TICA

THE INTERNATIONAL COMPOSITAE ALLIANCE

XII CONGRESO LATINOAMERICANO DE BOTÁNICA
21–28 Octubre 2018 | Quito–Ecuador

ASOCIACIÓN BOTÁNICA ECUATORIANA

CCE BENJAMÍN CARRIÓN

October 20th 2018 | Quito - Ecuador

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A note from organizers

The International Compositae Alliance (TICA) was created some 12 years ago to act as a hub to promote research, and advance the knowledge of the largest plant family on Earth. Today the need for TICA is more important than ever. Widespread international coopeartion is key to move along the road to better know and promote conservation of the Compositae worldwide. This year, in the context of the XII Latin American Botanical Congress a group of students of the family got together to share some of their research and propose ideas to further develop TICA. We hope that in the follwoing years a sense of cummunity further develops to empower the young synantherologists of tomorrow.

Itziar **Arnelas**
Mauricio **Bonifacino**
Vicki **Funk**
Gustavo **Heiden**

Cover photo
Lasiocephalus ovatus (Senecioneae) at the foothills of Chimborazo, Ecuador

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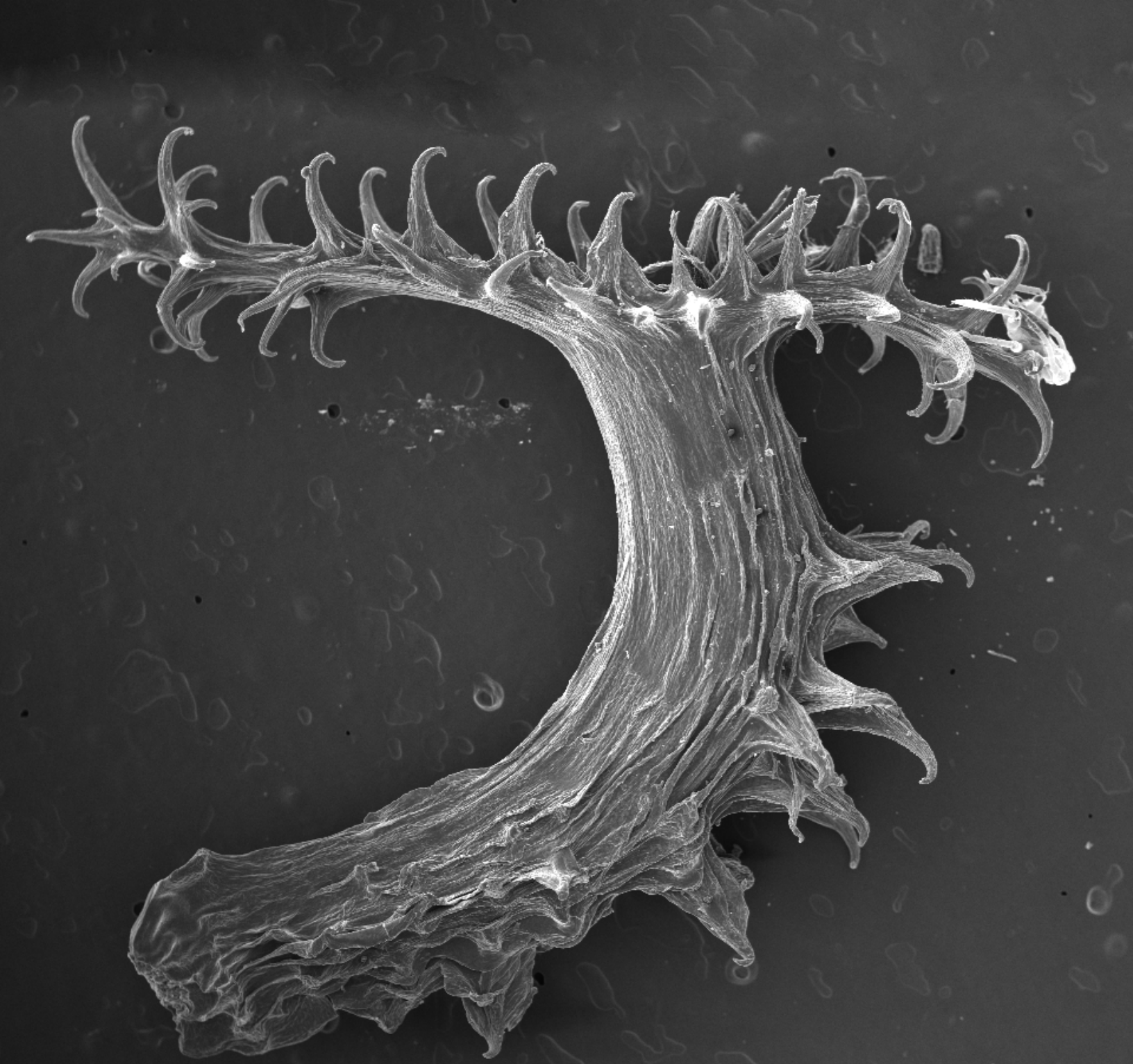


DIPTEROCOME, AN ADDITION TO THE SECOND-ORDER HEADED GENERA IN COMPOSITAE?

Alfonso Susanna, Juan Antonio Calleja, Mercè Galbany-Casals, Núria Garcia-Jacas, Sonia Herrando-Moraira, Pedja Janaćković, Javier López-Alvarado, Jordi López-Pujol, Jian-Quan Liu, Jennifer Mandel, Llorenç Sáez, Alexander Sennikov & Roser Vilatersana

Dipterocome, an addition to the second-order headed genera in Compositae?

Alfonso Susanna[1*] and The Cardueae Radiations group (in alphabetical order: Juan Antonio Calleja[2], Mercè Galbany-Casals[2], Núria Garcia-Jacas[1], Sonia Herrando-Moraira[1], Pedja Janaćković[3], Javier López-Alvarado[2], Jordi López-Pujol[1], Jian-Quan Liu[4], Jennifer Mandel[5], Llorenç Sáez[2], Alexander Sennikov[6,7] & Roser Vilatersana[1]

[1] Botanic Institute of Barcelona (IBB, CSIC-ICUB), Barcelona, Spain.

[2] Departament de Biologia Animal, Biologia Vegetal i Ecologia, Universitat Autònoma de Barcelona, Spain.

