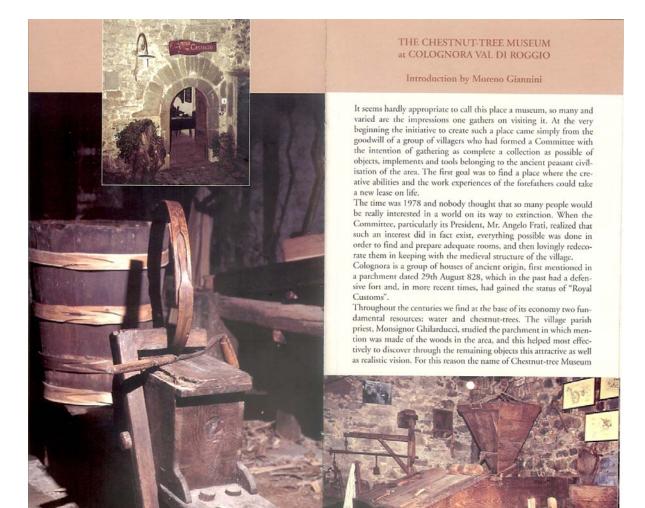
La tradizione della favina di castagne o comunemente detta farina di neccio, ha radici antiche in Garfagnana e il suo utilizzo, per la popolazione, è paragonabile a quello della farina di grano nelle zone di pianura. Il castagno quindi "albero del pane" e i suoi frutti, le castagne, "pane d'albero"

Garfagnana



Appendix (v) - Museo del Castagno





GUIDE TO THE CHESTNUT-TREE MUSEUM

by Angelo Frati

was officially given to the collection in 1985 and as such it is known by ever more numerous visitors, by newspapers, magazines and TV stations, including some foreign ones.

The Museum is mentioned in some specific publications (see "The Chestnut-tree in the Province of Lucca" by M. Buccianti).

Furthermore some departments of several Universities, having discovered the value of such an Institution, have not missed the opportunity of making of this museum an object of study and thorough investigation. The cultural impact of the Museum is also confirmed by the interest shown in it by some Associations, such as "Lucca in Villa", as well as by the active participation in it of such organizations as the "Centre for the Collection, Study and Enhancement of the Popular Tradition of the Province of Lucca", whose interest has contributed to the growing popularity of the Museum.

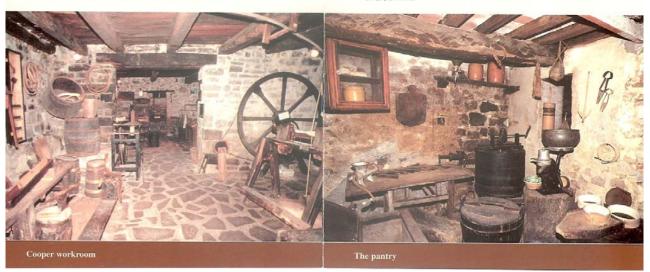
In other words, this is not a traditional museum, but a collection of places, rooms, ancient objects which, appropriately exhibited, leave the visitor with a definite sense of inspiring beauty coupled with organizational skill. The merit of having understood all this with remarkable foresight and of looking with love and devotion after the growth of the Museum is unanimously attributed to our friend Angelo Frati, who spurred the initiative, to Roberto Frati, invaluable collaborator in the day-to-day running of the Museum, to Lino Biondi who enthusiastically lends his support to all those, who within their ability offer their cooperation, always coupled with great enthusiasm, firmly believing in the goodness of this initiative.

The Chestnut-Tree Museum was created in 1985 with the aim of collecting, studying and spreading the knowledge of the many life experiences which have revolved around this plant. It is an unusual type of "museum" as it consists not only of seven rooms inside an ancient building in the village, but also of a "metato" (a special place for the drying of the chestnuts) and of a wood equipped with a "carbonaia", used for making charcoal (consisting of a rounded heap of cut-up wood covered with layers of wet leaves, earth and turf, appropriately arranged so as to leave inside of it a small opening for the passage of smoke) and a thatched hut, made of straw supported by a wooden structure.

The Museum itself comprises twenty sections including the showing of two cycles in the processing of the chestnut-tree, one to do with the use of the wood proper and the other with the food aspect. Each object is exhibited in the appropriated section of the relative productive process.

The Museum is open on Sundays and public holidays. Timetable: Summer – 3.30 to 6.30 p.m. Winter – 3 to 6 p.m. By appointment, with sufficient advance notice, tourist groups and schools may visit the Museum on any day of the year.

For information and booking call either the Museum: 0583/358159; or Mr. Angelo Frati: 0583/954465; or Mr. Roberto Frati: 0583/358004.



Room 1

- Tools for felling and cutting up the trees.
- Equipment to cut firewood.
- Cutting the timber into boards through the ancient system of the "segantini" (a type of saw, strung in a rectangular wooden frame, already in use in Roman times).
- Extraction of tannin. This product of the chestnut tree has required uses. but in particular it is indispensable in the tanning industrians uses. but in particular it is indispensable in the tanning indus-

various uses, but in particular it is indispensable in the tanning industry to turn animal skin into leather.

- Various types of baskets made with chestnut-tree bark and small branches.

Room 2

- Collection of tools for making charcoal. During the tour of the woods, visitors will see a "carbonaia" (see description above) near the straw hut.

- Equipment for transporting wood.

- Blacksmith shop with display of latches, pivots, locks, nails, hinges and whatever else might be used by the carpenter or the cooper, besides cutring tools (such as hatchets, pruning knives, sickles, etc.) used by farmers and woodcutters.

Room 3

Room 3

- Carpenter shop with full equipment. It contains a rare specimen of a "whip" lathe or "pole".

(Under the ceiling a long and pliable stick is suspensed horizontally, with a rope bound at its end which is made to go two or three times round the board to be turned. Below the working bench the rope is attacched to a pedal which, on being pressed by the foot, turns the board around).

- Room of tub and barrel makers. It contains a collection of the traditional equipment of these master artisans, no longer existing, who used to live in great number expecially in the area of the Pescaglia township. Among the tools a currosity: the planes in the shape of a toad ("bodda" in the local dialect).

Room 4 • The display begins with the tools used for pruning the chest-nut-trees and for deaning up the lorest in preparation for the harvesting. Once gathered the chestnuts were dried in the "metato" by heat from the fire kept down under the previous years chaff. The fire was kept going with-out interruption for 20/30 days. This would be followed by the trashing and the verhitating in order to separate the chestnuts from the chaff, and finally by the grinding into flour, well illustrated by an original mill (see note below).

On the outside of the museum, please notice the presence of the equip-ment which transforms water in driving force in order to operate the mill.

Room 5 * The exhibit continues with the display of the various containers used for the storing of chestnut flour (hollowed chestnut-tree trunks, hand-made chests, medieval containers carved in stones). Also various systems of weighing and measuring are shown here.

Room 6 • In this small room used as storage, there are spaces for showing the processing of animal products obtained from sheeps and pigs, from sausage making to other methods of storing (chestnut-tree tubs, stone containers). In the local economy sheeps and pigs constituted two complementary resources to the basic wealth coming from the chestnut-tree.

Room 7 • The food cycle ends in the old kitchen with the ritual use of the "sweet flour". Of particular interest are the ancient "irons" made of stone for the preparation of "necci" ("sweet flour" pancakes).

Room 8 * Meeting hall.

Note: The mill with horizontal wheel ("ritrecina") is activated by the water conveyed from the "gora" (stream) into a small wood gutter onto the paddles of the "ritrecina"; under the push of the hydraulic force, it starts moving and causes the rotation, by means of the vertical connecting pole, of the upper millstone on top of the lower millstone which is fixed. In this way the chestnust are crushed, having fallen into the hole in the middle of the millstone through the "tramoggia" (hopper) hanging above it. The flour falls into a container below, having wooden doors, and is thereafter collected with a small shovel and placed in bags.





