

2018 Economic Botany Section Report to the BSA Council
Submitted by Laura Klein (Saint Louis University and the Danforth Plant Science Center,
laura.klein@slu.edu)
July 14, 2019

Current Section Governance:

Laura Klein – Chair

Emily Warchefsky – Secretary/Treasurer

Alex McAlvay – Public relations co-officer

Doressa Williams – Public relations co-officer

2017-2018 Activities:

1. BOTANY 2018 Rochester Activities and aftermath

- a. Contributed Papers: in total, 30 papers were presented in the Economic Botany section in 2018, a 20% increase from BOTANY 2017. Specifically, 18 papers were presented to the Crop Wild Relatives session and 12 were presented to the Ethnobotany session.
- b. Contributed Posters: 9 posters were presented to the Crop Wild Relatives session and 1 poster was presented in the Ethnobotany session in the Economic Botany section in 2018 in Rochester, for a total of 10 posters.
- c. The Economic Botany business meeting was held Monday, July 23 at 4:30pm. Laura Klein, postdoctoral research associate studying graft effects in grapevines, was elected to succeed Rachel Meyer as chair of the section. We are grateful to Rachel's three years of service, in which she thoughtfully expanded the reach and interest of the section to members of the society by organizing several events, writing a *Plant Science Bulletin* article, and creating two economic botany sessions during the annual meetings. We value her contributions to this section. Emily Warchefsky, postdoctoral research associate studying sunflower genomics, was elected to succeed Angelle Boullard-Roberts as secretary. We thank Angelle for her year of service to the section. Alex McAlvay, postdoctoral research associate at Cornell University, and Doressa Williams, undergraduate at the University of Mississippi, were elected to succeed Elliot Gardner as co-officers of public relations. We thank Elliot for his years of service and for helping develop media and announcements from the section.
- d. At the business meeting, we discussed how to increase student travel award awareness to increase applications, possible candidates for corresponding membership, and the addition of an economic botany section field trip at BOTANY 2019. We also discussed section fundraising events, such as a section mixer.
- e. Vashist Pandey was awarded a corresponding membership for India.
- f. Officers met to discuss creating section social media accounts to share opportunities/initiatives within the section, promote general interest and encourage research, teaching, and collections management in economic botany, support other economic botany societies, and bridge these societies with the Botanical Society of America. When posts are original content, officers will agree

on the message together and will include the Botanical Society of America as a tag. Any retweeting/tagging can be done at the officer's discretion.

2. BOTANY 2019

- a. The Economic Botany Section is hosting a field trip to Almuñia de los Zopilotes - experimental crop wild relative farm and orchard of Gary Nabhan, the Native Seeds/SEARCH conservation farm, and Borderlands Restoration Network's nursery and seed lab, which will take place on Sunday, July 28 from 8am – 5pm.
- b. The section has awarded Emma Frawley and Ksenia Pereverzeva student travel awards (\$300).
- c. The section is supporting two symposia financially: “Life without water: evolution and adaptation of xeric plants” (\$300) and “Crop Wild Relatives and Land Races: the sky islands of southwest North American agriculture” (\$600).
- d. The section is supporting two symposia in name: “Phylogenomic perspectives on reproductive isolation and introgression” and “The potential of machine learning for plant biology.”
- e. The section is supporting four colloquia in name: “Time to dig: the importance of underground storage organs in plant evolution,” “Ecological factors that drive patterns of population genetic structure in plants,” “Questioning species and species complexes: a colloquium in honor of Dr. R. James Hickey,” and “Ericaceae: systematics, ecology, and evolution.”
- f. The section received 45 abstracts:
 - i. Ethnobotany Posters (12):

Monday, July 29th, 5:30 pm to 7:00 pm · Arizona Ballroom/Starr Pass						
Session P: Contributed Posters: Ethnobotany Posters						
Log in to add this item to your schedule						
PET001	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	The antioxidant activity and cytotoxic activities against cancer cell lines of Thai medicinal plant recipe Log in to add this item to your schedule	Poster: Ethnobotany	Dechayont, Bhanuz ; Phuaklee, Pathompong; Chunthong-Orn, Jitpisute; Mokmued, Khwanchanok; Poomirat, Saovapak; Saesiw, Ubonwan.	Prompak remedy Cytotoxic Antioxidant
PET002	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	anti-inflammatory activity of four leaves extracts in lipopolysaccharide-stimulated raw264.7 macrophages Log in to add this item to your schedule	Poster: Ethnobotany	CHUNTHORNG-ORN, JITPISUTE.	Anti-inflammation
PET003	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	Anti-allergic and antioxidant activities and Total Phenolics Content of Ya-Ta-KAE-KAN formula	Poster: Ethnobotany	PHUAKLEE, PATHOMPONG ; Dechayont, Bhanuz ; CHUNTHORNG-ORN, JITPISUTE; Itharat, Arunpom.	Path