[3] University of Belgrade - Faculty of Biology, Institute of Botany and Botanical Garden "Jevremovac", Studentski trg 16, Belgrade 11000, Serbia.

[4] Key Laboratory for Bio Resources and Eco Environment, College of Life Sciences, Sichuan University, China.

[5] Department of Biological Sciences, University of Memphis, Memphis, Tennessee, USA.

[6] Botanical Museum, Finnish Museum of Natural History, University of Helsinki, Finland. 6

[7] Herbarium, Komarov Botanical Institute of Russian Academy of Sciences, St. Petersburg, Russia.

[*] *asusanna@ibb.csic.es*

Key words: *Gundelia*, *Echinops*, *Hecastocleis*, syncephaly.

The genus *Dipterocome* Fisch. & C. A. Mey. has a quite complicated history. It was described as *Dipterocome* and as *Jaubertia*, and even included in *Koelpinia*. All the attempts of establishing firmly its tribal ascription in the Compositae failed for 150 years: it was placed tentatively in tribe Calenduleae by Bentham, Boissier and Hoffmann, but it was clear that the similarities to *Calendula* were superficial. De Candolle was so frustrated that he ranked *Dipterocome* among the unclassified genera of the Compositae acknowledging that it was an impossible task. Thanks to the use of molecular markers, Anderberg finally placed the genus in the Cardueae. Using next-generation sequencing, we have confirmed that *Dipterocome* belongs to the Cardueae and constitutes a monotypic subtribe Dipterocominae with affinities to the subtribe Xerantheminae. In our presentation, we will discuss the morphology and structure of the capitulum. Based on the excellent drawings by Jaubert & Spach and new histological evidence, we will challenge the traditional interpretation as achenes of the peculiar, spiny structures in the heads. Rather, they should be interpreted as diaspores; the achene is enclosed in a sheat of fused spiny bracts that would be hard to derive from receptacular scales. Our hypothesis is that the heads of *Dipterocome* are syncephalies or second-order inflorescences, and the "florets" are actually individual heads; the female ones have horned bracts enclosing the achenes, and the male ones show only a tiny basal sheat. It is worth mentioning that at least four of the genera with second-order inflorescences in the Compositae, *Dipterocome*, *Echinops*, *Gundelia*, and *Hecastocleis*, are plants from extremely dry habitats.

Alfonso Susanna

Botanic Institute of Barcelona
Pg. del Migdia, s. n.
08038 Barcelona
Spain

asusanna@ibb.csic.es

Alfonso Susanna works on tribe Cardueae since 1981. Together with Núria Garcia-Jacas, he pioneered the molecular studies in the tribe and compiled the latest revisions of the Cardueae. He has carried important field collections in Middle Asia, North Africa and the Mediterranean Region, always focusing on the Cardueae. Alfonso presented his PhD in 1982 in the Autonomous University of Madrid. He is currently senior scientists at the Botanic Institute of Barcelona.

Cover photo
Dipterocome pusilla, diaspore with SEM.

TEMPO OF DIVERSIFICATION IN THE SUPERRADIATION OF DAISIES (ASTERACEAE)

Luis Palazzesi, Oriane Hidalgo, Viviana D. Barreda, Félix Forest, Sebastian Höhna

Tempo of diversification in the superradiation of daisies (Asteraceae)

Luis Palazzesi [*1,2], Oriane Hidalgo[2], Viviana D. Barreda[1], Félix Forest[2] & Sebastian Höhna[3,4]

[1] Museo Argentino de Ciencias Naturales & Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires C1405DJR, Argentina

[2] Jodrell Laboratory, Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3DS, United Kingdom

[3] Department of Integrative Biology, University of California, Berkeley, CA 94720, USA

[4] Division of Evolutionary Biology, Faculty of Biology, Ludwig-Maximilians-Universität München, Grosshaderner Str. 2, 82152 Planegg-Martinsried, Germa

** lpalazzesi@macn.gov.ar*

Key words: Cenozoic, Compositae, RevBayes.

Asteraceae comprise nearly one-tenth of all living angiosperms. Despite their dominant role in terrestrial ecosystems, the evolutionary history and tempo of daisy diversification is poorly understood. A major limitation when analyzing diversification rates in hyper-diverse families is the inevitable sparse species sampling. Here, we explore the shifts in diversification rates of Asteraceae using a novel model implemented in RevBayes. Our analyses demonstrate that the most dramatic increase in diversification rates of Asteraceae occurred during the late Oligocene (~28 Mya), peaking between 20 Mya and 15 Mya, and subsequently decreasing for a brief period of time before increasing again from the late Miocene (~10 Mya). Our estimates of low diversification rates prior to the Oligocene is consistent with the scarcity of fossils assigned to daisies known from this period. Similarly, our estimates of a high diversification rate in the late Oligocene and early Miocene is in line with the high diversity of fossil remains assigned to these groups. Overall, our results shed new light on our understanding of the origin and diversification of Asteraceae.

