58th Annual Meeting

of the SOCIETY

FOR ECONOMIC BOTANY

BRAGANÇA - PORTUGAL

JUNE 4-9, 2017

Living in a global world:

local knowledge and sustainability

Book of abstracts

58TH ANNUAL MEETING of the SOCIETY FOR ECONOMIC BOTANY

BRAGANÇA · PORTUGAL

JUNE 4-9, 2017

Title: Living in a global world: ethnobotany, local knowledge and sustainability. 58th Annual Meeting of the Society for Economic Botany. Book of Abstracts

Coordination: Ana Maria Carvalho, Manuel Pardo de Santayana & Rainer Bussmann

Edition: Instituto Politécnico de Bragança, Centro de Investigação de Montanha & Society for Economic Botany · 2017
5300-253 Bragança · Portugal
Tel. (+351) 273 303 200 · Fax (+351) 273 325 405
www.ipb.pt

Design: Image Services of Instituto Politécnico de Bragança

ISBN: 978-972-745-224-8

Disponível em: http://hdl.handle.net/10198/14256

SOCIETY FOR ECONOMIC BOTANY

ipb INSTITUTO POLITÉCNICO DE BRAGANÇA

CIMO Centro de Investigação de Montanha

WLBC The William L. Brown Center — Missouri Botanical Garden

SPRINGER NATURE

Bragança

MUSEU DA ABADE DE BAÇAL

Centro Ciência Viva de Bragança

Caixa CA Fundação

58TH ANNUAL MEETING
of the SOCIETY FOR ECONOMIC BOTANY
BRAGANÇA - PORTUGAL
JUNE 4-9, 2017

Organizing Committee

Ana Maria Carvalho – Instituto Politécnico de Bragança, Centro de Investigação de Montanha, Portugal
João Azevedo – Instituto Politécnico de Bragança, Centro de Investigação de Montanha, Portugal
Manuel Pardo de Santayana – Universidad Autónoma de Madrid, España
Rainer Bussmann – Missouri Botanical Garden, William L. Brown Center, United States of America

Cassandra Quave – Emory University, United States of America
Gayle Fritz – Washington University, St. Louis, United States of America
Steven Casper – Society for Economic Botany President, Cheverly, MD, United States of America

Atilano Suarez – Instituto Politécnico de Bragança, Serviços de Imagem, Portugal
Isabel Sá – ALDEIA, Associação para o Desenvolvimento Sustentável, Portugal
Maria de Jesus Caldeireiro – Instituto Politécnico de Bragança, Escola Superior Agrária, Portugal
Nuno Carvalho – Instituto Politécnico de Bragança, CIESA, Portugal
Sónia Cruz – Instituto Politécnico de Bragança, GIAPE, Portugal

Heather Cacanindin – Society for Economic Botany Office, United States of America
Robert Brandt – Society for Economic Botany Office, United States of America

Sandra Bogdanova – Society for Economic Botany Student Representative

Economic botany· approaches from Archaeobotany, Ethnography and History – Session 3

Chair: Valentina Savo, Simon Fraser University, Canada
Monday, June 5, 17h00 – Room G3-S5/01

Ethnobotany, ethnopharmacology and natural products· challenges and trends – Session 1

Chair: Michael Heinrich, University College London, School of Pharmacy, United Kingdom
Tuesday, June 6, 11h00 – Auditório Dionísio Gonçalves

Ethnobotany, ethnopharmacology and natural products· challenges and trends – Session 2

Chair: Patrick Van Damme, Ghent University, Plant Production, Belgium
Tuesday, June 6, 14h30 – Auditório Dionísio Gonçalves

Ethnobotany, ethnopharmacology and natural products· challenges and trends – Session 3

Chair: Joan Vallés, Universitat de Barcelona, Laboratori de Botànica Facultat de Farmàcia i Ciències de l'Alimentació, Spain
Thursday, June 8, 11h00 – Auditório Dionísio Gonçalves

From famine wild plants in mountain regions of Northeastern Portugal to gourmet foods in contemporary diets: a nutritional-based revalorization study.