Appendix (vi) – First European Chestnut Congress Program



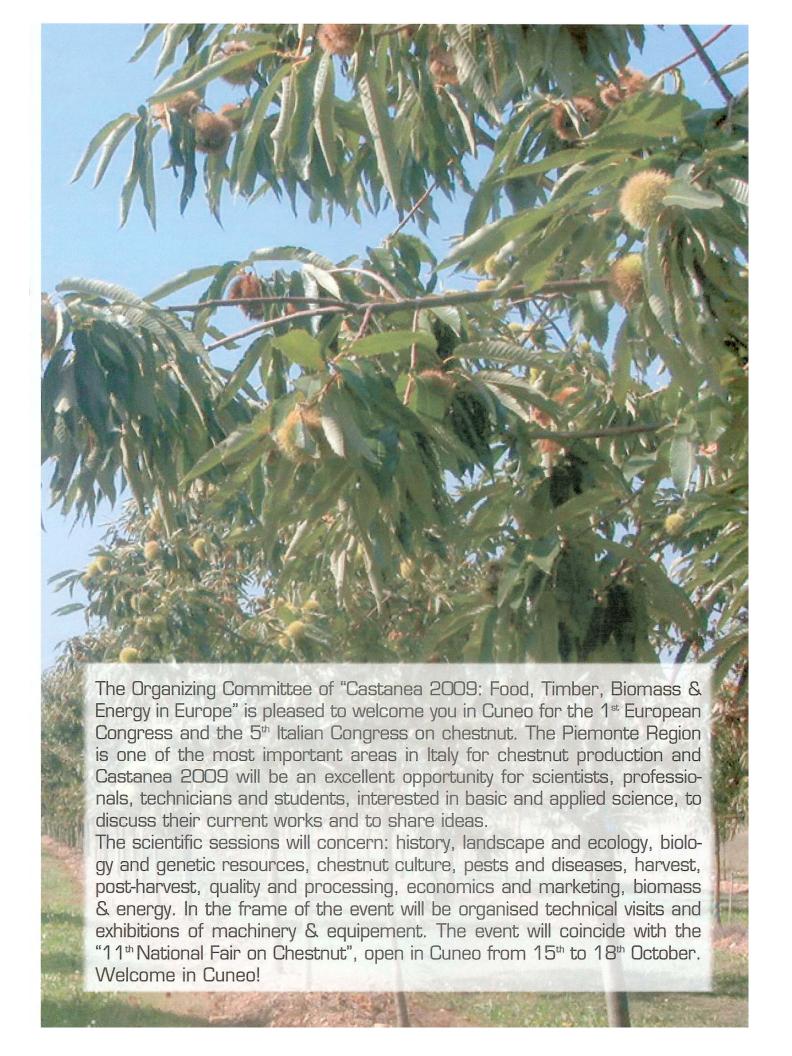


Castanea 2009

1st European Congress on Chestnut 5° Convegno Nazionale Castagno

www.arboree.unito.it/castanea2009





COMITATO SCIENTIFICO / SCIENTIFIC COMMITTEE

Giancarlo Bounous

Presidente / Convener Università di Torino

Alberto Alma Emilio Amorini Sanzio Baldini Roberto Botta

Tiziano Caruso
Orazio Ciancio
Alessandro Crosetti

Carlo Fideghelli Raffaello Giannini Giovanni Nicolotti Cristiana Peano Davide Pettenella

Pietro Piccarolo Mario Pividori Carlo Pirazzoli Giuseppe Scarascia

Mugnozza

Giacomo Tamietti Tullio Turchetti Andrea Vannini

Milan Bolvansky Mihai Botu Svetla

Bratanova-Doncheva
Marco Conedera
Stephanos Diamandis
Victor Galan Sauco
Juan F. Gallardo Lancho
Bernard Hennion
Afonso Martins
Ibrahim Mujic
Lorenzo Santiago Pereira

Mikhail Pridnya Laszlo Radocz Arif Soylu Anita Solar Università di Torino

CRA Istituto Sperimentale per la Selvicoltura, Arezzo

Università della Tuscia, Viterbo

Università di Torino Università di Palermo Università di Firenze Università di Torino

CRA Istituto Sperimentale per la Frutticoltura, Roma

Università di Firenze Università di Torino Università di Torino Università di Padova Università di Torino Università di Padova Università di Bologna

Università della Tuscia, Viterbo

Università di Torino

Consiglio Nazionale delle Ricerche, Firenze

Università della Tuscia, Viterbo

Slovak Republic Romania

Bulgaria

Switzerland
Greece
Spain
Spain
France
Portugal
Croatia
Spain
Russia
Hungary
Turkey
Slovenia

SEGRETERIA SCIENTIFICA / SCIENTIFIC SECRETARY

Gabriele Loris Beccaro Maria Gabriella Mellano Sara Canterino

Dipartimento di Colture Arboree Università di Torino

COMITATO D'ONORE / HONOR COMMITTEE

Alberto Valmaggia Sindaco - Città di Cuneo

Luca Zaia Ministro - Politiche Agricole Alimentari e Forestali

Mercedes Bresso Presidente - Regione Piemonte
Gianna Gancia Presidente - Provincia di Cuneo
Antonio Saitta Presidente - Provincia di Torino
Ferruccio Dardanello Presidente - CCIAA Cuneo

Ugo Boccacci Presidente - Comunità Montana Valli Gesso e Vermenagna

Stefano Dhò Presidente - Comunità Montana Bisalta

Mercé Rovira FAO-CIHEAM Nuts Network

Damiano Avanzato ISHS - International Society for Horticultural Science

Paolo Inglese Presidente Generale - SOI -

Società di Ortoflorofrutticoltura Italiana

Romano Veroli Presidente - Associazione Nazionale Città del Castagno

Enrico Borghi Presidente - UNCEM

Lido Riba Presidente - UNCEM Piemonte e IPLA

Marcello Gatto Presidente - Coldiretti Cuneo

COMITATO ORGANIZZATORE / ORGANIZING COMMITTEE

Giancarlo Bounous Presidente

Presidente / Convener Dipartimento di Colture Arboree Università di Torino

Gabriele Loris Beccaro Paolo Boccacci Sara Canterino Alessandro Cerutti Valentina Chiabrando Dario Donno