			Log in to add this item to your schedule			
PET004	July 29th 5:30 pm	Arizona Ballroom/Star Pass	Persistence of antimicrobial activity in oyster mushroom herbarium specimens Log in to add this item to your schedule	Poster: Ethnobotany	Reaney, Amber ; Metzgar, Jordan .	Pleurotus antimicrobial antibiotic resistance oyster mushroom
PET005	July 29th 5:30 pm	Arizona Ballroom/Star Pass	Biological Activity of Guava (<i>Psidium guajava</i>) Log in to add this item to your schedule	Poster: Ethnobotany	Melo, Claudia ; Cruz, Victor; Sorel, Victor; Cornejal, Nadjet; Buczynski-Kos, Ane C.; Priano, Christine; Fernandez Romero, Jose; Koroch, Adolfin .	guava antioxidant capacity antimicrobial activity antiviral activity
PET006	July 29th 5:30 pm	Arizona Ballroom/Star Pass	"A Sweet Syrup for the Chest": An ethnobotanical study of a recipe to treat lung illness from the last Medici princess Log in to add this item to your schedule	Poster: Ethnobotany	Spurgeon, Alexandria ; Krakos, Kyra.	ethnobotany
PET007	July 29th 5:30 pm	Arizona Ballroom/Star Pass	Antibacterial and Antioxidant Activity of Polyphenols Extracted from Four Species of <i>Gymnopilus</i> (Macrofungi) Collected from the Wild in Nigeria Log in to add this item to your schedule	Poster: Ethnobotany	Adongbede, Erute ; Williams, Leonard; Davis, Shuritta; Randolph, Priscilla.	Nutraceuticals antimicrobial Free radicals Polyphenols Macrofungi
PET008	July 29th 5:30 pm	Arizona Ballroom/Star Pass	Plant identification and mapping in a culturally and historically significant cemetery Log in to add this item to your schedule	Poster: Ethnobotany	Jennings, Caroline ; Borer, Catherine.	Cemetery Grave marker vegetation mapping
PET009	July 29th 5:30 pm	Arizona Ballroom/Star Pass	The more the merrier? Bioprospecting the bitterness of cytogenetic variants from creosote bush	Poster: Ethnobotany	Ramirez, Sarah ; Fuentes Soriano, Sara; Guzman, Ivette.	Creosote polyploidy Polyphenolics Cytotypes Chihuahuan Desert

			(Larrea tridentata (DC.) Coville, Zygophyllaceae) in the Sonoran and Chihuahuan desert Log in to add this item to your schedule			sonoran desert ethnobotany Morphometric Analysis bioactives <i>Larrea tridentata</i> Zygophyllaceae
PET010	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	The Nagoya Protocol Learning Portal Log in to add this item to your schedule	Poster: Ethnobotany	Meyer, Rachel ; Jordon-Thaden, Ingrid.	science communication policy Convention on Biological Diversity Research experiences Intellectual Property DNA Genetic Resources extinction genomics Living Collections natural history collections
PET011	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	Anti-inflammatory of Ya-Mahanintangtong remedy extract Log in to add this item to your schedule	Poster: Ethnobotany	Dechayont, Bhanuz ; Juckmeta, Thana.	Anti-inflammatory Mahanintangtong remedy extracts
PET012	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	Anti-<i>Helicobacter pylori</i> isolated from Thai patients and antioxidant activities of aqueous extract of nutmeg and mace from <i>Myristica fragrans</i>: support gastrointestinal disorders treatment in p Log in to add this item to your schedule	Poster: Ethnobotany	Suthisamphat, Naranpraphai ; Dechayont, Bhanuz ; PHUAKLEE, PATHOMPONG ; CHUNTHORNG-ORN, JITPISUTE; Vilaichone, Rathakorn; Itharat, Arunporn.	anti- <i>H. pylori</i> Nutmeg Mace Antioxidant gastrointestinal disorders

ii. Ethnobotany Papers (7):

Tuesday, July 30th, 8:00 am to 9:45 am · San Luis 2/Starr Pass
[Session ETH1: Contributed Papers: Ethnobotany](#)

Presiding: [Laura Klein](#), Saint Louis University
 Log in to add this item to your schedule

