



# The Bean Bag

**A newsletter to promote communication among research scientists  
concerned with the systematics of the Leguminosae/Fabaceae**

Issue 64, Year 2017

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# Letter from the Editor

Dear Bean Bag Fellow

I hope your 2018 has been wonderful so far!

Apologies for the delay in getting this issue to you. As you will see, this is another extra-large issue. The extension of the submission deadline seems to have done the trick! But then the BB webpage added an extra delay, as it is currently still unavailable. The Kew IT team is working on a new site that will be ready only in a few months. I will keep you posted.

A lot has been going on in 2017 in the legume world, not to forget that the new Leguminosae subfamily classification was published in the journal *Taxon*, as reported in the previous BB Newsletter 63.

This issue starts by remembering Mario Sousa, who many of the BB members have known personally, including myself. Afterwards, you will get to know everything on electronic access to data about Legumes. Then we will look forward into 2018, with the International Legume Conference in Sendai, Japan!

Several beautiful photographs of Brazilian legumes will delight you. Those of the Australian *Daviesia* flowers will precede one of the highlights from the world of legume publications. You will certainly note the highlight with the funny cartoon! Concluding, as always, you'll find the traditional (and long) list of legume bibliography.

As a reminder, the Bean Bag Newsletter is sent out through the BB Google Group, which is the only purpose of this google group. For correspondence about the BB, members are invited to email at [beanbag.kew@gmail.com](mailto:beanbag.kew@gmail.com).

Finally, I am very grateful to Gwil Lewis and Leo Borges for their editorial assistance and to all contributors of this issue for sharing their news, insights, images and publication citations, making this probably one of the longest issues!

Thank you for your attention, and I will be back with news about the webpage.

Kind regards,

*Brigitte Marazzi*

## The Bean Bag Newsletter in the Web

The present and the most recent newsletters are made available for online download on the BB webpage, whereas issues 1-54 are found on the digital library: [www.biodiversitylibrary.org/bibliography/122385#/summary](http://www.biodiversitylibrary.org/bibliography/122385#/summary)

Visit our [Webpage](#) (unavailable), join us on [Google Group](#) or find us on [Facebook](#)!

# REPORTS OF 2017 HAPPENINGS

## MARIO SOUSA SÁNCHEZ (1940-2017)

Communicated by Lulu Rico, Royal Botanic Gardens, Kew



Mario Sousa in 2006 at the Instituto de Biología, UNAM. Photo courtesy of E.J. Lott.

Professor Mario Sousa Sánchez (b 19 Feb 1940, d 17 Jan 2017). Mario Sousa served at the Instituto de Biología (UNAM) for 52 years, where he began as an academic technician in 1964, fulfilling several responsibilities over the course of his long and devoted career: researcher, editor, and twice Head Curator of the National Herbarium of Mexico, among others. In 1989 during the 100th Anniversary of the National Herbarium (MEXU), UNAM (Universidad Nacional Autónoma de México), he was awarded a special Merit Medal for his dedication to MEXU; in 1993 he was recognized for his contributions to botanical knowledge of the Yucatan Peninsula; in 2010, he received the Botanical Merit Medal from the Sociedad Botánica de México; in 2011 was awarded a Botany *Doctor Honoris Causa* at

of the Universidad Michoacana de San Nicolás de Hidalgo. Additionally, he was Honorary Research Curator at the, Missouri Botanical Garden Herbarium.

Sousa studied the vegetation regeneration of the Tuxtepec region in Oaxaca for his BSc thesis in the Facultad de Ciencias (UNAM), under the supervision of Prof. Faustino Miranda, obtaining his degree in 1963. He was part of the *Dioscorea* Commission which surveyed this plant genus, especially *D. composita* Hemsl., at that time recently discovered as a source of diosgenin and steroids for pharmaceutical research. He played a key role, together with Prof. A. Gómez-Pompa, in establishing 'Los Tuxtlas', the first tropical field station of UNAM. The station comprises

600 ha. donated in 1966 by arrangements with the Governmental Agriculture Department in Mexico. Los Tuxtlas remains an important forest reserve where many researchers and their students continue working. During his life he tirelessly carried on field work in Mexico and other Central American countries, despite various difficulties. Once in 1980, after returning from an expedition in Panama, he suffered a painful infection of the parasite *Dematobia hominis* L.f. Luckily, he was well attended and just scars of the larvae were left on his forearm and head.

During a study visit to Berkley, University of California, he made the acquaintance of Prof. Velva E. Rudd, who encouraged him to research the genus *Lonchocarpus* under the super-



Mario Sousa at the Inst Ecol Patzcuaro Mich. Photo courtesy of the Archives of the Instituto de Biología, UNAM.

vision of B.G. Schubert at Harvard University (1968-1972). Rudd and Schubert, both specialists on the Leguminosae, were his teachers, friends, and eventually advisers for several decades to both Mario and his students. In his long, and exceptionally dedicated career, he published important works on Legume taxonomy and diversity (Sousa 1993, 2001 a & b, Sousa & Delgado 1993, Lavin & Sousa 1995); as well as chapters for several books (Sousa et al. 2004, 2007, Sousa 2010) and described at least 159 species new to science within 29 genera, especially in the former tribe Lonchocarpaceae and in the Millettieae (among some are Sousa & Peña de Sousa 1981, Sousa 2005, 2009); at least 32 taxa have been dedicated to him (Grether 2017, Rico & Grether 2017).