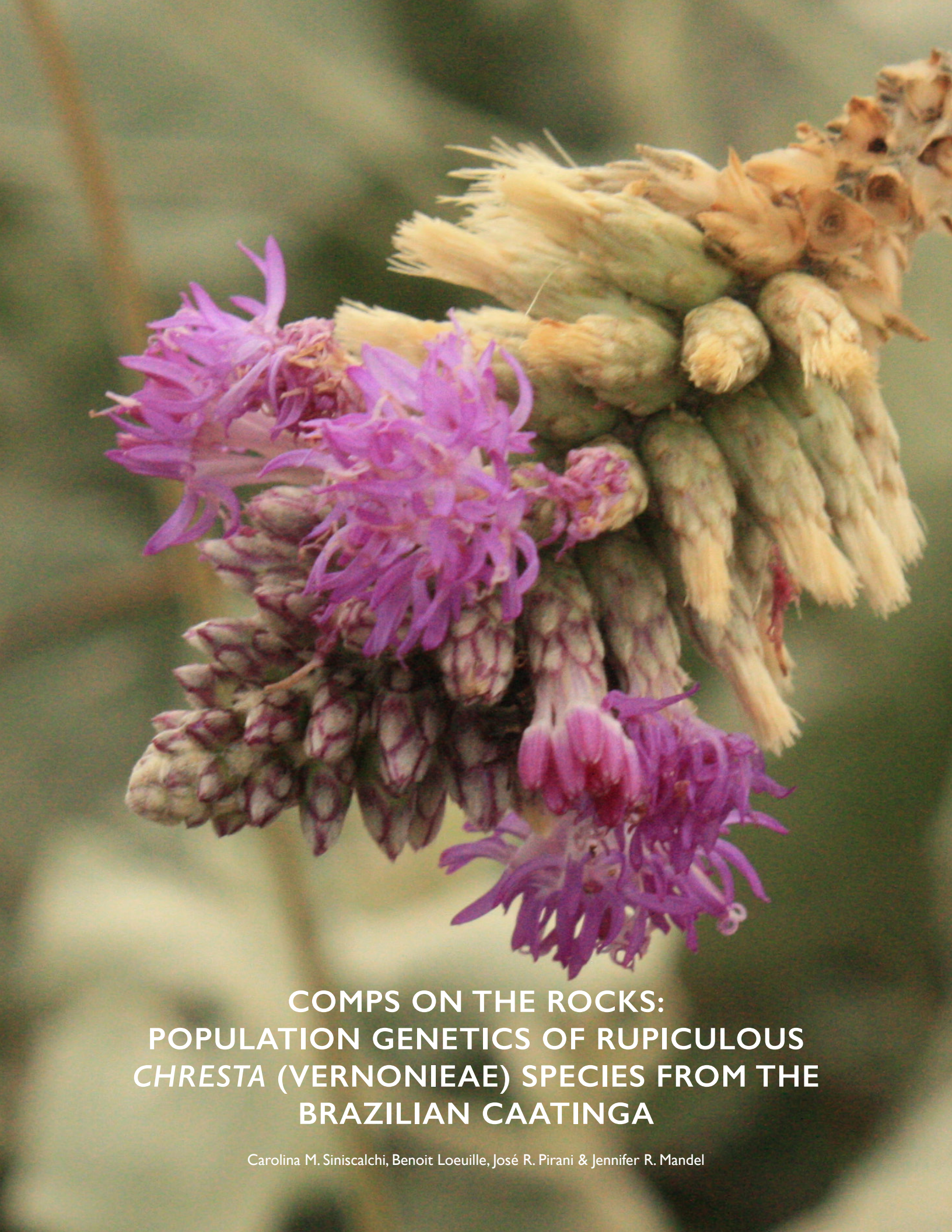
Luis Palazzesi

Museo Argentino de Ciencias Naturales
Angel Gallardo 470,
C1405DJR,
Buenos Aires,
Argentina

lpalazzesi@macn.gov.ar

I am a biologist interested in evolution, biogeography and conservation. I study plants and fossil plants because together they provide a long-term record of evolutionary, ecological and environmental change. I finished my PhD in 2008 at University of Buenos Aires; my main goal was to try to understand when and under which circumstances the Patagonian steppe (a massive arid grassland on the lee-side of the Andean range) evolved on the basis of the fossil record. More recently I was awarded a Marie-Curie Fellowship (2013-2015) based in Kew Gardens to explore the evolution of two important angiosperm families (Asteraceae and Poaceae) to understand when the grassland biome became widespread.

Cover photo
Yellow goldifelds (Lasthenia) blossom the Carrizo Plain Natural Monument, California, USA.



COMPS ON THE ROCKS: POPULATION GENETICS OF RUPICULOUS *CHRESTA* (VERNONIEAE) SPECIES FROM THE BRAZILIAN CAATINGA

Carolina M. Siniscalchi, Benoit Loeuille, José R. Pirani & Jennifer R. Mandel

Comps on the rocks: population genetics of rupiculous *Chresta* (Vernonieae) species from the Brazilian Caatinga

Carolina M. Siniscalchi[1,3*], Benoit Loeuille[2], José R. Pirani[1] and Jennifer R. Mandel[3]

[1] Laboratório de Sistemática Vegetal, Departamento de Botânica, Universidade de São Paulo, São Paulo, Brazil

[2] Departamento de Botânica, Universidade Federal de Pernambuco, Recife, Brazil

[3] The Mandel Lab, Department of Biological Sciences, University of Memphis, Memphis, USA

* *carol.siniscalchi@gmail.com*

Key words: Chrestinae, rock outcrops, population diversity, population structure.

Measures of genetic diversity and population structure are fundamental when studying evolutionary processes in different species. In the present study, we use nuclear SSR markers exclusively designed for *Chresta* from nuclear regions obtained from target capture sequencing to investigate the population genetics of five rupiculous species of *Chresta* that occur in the Brazilian Caatinga and present fragmentary populations. Four of these species are distributed along two mountain chains, with maximum distances of 200 km among populations of each species and the remaining species is widely distributed throughout the biome, with three main groups of populations. Eleven SSR markers were used, and a total of 312 individuals from 27 populations (*C. harleyi* [8 populations], *C. hatschbachii* [1 population], *C. martii* [14 populations], *C.* sp. 1 [3 populations] and *C.* sp. 2 [1 population]) were genotyped. Population diversity measures were calculated using GenAlEx, while structuring was analyzed using AMOVA in GenAlEx and the software STRUCTURE. Different species presented different patterns of diversity and structure, *C. harleyi* showed medium levels of inbreeding and moderate population structuring, with all genetic clusters being present in all populations. *Chresta martii* showed very high levels of inbreeding and structuring, with populations grouping in two geographically separate clusters and presenting subsequent substructuring, with different patterns between the two main geographic groups. *Chresta* sp. 1 showed excess of heterozygotes and very little structuring. *Chresta* sp. 3 presents higher levels of inbreeding than *C. hatschbachii*, which could be a reflex from the extent of occurrence of each species. These processes may impact the evolution of each species differently, as well as proposals for their conservation.

Carolina Siniscalchi

Laboratório de Sistemática Vegetal,
Departamento de Botânica,
Universidade de São Paulo,
São Paulo, Brazil

carol.siniscalchi@gmail.com

I have been studying plant systematics and taxonomy since 2009, when I started my undergraduate research at the Plant Systematics Laboratory at Universidade de São Paulo, Brazil. I started my career studying Leguminosae taxonomy and floristics. In 2012, I obtained my M.Sc. and started my Ph.D. research about Compositae in 2014. I studied the systematics and evolution of genus Chresta (Vernonieae), using phylogenomic methods to obtain a phylogeny of the genus, to better study its relation within tribe Vernonieae and its morphological evolution. Also, I used this genomic data to develop new microsatellite markers to study population genetics in some rupiculous species of Chresta. I graduated in January 2018 and will soon start a postdoctoral fellowship at the University of Memphis, TN, USA.