ETH1001	July 30th 8:00 am	San Luis 2/Starr Pass	The Nutritional and Medicinal Value of <i>Synsepalum dulcificum</i> (Schumach. and Thonn.) Daniell for treating <i>Diabetes mellitus</i> in Nigeria Log in to add this item to your schedule	Oral Paper	Onuminya, Temitope ; Ifelaja, Folakemi.	Diabetes Hypoglycemia Medicinal plants <i>Synsepalum dulcificum</i>
ETH1002	July 30th 8:15 am	San Luis 2/Starr Pass	Comparative Bark Anatomy of Three Khaya species used in Nigeria as antisickling agent Log in to add this item to your schedule	Oral Paper	Oyedapo, Ololade ; Agbedahunsi, Joseph Morounfolu; Illoh, Halbert Chukwuma; Akinloye, Akinwumi.	Antisickling Inhibition Khaya Reversal Sclereids
ETH1003	July 30th 8:30 am	San Luis 2/Starr Pass	Etymology of Folk Nomenclatures for <i>Sphenostysis stenocarpa</i> (Hoechstex A. Rich) Harms Log in to add this item to your schedule	Oral Paper	Nnamani, Catherine V ; Atkinson, Christopher J.; Nwite, Joel E..	Etymological traditional knowledge classification custodians <i>Sphenostysis stenocarpa</i>
ETH1004	July 30th 8:45 am	San Luis 2/Starr Pass	Pedaliaceae: Source of Nutritious and Medicinal Indigenous Vegetables with Underutilized Status in Nigeria Log in to add this item to your schedule	Oral Paper	Fasola, Taiye Remi ; Ogunsola, Oladele.	Indigenous Vegetables nutritious Medicinal plants
ETH1005	July 30th 9:00 am	San Luis 2/Starr Pass	Traditional Knowledge for Modern Agriculture: The Ethnobotany of <i>Elymus</i> Log in to add this item to your schedule	Oral Paper	Frawley, Emma ; Micke, Brooke; Claudia, Ciotir; Miller, Allison.	Elymus ethnobotany agriculture traditional knowledge Perennial
ETH1006	July 30th 9:15 am	San Luis 2/Starr Pass	Comparing plant uses among coastal plain cultures in colonial Virginia Log in to add this item to your schedule	Oral Paper	Pereverzeva, Ksenia ; Metzgar, Jordan .	ethnobotany colonial Virginia Powhatan Rappahannock
ETH1007	July 30th 9:30 am	San Luis 2/Starr Pass	Traditional uses, Palynological, and Anatomical Characterization of <i>Nelumbo nucifera</i> Gaertn. with Its <i>In vitro</i> and <i>In cellulo</i> Antioxidant Potentials Log in to add this item to your schedule	Oral Paper	Tungmunnithum, Duangjai ; Hano, Christophe.	

iii. Crop Wild Relatives Posters (12):

Monday, July 29th, 5:30 pm to 7:00 pm · Arizona Ballroom/Starr Pass

Session P: Contributed Posters: Crops and Wild Relatives Posters

Log in to add this item to your schedule

PCW001	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	<p>Morphological and Molecular Characterization of Cowpea Accessions from Africa</p> <p>Log in to add this item to your schedule</p>	Poster: Crops and Wild Relatives	<p>Onuminya, Temitope; Ogundipe, Oluwatoyin; Lawal, Oyewole; Ogunkanmi, Mubarak.</p>	<p>Cowpea genetic diversity Dendogram Africa</p>
PCW002	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	<p>Inferring the domestication history of the cultivated <i>Zizania latifolia</i> in the Yangtze River Basin</p> <p>Log in to add this item to your schedule</p>	Poster: Crops and Wild Relatives	<p>Zhao, Yao; Rong, Jun; Song, Zhiping; Chen, Jiakuan.</p>	<p>domestication wild rice genetic structure population history co-evolution</p>
PCW003	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	<p>Who let the dogs out? A review of spontaneous transgenes in natural plant populations</p> <p>Log in to add this item to your schedule</p>	Poster: Crops and Wild Relatives	<p>Ellstrand, Norman.</p>	<p>gene flow GMO transgene crop wild relatives feral herbicide tolerance brassica agrostis Seed dispersal pollen genetic engineering</p>
PCW004	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	<p>Breeding the Dog of the Plant World: Development of Doubled Haploid <i>Brassica oleracea</i></p> <p>Log in to add this item to your schedule</p>	Poster: Crops and Wild Relatives	<p>Gallagher, Evan; Yuxiang, Yuan; Mabry, Makenzie; Pires, Joseph.</p>	<p>Doubled Haploid Microspore Culturing <i>Brassica oleracea</i> homozygous</p>
PCW005	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	<p>The domestication history of <i>B. oleracea</i>: wild relatives, geography of domestication, and multiple origins of kale</p> <p>Log in to add this item to your schedule</p>	Poster: Crops and Wild Relatives	<p>Mabry, Makenzie; Gallagher, Evan; Turner, Sarah; Pires, Joseph.</p>	<p><i>Brassica oleracea</i> domestication Origin crops and wild relatives Phylogenetics population genetics</p>
PCW006	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	<p>Evaluating Organic Nutrient Management Practices to Improve Industrial Hemp Yield and Quality</p> <p>Log in to add this item to your schedule</p>	Poster: Crops and Wild Relatives	<p>Caton, Tara; Smith, Andrew, Dr.; Carr, Rick; Omondi, Emmanuel, Dr.; Leshner, Emily.</p>	<p>Cannabis Industrial Hemp nutrient management Organic Agriculture Regenerative Agriculture Soil Nitrogen</p>