Returning to UNAM after his years at Harvard University, in 1975 he became Head Curator of MEXU; then, under his influence, the National Herbarium began a period of exponential growth. In five

years it went from c. 80,000 specimens to more than 300,000, and in 1985, when he left his first period as Head Curator, MEXU had incorporated more than 400,000 specimens. In his capacity as Head Curator, Mario Sousa, with his characteristic diligence, raised the Herbario Nacional, MEXU, to international standards and saw it registered in Index Herbariorum. Under his direction during a second period as Head Curator (1994-2003), MEXU grew to more than one million specimens. He promoted intensive field work for specimen collections and exchange with other institutions, both national and international (see Dávila & German 1991), and obtained donations or purchased historical herbarium sets (Rico & Grether 2017).

During his administration, he acquired grants, outside the UNAM, aiming to make a bigger and better MEXU. He knew of the importance of ancillary collections, such as those of Asa Gray in the USA, and he formalized several

ancillary collections for which the Instituto de Biología was a repository, such as: pollen, photography slides, etc. Among those worth highlighting is the wood collection, started by F. Miranda in 1949, officially registered in Index Xylariorum; nowadays, two databases of this are available, one at CONABIO and the other in UNIBIO, at the Institute of Biology server (Lynch & Gasson, 2010). Another important collection is that of seeds and fruits. In 1974 Mario Sousa started to collect drift seeds and fruits along the coast of the States of Oaxaca and Veracruz. He knew the importance of these, the study of, but also for plant dispersal and biogeographical research. Sousa supported the growth of the departmental botany library by increasing the exchange of materials, especially those regarding floras, nomenclature, taxonomy, and microfilms with the cooperation of the late librarians Raymundo García and Armando Butanda. He often said that without a library, it was not possible to

have an Herbarium. He served as editor of the Boletín de la Sociedad Botánica de México (1973-1979) and the Anales del Instituto de Biología, UNAM (1993-1994), but his most notable editorial contribution was for the Flora Mesoamericana Project of which, in 1980, he was one of four founders along with Gerrit Davidse (Missouri Botanical Garden, USA), Arthur Chater and Christopher Humphries at the British Museum (Natural History, London).

In Sousa's office there is a cabinet full of published or draft papers on biographies and itineraries of major

botanists because he realized as a student that many older herbarium specimens did not have complete collection data. To find the localities of plants of his interest, he researched botanist's diaries and built up itineraries, georeferencing the sites as much as possible by use of maps and gazetteers (Purata 1981, Sousa 1969, 1979).

In October 2015 he celebrated his 50 years' service in UNAM. During his tenure he supervised at least 23 theses, eight with honors and prizes given by the Sociedad Botánica de México (Rico & Grether 2017). He also will be

remembered for his warm welcome to MEXU visitors and his frequent collaborations with botanists from other countries who shared his zeal for knowledge and appreciation of the flora of Mexico.

He spoke, although somewhat reluctantly, at many fora. His last in 2016, in a Symposium at the XX Mexican Botanical Congress, celebrating the 75<sup>th</sup> Anniversary of the Sociedad Botánica de México where he stressed the research impact of the 1960s "Commission of *Dioscorea*" in the knowledge of Mexican tropical rain forests. He also described to



III Congreso Mexicano de Botánica, 14 Oct 1966 - M. Sousa, A. Carter, F. Gonzalez Medrano and Mason (third, fourth and fifth left to right). Photo courtesy of the Archives of the Instituto de Biología, UNAM.

the younger generation what botany and plant exploration were like before GPS, lightweight clothing and other advances in field equipment. Furthermore, he brought to life Miranda's teaching, and anecdotes of his dear friends and colleagues.

He continued to study the genus *Lonchocarpus* and other

Legumes until his last working day in the 'Sala de Tipos' at MEXU, where he was a living treasure.

Mario Sousa will be remembered for his dedication and tireless effort, revealed in his fine sense of humor, patience, kindness, and more especially his open-minded attitude to the rest of the

botanical world, an attitude of fair collaboration and co-operation.

Mario Sousa is survived by three sons from his first marriage, and by his second wife and devoted colleague, Gloria Andrade, and their two daughters.

