



International Oaks

The Journal of the International Oak Society

Proceedings
8th International Oak Society Conference
October 18-21, 2015

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Cover illustration. Wendy Brockman (*Quercus palustris*).

Photos. p. 9: James MacEwen (Michael Heathcoat Amory); p. 10: Guy Sternberg (8th International Oak Society Conference participants); p. 11: Charles Snyers d'Attenhoven (*Quercus stellata*); p. 13: Béatrice Chassé (*Q. ×fernowii*).

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Table of Contents

—/ 11 /—

Foreword

Twenty-one Years After

Charles Snyers d'Attenhoven

—/ 13 /—

Preface

From Small Acorns

Sara Oldfield

—/ 15 /—

Introduction

Oak Research in 2015: a Snapshot from the IOS Conference

Andrew L. Hipp

—/ 23 /—

Systematics and Biogeography of the American Oaks

Paul S. Manos

—/ 37 /—

Diversity, Distribution and Ecosystem Services of the North American Oaks

Jeannine Cavender-Bares

—/ 49 /—

Drought Tolerance and Climatic Distributions of the American Oaks

Matthew Kaproth and Jeannine Cavender-Bares

—/ 61 /—

Phylogeny and Introgression of California Scrub White Oaks (*Quercus* section *Quercus*)

Victoria L. Sork, Erin Riordan, Paul F. Grugger, Sorell Fitz-Gibbon, Xinzeng Wei, and Joaquín Ortego

—/ 75 /—

A Tough Little Survivor: The West Texas Oak, *Quercus hinckleyi*

Janet Rizner Backs

—/ 83 /—

Landscape and Conservation Genetics of the Island Oak, *Quercus tomentella*

Mary V. Ashley, Janet R. Backs, and Saji T. Abraham

—/ 91 /—

Hybridization and Adaptive Divergence in Oaks

Olivier Gailing and Jennifer Riehl

—/ 99 /—

Asexual Propagation of Oak Hybrids: Our Progress, and the Challenges of Producing Clonal Plants
Nina L. Bassuk, Bryan R. Denig, and Miles Schwartz Sax

—/ 107 /—

Eating Acorns: What Story do the Distant, Far, and Near Past Tell Us, and Why?
Béatrice Chassé

—/ 137 /—

New and Lesser-Known Cultivars 2013-2015
Ryan Russell and Eike Jablonski

—/ 149 /—

Anther Culture of Turkey Oak (*Quercus cerris*)
Joseph Rothleutner

—/ 155 /—

The Plant Collections Network and the *Quercus* Multisite Collection
Greg Paige

—/ 163 /—

Rescuing Plant Species with Extremely Small Populations in China: the Case of the Xichou oak,
Quercus sichourensis
Weibang Sun, Zhekou Zhou, Wenyun Chen, Yuan Zhou, Lei Cai, Murphy Westwood, and Jessica Turner

—/ 171 /—

Conservation of *Quercus arbutifolia*, a Rare Oak, from Southern China's Montane Cloud Forests
Min Deng, Xu Jun, Yi-Gang Song, and Xiao-Long Jiang

—/ 181 /—

A Genetic Map for the *Lobatae*
Arpita Konar, Olivia Choudury, Oliver Gailing, Mark V. Coggeshall, Margaret E. Staton, Scott Emrich, John E. Carlson, and Jeanne Romero-Severson

—/ 189 /—

Development of New Genomic Resources for Northern Red Oak, *Quercus rubra*
Christopher R. Heim, Mark V. Coggeshall, Arpita Konar, and Jeanne Romero-Severson

—/ 195 /—

Sustaining Oaks in the Chicago Region Landscape: Developing a Plan for Maintaining Oak
Dominance in an Urban Landscape
Lindsay Darling and Robert T. Fahey

—/ 207 /—

Pathfinder: the Last Prairie Sentinel
Guy Sternberg

—/ 217 /—

Oaks in Puebla: Growing Successes and Failures, and New Research Topics
Maricela Rodríguez-Acosta, Allen J. Coombes, Carlos A. Paredes-Contreras, Stephanie Fernández-Velázquez, and Citlali Guevara-González