Cover photo
Lateral view of capitulescence in Chresta.

SENECIONEAE (ASTERACEAE) FROM THE CENTRAL ANDES

Daniel Montesinos

Senecioneae (Asteraceae) from the central Andes

Daniel Montesinos-Tubée[1,2,3,4]

[1] Naturalis Biodiversity Centre, Botany Section, National Herbarium of The Netherlands, Herbarium Vadense. Darwinweg 2, 2333 CR Leiden, The Netherlands.

[2] Instituto Científico Michael Owen Dillon, Av. Jorge Chávez 610, Cercado, Arequipa, Perú.

[3] Instituto de Ciencia y Gestión Ambiental de la Universidad Nacional de San Agustín de Arequipa. Calle San Agustín 108, Arequipa-Perú.

[4] Herbario HCSM. Universidad Católica de Santa María de Arequipa (Arequipa, Perú).

dbmtperu@gmail.com

Key words: Compositae, identification, key, morphology.

A review of Senecioneae from Central Andes is proposed as a tool for field and herbarium labor in order to facilitate the complexity of taxa identification in the series Senecioneae for the Andes. This review includes 670 recognized species occurring in Peru and neighboring countries (Colombia, Ecuador, Chile, Bolivia and Argentina). Twenty major morphological groups with 34 subgroups are identified within Senecioneae. Taxa included in this approach are: *Chersodoma* (11 spp.), *Dendrophorbium* (76 spp.), *Dorobaea* (3 spp.), *Gynoxys* (83 spp.), *Senecio* (including few segregated genera) (453 spp,), *Lasiocephalus* (5 spp.) and *Pentacalia* (39 spp.). This review is based on Cabrera et al. (1999) with modifications. The main goal of this review is to provide a clear overview of the group for a better understanding of the most useful characters for species identificatuon. Review was based on the study of hundreds of herbatium specimenes hosted at HSP, USM, MOL, CPUN, HUT, CUZ, HUSA, HCSM, MO, LPB, F, P, B, and L. Extensive fieldwork was carried out across Peru, Ecuador, Chile and Argentina.

Daniel Montesinos Tubée

Herbario HCSM
Universidad Católica de Santa María de Arequipa
Arequipa, PERU

dbmtperu@gmail.com

Dr. Daniel B. Montesinos-Tubée is interested in many aspects of Senecioneae research. He is currently working independently on systematics and ecology of *Senecio* from the Peruvian Andes. His work involves studies on morphological techniques combined with extensive fieldwork and herbarium classification which has encouraged him to encounter novelties to science in *Senecio* and *Dendrophorbium*. His studies are being published in taxonomical journals and are combined with phytosociological and archaeological studies. Daniel obtained his Ing. Agr. from the Universidad Católica de Santa María de Arequipa, his M.Sc. and Ph.D. from Wageningen University in The Netherlands. He is principal researcher at different scientific institutes across Peru, herbarium curator and director of the newly established HCSM and invited professor and speaker at universities and symposiums in Peru.

Cover photo
Senecio canescens. Lower slopes of Pastoruri peak, Huascaran National Park, Peru.

UNRAVELING THE IDENTITY OF "LAS CARQUEJAS": SEARCHING FOR A SOLUTION TO THE BACCHARIS TRIMERA COMPLEX (ASTEREAE: BACCHARIS SECT. CAULOPTERAE)

María V. Valtierra, Eduardo Marchesi, Gustavo Heiden & José M. Bonifacino

Unraveling the identity of "Las Carquejas": searching for a solution to the *Baccharis trimera* complex (Astereae: *Baccharis* sect. *Caulopterae*)

María V. Valtierra*[1], Eduardo Marchesi[1], Gustavo Heiden[2] & José M. Bonifacino[1]

[1] Laboratorio Botánica, Facultad Agronomía, UdelaR, Garzón 780, Código Postal 12900 Montevideo, Uruguay.

[2] Embrapa Clima Temperado, Rodovia BR 392, km 78, Caixa Postal 403, Pelotas, RS, Brasil

* *mvvaltierra@gmail.com*

Key words: Compositae, Baccharidinae, taxonomic novelties, synonymy.

The *Baccharis trimera* complex includes entities of *Baccharis* L. sect. *Caulopterae* group. A list of species and synonymy and geographic distribution are presented. *Baccharis trimera* is very widely distributed; it ocurrs in many habitats and has a remarkable morphological variation, a situation that through history led to a proliferation of names and misidentifications as similar species were interpreted by different authors as variations of *Baccharis trimera*. *Baccharis crispa, B. cylindrica, B. myriocephala, B. genistelloides* and *B. trimera* have been studied throughout history by different authors and recognized as independent but related species by some, as synonyms and as variants of *B. trimera* by others. Our study was based on the study of relevant literature, study of the protologues and the type specimens available in the JSTOR database, analysis of herbarium specimens hosted at MVFA, MVJB, MVM and SPF, and pointed field observations. We conclude that *Baccharis crispa* and *B. trimera* are independent species. *Baccharis crispa* is recognized as an endemic species of Uruguay. *Baccharis cylindrica* is included under the synonymy of *B. trimera*. Additionally, *B. myriocephala* and *B. genistelloides* are recognized as independent species but are excluded from the flora of Uruguay. A lectotype is selected for *B. crispa* and the names *B. cylindrica* and *B. trimera* are neotypified.

Victoria Valtierra

Laboratorio de Botánica
Facultad de Agronomía
Universidad de la República
Av. Garzón 780
Montevideo, CP 12900
U RUGUAY

mvvaltierra@gmail.com

My main academic interests include the taxonomy Astereae tribe. For my Masters, I reviewed *Baccharis* sect. *Caulopterae* for Uruguay. Currently I am involved in the Flora of Uruguay project with the Compositae. For this project I am contributing with the treatment of Astereae tribe species. I also teach Botany at the school of Agronomy (UdelaR) and I am about to start my PhD on systematics of *Baccharis* sect. *Caulopterae*.