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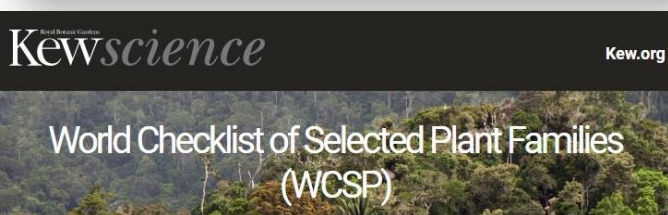
Mario Sousa at the Institut für Allgemeine Botanik in Hamburg, Germany. Photo courtesy of the Archives of the Instituto de Biología, UNAM.

# GOOD TO KNOW

## ACCESSING DATA ABOUT LEGUMES

Communicated by Bob Allkin and Gwil Lewis, Royal Botanic Gardens, Kew

Many of you may be wondering how to access data about Legumes. The sad truth is that there have been backward steps in recent years as well as some advances. We are frequently asked by colleagues to point them to the most appropriate available resources and this note is to summarise the situation from our perspective.



### Legumes of The World Online

The online version of Kew's "Legumes of the World" publication (illustrated accounts of all legume genera) is no longer available on Kew's website. One current initiative is to include the data from LOWO into Plants of the World Online and many of the images are already available. Sadly, however, there are no immediate plans to resurrect the LOWO interface which permitted collaborating legume authors to edit their own chapters or users to browse alternative phylogenetic taxonomies. Additional resources are required to resurrect the LOWO platform and to enable the legume community to maintain the generic accounts. Any group or institute interested in taking on responsibility for, developing or otherwise supporting the LOWO resource please contact Gwil Lewis.

### Species Checklists

The ILDIS (international Legume Database and Information Service) homepage at Reading appears no longer to be maintained and data searches are no longer possible. The ILDIS checklist data is however available through [Catalogue of Life](#).

A convenient online publication of all the data classes stored in ILDIS is available [here](#) based on Version 10.38 of the database. You can search by taxonomy, geographical distribution, habitat, common name or descriptor (e.g. Habit, Climbing, Conservation, Lifespan etc.) as well as on use of the plant.

The [World Checklist](#) project is actively curating a checklist of all the seed plants including legumes. It contains accepted names, full synonymy and distribution data and is now complete for 98% of all legume species. The team are currently adding recently published legume species and ensuring that all 'autonyms' are included. Once the outcome is peer-reviewed it will be added to the World Checklist website. More than 95% of legume species data are nevertheless already visible through Kew's [Plants of the World Online](#) portal (POWO). Since POWO only includes those scientific names which have been explicitly linked to IPNI (International Plant Names Index), some synonymy and infraspecific taxa recorded in the World checklist database are, temporarily, missing from POWO although these will slowly come online.

# A LOOK INTO 2018

## PROGRESS REPORT ON *ACACIA* S.L. IN THE INDIAN SUBCONTINENT AND IN CHINA

Communicated by Bruce Maslin, W.A. Herbarium, Australia, and Singapore Botanic Gardens Herbarium

### Revision of the *Acacia* sens. lat. flora of China\*

By B.R. Maslin, B.C. Ho, H. Sun and L. Bai.

This project has been in progress for the past 3 or 4 years and is nearing completion; we hope to finish towards the end of 2018. All 21 indigenous species of *Acacia* sens. lat. in China belong to the genus *Senegalia*; around half of these will be either described as new or will be new combinations in this work. The introduced species belong to the genera *Acacia* sens. str. (a number of which are significant commercial timber crops in southern China), *Acaciella* (very uncommon), *Senegalia* and *Vachellia*.

### Annotated Checklist of *Senegalia* and *Vachellia* for the Indian subcontinent

By A.S. Deshpande, S. Krishnan, M.K. Janarthanam and B.R. Maslin

This Checklist is now completed and we are currently looking for a suitable place to publish. The Checklist complements the one I did for Southeast Asia and China in 2015 (Maslin, B.R. 2015. Synoptic overview of *Acacia* sensu lato (Leguminosae: Mimosoideae) in East and Southeast Asia. Gardens Bulletin Singapore 67: 231-250).

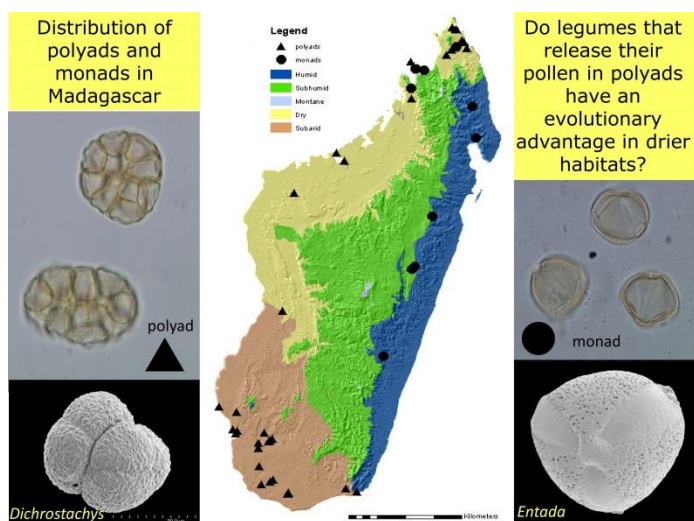
\*Provisional title.