PCW007	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	Characterization of Saamakan Rice Diversity in Suriname Log in to add this item to your schedule	Poster: Crops and Wild Relatives	Glos, Rosemary ; Landis, Jacob ; Royall, Margaret; Harrington, Sandra; McCouch, Susan; Specht, Chelsea; Styger, Erika.	rice Suriname morphology PCA
PCW008	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	Improving the rotational value of field pea, <i>Pisum sativum</i> subsp. <i>arvense</i> (L.), a legume cover crop Log in to add this item to your schedule	Poster: Crops and Wild Relatives	Marques, Edward ; Bueno, Erika; Kerwien, Lauren; von Wettberg, Eric.	fiel pea crop improvement cover crop Rhizosphere Microbiome roots rotation
PCW009	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	Seed System Diversity and Resilience in New Vermont Farming Communities Log in to add this item to your schedule	Poster: Crops and Wild Relatives	Kur, Andi ; von Wettberg, Eric; Guo, June; Tobin, Daniel; Reynolds, Travis.	Seed systems food security agroecology agroecosystem diversity farm resilience
PCW010	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	Wild hops in the Arizona Sky Islands: Meiotic chromosomes and the structural variability of the <i>Humulus lupulus</i> species Log in to add this item to your schedule	Poster: Crops and Wild Relatives	Easterling, Katherine ; Morcol, Taylan; Pitra, Nicholi; Aquino, Jenna; Lopes, Lauren; Matthews, Paul; Bass, Hank.	
PCW011	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	Gene flow in the silverleaf sunflower, <i>Helianthus argophyllus</i> Log in to add this item to your schedule	Poster: Crops and Wild Relatives	Pascual, Mariana ; Rieseberg, Loren.	Flowering time assortative mating crop wild relatives
PCW012	July 29th 5:30 pm	Arizona Ballroom/Starr Pass	Advanced Imaging of the Genus <i>Crambe</i>, A Non-Model Orphan Crop Log in to add this item to your schedule	Poster: Crops and Wild Relatives	Pearl, Carson Howard ; Vitale, Jessica; Abrahams, Richard; Pires, Joseph .	<i>Crambe</i> Brassicaceae PlantCV

iv. Crop Wild Relatives Papers (15):

Wednesday, July 31st, 8:00 am to 12:00 pm · Tucson D/Starr Pass Session CWR1: Contributed Papers: Crops and Wild Relatives Presiding: Laura Klein, Saint Louis University Log in to add this item to your schedule						
CWR1001	July 31st 8:00 am	Tucson D/Starr Pass	Crop wild relative conservation and utilization for Yangtze River Basin sustainability Log in to add this item to your schedule	Oral Paper	Rong, Jun ; Zhao, Yao ; Li, Qin; Xiang, Xiaoguo; Chen, Jiakuan.	crop wild relatives Yangtze River Basin domestication biodiversity genetic diversity