Cover photo
Close up of Baccharis trimera

VARIATION ON A THEME: THE MORPHOLOGICAL LANDSCAPE OF ASTERACEAE INFLORESCENCES

Oriane Hidalgo, Lin Fu, Luca Pegoraro, Manica Balant, Teng Zhang, Maarten Christenhusz, Benjamin Coquillas, Rolland Douzet, Paula Elomaa, Felix Forest, Teresa Garnatje, Cynthia González, Nicholas Hind, Paula Rudall, Boštjan Surina, Thais Vasconcelos, Clément Vignon, Jurriaan M. de Vos, Luis Palazzesi, Jaume Pellicer & Ilia J. Leitch

Variation on a theme: the morphological landscape of Asteraceae inflorescences

Oriane Hidalgo[*1,2], Lin Fu[1,3], Luca Pegoraro[1], Manica Balant[4], Teng Zhang[5], Maarten Christenhusz[1,6], Benjamin Coquillas[1], Rolland Douzet[7], Paula Elomaa[5], Felix Forest[1], Teresa Garnatje[8], Cynthia González[9], Nicholas Hind[1], Paula Rudall[1], Boštjan Surina[4], Thais Vasconcelos[1], Clément Vignon[1], Jurriaan M. de Vos[1,10], Luis Palazzesi[11], Jaume Pellicer[1] & Ilia J. Leitch[1]

[1] Royal Botanic Gardens, Kew, Richmond, Surrey, TW9 3AB, UK.

[2] Laboratori de Botànica, Facultat de Farmàcia i Ciències de l'Alimentació, Universitat de Barcelona, Unitat Associada CSIC, Av. Joan XXIII s.n., 08028 Barcelona, Catalonia, Spain.

[3] South China Botanical Garden, Chinese Academy of Sciences, No.723, Xingke Road, Tianhe District Guangzhou 510650, P.R. China.

[4] University of Primorska, Muzejski trg 2, 6000 Koper, Slovenia.

[5] Department of Agricultural Sciences, Viikki Plant Science Centre, University of Helsinki, 00014, Finland.

[6] Plant Gateway, 5 Talbot Street, Hertford, Hertfordshire, UK.

[7] Station Alpine Joseph Fourier, CNRS UMS 2925, Université Joseph Fourier, Grenoble 1, BP 53, 38041 Grenoble Cedex 9, France.

[8] Institut Botànic de Barcelona (IBB-CSIC-ICUB), pg. del Migdia, s/n, Parc de Montjuïc, ES-08038 Barcelona, Catalonia, Spain.

[9] Laboratorio de Botánica, FCNyCS, Univ. Nac. de la Patagonia San Juan Bosco, 9 de julio 25, 3° piso, (9100) Trelew, Chubut.

[10] Department of Environmental Sciences - Botany, University of Basel, Schönbeinstrasse 6 4054 Basel, Switzerland.

[11] Museo Argentino de Ciencias Naturales, CONICET, División Paleobotánica, Buenos Aires, C1405DJR, Argentina.

**o.hidalgo@kew.org*

Key words: capitulum, floral symmetry, pseudanthium

The Asteraceae, or daisy family, is the most species-rich family of all flowering plants and is predominant (in terms of species number) in threatened ecosystems such as grasslands and high-altitude mountains. The family is characterised by its peculiar inflorescence – the capitulum– which mimics a flower but is in fact composed of a multitude of tightly grouped florets. The capitulum is seen as a key innovation that has greatly contributed to the impressive evolutionary success of the family. However, to date, there is still no comprehensive understanding of how the capitulum's morphology and structure vary across the Asteraceae lineages. This is mainly due to a lack of appropriate tools for describing such a complex and condensed structure. In this study, we developed a protocol to visualize and interpret the diversity of inflorescence morphology and architecture across the family. We analysed data gathered for over 700 accessions to explore the morphological landscape of Asteraceae inflorescences, and provide insights into the biological and evolutionary significance of capitulum diversification.