Maria Gabriella Mellano

Dipartimento di Colture Arboree Università di Torino

Domenico Giraudo Bruno Giraudo

Comune di Cuneo

Ugo Palara Francesco Baroncini Presidente Sez. Frutticoltura SOI

SOL

Dario Adamo

Comunità Montana Valli Gesso e Vermenagna

Comunità Montana Bisalta

Enrico Raina

Vivaio Regionale Gambarello

Regione Piemonte

Mariolina Pianezzola

GAL Valli Gesso, Vermenagna e Pesio

COMITATO MOSTRE / EXPO COMMITTEE

Gabriele Loris Beccaro Elvio Bellini Università di Torino

Centro di Studio e Documentazione del Castagno, Firenze

SEGRETERIA ORGANIZZATIVA / ORGANIZING SECRETARY

Gabriele Loris Beccaro Maria Gabriella Mellano Sara Canterino

Dipartimento di Colture Arboree Università di Torino

Martedì 13 Ottobre

Tuesday, 13th October

FACOLTÀ di AGRARIA

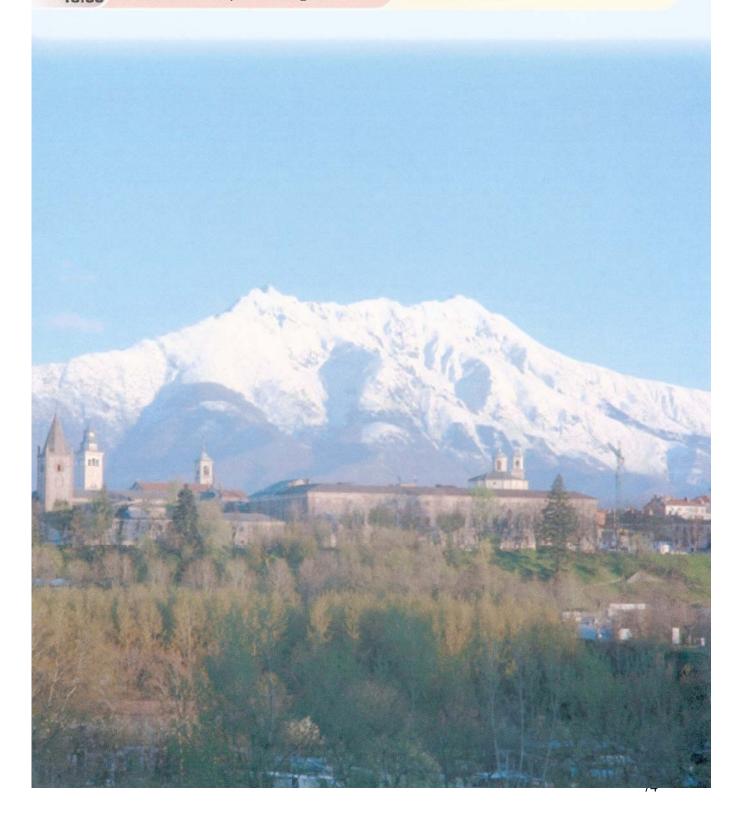
FACULTY of AGRICULTURE

(Piazza Torino)

(Torino Square)

15.00

Posizionamento Poster Punto internet per convegnisti Poster display Internet Point



Mercoledi 14 Ottobre

Wednesday, 14th October

Centro Incontri Provincia di Cuneo (Corso Dante 41 - Cuneo)

Congress Center of Cuneo Province (Dante Main street 41 - Cuneo)

8.00

Registrazione

9.00

Presentazione del Convegno e apertura dei lavori Registration

Welcome & Opening sessions

SALA B

ROOM B

I sessione:

Storia, paesaggio ed ecologia

I session: History, landscape & ecology

Chairman: Victor Galan Sauco

9.30

Keynote speaker: **Pitte J. R.**

La civilizzazione europea dei castagneti

The european civilization of the chestnut wood

10.00

Gullino P., Larcher F., Devecchi M. Il castagno nel paesaggio piemontese: storia e prospettive

History of chestnut in the landscape of Piedmont (North-West Italy)

10.10

Adua M.

Sintesi e prospettive delle storie, strutture ed economie legate al castagno fra secondo e terzo millennio

Review and perspectives of history, structures and economies of chestnut between second and third millennium

10.20

Crosetti A.

Il castagno e la politica legislativa forestale italiana tra otto e novecento

Chestnut policies and forestry laws between XIX and XX century

10.30

Krebs P., Koutsias N., Conedera M. Descrizione della distribuzione spaziale di castagni secolari nel Sud delle Alpi Svizzere

Modelling the spatial distribution of giant chestnuts in the Swiss southern Alps

10.40

Coffee Break

1

11.10	Cevasco R., Guido M.A., Menozzi B.I., Molinari C., Montanari C., Moreno D., Vaccarezza C.	Ecologia storica dei castagneti in Liguria: documentazione d'archivio e di terreno Historical ecology of chestnut groves in Liguria: archive documentation and field evidences
11.20	Agresti G., Castorina R., Genco G., Giagnacovo C., Lo Monaco A., Pelosi C.	Il legno di castagno nei beni culturali Chestnut wood in cultural heritage
11.30	Vettori C., Paganelli A., Giannini R., Paffetti D.	Identificazione di Castanea latifolia (Sord.) in un campione di 45.000 anni derivante dalla laguna di Venezia Identification of Castanea latifolia (Sord.) in 45,000- year-old sample from Venice lagoon
11.40	Matteucci E, Isocrono D., Piervittori R.	Biodiversità lichenica epifita in castagneto Epiphytic lichen diversity in Chestnut wood
11.50	Bolea V., Chira D., Vasile D.	Castanea sativa Mill. quale indicatore ambientale Castanea sativa Mill. as pollution indicating species
12.00	Discussione Discussion	
12.30	Presentazione libro "Following Chestnut Footprints"- Damiano Avanzato Presentation of the book "Following Chestnut Footprints"- Damiano Avanzato	
13.00	Lunch	





Mercoledì 14 Ottobre

Wednesday, 14th October

SALA FALCO

ROOM FALCO

Il sessione:

Biologia e risorse genetiche

Il session: Biology and genetic resources

Chairman: Lorenzo Santiago Pereira

14.30	Keynote speaker: Villani F.	Un approccio integrato per lo studio della variabilità genetica e adattativa di Castanea sativa Mill.
		An integrated approach to assess the genetic and adaptive variation of Castanea sativa Mill.
15.00	Mellano M. G., Canterino S.,	Caratterizzazione genetica di genotipi di Castanea sativ Mill. del Centro Reg. di Castanicoltura - Cuneo (Italy)
	Beccaro G.L., Boccacci P., Bounous G.	Genetic characterization of genotypes of Castanea sat Mill. of the Reg. Centre of Castaniculture - Cuneo (Italy
45.44	Pezzatti G.B., Krebs P.,	Impiego del rapporto superficie fogliare/area del tronco qua indicatore di stress idrici in castagno
15.10	Gehrig E., Conedera M., Mazzoleni S.	Using the leaf area/sapwood area (LA/SA) relationship to assess water stress sensivity among chestnut trees
15.20	Costa R., Batista D., Dinis L., Martins L., Paulo O., Araújo J., Laranjo J.G.	Un programma di breeding per la resistenza a malatti nel castagno europeo. Ibridazioni interspecifiche tra Castanea sativa Mill. e specie asiatiche
15.20		A breeding programme implemented for disease resistance in European chestnut. Inter-specific crosses between Castanea sativa Mill. and Asian species
4E 20	Glushkova M	Variabilità genetica del castagno (Castanea sativa Mill.) in progenie di campi sperimentali in Bulgaria: aspetti morfologic
15.30		Genetic variation of European chestnut (Castanea sativa Mill.) in progeny trial plantations in Bulgaria: growth traits and survival
15.40	Cuenca B., Ocaña L., Salinero C., Pintos C., Mansilla J.P., Rial C.	Selezioni di Castanea sativa Mill. per la resistenza a Phytophthora cinnamomi: micropropagazione e valutazione di cloni selezionati
		Selection of Castanea sativa Mill. for resistance to Phytophthora cinnamomi: micropropagation and testing of selected clones

15.50	Aravanopoulos F.A., Mitsakaki A., Katsidi E., Avramidou E., Sfakianaki E.	Variabilità genetica e struttura di impianti di castagno (Castanea sativa) intensivi ed estensivi in Grecia Genetic diversity and structure of intensively and extensively managed chestnut (Castanea sativa) orchards in Greece
16.00	Spanu I., Vettori C., Paffetti D.,	Caratterizzazione molecolare di cultivar di pregio di castagno
	Giannini R.	Molecular characterization of chestnut cultivars
16.10	Santamaría E., Hasbún R., Meijón M., Viejo M., Toorop P. E., Rodríguez R., Cañal M. J.	Ruolo di fattori epigenetici durante la dormienza gemmaria di Castanea sativa
10.10		The role of epi-genetics during Castanea sativa bud dormancy
16.20	Medina C.M., Fulbright D.W.	Valutazione di simple sequence repeats (SSR) per l'analisi genetica in castagneti del Michigan
		Evaluation of simple sequence repeats (SSR) for genetic analysis of chestnut trees in Michigan orchards
16.30	Serdar U, Beyhan N., Demirsoy H., Demirsoy L.	Osservazioni fenologiche su genotipi di castagno nella Regione del Mar Nero, Turchia
16.30		Some phenological properties of chestnut genotypes in the Black Sea Region, Turkey
16.40	Discussione	
10.40	Discussion	