## POLLEN IN MADAGASCAN MIMOSOID LEGUMES

Communicated by Hannah Banks  
Royal Botanic Gardens, Kew

**Pollen and ecological correlations in Madagascar's mimosoid legumes** - A project by MSc Student Shawn O'Donnell, with Hannah Banks (Primary supervisor) and Gwilym Lewis (Co-Supervisor), Royal Botanic Gardens, Kew.

The mimosoid legumes are one of the few angiosperm groups that contain taxa that release pollen as polyads. Such pollen aggregations affect, or are affected by, several other aspects of reproductive biology and ecology, such as multi-ovulate ovaries and pollination efficiency. Banks *et al.* (2010) showed that in the *Adenantha* group the number of pollen grains in polyads is closely correlated with the number of ovules in ovaries. These authors also showed that stigmatic morphology varied from widely crateriform in taxa that release monads, to narrowly porate and tubular in taxa that release polyads, with the width of these porate stigmas sufficient only to receive a single polyad. In combination, these traits imply an efficient pollination system in taxa that release polyads, in which full fertilisation of all ovules of a flower appears to require only a single pollination event. Preliminary data suggest that polyads in Madagascar's mimosoids may have evolved as adaptations to drier environments (please see figure), and/or in conjunction with ant-plant mutualisms. Many species have ant mutualisms, whereby ants provide defence against herbivory, and some studies show plants produce much more growth when ants are present compared with individuals where the ants are absent. However, the ants guard the plants so well that they can also interfere with pollinators during flowering. Willmer *et al.* (2009) showed that several species of the mimosoid genus *Vachellia* Wight & Arn in mixed-species acacia savannas in Kenya produce floral volatile organic compounds that deter ants from open flowers. Might caducous anther glands in



Do legumes that release their pollen in polyads have an evolutionary advantage in drier habitats?

Madagascar mimosoids be involved with the production of ant-deterrent volatile organic compounds that maintain a narrow temporal window for pollination? Under such temporally constricted circumstances, pollen aggregation may provide a selective advantage, whereby one pollination event could provide enough pollen to fertilise all the ovules in the ovary. To test these hypotheses, we collected data on habitat, pollen, ovules, seeds, anther glands and extrafloral nectaries spanning all 14 genera of Madagascar mimosoids, and carried out statistical analyses. This project is currently being prepared for publication.

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# A LOOK INTO 2018



## VII INTERNATIONAL LEGUME CONFERENCE SENDAI, JAPAN AUGUST 29 - SEPTEMBER 2



Communicated by Tadashi Kajita  
Chairperson, 7ILC Organizing Conference

It is our pleasure to announce the Seventh International Legume Conference (7ILC) to be held in Sendai, Japan, August 29-September 2, 2018. Sendai is the largest city in the northeast part of Japan and known as “City of Trees”. At the seaside, Matsushima bay is known as one of the most beautiful viewpoints in Japan.

The theme for the conference is “Legume Systematics for the Next Generation”. The conference program will be structured to cover various topics such as Systematics, Evolution, Genetics and Genomics, Legume-bacteria symbiosis, and Agriculture.

The organizing committee is gearing up for an exciting and informative conference program including plenary lectures, symposia on a variety of topics, poster presentations and various programs for participants from all over the world. We welcome in particular the participation of young researchers and students.

The webpage for the conference is at  
<http://7ilc.info>

Please follow the updates in the website.

### Important dates in 2018:

FEBRUARY 25: Deadline for **Early bird registration**

MAY 31: Deadline for **Abstract submission**

Please mark the dates in your calendar and start preparing your fabulous talk. We are looking forward to welcoming you in Sendai, Japan!

Photo (top) courtesy of Kun Qian.

Photos (middle, bottom):  
[commons.wikimedia.org](https://commons.wikimedia.org)

# A LOOK INTO 2018

## A MORPHOLOGICAL ENSEMBLE – PART 2

Communicated by Leonardo Borges on behalf of the Legume Phylogeny Working Group

2017 was a good year for Legume Systematics. We got a new classification for the Leguminosae and many articles were published, including a large number of new species and genera. We were also waiting for a previously announced issue on Legume Morphology in the Botanical Journal of the Linnean Society and we now know it is almost finished and ready to come out in the first half of

2018. This selection of papers is going to be a good addition to our knowledge on legume morphology, but there is still a lot to discover and understand. We are looking forward to this year bringing good opportunities for us to engage in collaborative efforts to study the diverse phenotype of the Leguminosae, particularly in the context of the upcoming 7 ILC, in Japan.



The last ILA Conference was held in 2015 in Milan, Italy.

## XV INTERNATIONAL LUPIN CONFERENCE JOINTLY WITH THE INTERNATIONAL TARWI CONGRESS COCHABAMBA, BOLIVIA MARCH 18-21, 2019.