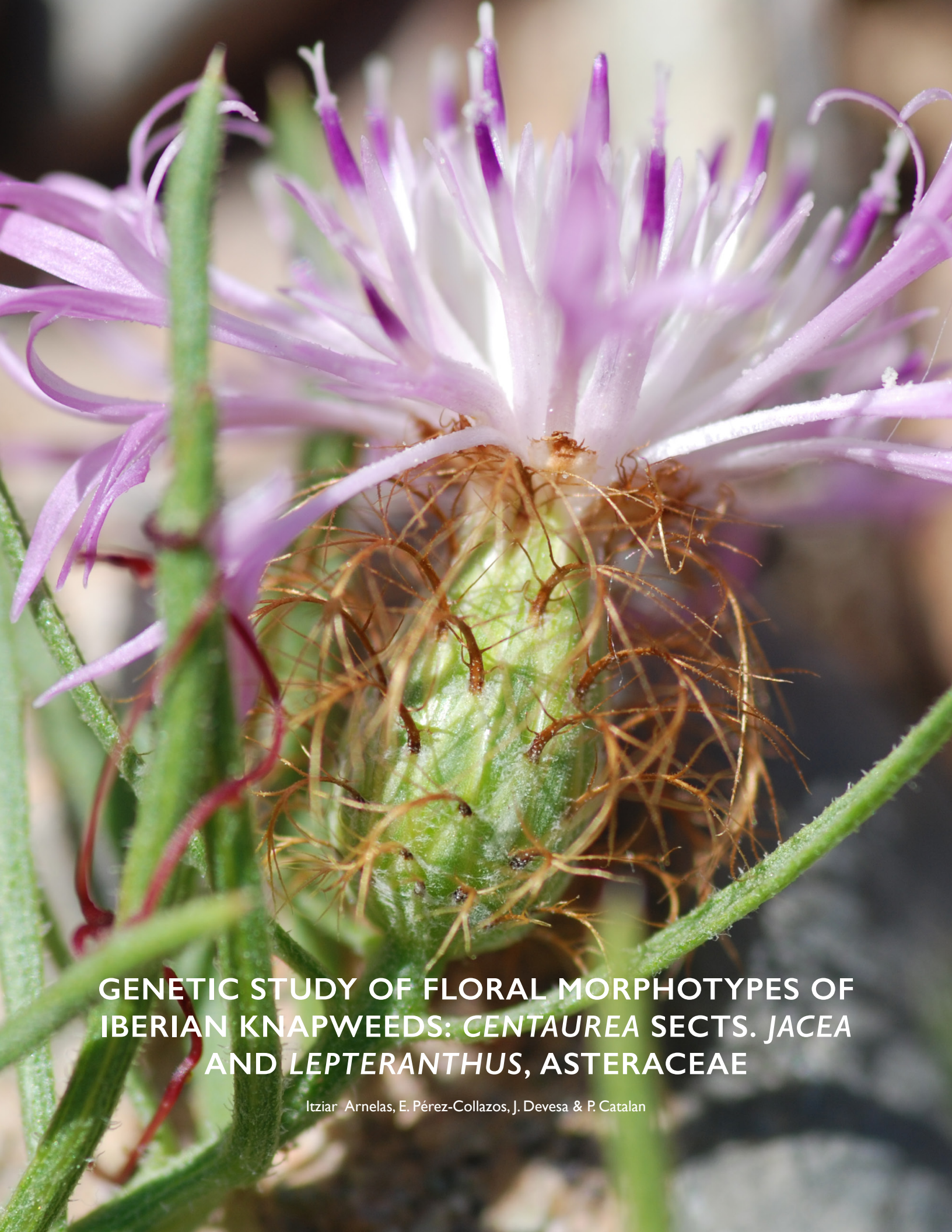
Oriane Hidalgo

Royal Botanic Gardens Kew,
Richmond, Surrey,
TW9 3AB, UK.

o.hidalgo@kew.org

The connecting thread of Dr. Oriane Hidalgo's research is to uncover patterns and processes of genome evolution responsible for plant diversification, through an integrated approach including evolutionary-developmental biology, phylogenetics and cytogenetics. She is particularly interested in studying the origin and diversification of plant reproductive morphologies across angiosperms from the evo-devo and genomic perspectives. Her research concentrates on the changes in floral symmetry and inflorescence complexity in the families Papaveraceae and Asteraceae. Her other main research line focuses on the evolutionary significance of the extraordinary diversity of plant genomes (i.e. size, organisation, composition and dynamics), covering a wide array of plant groups including angiosperms, gymnosperms and pteridophytes.

Cover photo
Lateral view of the head of Cnicothamnus (Gochnatieae)



GENETIC STUDY OF FLORAL MORPHOTYPES OF IBERIAN KNAPWEEDS: *CENTAUREA* SECTS. *JACEA* AND *LEPTERANTHUS*, ASTERACEAE

Itziar Arnelas, E. Pérez-Collazos, J. Devesa & P. Catalan

Genetic study of floral morphotypes of Iberian knapweeds: *Centaurea* sects. *Jacea* and *Lepteranthus*, Asteraceae

Itziar Arnelas[*1,2], **E. Pérez-Collazos**[3], **J. Devesa**[1], **P. Catalan**[3]

[1] Departamento de Botánica, Ecología y Fisiología Vegetal, Facultad de Ciencias, Universidad de Córdoba, Campus de Rabanales, Edificio José Celestino Mutis, Ctra. de Madrid km. 396, 14071 Córdoba, Spain

[2] Herbario HUTPL, Departamento de Ciencias Biológicas, Universidad Técnica Particular de Loja, Apartado postal 11-01-608 Loja. Ecuador.

[3] Departamento de Ciencias Agrarias y del Medio Natural. Escuela Politécnica Superior de Huesca. Universidad de Zaragoza. Carretera de Cuarte s/n. CP 22071 Huesca. Spain.

* itziarnelas2@gmail.com

Key words: Cardueae, Compositae, Morphology, Spain

Species of the genus *Centaurea* show flowers forming two types of capitula, radiant, where all flowers are tubular but the central hermaphrodite and small and the outers neutral and large (hereafter R morph), and non-radiant (NR), where central and outer flowers are hermaphrodite and identical in shape and size. Taxonomic studies in the Iberian Peninsula demonstrated the existence of floral morphological variability both between and within species of the sister *Centaurea* sects. *Jacea* and *Lepteranthus* lineages. We used AFLPs for testing their capability to discriminate the proposed taxonomic ranks and the R-NR morphotypes of the studied taxa and populations. We analyzed 510 individuals from 58 Iberian populations of 12 taxa and estimated several genetic diversity indexes (fT, fdt, fe, fr, 99%P) at the population, taxonomic and morphotypic levels. Genetic relationships were assessed through neighbor-joining (NJ) and PCoA clustering methods using the Nei and Li distance matrix distance. Within *C.* sect. *Jacea*, *C. debeauxii* subsp. *debeauxii* is the most diverse taxon and *C. nevadensis* the less diverse, whereas *C. linifolia* is the less diverse of *C.* sect. *Lepteranthus*. The genetic circumscriptions of both sections and of each studied taxon were recovered in the NJ tree and PCoA analyses. Within species, no segregation of R-NR morphotypes were observed except for populations of *C. jacea* subsp. *angustifolia* and *C. nevadensis*. We found that common species with large geographic distribution show the highest genetic diversity values, whereas the lowest values were found in several endemics. The segregation of *C.* sect. *Jacea* and *Lepteranthus* is in accordance with previous taxonomic and phylogenetic studies. The segregation of R/NR morphs was genetically supported within some species and populations, suggesting that the floral morphotype could be maintained in some genetically isolated allopatric populations but also in some sympatrically distributed populations.