	FACOLTÀ di AGRARIA	FACULTY of AGRICULTURE
	(Piazza Torino)	(Torino Square)
18.30	Visita Expo Mostra pomologica Sessione poster. Chairman: Roberto Botta e Juan F. Gallardo Lancho	Visit to the Expo Pomological exhibition Poster session. Chairman: Roberto Botta and Juan F. Gallardo Lancho
20.00	Partenza in autobus per la cena di benvenuto	Loading the bus for the welcome dinner

Mercoledi 14 Ottobre

Wednesday, 14th October

	SALA B	ROOM B
	III sessione: Tecniche colturali	III session: Chestnut culture
Chairn	nan: Tiziano Caruso	
44.00	Keynote speaker:	Gestione multifunzionale dei frutteti di castagno nel Nord del Portogallo: effetti su produttività e sostenibilità
14.30	Martins A.	Chestnut orchard management in Northern Portugal for multiple use: effects on productivity and sustainability
15.00	Tani A., Maltoni A.,	Riflessioni sull'effetto di pratiche colturali in castagneti con presenza di <i>Dryocosmus kuriphilus</i>
15.00	Mariotti B.	Considerations about the effects of cultural practices in chestnut stands affected by Dryocosmus kuriphilus
4E 40	Tani A.,	La definizione degli obiettivi: azione preliminare imprescindibile nel recupero delle selve da frutto
15.10	Maltoni A., Mariotti B.	The definition of the objectives: a necessary preliminary action to restore chestnut orchards
15.20	Lyubenova M., Bratanova-	Principali caratteristiche sulle dinamiche biologiche di casta- gneti sul Monte Belasitza, Bulgaria
15.20	Doncheva S., Dimitrova V., Grozeva M.	Main characteristics of biological turn-over in Castanea sativa Mill. communities from Belasitza Mountain, Bulgaria
15.30	Mattioli W.,	Rapporti tra gestione selvicolturale e diversità floristica: il caso dei cedui castanili dei Monti Sabatini (Lazio)
15.30	Portoghesi L., Corona P.	Floristic diversity and silviculture: the case of the chestnut coppice stands on the Mounts Sabatini (Latium, Italy)
15.40	Serdar U., Demirsoy H.,	Compatibilità d'innesto in genotipi turchi di castagno
	Macit I., Erturk U.	Grafting compatibility in some Turkish chestnut genotypes (Castanea sativa Mill.)
		Microinnesto in vivo seriale su Castanea sativa

in ciclo breve

in short cycles

16.00 Barthold F., Torriani D., Pezzatti G.B.

15.50

Fernandez L.,

Conedera M.,

Crecente-Campo S.

Suscettibilità alla siccità di Castanea sativa: il caso di studio dell'estate 2003 nel Sud delle Alpi

In vivo serial micrografting of Castanea sativa

Drought sensitivity of Castanea sativa: the study case of summer 2003 in the Southern Alps

	Serdar U., Macit I.	Innovazione nella coltura del castagno nella Regione del Mar Nero, Turchia
16.10		New advances in chestnut growing in the Black Sea Region, Turkey
	Ríos-Mesa D.,	
40.00	Pereira-Lorenzo S.,	Coltura ed utilizzazione del castagno nelle Isole Canarie
16.20	Gonzalez A.J., Gonzalez-Diaz E., Galan Sauco V.	Situation of chestnut cultivation and utilization in the Canary Islands
16.30	Solar A., Likozar A., Štampar F.	Innesto e performance del primo anno della cv Marsol innestata su differenti portinnesti
10.00		Grafting and performance in the first year of cv "Marsol" graf- ted onto different rootstocks
	Discussione	
16.40		
10.40	Discussion	

	-			
FACOL	TA	eli.	ACD	ADIA
	- II / A	will	MUDI	P-01 - 11-0

FACULTY of AGRICULTURE

(Piazza Torino)

(Torino Square)

Visita Expo Castanea
Mostra pomologica
Sessione poster. Chairman:
Roberto Botta
e Juan F. Gallardo Lancho

Visit to the Expo Castanea
Pomological exhibition
Poster session. Chairman:
Roberto Botta
and Juan F. Gallardo Lancho

20.00 Partenza in autobus per la cena di benvenuto

Loading the bus for the welcome dinner





Thursday, 15thOctober

Centro Incontri Provincia di Cuneo (Corso Dante 41 - Cuneo) Congress Center of Cuneo Province (Corso Dante 41 - Cuneo)

SALA B

ROOM B

IV sessione: Aspetti fitosanitari IV session: Pests and diseases

Chairman: Stephanos Diamandis

Chairn	nan: Stephanos Dian	nandis	
8.30	Keynote speaker: Alma A.	Esperienza italiana nella lotta biologica a <i>Dryocosmus</i> kuriphilus. Allevamento, rilascio e insediamento del parassitoide Torymus sinensis	
0.00	Aima A.	The Italian experience in fighting Dryocosmus kuriphilus. Reproducing, spreading and setting of Torymus sinensis	
9.00	Bosio G.,	Dryocosmus kuriphilus Yasumatsu: stato dell'arte a sette anni dalla prima segnalazione in Piemonte	
3.00	Gerbaudo C.	Dryocosmus kuriphilus Yasumatsu: an outline seven years after the first report in Piedmont	
9 10	9.10 Clausi M., Vinciguerra M.T., Trematerra P.	Una nuova specie di farfalla nociva su castagno in Sicilia	
3.10		A new species of moth as insect pest of chestnut in Sicily (Italy)	
9.20	Viggiani G.,	Dati preliminari sulla fenologia di <i>Dryocosmus kuriphilus</i> Yasumatsu e l'artropodofauna utile del castagno in Campania	
	Voto A.	Preliminary data on the phoenology of Dryocosmus kuri- philus Yasumatsu and the beneficial arthropofauna of the chestnut in Campania	
9.30	Curto G., Reggiani A.,	Contenimento dei lepidotteri carpofagi del castagno per mezzo di nematodi entomopatogeni	
	Dallavalle E., Bariselli M.	Control of carpophagous lepidoptera in chestnut by means of entomopathogenic nematodes	
	Sartor C., Marinoni D., Beccaro G.L., Mellano M.G., Quacchia A., Bounous G., Botta R., Alma A.	Valutazione della sensibilità varietale al cinipide galligeno in cultivar di castagno e meccanismi molecolari di rispo- sta all'insetto	
9.40		Evaluation of susceptibility to gall wasp in chestnut cultivars and molecular mechanisms of plant response to infestation	



Donis-Gonzalez I.R., Ryser E., Guyer D., Fulbright D.W.. Muffa dell'epicarpo e decadimento dell'episperma sulle castagne fresche in Michigan

Shell mold and kernel decay of fresh chestnuts in Michigan

10.00 Gentile S., Valentino D., Visentin I., Tamietti G. Epidemie di *Gnomonia pascoe* su castagne nell'area di Cuneo

Epidemics of Gnomonia pascoe on sweet chestnut fruits in Cuneo area

10.10 *Çeliker N.M.,* Onogur E.