Communicated by Ana M. Planchuelo,  
member of the International Lupin Association Board and the  
Scientific Organizing Committee

The International Lupin Conference is organized by the International Lupin Association (ILA) and since the 1st ILA Conference in Cuzco, Perú in 1980, until now the meetings are traditional conventions for scientists, researchers, breeders, farmers, industrial manufacturers, University professors, technicians and students around the world to share the experience and the expertise in all fields related to the genus *Lupinus*.

The ILA Conference and the Tarwi Congress will feature public, plenary and keynote lectures, general symposia, poster presentations in English and Spanish. Also special seminars and credit courses for graduate students will be announced in future web pages.

More details and instructions for speakers and poster presentation will be announced later. For information or submission activities until the web page is ready, please email to: [aplanch@gmail.com](mailto:aplanch@gmail.com)

## LEGUME SHOTS OF THE YEAR



Cool coloured stipules  
(not bracts!) on  
young synflorescences  
of *Mimosa regina*.

Photo by  
Leonardo Borges



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*Camptosema ellipticum*

Photo by  
Leonardo Borges



*Eriosema glaziovii* shining in  
Brazilian grasslands.

Photo by  
Leonardo Borges



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An upside-down and strongly  
curled, asymmetric flower of  
*Canavalia mattogrossensis* from  
Brazil.

Photo by  
Leonardo Borges

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*Parryella* species  
in northern Arizona (US).

Photo by  
Matt Lavin

If anyone is planning  
systematic/phylogenetic  
work on *Errazurizia* or  
*Parryella*, please contact  
Martin Wojciechowski  
(Arizona State University):  
[mwojciechowski@asu.edu](mailto:mwojciechowski@asu.edu)  
Thank you!



*Errazurizia* species  
in northern Arizona (US).

Photo by  
Matt Lavin





Phylloclades and red bird-pollinated flower of *Daviesia epiphyllum*.

Photo by Ron Hotchkiss, taken at the Australian National Botanic Gardens.

Image downloaded from the Photo Collection of the Australian National Botanic Gardens  
<http://www.anbg.gov.au/photo>

See next page for more details on genus *Daviesia*.



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Yellow and red ("egg and bacon") flowers of *Daviesia sarissa*.

Photo by Mike Crisp

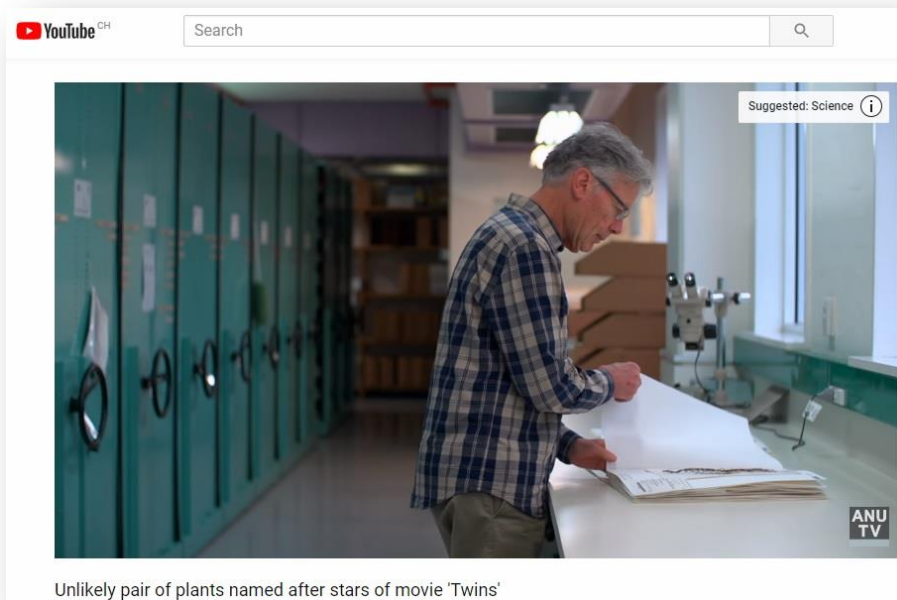
# LEGUME BIBLIOGRAPHY UNDER THE SPOTLIGHT

## A LIFETIME WORK HAS BEEN PUBLISHED: THE MONOGRAPH OF *DAVIESIA* (MIRBELIEAE)

Communicated by Mike Crisp, Australian National University

I commenced work on this monograph in 1974, spent some time at Kew in 1981-2, doing some of my early work on *Daviesia*, but was only able to find time to complete it after retiring recently.

From the abstract: "*Daviesia* is a clade of scleromorphic shrubs that are endemic to Australia and its near offshore islands, where it is the largest genus of Fabaceae subfam. Faboideae, with 131 species recognised here. The genus is distributed throughout the continent and occurs in all major habitats except wetlands, rainforest and the alpine zone. This is the first monograph of the genus published since Bentham's in 1864, which included only 55 species. New taxa described herein are *D. divaricata* subsp. *lanulosa*, *D. filipes* subsp. *terminalis*, *D. subulata*, *D. schwarzenegger* and *D. scabrella*. New combinations with a change of rank are *D. aphylla*, *D. decurrens* subsp. *hamata* and *D. implexa*, while *D. devito* is raised from subspecies level and given a new epithet. [...]"