—/ 227 /—

Searching for the Hardy Southern Live Oak
Anthony Aiello

—/ 233 /—

The Last Basketmaker: Indiana's Forgotten History of Oak-Rod Baskets
Jon Kay

—/ 245 /—

Are Resource Dynamics a Necessity for Oak Masting?
Ian Pearse

—/ 255 /—

Preserving Oak (*Quercus* sp.) Germplasm to Promote Ex-Situ Conservation
Christina Walters, Lisa Hill, Jennifer Crane, Marcin Michalak, Xia Ke, Jeffrey Carstens, Kevin Conrad, Murphy Westwood, Alison Colwell, Joanna Clines, and Pawel Chmielarz

—/ 267 /—

The Pace of Microevolution of European Oaks During Environmental Changes
Antoine Kremer

—/ 277 /—

Launching the Global Oak Conservation Initiative at The Morton Arboretum
Lisa Kenny and Murphy Westwood

—/ 290 /—

Workshops

—/ 305 /—

Poster Sessions

—/ 343 /—

Pre-Conference Tour
Roderick Cameron

—/ 364 /—

The Morton Arboretum
Charles Snyers d'Attenhoven

—/ 375 /—

Post-Conference Tour
James Hitz

—/ 390 /—

International Oak Society Service Awards

—/ 392 /—

First International Oak Society Silent Auction



Dotorimuk (acorn tofu) served in a restaurant near Seoul (Shawn Overstreet).

Acorns As Food in the Republic of Korea

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The Korean Peninsula is one of the last regions on Earth where widespread acorn harvesting and consumption is still common. Oak groves were traditionally managed to provide food in years when the rice harvest was poor. These traditional oak groves, however, are threatened with development and a subsequent loss of traditional knowledge.

To preserve and analyze this traditional knowledge, fifteen village elders, highly experienced in acorn production and use, were selected via purposeful sampling. Elders were selected in locations across all nine political provinces and all five ecological provinces of the Republic of Korea (ROK) in order to capture any regional variation in knowledge. Structured interviews were conducted in summer/fall 2014 to document their traditional acorn knowledge. Interview data was analyzed in two categories: acorn production practices and acorn food uses. These were defined as being widely practiced if the number of citations exceeded 50% of the interviews using a Binomial Distribution Test ($P < 0.05$).

The acorn production results showed that wild-collecting acorns from the ground was the most common practice comprising 39% of all citations, and was the only one that was widely practiced. The other practices mentioned were somewhat trivial or of recent origin. It is therefore concluded that a body of traditional knowledge about acorn production does not currently exist in the ROK.

The acorn food-use results showed that making acorn tofu (*dotorimuk*) was the most common use comprising 31% of all citations and was also the only one that was widely practiced. Making acorn tofu is a complicated process in which there was much variation between interviewees. Additionally, the other uses of acorns for food were diverse and mostly non-trivial. It is therefore concluded that a body of traditional knowledge about acorn food uses continues to exist in the ROK.

Acorns as food in the P

UCDAVIS

Shawn Overstreet¹, Seongmin Choi², Char
¹University of California, Davis, ²Seoul Nation

Why Acorns?

- ◆ Historically, acorns have been used on four continents as food and fodder (Bainbridge, 1986)
- ◆ They possess however, the modern-day potential to help mitigate climate change.
- ◆ Acorns are borne on oak trees that provide long-term atmospheric carbon sequestration.
- ◆ Such tree "grains" are a compelling climate-friendly alternative to annual cereal grains.
- ◆ First step in assessing the potential of acorns as a commercial crop is to understand traditional production and utilization practices.

Why South Korea?

- ◆ Oak groves were traditionally managed to provide food in years when rice harvest was poor (Lee et al., 2007)
- ◆ It is one of the last countries where acorn harvesting and consumption is still common (Bainbridge, 2006)
- ◆ Traditional oak groves are threatened with development (Park et al., 2013) and traditional knowledge may also be threatened

Theory

South Korea's continuous 500-year history of acorn use should have led to an accumulation of traditional knowledge about acorn production and consumption.