Risultati promettenti per la lotta al cancro corticale del castagno in Turchia

Promising results on biological control of chestnut blight in Turkey

Doken M.T., 10.20 Erincik Ö., Açikgöz S. Cancro corticale e fattibilità della lotta biologica studiando il fenomeno dell'ipovirulenza nella provincia di Aydin in Turchia

Chestnut blight disease and evaluation of the feasibility of its biological control in the Aydin province-Turkey by exploiting the hypovirulence phenomenon

10.30 Coffee Break



Thursday, 15thOctober

Centro Incontri Provincia di Cuneo (Corso Dante 41 - Cuneo) Congress Center of Cuneo Province (Dante Main Street 41 - Cuneo)

SALA B

ROOM B

IV sessione: Aspetti fitosanitari IV session: Pests and diseases

Chairman: Andrea Vannini

Açikgöz S., Döken M.T., Erincik Ö., Değirmenci F.	Caratterizzazione di isolati ipovirulenti di C <i>ryphonectria</i> parasitica (Murrill) Barr con la dsRNA analisi in Aydin - Turchia	
		Determination of hypovirulent isolates of Cryphonectria parasitica (Murrill) Barr by dsRNA analysis in Aydin-Turkey
11.10	Turchetti T.,	Situazione attuale ed evoluzione dello stato sanitario dei castagneti
	Maresi G.	Present situation and sanitary situation of chestnuts
44.00	Rigling D.,	Ipovirulenza naturale ed applicata per la lotta al cancro corticale in Svizzera
11.20	Prospero S., Heiniger U.	Natural and applied hypovirulence to control chestnut blight in Switzerland
11.30	Perlerou C., Diamandis S.	Diffusione dell'ipovirulenza introdotta vs. ipovirulenza naturale
		Spread of introduced hypovirulence vs. natural hypovirulence
11.40	Radocz L., Tarcali G., Jenei A., Egyed K.	Il cancro corticale (<i>Cryphonectria parasitica</i>) nell'Europa Centrale
11.40		The chestnut blight fungus (Cryphonectria parasitica) in the central-european region
44 50	Castro J., Azevedo J.C., Martins L.	Analisi temporale del declino del castagno nel Nord est del Portogallo
11.50		Temporal analysis of sweet chestnut decline in Northeastern Portugal using geostatistical tools



Prospero S., Jung E., Müller A., Rigling D. Diversità genetica e modello di diffusione di *Cryphonectria parasitica* in Svizzera

Genetic diversity and migration patterns of the introduced pathogen Cryphonectria parasitica in Switzerland

12.10 Discussione

Discussion

13.00 Lunch



Thursday, 15thOctober

SALA FALCO

ROOM FALCO

V sessione:

Aspetti economici e marketing

V session: Economics and marketing

Chairman: Arif Soylu

8.30	Keynote speaker: Pirazzoli C.	Aspetti economici e di mercato del castagno in Italia	
		Economic and marketing aspects of chestnut in Italy	
9.00	Keynote speaker: Ling Q.	Evoluzione e sviluppo dell'industria del castagno in Cina	
		The evolution and development of chestnut industry in China	
9.30	Hennion B.	Produzione di castagne in Francia: stato dell'arte e prospettive	
9.30	Hennion B.	Chestnut production in France, review, perspectives	
9.40	Santiago Pereira L.	Il castagno in Spagna dalla produzione di frutto e legno all'industria	
9.40		Chestnut in Spain, from nut and timber production to industry	
9.50	Soylu A.	Lo sviluppo della filiera del castagno in Turchia nell'ultimo secolo	
		The development of chestnut industry of Turkey in the last half Century	
	Botu M.	La situazione della coltura del castagno in Romania	
10.00		Sweet chestnut situation in Romania	
10.10	Bratanova- Doncheva S., Lyubenova M., Dimitrova V., Stiptzo V.	Origine, stato dell'arte e prospettive della coltivazione del castagno in Bulgaria	
		Origin, state of the art and perspectives of chestnut cultivation in Bulgaria	

10.20 Diamandis S.

Il castagno: dalla "kastania" degli antichi Greci ad oggi

Sweet chestnut: from the "Kastania" of the ancient Greeks to modern days

10.30 Coffee break

Chairman: Laszlo Radocz

11.00	Fulbright D.W., Mandujano M.	La produzione di castagne in Michigan
		Chestnut production in Michigan
11.10	Pettenella D., Secco L.	Il castagno come strumento di marketing territoriale
11.10		Chestnut as a territory marketing tool
	Yamaniski O.K., Sobierajski G.R.,	Il castagno in Brasile: ricerche e prospettive
11.20	Bueno S.C.S., Pommer C.V.	Chestnut in Brasil: researches and perspectives
	Discussione	
11.40	DISCUSSIONE	
Discussion		

13.00 Lunch



Thursday, 15thOctober

SALA FALCO

ROOM FALCO

VI sessione: Raccolta, post- raccolta, qualità e trasformazione VI session: Harvest, post-harvest, quality & processing

Chairman: Pietro Piccarolo

14.30	Keynote speaker: Fulbright W. D.	Efficacia di trattamenti in postraccolta per la riduzione di muffe e decadimenti qualitative su castagne fresche in Michigan
		Efficacy of postharvest treatments for reduction of molds and decay in fresh Michigan chestnuts
15.00	Adamo D., D'Eramo L., Giordano G.,	La geomatica come strumento per la gestione del catasto castanicolo e della castanicoltura nelle Valli Gesso e Vermenagna (Cuneo-Italia)
	Pianezzola M., Boccacci U.	Geomatic as a tool for the management of chestnut database and culture in Gesso and Vermenagna Valley (Cuneo-Italy)
Uylaser V., 15.10 Inceday B.K,	Uylaser V., Inceday B.K,	Uno studio sull'attitudine di alcune cultivar di castagno per la canditura
	Mert C., Soylu A.	A research on suitability of some chestnut cultivars for candied chestnuts
15.20	Correia P.,	Potenzialità della castagna per la produzione di amido
13.20	Beirão-da-Costa M.L.	Potentialities of chestnut for starch production
	Comba L., Gay P., Piccarolo P., Ricauda Aimonino D.	Processi termici nei processi di canditura dei marroni
		Thermal processes in candying process on chestnuts
45.40	Ganino T., Setti E., Dall'Asta C.,	Influenza dell'altitudine sulla composizione chimica e sulla morfologia di due varietà di castagno (Castanea sativa Mill.)
15.40	Caligiani A., Montali L., Beghè D., Fabbri A.	Altitude effects on fruit chemical composition and morphological parameters of two different chestnut (Castanea sativa Mill.) cultivars
15.50	Guyer D., Xing J.,	Influenza di fattori particolari sull'efficienza e l'efficacia di una macchina per la pelatura delle castagne
	Mandujano M., Fulbright D.W.	Influence of selected factors on efficiency and effectiveness of a peeling machine for chestnuts

16.00	Baldini S., Di Fulvio F., Liberati D.	Impatti con la raccolta meccanizzata del legno in cedui di castagno: un caso di studio
		Impacts of mechanized wood harvesting in chestnut coppices: a case study
16.10	Spina S., Agrumi M., Bistoni A., Romagnoli M.	Qualità del legno di castagno in alcuni siti del Lazio
		Wood quality in chestnut sites from Latium Region
16.20	Battaglia S., Gotti M., Castello G., Ghezzi M., Canterino S.	Utilizzi alternativi del castagno: dai tannini alle biomasse
		Alternative uses of chestnut: from tannins to biomass
16.30	De Vasconcelos M. C. B.M., Nunes F., Bennett R.N., Rosa E. A.S., Ferreira-Cardoso J.V.	Processi industriali delle castagne: effetti delle sostanze nutrienti e non nutrienti sulla salute
		Industrial processing of chestnut fruits (Castanea sativa): effects on health-promoting nutrients and non-nutrients (phytochemicals)
16.30	Discussione	
	Discussion	