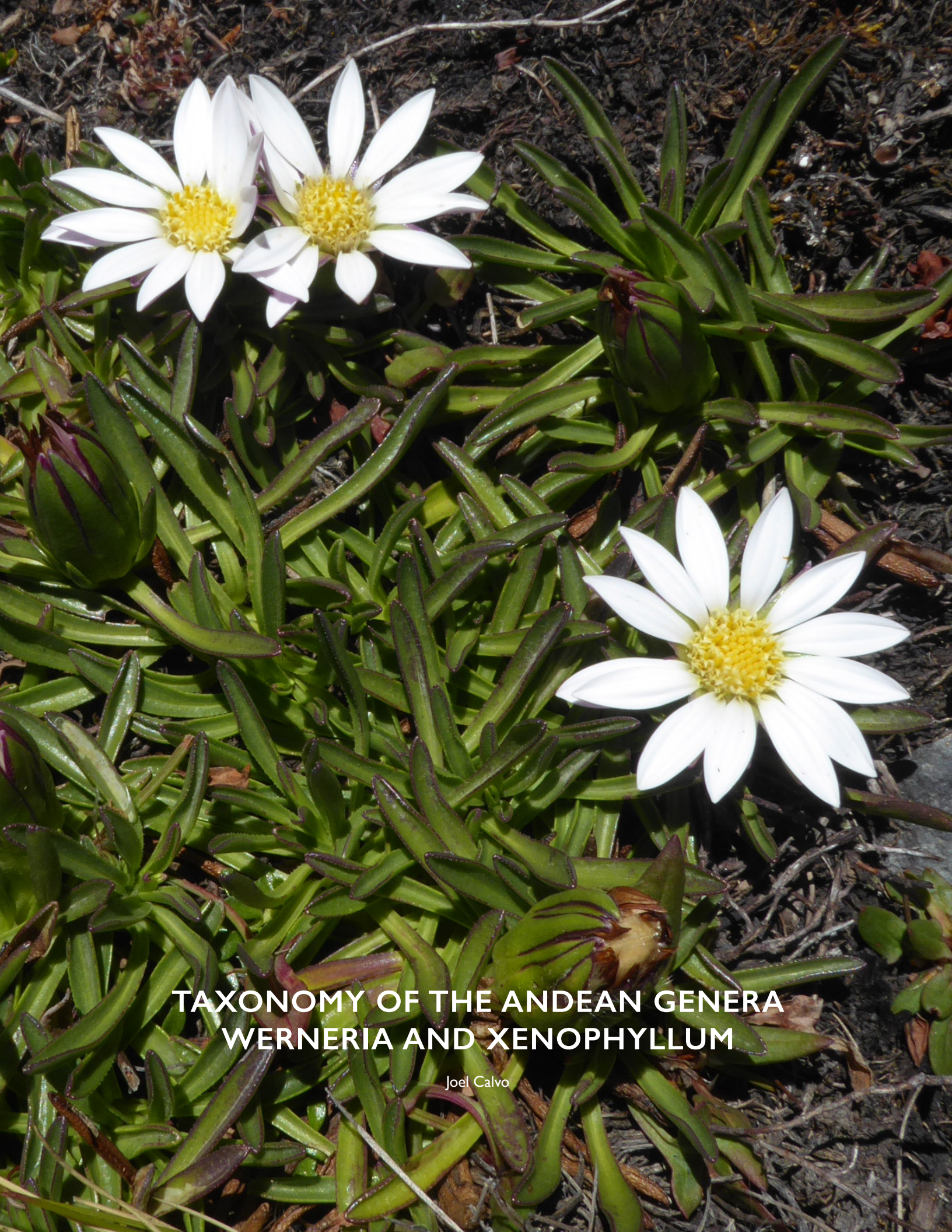
Itziar Arnelas

Herbario HUTPL,
Departamento de Ciencias Biológicas,
Universidad Técnica Particular de Loja,
Apartado postal 11-01-608
Loja. Ecuador.

itziarnelas2@gmail.com

Dr. Itziar Arnelas Seco (Spain) is interested in taxonomic research involving biodiversity studies focusing on naming, describing and classifying different genera of Compositae. Much of her research interest is related to developing phylogenetic and population genetic studies to uncover the taxonomy of focal groups. She is currently investigating the evolution and taxonomy of tribe Astereae (Compositae) and of other angiosperms (Poaceae, Festuca; Polygonaceae, Coccoloba) in order to increase the knowledge of the tropical and Andean flora of Ecuador. She obtained her PhD at the University of Cordoba (Spain) within the Flora Iberica research project. She is Professor of Botany at Universidad Tecnica Particular de Loja (UTPL, Ecuador).

Cover photo
Centaurea linifolia, lateral view of head



TAXONOMY OF THE ANDEAN GENERA WERNERIA AND XENOPHYLLUM

Joel Calvo

Taxonomy of the andean genera *Werneria* and *Xenophyllum* (Compositae: Senecioneae)

Joel Calvo

Instituto de Geografía, Facultad de Ciencias del Mar y Geografía, Pontificia Universidad Católica de Valparaíso, Avenida Brasil 2241, 2362807 Valparaíso, Chile.

calvocasas@gmail.com

Key words: Asteraceae, Neotropics, systematics.

Werneria and *Xenophyllum* (Senecioneae) are two genera mainly distributed through the Andes, from western Venezuela to southern Argentina and Chile. Only *W. nubigena* is a trans-Andean species that reaches Chiapas in southern Mexico. Their diversity centers are found around Central Peru and Bolivia. The genus *Werneria* contains ca. 30 species and *Xenophyllum* ca. 22 species. They are perennial rhizomatous herbs characterized by having the involucral bracts partially fused at the base, absence of a well-developed calyculus (supplementary bracts), radiate or discoid capitula (rarely disciform), and white or yellow ray florets when present. The genus *Xenophyllum* was segregated from *Werneria* in 1997 to include those species forming loose or tightly compressed hummocks or well-developed mats and having leaves along the stems. However, some species are hardly assignable to one or another genus. On-going studies are aimed to elucidate this issue. In Ecuador four species of *Werneria* and eight species of *Xenophyllum* are recorded; three species of *Xenophyllum* are endemic.

Joel Calvo

Instituto de Geografía,
Facultad de Ciencias del Mar y Geografía,
Pontificia Universidad Católica de Valparaíso,
Avenida Brasil 2241, 2362807
Valparaíso, Chile.

calvocasas@gmail.com

Dr. Joel Calvo is working on Andean Senecioneae since 2015, after undertaking the Ph.D. on Eurasian Senecio in the Real Jardín Botánico de Madrid. He is specialist in taxonomy and nomenclature, but also interested in systematics and phytogeography. His work is mainly focused on the genera Dendrophorbium, Pentacalia, Senecio, Werneria, and Xenophyllum. Joel did a postdoc at the Universidade Federal da Bahia (Brazil) and he is currently carrying out his second postdoc at the Pontificia Universidad Católica de Valparaíso (Chile). He is an active plant collector and also collaborates with the Spanish project Flora iberica.