Watch the video about this work:

[Unlikely pair of plants named after stars of movie 'Twins'](#)

The video by the ANU Media Unit is an interview with Mike Crisp and focusses on the two cryptic species that the authors described and named after the actors Arnold Schwarzenegger and Danny DeVito. The video also covers the monograph more generally.

**Full reference:** Crisp M.D., Cayzer L., Chandler G.T., Cook L.G. 2017. A monograph of *Daviesia* (Mirbelieae, Faboideae, Fabaceae). *Phytotaxa* 300: 1–308. The paper is freely available under Open Access: <https://biotaxa.org/Phytotaxa/article/view/phytotaxa.300.1.1>

# LEGUME BIBLIOGRAPHY UNDER THE SPOTLIGHT

## THE MAJESTIC CANOPY-EMERGENT GENUS *DINIZIA* (LEGUMINOSAE: CAESALPINIOIDEAE), INCLUDING A NEW SPECIES ENDEMIC TO THE BRAZILIAN STATE OF ESPIRITO SANTO.

Communicated by Gwil Lewis,  
Royal Botanic Gardens, Kew

Since its description, almost 100 years ago, the genus *Dinizia* has been treated as monospecific, comprising the single canopy-emergent species *Dinizia excelsa* Ducke which grows in non-flooded Amazonian forests of Guyana, Suriname and seven states of northern and central-western Brazil.

*Dinizia jueirana-facao* G. P. Lewis & G. S. Siqueira, which grows in a restricted area of semi-deciduous Atlantic rain forest in Espírito Santo state, Brazil, is described as a new species in the genus. The new species is also a canopy-emergent of impressive stature. [...]

Fossil leaves, inflorescences and fruit provide evidence for a *Dinizia*-like ancestor occurring in south-eastern North America during the Eocene. In contrast to *D. excelsa* where pollen is dispersed in tetrads, the pollen of *D. jueirana-facao* is shed in monads. *D. jueirana-facao* is considered critically endangered following IUCN conservation criteria, whereas *D. excelsa* is assessed to be of least concern.

Read the story in this Kew Science blog:  
[“Probably the worlds heaviest living organism described in 2017?”](#)

**Full reference:** Lewis, G.P., Siqueira, G.S., Banks, H. & Bruneau, A. (2017). The majestic canopy-emergent genus *Dinizia* (Leguminosae: Caesalpinioideae), including a new species endemic to the Brazilian state of Espírito Santo. Kew Bulletin 72: 48.

The paper is freely available under Open Access:  
<https://link.springer.com/article/10.1007/s12225-017-9720-7>



The impressive trunk of *Dinizia jueirana-facao*.  
Photo courtesy of Gwil Lewis

Drawing of *D. jueirana-facao* by Margaret Tebbs,  
from Fig. 3 of Lewis et al. (2017).





# LEGUME BIBLIOGRAPHY UNDER THE SPOTLIGHT

## A CARTOON ABOUT THE HETEROCHROMATIC AND CYTOMOLECULAR DIVERSIFICATION IN THE CAESALPINIA GROUP

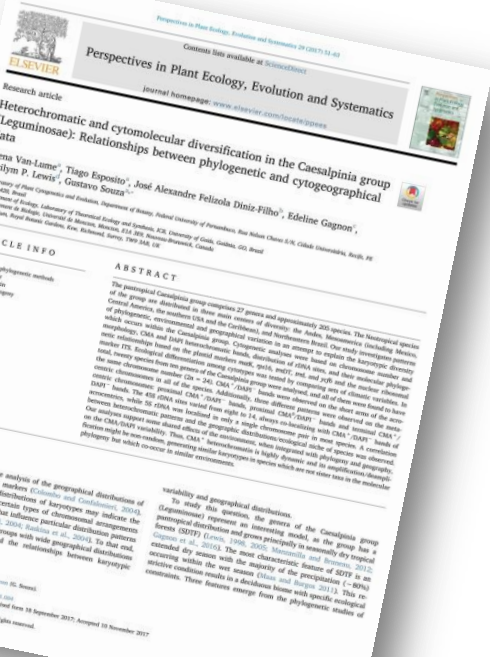
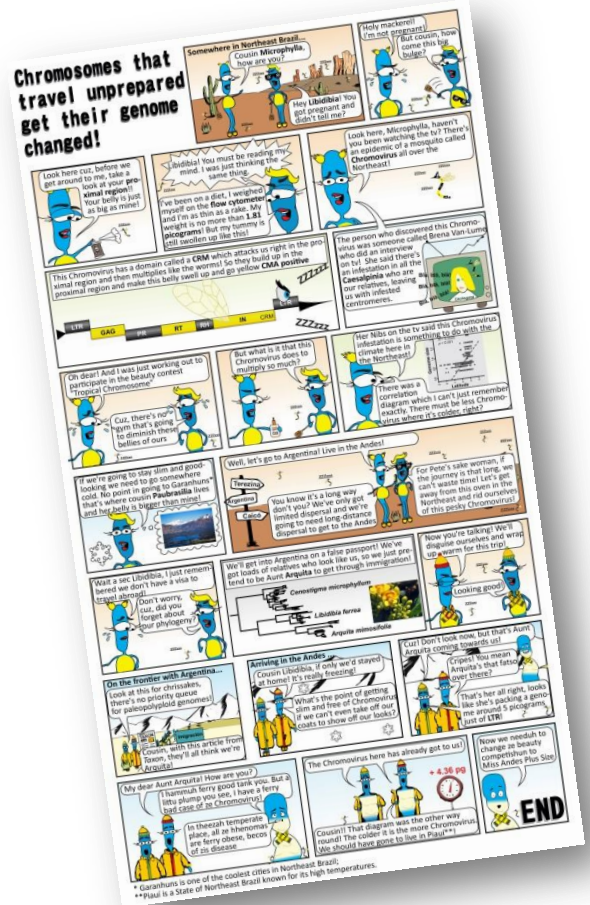
Communicated by Gustavo Souza,  
Universidade Federal de Pernambuco, Brazil