Thursday, 15thOctober

SALA B

ROOM B

VII sessione: Biomasse ed energia VII session: Biomass & Energy

Chairman: Sanzio Baldini

Citali man. Ganzo Balani					
14.30	Keynote speaker: Scarascia Mugnozza G.	Conservazione delle risorse genetiche e del potenziale adattativo di castagno (Castanea sativa Mill.) in relazione ai cambiamenti ambientali			
		Preservation of chestnut (Castanea sativa Mill.) genetic resources and adaptative potential in relation to environmental changes			
15.00	Gotti M., Benso M., Cremonini C., Zanuttini R.	Il pellet di castagno detannizzato			
		A chestnut pellet without tannin			
15.10	Becagli C., Amorini E., Fratini R., Manetti M., Marone E.	Problemi e prospettive della filiera del castagno in Toscana			
		Problems and prospects of wood chain of chestnut in Tuscany			
15.20	Nosenzo A., Berretti R., Boetto G., Travaglia P.M.	Assortimenti legnosi da boschi cedui di castagno (Castanea sativa Miller) in Piemonte: analisi della produttività			
		Timber assortments in chestnut (Castanea sativa, Miller) coppice stands of Piedmont: a productivity analysis			
15.30	Tani A., Maltoni A., Mariotti B.	Risultati di esperimenti su cultivar di castagno per la produzione di legno			
		Results of experiments on chestnut cultivars for wood production			
15.40	Conedera M., Meloni F., Nicoloso A., Pividori M.	Radicazione delle ceppaie in vecchi cedui di castagno			
		Stool uprooting in over-aged chestnut coppice stands			
15.50	Mirchev S., Lyubenova M., Shikalanov A., Dimitrova V., Bratanova- Doncheva S.	Studio dell'impatto dei cambi climatici sui rischi dendrocronologici in castagneti della Bulgaria			
		Dendrochronological risk assessment for impacts of climate changes on chestnut communities in Bulgaria			

16.00	Gallardo Lancho J.F., González M.I., Martins A., Raimundo F.	Potenzialità di sequestro di CO ₂ in castagneti della Penisola Iberica
		Potentiality of carbon sequestration of chestnut systems of the Iberian Peninsula
16.10	Romagnoli M., Spina S.	Le interazioni legno-ambiente-selvicoltura del Lazio
		The relationships wood-environment-selviculture in chestnut from Latium Area Region
	Derchi P., Stagnaro A.	Gestione integrata del ceduo castanile nelle aree interne della Liguria: aspetti fondiari, gestione associata, valorizzazione energetica e mercantile
16.20		Integrated management of the chestnut coppice in Liguria's inland areas: land aspects, associate management, energy and merchant valorization
16.30	Manetti M., Amorini E., Becagli C., Conedera M., Pelleri F., Pividori M., Schleppi P., Zingg A.	Produzione di legname di qualità dai cedui di castagno (Castanea sativa Mill.). Confronto tra diverse modalità selvicolturali
16.30		Quality wood production from chestnut (Castanea sativa Mill.) coppices. Comparison between different sylvicultural approaches
16.40	Cielo P., Corgnati M., Gottero F., Settembri P., Zanuttini R.	La filiera foresta-legno-energia in Piemonte
		The forest-wood-energy chain in Piedmont, Italy
46 50	Berti S., Brunetti M., Cremonini C., Togni M., Zanuttini R.	Il legname di castagno per uso strutturale
16.50		The chestnut wood for structural use
17.00	Nati C.	Raccolta associata nei cedui di castagno degradati
17.00		Associated harvest in chestnut declined coppices
17.10	Discussione	
17.10	Discussion	



Thursday, 15thOctober

Piazza Galimberti

Square Galimberti

17.45

Inaugurazione 11° Edizione Fiera Nazionale del Marrone Visita agli stands 11th Edition of the National Fair on Chestnut Visit to the stands

FACOLTÀ di AGRARIA

FACULTY of AGRICULTURE

(Piazza Torino)

(Torino Square)

19.00

Business meeting SOI - ISHS FAO - CIHEAM Nut Network information: Rovira Mercé

FAO - CIHEAM Nuts Network information: Rovira Mercé

Business Meeting SOI - ISHS

Cena Buffet

Banquet

Teatro Toselli

Toselli Theatre

(Via Toselli 9)

(Toselli Street 9)

Concerto orchestra "B. Bruni" della Città di Cuneo Direttore: Maestro A. Tappero Merlo

"B. Bruni" orchestra Conductor: A. Tappero Merlo

Concert by the Cuneo

21.15

Associazione Città del Castagno: Premi: E. Magnano, G.R. Bignami, A. Salsotto Association
"Towns of the Chestnut":
Award in memory of:
E. Magnano, G.R. Bignami,
A. Salsotto

Venerdì 16 ottobre

Friday, 16thOctober

Centro Incontri Provincia di Cuneo (Corso Dante 41 - Cuneo)

Congress Center of Cuneo Province (Dante Main street 41 - Cuneo)

Visite Tecniche - Partenza ore 08,00

Technical visits - Loading the bus 08,00

Le visite prevedono due tour alternativi:

The visits include two options:

- a) visite di campo (castagneti tradizionali e nuovi impianti, dimostrazione in campo di macchine per la raccolta, tree climbing);
- a) field tour (old plantations and modern chestnut orchards, mechanical harvesting)
- b) lavorazione del frutto e industrie di trasformazione
- b) chestnut storage, packaging and processing industries

Robilante (CN)

Robilante (CN)

(Piazza Regina Margherita 27)

(Regina Margherita 27 Square)

11.00

Riunione del Consiglio Nazionale Città del Castagno Meeting of the National Association of Chestnut Towns





Un Convegno eco-sostenibile

Per rendere Castanea 2009 un evento sostenibile dal punto di vista ambientale si è deciso di applicare la procedura internazionale EMAS-ISO 14001.

Per compensare la quantità di CO₂ emessa dall'evento, gli organizzatori di Castanea 2009 hanno stretto una collaborazione con la Fondazione Otonga in Ecuador e una parte delle quote di iscrizione sarà destinata a preservare una porzione di foresta. La scelta è sembrata elemento imprescindibile di coerenza per trattare di castagno anche in chiave ambientale.



An eco-sustainable Congress

In order to make Castanea 2009 more "environmentally friendly", the organizing committee decided to apply the international procedure protocol EMAS-ISO 14001.

To balance the amount of the CO₂ produced during the event, Castanea 2009 organizing Committee collaborates with Otonga Foundation in Ecuador. A part of the registration fees will be utilized to preserve a portion of the Ecuador forest in order to compensate the produced CO₂ emissions. The choice was considered a must in order to discuss about chestnut in an environmentally friendly way.



LOCATION

1. Sessioni scientifiche:

Centro Incontri Provincia di Cuneo Corso Dante 41

1. Scientific Sessions:

Congress Center of Cuneo Province Dante Main Street 41

2. Expo e Sessioni poster:

Facoltà di Agraria Piazza Torino 3

2. Expo and poster Sessions:

Faculty of Agriculture Torino Square 3

3. Teatro Toselli

Via Toselli 9

3. Toselli Theatre

Toselli Street 9





The area of Cuneo is well known all over the world for its excellent wine and food production. Over four days, the Chestnut National Fair fills the centre of the old town with flavours, scents and colours thanks to hundreds of stalls from Piedmont, Italy and other European countries.

Il territorio cuneese è noto al grande pubblico italiano e internazionale per l'eccellenza dei prodotti enogastronomici di cui è ricco. La Fiera del marrone per quattro giorni riempie di sapori, profumi e colori il centro storico di Cuneo con centinaia di espositori provenienti da ogni parte del Piemonte, dall'Italia e dall'Europa.