Authors: Pinela, José [1], Roriz, Custódio Lobo [1], Pereira, Carla [1], Fernandes, Ângela [1], Barros, Lillian [1], Oliveira, M. Beatriz P.P. [2], Carvalho, Ana Maria [1], Ferreira, Isabel C.F.R. [1].

Wild plants have received high importance at different locations and times of the human history given their ability to provide nutrients and protection in scarcity periods. In the Northeastern region of Portugal, a mountainous land with vast biodiversity and cultural heritage, a large number of edible wild plants have become underutilized over time. This abandonment was mainly due to altered lifestyles of modern society and massive utilization of a restrict number of crops. However, some wild species are now emerging in gardens and kitchens around Europe and increasingly found in farmers' markets, gourmet food shops and restaurants. Following this trend, this study aimed to characterize five species traditionally consumed as vegetable (*Montia fontana* L., *Nasturtium officinale* R. Br. and *Rumex induratus* Boiss. & Reut.) or as condiment (*Pterospartum tridentatum* (L.) Willk and *Thymus pulegioides* L.) in terms of nutrients and bioactive compounds. Wild specimens of the selected plants were gathered in the Northeast region of Portugal and analyzed for their nutritional value following standard procedures; free sugars, fatty acids, tocopherols and ascorbic acid were analyzed by chromatographic techniques; and total phenolics and flavonoids were quantified by colorimetric assays. All plants revealed low protein contents. The highest levels of carbohydrates and free sugars were found in the flowering parts of the two species used as condiments. Fructose and glucose predominated in all plants except in *T. pulegioides* in which sucrose prevailed. These low-fat foods revealed healthy fatty acids profiles mainly composed by α-linolenic acid, a precursor of long-chain n-3 polyunsaturated fatty acids. *M. fontana* and *R. induratus* were sources of ascorbic acid; a 100-g portion of *R. induratus* contain more than 50% of the recommended dietary allowances (RDA) for adults. *R. induratus*, *T. pulegioides* and *P. tridentatum* presented the high α-tocopherol content, whose 100-g portions contribute in more than 30% of the RDA. Regarding bioactive non-nutrients, while *P. tridentatum* was found particularly rich in total phenolics, *T. pulegioides* showed the highest total flavonoid content. This extensive work demonstrates that the selected famine foods have a healthy fatty acids composition, vitamins and bioactive compounds, and can be considered as interesting contemporary foods.

Keywords: Wild food plants, Valorization, Nutricional value, Northeast of Portugal.

Affiliation: 1 - Mountain Research Centre (CIMO), Escola Superior Agrária, Instituto Politécnico de Bragança, Campus de Santa Apolónia, Bragança, 5300-253, Portugal; 2 - REQUIMTE/LAQV, Faculty of Pharmacy, University of Porto, Rua Jorge Viterbo Ferreira, nº 228, Porto, 4050-313, Portugal

An ethnobotanical review on uses of the Turkish *Salvia* species.

Authors: Bulut, Gizem [1], Dogan, Ahmet [2], Senkardes, Ismail [1], Tuzlacı, Ertan [1].

Salvia L. is one of the most useful genera especially traditional therapy in Turkey. The aim of this study is to revise various ethnobotanical uses of *Salvia* species according to our investigations and scientific literature records. Our investigations are based on local ethnobotanical studies. The ethnobotanical information was obtained through open ended and semi-structured interviews from the local people. The specimens were collected during the field works and then identified. In addition, the scientific literature records on the subject were revised. According to the results, 36 *Salvia* taxa are ethnobotanically used in Turkey. The usages of the plants are respectively as follows: traditional folk medicine (34 taxa), food (19 taxa), herbal tea (5 taxa), spice (2 taxa) and dye (1 taxa). Among them, *Salvia fruticosa*, *S. tomentosa* and *S.virgata* are the most popular plants and they are used in many localities of Turkey.

Keywords: Ethnobotany, *Salvia*, Medicinal plants, Edible plants, Turkey.

Affiliation: 1 - Marmara University Faculty of Pharmacy, Pharmaceutical Botany, Tıbbiye cad. Haydarpaşa, Istanbul, 34668; 2 - Marmara University Faculty of Pharmacy, Pharmaceutical Botany, Tıbbıye cad., Haydarpasa, Istanbul, 34668