A cartoon tells the science story, in a fun way, of the recently published article (Van-Lume et al., 2017) in collaboration with Gwil Lewis (Royal Botanic Gardens, Kew). See the next page for the full-size version.

Drawings and original text (in Portuguese) are by Gustavo Souza, English translation and review by Simon Mayo and Gwil Lewis.

The pantropical Caesalpinia group comprises 27 genera and approximately 205 species. The neotropical species of the group are distributed in three main centers of diversity: the Andes, Mesoamerica (including Mexico, Central America, the southern USA and the Caribbean), and Northeastern Brazil. The study by Van-Lume and co-authors investigates patterns of phylogenetic, environmental and geographical variation in an attempt to explain the karyotypic diversity which occurs within the Caesalpinia group.

(Adapted from the abstract of Van-Lume et al.)



### Full reference:

Van-Lume, B., Esposito, T., Diniz-Filho, J.A.F., Gagnon, E., Lewis, G.P. and Souza, G., 2017. Heterochromatic and cytomelecular diversification in the Caesalpinia group (Leguminosae): Relationships between phylogenetic and cytogeographical data. *Perspectives in Plant Ecology, Evolution and Systematics* 29: 51-63.

<https://www.sciencedirect.com/science/article/pii/S1433831917300811>

# Chromosomes that travel unprepared get their genome changed!

Somewhere in Northeast Brazil...

Cousin Microphylla, how are you?

Hey Libidibia! You got pregnant and didn't tell me?

Holy mackerel! I'm not pregnant!

But cousin, how come this big bulge?

Look here cuz, before we get around to me, take a look at your proximal region!! Your belly is just as big as mine!

Libidibia! You must be reading my mind. I was just thinking the same thing.

I've been on a diet, I weighed myself on the flow cytometer and I'm as thin as a rake. My weight is no more than 1.81 picograms! But my tummy is still swollen up like this!

Look here, Microphylla, haven't you been watching the tv? There's an epidemic of a mosquito called Chromovirus all over the Northeast!

This Chromovirus has a domain called a CRM which attacks us right in the proximal region and then multiplies like the worms! So they build up in the proximal region and make this belly swell up and go yellow CMA positive

The person who discovered this Chromovirus was someone called Brena Van-Lume who did an interview on tv! She said there's an infestation in all the Caesalpinia who are our relatives, leaving us with infested centromeres.

Oh dear! And I was just working out to participate in the beauty contest "Tropical Chromosome"

Cuz, there's no gym that's going to diminish these bellies of ours

But what is it that this Chromovirus does to multiply so much?

Her Nibs on the tv said this Chromovirus infestation is something to do with the climate here in the Northeast!

There was a correlation diagram which I can't just remember exactly. There must be less Chromovirus where it's colder, right?

If we're going to stay slim and good-looking we need to go somewhere cold. No point in going to Garanhuns\* that's where cousin Paubrasilia lives and her belly is bigger than mine!

Well, let's go to Argentina! Live in the Andes!

You know it's a long way don't you? We've only got limited dispersal and we're going to need long-distance dispersal to get to the Andes

For Pete's sake woman, if the journey is that long, we can't waste time! Let's get away from this oven in the Northeast and rid ourselves of this pesky Chromovirus!

Wait a sec Libidibia, I just remembered we don't have a visa to travel abroad!

Don't worry, cuz, did you forget about your phylogeny?

We'll get into Argentina on a false passport! We've got loads of relatives who look like us, so we just pretend to be Aunt Arquita to get through immigration!