Contatti / Contacts:

www.arboree.unito.it/castanea2009

e-mail: castanea2009.dca@unito.it

fax: 011-6708658, tel. 011-6708646-8751-8802 posta/ ordinary mail: Segreteria Castanea 2009 c/o

Dipartimento di Colture Arboree Università degli Studi di Torino Via Leonardo da Vinci, 44 10095 Grugliasco (TO) ITALY

Prenotazioni alberghiere / Hotel reservation

CÔNITOURS

Consorzio Operatori Turistici Provincia di Cuneo Via A. Avogadro, 32 12100 Cuneo

Tel. +39.0171.696206 / 698749

Fax +39.0171.435728 E-mail: info@cuneohotel.it http://www.cuneohotel.it















Dipartimento di Colture Arboree Università degli Studi di Torino





























Unione mazionale comuni comunità enti montani



















Sponsor_































Azienda Agricola Florovivaistica Lazzerini Carlo

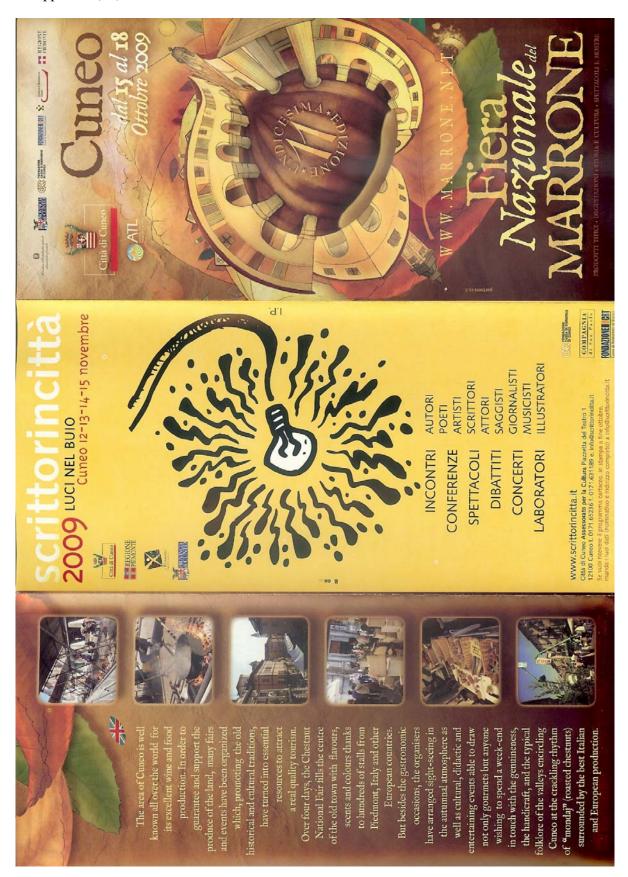


Alpi Vivai Viale





Appendix (vii) – Fiera Nazionale del Marrone



Appendix (viii) Questionnaire Responses

From a chestnut perspective what were your key learnings?

- The extent of the horticultural problems faced by the chestnut industry in Europe- the problems we encounter in Australia seem somewhat diminished in comparison and I feel relieved that we don't have to contend with moth larvae ('worms') in our nuts- imagine if the Bogong moth suddenly decided that chestnuts would be a great place to incubate its larvae! I'm equally appreciative that we don't have gall wasps or blight to contend with.
- The importance of chestnut timber production in Europe- are we overlooking a potentially valuable resource in Australia? I almost feel guilty about all the chestnut logs I feed into my combustion stove each winter!
- The rather curious practice of 'curing' chestnuts by submersing them in water for a week (or more depending on who you talk to). I came to the conclusion that the objective of this practice is to 'drown' the moth larvae (worms), however I would be interested in investigating this practice further to establish if there is actually some other benefit. It would be interesting to discover if anything actually occurs chemically or physiologically to the chestnut as a result of this treatment.

What surprised you about the chestnut culture in Italy?

- The fact that the traditional culture is considered to be in need of affirmative action to ensure its preservation a conscious effort to revive the place of the chestnut in the Italian psyche appears to be on the agenda of many in the chestnut industry. I assumed that it was so embedded in Italian culture that it naturally promulgated itself across the generations. The establishment of chestnut museums, the revival of traditional flour production methods, programs to preserve natural forests and old plantations are examples of strategies to ensure the chestnut retains a place in Italian culture. The concern of the Australian chestnut industry that the main consumers of chestnuts are the older generation of Mediterranean descent and that the demand for chestnuts will decline unless the younger generations embrace the traditions and food culture of their parents seems to be a concern that is not confined to Australia.
- The regional rivalry- Italy is a relatively small country, yet I detected a sense of parochialism when it came to chestnuts with each region apparently convinced that their local variety was superior. This is something we don't really experience in Australia, probably because our industry is young and based on selected cultivars which are grown Australia wide, or perhaps it is because our industry is so small we need to work together.

Most memorable/interesting activity?

• Difficult question- they were all interesting! The walk through the chestnut forest to the old flour mill, both the chestnut festivals, both the marron glace factories, the bus journeys along seemingly impossible roads, the chestnut museum.

Most memorable chestnut dish/food?

• Another difficult question-liked them all. The Cuneotorta served with chestnut gelato at La Ruota Hotel at Pianfei was lovely, as was the chestnut filled ravioli with truffle served at the Colombaia restaurant in Marradi

The three most interesting presentations at the congress?

- Have to vote for Lucas of course and his Phomopsis presentation!
- The Epidemics of Gnomonia Pascoe on Sweet Chestnut Fruits in Cuneo Area (University di Torino)- because it confirmed and complemented the research conducted by Lucas- it was surprising to discover that parallel research was being conducted at the other side of the globe that we were unaware of.
- A Breeding Programme Implemented for Disease Resistance in European Chestnut. (Portugal) -interesting because it focussed on the development of cultivars which are resistant to Phytophthora Cinnamoni (a significant problem in my orchard) -there was also a presentation on the same theme from Spain.

Other observations or general comments?

• I feel very fortunate to have been part of this study tour- the learning experiences it provided were invaluable and I will continue to reflect upon them in terms of my orchard management and future directions for many years to come. The opportunity to connect with the wider chestnut industry in the global context was a horizon widening experience. As organisers of the tour, Brian and Jane deserve accolades for their research and planning which resulted in such successful tour and for inviting others to share the benefits of their knowledge, contacts and organisational skills.

From a chestnut perspective what were your key learnings?

There is a lot more that can be done with chestnuts!

The Australian industry is in an embryonic stage compared to Europe, with huge potential and opportunities for our industry to grow and establish itself.

Biosecurity is key to keeping our crop safe from the pests and diseases that have ravaged the European and US crop. This could be seen as a huge marketing advantage for Australia.

What surprised you about the chestnut culture in Italy?

The sheer amount of value added products available and how entrenched the chestnut is as an everyday foodstuff, not only that it's part of their cultural heritage dating back 1,000 years! (Probably more!) This awareness of the product and traditions that have been handed down certainly changes the dynamics and marketing focus between their industry and ours. We still are in the process of raising awareness!

Most memorable/interesting activity?

(The orchestra!, but that doesn't really count!) There are a few.

• Walk through the chestnut plantation in Garfagnana past the pickers doing what they have been doing for 100's of years, perhaps with a little more technology ie tractors and a vacuum to suck up the nuts, but as far as drying them that was still being done in the traditional way in their stone huts. This was fascinating to see and learn about. And then onto the ancient chestnut flour mill where we were served traditional pancakes and fritters and roasted nuts from over an open fire. Truly memorable!