Figure 1 – Common Korean acorn foods

Hypotheses

- ◆ H₁: A body of traditional knowledge about acorn production exists in South Korea
- ◆ H₂: A body of traditional knowledge about using acorns for food exists in South Korea

Methods

- ◆ Selected fifteen village elders, highly experienced in acorn production and use, via purposeful sampling
- ◆ Structured interviews were conducted in summer/fall 2014 to document traditional acorn knowledge
- ◆ Interviews were conducted across all nine political provinces and all five ecological provinces



Figure 2 – Interview sites in South Korea

- ◆ Two indices were computed to measure the relative importance of acorn production management practices and of the various acorn food uses:
 1. **Management Diversity Value (MDV)** = M_{cx}/M_{ct} = Number of citations for a given management practice (M_{cx}) divided by the total number of citations for all management practices (M_{ct}).
 2. **Use Diversity Value (UDV)** = U_{cx}/U_{ct} = Number of citations for a given acorn food use (U_{cx}) divided by the total number of citations for all acorn food uses (U_{ct}).
- ◆ Management practices and food uses are defined as being Widely Practiced if the number of citations exceeds 50% of the interviews using a Binomial Distribution Test ($P < 0.05$).

Republic of South Korea

Ryul Park³, Dowon Lee², Thomas Gradziel¹
University, ³Korea Forest Research Institute



Results

Acorn Production Practices

- ◆ Wild-collecting acorns from the ground was the most important management practice comprising 39% of all management citations and was the only one that was Widely Practiced.

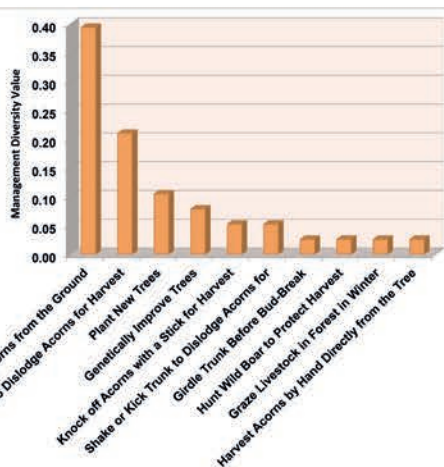


Figure 3 – Acorn Management Practices

Acorn Food Uses

- ◆ Making acorn tofu (*dotorimuk*) was the most important acorn food use comprising 31% of all food use citations and was the only one that was Widely Practiced.

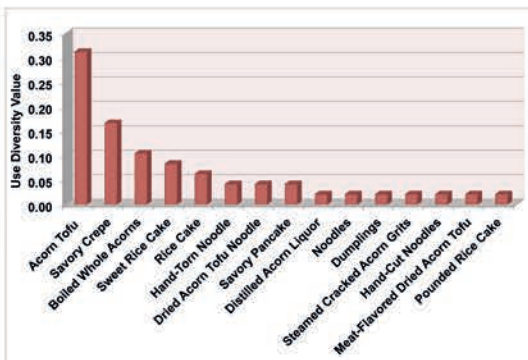


Figure 4 – Acorn Food Uses

Conclusions

- ◆ H₁: A body of traditional knowledge about acorn production exists in South Korea is REJECTED because the most important and only Widely Practiced technique is wild-collection of acorns from the ground. The other practices are somewhat trivial or of recent origin.
- ◆ H₂: A body of traditional knowledge about using acorns for food exists in South Korea is ACCEPTED because the most important and only Widely Practiced use of acorns for food is the making of acorn tofu, a complicated process in which there is much variation between interviewees. The other uses of acorns for food are diverse and mostly non-trivial.

Despite a 500-year history of maintaining oak groves as an emergency food source, it is interesting that not much traditional knowledge about acorn production remains, but much about acorn use does. It is possible that village connections with traditional acorn groves broke down during the Japanese Occupation, Korean War, and postwar deforestation period (1910-60), and acorns became something that were gathered randomly from what forested areas remained.

Acknowledgements

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