Now you're talking! We'll disguise ourselves and wrap up warm for this trip!

Looking good!

On the frontier with Argentina...

Look at this for chrissakes, there's no priority queue for paleopolyploid genomes!

Cousin, with this article from Taxon, they'll all think we're Arquita!

Arriving in the Andes...

Cousin Libidibia, if only we'd stayed at home! It's really freezing!

What's the point of getting slim and free of Chromovirus if we can't even take off our coats to show off our looks?

Cuz! Don't look now, but that's Aunt Arquita coming towards us!

Cripes! You mean Arquita's that fatso over there?

That's her all right, looks like she's packing a genome around 5 picograms just of LTR!

My dear Aunt Arquita! How are you?

I hammuh ferry good tank you. But a littu plump you see, I have a ferry bad case of ze Chromovirus!

In theezah temperate place, all ze hhenomas are ferry obese, becos of zis disease

The Chromovirus here has already got to us!

+ 4.36 pg

Cousin!! That diagram was the other way round! The colder it is the more Chromovirus. We should have gone to live in Piauí\*\*!

Now we needuh to change ze beauty competishun to Miss Andes Plus Size

**END**

\* Garanhuns is one of the coolest cities in Northeast Brazil;  
 \*\*Piauí is a State of Northeast Brazil known for its high temperatures.

# LEGUME BIBLIOGRAPHY UNDER THE SPOTLIGHT



Adult (above) and larva (below) of a silver bug (Tingidae, Hemiptera) on *P. vulgaris* var. *aborigineus*.

Photos courtesy of Fabiana S. Ojeda.

**Full reference:** Ojeda, F. S., Amela García, M. T., Hoc, P. S. 2017. Characterization of the arthropod attack to *Phaseolus vulgaris* var. *aborigineus* (Fabaceae). Lambert Academic Publishing, Saarbrücken, Germany, 72 pp. ISBN: 978-3-330-04254-4.

## A BOOK ON THE CHARACTERIZATION OF THE ARTHROPOD ATTACK ON *PHASEOLUS VULGARIS* VAR. *ABORIGINEUS*

Communicated by Amela García Ojeda, Universidad de Buenos Aires, Argentina

The insects and other arthropods associated with *Phaseolus vulgaris* L. var. *aborigineus* (Burkart) Baudet, a native bean from Argentina and a potential source for improvement of cultivated varieties, were compared between different genetic lines. Seeds from distant latitudes and from wild, weedy and presumptive hybrid individuals were sown in two microsites of Buenos Aires University Campus. Arthropod presence and abundance as well as the amount of damage and possible physical defenses were registered during two culture seasons. All the accessions were attacked by 15 taxa of Insecta and 5 of Arachnida, including larvae and adults. Species richness varied among culture seasons. Although the indument density was significantly different between wild specimens from different latitudes and between culture sites for plants of a same provenance, this character did not constitute a mechanic obstacle against the recorded herbivores, as the amount of damage was high and similar in both provenance and in all the entities, irrespective of culture site or season. Neither the presumed hybrid nor the weedy form exhibited a better performance against arthropod attack than did the wild form.

## LEGUMES HAVE THE GREATEST RESILIENCE IN ARGENTINA

Communicated by Ana María Planchuelo-Ravelo, Centro de Relevamiento y Evaluación de Recursos Agrícolas y Naturales, Córdoba, Argentina



A recently published multidisciplinary study by Planchuelo and Ravelo (2017) investigated the impact in central Argentina of rainfall and drought occurrences on the regeneration of vegetation in the Spring, considering as case studies 12 sub-shrub and herbaceous perennial species of ethnobotanical importance. Among these perennials there were two legumes: *Erythrostemon gilliesii* (Hook.) Klotzsch - (commonly called lagaña de perro, pichana, poinciana, goat beard, beard of old man; see image) and *Vachellia caven* (Molina) Seigler & Ebinger (commonly called aromito, churqui, espinillo, aramo, or caven). An analysis of environmental thermo-hydro-meteorological conditions in each month during 2008-2016 showed that, although the area was suffering severe droughts and forest fires, the two species had a greater resilience and a more rapid recovery in their ecological niche than other perennials species studied.

**Full reference:** Planchuelo, A.M. & Ravelo, A.C. 2017. Condiciones termo-hídricas y comportamiento de especies nativas en el Valle de Paravachasca, Córdoba, Argentina. RADA VIII: 43-57.

# PUBLICATION NEWS

## FROM THE WORLD OF LEGUME SYSTEMATICS

Compiled by Leonardo Borges, Universidade Federal de São Carlos, Brazil,  
and Brigitte Marazzi, editor BB Newsletter

A list with this year's publication citations of studies on legume systematics is here provided. We thank authors who sent us their references. Please accept our apologies if any citation is missing. This collection of studies and the publications highlighted above provide an elegant insight into another vibrant year of research in Systematics and Biology of Leguminosae.

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