- Marrons Glace factory tour, Marradi. How wonderful to see this kind of production in what I thought a considerably small village, supporting the families and chestnut industry. We were able to witness the whole production from the raw fruit to the packaged product. Interesting indeed!
- Chestnut Museum high in the hills of Colognora di Pescaglia. Once again we were reminded of the history of chestnuts in Italia. What a wonderful heritage that has been preserved to give us an indication of a time past, but helped us to keep in perspective an industry that has continued to modernize up to a point. Absolutely memorable!

Most memorable chestnut dish/food?

The diamond shape cake served at the Palazzo Torriani (The Palace!) Marradi. Unfortunately I cannot remember the name of it, it was delicious!

The chestnut pasta at Garfagnana. Giovanni also did a 'breakfast bar' jam filled made with chestnut flour, I purchased 3, ate 2 myself and bought one back for my grandson, he gobbled it up and so did I, they were really good!

The three most interesting presentations at the congress?

Day 2; I'm really not being biased (!) but Lucas's presentation was the best. He was able to identify a problem, show research to combat and results to date.

Day 1; Historical ecology of chestnuts groves in Liguria – just fascinating to hear them talk about their trees and the age of them.

(I could not find it on the program, sorry) The discussion on the giant chestnut trees, their survival and the fight to keep them in production.

Other observations or general comments?

When are we going again!? It was fabulous, just to thank you both for the opportunity by organizing such a tour.

From a chestnut perspective what were your key learnings?

- They have been cultivated for up to 3000 years.
- The variety of foods based on chestnuts is huge.
- There are very limited target levels for foliar nutrients based on chestnut research.

What surprised you about the chestnut culture in Italy?

- That it was a non discretionary staple food for significant parts of the population for many decades.
- The level of processing is very high and there are many ways to peel and/or store chestnuts.

Most memorable/interesting activity?

- The chestnut museum.
- The varied ways of roasting.
- The very old tree bases which were often rotten but had "new trees" growing off the stump.

Most memorable chestnut dish/food?

Roasted chestnuts

From a chestnut perspective what were your key learnings?

The great number and variety of products that can be made from chestnuts. Particularly, cakes, pasta and sweets.

What surprised you about chestnut culture in Italy?

Although the Chestnut is a native forest tree in Italy. While those old forests are harvested producing a huge annual crop, we did not see much evidence of chestnut orchards planted and managed as here in Australia.

Most memorable/interesting activity?

The visit to the Marron Glace factory. The size of the factory and the volume of chestnuts handled. The factory operated all the year around employing a large staff. It is a lesson for what can be done.

Most memorable chestnut dish/food?

Chestnut Crepes with ricotta at the old flower mill. While the Chestnut flan we sampled at the castle in Marradi was equally delicious.

The three most interesting presentations at the congress?

- The presentations on the Gall Wasp. It is a lesson that we must be ever vigilant in our biosecurity measures.
- The American report on post harvest rot which validates our own R and D investment in this area.
- Lucas Suttleworth's report on post harvest rot showed the other delegates what great value we have in our one researcher, when other countries have many.

Other observations or general comments?

The Italians are most hospitable people and are wonderful hosts. They were very open with their wealth of knowledge.

From a chestnut perspective what were your key learnings?

- The distillation of what 'marrone' really is; ie it is a male sterile good-flavoured 7 peeling single embryo nut which seems to stem from one particular selection many thousands of years ago. Examples of this line in Australia are di Coppe marrone and marron di cusa
- That hand in hand with the EU's geographic appellation and reinvigoration of the Italian chestnut industry is the critical role of organic management.
- That chestnut orchards managed appropriately have a large carbon sequestration capacity.

What surprised you about the chestnut culture in Italy?

The very steep terrain, the age of the orchards, the labour intensiveness of the orchard management and harvest process. Helen was also surprised at the pervasive integration of the chestnut product into the food, drink and confectionary culture of northern Italy. (David had become aware of this in the Portugal-France trip in 2004, and had told Helen about this, but seeing is believing!)

Most memorable/interesting activity?

We enjoyed the whole itinerary, but the Marradi experience was absolutely fabulous. The chestnut centred agri-tourismo accommodation and setting was a joy; Professor Bellini was so welcoming, knowledgable and sharing; the chestnut festival was wonderful and the palace morning tea reception was a privilege!

Cuneo was memorable for different reasons. Prof Buenos, the Turin University host, brought us excellent field trips and fabulous cultural experiences. It was wonderful to be in a city that so celebrates and utilizes the chestnut!

We also appreciated meeting Guido the chestnut nurseryman and his wife. We shall be keeping in contact!

Most memorable chestnut dish/food?

Chestnut pasta and sage butter sauce served at the Castelnuovo agritourismo; and the chestnut pancakes and castanacha cooked for us at the old chestnut flour mill near Castelnuovo; the 'swiss jam roll' with a layer of chestnut paste was memorable at the Marradi Fair because it seems such an easy thing to transfer to the repertoire of Australian bakeries, such as the Beechworth Bakery. It will not take a massive cultural change to integrate this into mainstream bakery practice. Nor would it be too expensive. Then again, given the popularity of the very rich bee-sting bakery items, we are sure that the 'to die for' Mont Blancs of Cuneo's Arione Cafe would appeal to that niche of the Australian palate too!

The three most interesting presentations at the congress?

- Chestnut Culture strand: A Martins' keynote *Çhestnut orchard management in Northern Portugal for multiple use:effects on productivity and sustainability.* This research looked at the fungi indicator of soil quality and its relation to water and nutrients. The presentation reinforced our reading (Anderson, Jones & Hill), thinking and experience with regards to complex rhisosphere diversity in promoting soil health & nutrient levels ; as well as the role that fungi species and numbers play in this soil matrix toward its improvement; and function as a visual indicator.
- Pests & Diseases strand: Perlerou C & Diamandis S: *Spread of introduced hypovirulence vs. natural hypovirulence*. This research reflects the natural occurrence of chestnut blight hypervirulence and the growing realization that chestnut trees and growers are living with blight as a minor annoyance, rather than a major catastrophe.
- Pests and Diseases strand: Lucas Shuttleworth's presentation on his *chestnut internal rot research* in Australia. We believe the presentation of this work was important at the Cuneo conference because it shows how advanced Australia's work is on this problem. The Europeans are somewhat in denial about it.

Other observations or general comments?

The oldest orchards and the trees most resistant to disease were surprisingly on the north and east aspects at 500-900m at 450 N which in Europe is the coldest aspect. Indeed, in Australia the equivalent is south and east aspects at the same latitude as southern Tasmania! Obviously there is a southern ocean vs northern land mass factor here, but it does pose some interesting questions about the niche occupied by the chestnut tree.

We don't want gall-wasp in Australia!

We want chestnuts to be much more of a staple food in Australia in the way of northern Italy, rather than a gourmet food.

Budget Summary

When setting a budget estimate there are always unknown costs especially during overseas visits where exchange rates change daily. Whilst some of our costs were higher than expected (on ground transport for example) the major cost of accommodation was less than estimated due to there being four couples. This also resulted in the congress registration being cheaper than expected – there was a substantial discount for accompanying partners which was beneficial as both were able to attend all the sessions and events but simply received only one copy of the proceedings

Since we have come in under budget I have increased the administration expense to balance the amount set out in our original agreement. I discussed the adjustment with Karen Symes some time ago and it was approved. Initially I thought we may have been further under our budget but I miscalculated by including the GST in my figures rather than the net amounts.

Cuneo Study Tour Budget		
	Budget	Actual
Airfares	30,000	29,865
Transport Costs (train/bus, etc)	6,122	8,655
Accommodation	21,600	16,370
Meals	12,000	12,388
Congress Registration	6,600	4,955
Miscellaneous	3,000	3,997
Administration	3,600	6,692
	82,922	82,922