Cover photo
Werneria orbignyana

PHYLOGEOGRAPHIC RELATIONSHIPS AMONG SCANDENT SPECIES OF *PENTACALIA*, *MONTICALIA* AND *DENDROPHORBIUM* (COMPOSITAE: SENECIONEAE)

Federico García

Phylogeographic relationships among scandent species of *Pentacalia*, *Monticalia* and *Dendrophorbium* (Compositae: Senecioneae)

Federico García

Herbario Nacional Colombiano (COL), Instituto de Ciencias Naturales, Edificio 425, Universidad Nacional de Colombia, Bogotá, Colombia,

fgarciay@gmail.com

Key words: classification, climber, Neotropics, phylogeny

Pentacalia, a Neotropical genus of about 100 species has shown in previous molecular phylogenetic studies to be paraphyletic and polyphyletic. The present study assesses this conclusion using morphology and new sequences of ETS, ITS and trnL regions of species from isolated areas of Northern Andes (e.g. Sierra Nevada de Santa Marta), and proposes a classification of the Colombian species into 4 groups elevated to the rank of sections. A morphological matrix is used to explore differences between the clades resulting of maximum parsimony analysis (graphical abstract), and allows to evaluate infrageneric groups proposed by J. Cuatrecasas. Reproductive and vegetative characters such as habit and number of ligules are studied in the light of our molecular topologies, and a biogeographical framework for the colonization and up/down migrations of *Pentacalia* sensu lato species in the Andes is presented. Evolutionary relationships among *Pentacalia* sensu lato and closely related genera such as *Monticalia* and *Dendrophorbium*, are discussed. Phylogenetic trees for Senecioninae suggest independent pathways of evolution during Andean species establishment, with plasticity in growing forms resulting in transformations from erect to scandent forms in several independent cases.

Federico García

Herbario Nacional Colombiano (COL),
Instituto de Ciencias Naturales,
Edificio 425,
Universidad Nacional de Colombia,
Cll 53 # 35-83, Bogotá, Colombia,

fgarciay@gmail.com

Federico García is a Biologist from Catholic University of Chile, Master degree in Paleontology from Montpellier University and PhD candidate in Systematics from National University of Colombia. Since 2004 he has been curator for Compositae at the National Herbarium of Colombia, where he forged his career next to Santiago Díaz-Piedrahíta, publishing with him the volume of tribe Heliantheae from the "FLORA DE LA REAL EXPEDICIÓN BOTÁNICA DEL NUEVO REYNO DE GRANADA (1783 - 1816)". His research interests are centered on evolutive models of scandent forms in Andean Mountains, and strange cases of evolution following the up-down migration model (J. Lynch 1984) for the colonization of The Andes, where species adapted to high altitudes modify their bauplans while reaching lower habitats.

Cover photo

Monticalia tolimensis (treated by J. Cuatrecasas as Pentacalia tolimensis) is an example of the complexity of the treatment of the nearly 220 species included in Pentacalia sensu lato. It is a shrub varying from erect (Monticalia concept) to subscandent forms (Pentacalia concept), with dentate leaves (Dendrophorbium concept).

TAXONOMY OF *BACCHARIS* (ASTERACEAE: ASTEREAE): REVISION OF SUBGENERA *CORIDIFOLIAE*, *HETEROTHALAMULOPSIS*, *HETEROTHALAMUS* AND *OBLONGIFOLIAE*

Gustavo Heiden

Taxonomy of Baccharis (Asteraceae: Astereae): revision of subgenera *Coridifoliae*, *Heterothalamulopsis*, *Heterothalamus* and *Oblongifoliae*

Gustavo Heiden

Embrapa Clima Temperado, Pelotas, Brazil.

gustavo.heiden@embrapa.br

Key words: Baccharidinae, Neotropics, Taxonomic revision, South America.

A novel phylogenetic based infrageneric classification of the American genus *Baccharis* (440 species) recognizes seven subgenera based on monophyletic groups. The taxonomy of *B.* subgen. *Tarchonanthoide*s, comprising 13 species, was recently revised and published. The current goal is to provide the taxonomic revision of another four subgenera, along with increasing the sampling of these subgenera for phylogenetic studies. For the completion of the revision of the sections *Coridifoliae*, *Heterothalamus*, *Heterothalamulopsis* and *Oblongifoliae*, review of literature, study of herbaria specimens and fieldworks are underway along with sequencing of additional specimens for the phylogeny. This work summarizes the first results of the number of accepted sections and species recognized in these subgenera. *Baccharis* subgen. *Oblongifoliae* comprises 18 species occurring mostly in the summits of the main mountainous ranges of South America, with the highest diversity found in southeastern Brazil. The sect. *Oblongifoliae* is the only known section belonging to this subgenus. *Baccharis* subgen. *Heterothalamus* comprises seven species occurring mostly in mountain summits and rock outcrops. This subgenus comprises three sections: sect. *Bradeanae* (2 spp.) found in Serra do Caparaó, southeastern Brazil; sect. Psila (2 spp.) occurring along the Andes from northern Argentina to Peru; and sect. *Heterothalamus* (3 spp.), distributed in Pampean mountains and hilly ranges of Argentina, southern Brazil and Uruguay. *Baccharis* subgen. *Heterothalamulopsis* comprises only the sect. *Heterothalamulopsis* with one species (*B. wagenitzii*), a rupiculous shrub found in basaltic cliffs in southern Brazil. *Baccharis* subgen. *Coridifoliae* comprises two sections and ten species: sect. *Pluricephala*e with two narrow endemic species from southern Brazil, found in highland marshes and peat bogs, and sect. *Coridifoliae*, comprised by eight species, occurring in moist or dry grasslands and savannas from Bolivia and central Brazil, south to central Argentina. Funding: Systematics Research Fund 2016.

Gustavo Heiden

Embrapa Clima Temperado
Rodovia BR 392, km 78
Caixa Postal 403
Pelotas, RS 96010-971, Brasil

gustavo.heiden@embrapa.br

www.embrapa.br/equipe/-/empregado/362914/gustavo-heiden
www.researchgate.net/profile/Gustavo_Heiden

Gustavo Heiden is a Botanist interested in systematics, biogeography, evolution, conservation and applied uses of the plants, specially South American Subtropical and Temperate flora. Major research interests include systematics and evolution of Compositae; genetic resources and pre-breeding of crop wild relatives; sustainable management and use of the palm landscapes from Southern Brazil; and curation and exploration of herbaria data. Gustavo obtained his Bachelor and Licenciate degree in Biology from Universidade Federal de Pelotas, Master in Botany from Jardim Botânico do Rio de Janeiro, and PhD from Universidade de São Paulo. He currently works as researcher at Embrapa Clima Temperado, Pelotas, Brazil.

Cover photo
Baccharis psiadioides, a species of Baccharis placed in the subgenus Heterothalamus