						genetic resource germplasm climate change sustainability
CWR1002	July 31st 8:15 am	Tucson D/Starr Pass	Population genomic structure of the invasive crop-wild hybrid California wild radish along a climate gradient Log in to add this item to your schedule	Oral Paper	Welles, Shana; Sonnenschein, Anne.	hybridization Raphanus Invasion Population genomics
CWR1003	July 31st 8:30 am	Tucson D/Starr Pass	Industrial Hemp: A versatile crop with the potential to improve agroecosystem diversity, mitigate environmental degradation and increase farm incomes Log in to add this item to your schedule	Oral Paper	Caton, Tara; Omondi, Emmanuel, Dr.; Leshner, Emily; Smith, Andrew, Dr..	Cannabis Industrial Hemp Organic Agriculture Regenerative Agriculture agroecosystem diversity
CWR1004	July 31st 8:45 am	Tucson D/Starr Pass	Life history and cultivation affect seed size, germination, and first year root:shoot allocation in <i>Lupinus</i> and <i>Phaseolus</i> Log in to add this item to your schedule	Oral Paper	Herron, Sterling; Rubin, Matthew; Ciotir, Claudia; Van Tassel, David; Miller, Allison.	life history perennial agriculture annual perennial herbaceous perennial perennial grain legume Fabaceae Leguminosae perennial plant Perennial sustainable agriculture
CWR1005	July 31st 9:00 am	Tucson D/Starr Pass	Nutritive Differences Between Seeds of Annual & Perennial Grass Pea (<i>Lathyrus</i>L.) Log in to add this item to your schedule	Oral Paper	Nettleton, Colton; Herron, Sterling; Rubin, Matthew; Miller, Allison.	Perennial annual nutrition legume perennial agriculture inorganic ions
CWR1006	July 31st 9:15 am	Tucson D/Starr Pass	Confirmation of USDA germplasm identification in <i>Medicago</i> (Fabaceae) Log in to add this item to your schedule	Oral Paper	Steele, Kelly; Sandoval, Natalie; Hopkins, Andrew; Wojciechowski, Martin.	Medicago flow cytometry germplasm
CWR1007	July 31st 9:30 am	Tucson D/Starr Pass	Genetic and phenotypic analyses indicate that resistance to flooding stress is uncoupled from performance in cultivated sunflower Log in to add this item to your schedule	Oral Paper	Gao, Lexuan; Lee, Joon Seon; Hübner, Sarel; Hulke, Brent; Qu, Yan; Rieseberg, Loren.	Abiotic Stress crop flooding genome-wide association study (GWAS) Sunflower trade-offs

	July 31st 9:45 am	Tucson D/Starr Pass	Break Log in to add this item to your schedule			
CWR1009	July 31st 10:15 am	Tucson D/Starr Pass	Transcriptome and organellar sequencing highlight the complex origin and diversification of allotetraploid <i>Brassica napus</i> Log in to add this item to your schedule	Oral Paper	Pires, Joseph ; An, Hong; Qi, Xinshuai; Gaynor, Michelle; Hao, Yue; Mabry, Makenzie; Conant, Gavin; Barker, Michael.	Polyploid hybrid domestication brassica Transcriptomics Population genetics/genomics crops and wild relatives
CWR1010	July 31st 10:30 am	Tucson D/Starr Pass	Characterizing a chromosomal inversion QTL in maize using RNA-seq Log in to add this item to your schedule	Oral Paper	Crow, Taylor ; Runcie, Daniel.	RNA-seq Maize Chromosomal inversion
CWR1011	July 31st 10:45 am	Tucson D/Starr Pass	Epigenomic variation in the grapevine cultivar 'Chambourcin' in response to grafting and irrigation treatments Log in to add this item to your schedule	Oral Paper	Williams, Brigitte ; Edwards, Christine ; Miller, Allison.	Grapevine epigenome rootstock DNA methylation small RNA irrigation effects
CWR1012	July 31st 11:00 am	Tucson D/Starr Pass	Insecticidal Evaluation of some botanical powders as stored maize grain protectants against SITOPHILUS ZEAMAIIS (Motschulsky) (Coleoptera: Curculionidea): A Concern for postharvest Loss Log in to add this item to your schedule	Oral Paper	Onuminya, Temitope ; Agboola, Oludare; Ezeribe, Soromtochukwu.	botanicals food security nutrition post-harvest shelf life
CWR1013	July 31st 11:15 am	Tucson D/Starr Pass	Productivity and mineral composition of cocoyam (<i>Colocasia esculenta</i> var. Nce 0001 Schott) as influenced by integrated use of organic and inorganic fertilizers Log in to add this item to your schedule	Oral Paper	Iwuagwu, Mary ; Ogbonnaya, Chuks I.; Onwuchekwa, Ojimgba.	cocoyam fertilizer mineral concentration rice husk tuber yield
CWR1014	July 31st 11:30 am	Tucson D/Starr Pass	Physicochemical Properties of Starches obtained from <i>Anchomanes difformis</i> and <i>Tacca involucreta</i> Tubers Log in to add this item to your schedule	Oral Paper	AbdulRahaman, Abdullahi Alanamu.	<i>Anchomanes difformis</i> <i>Tacca involucreta</i> physicochemical properties starch
CWR1015	July 31st 11:45 am	Tucson D/Starr Pass	Assessing Pesticide Risks to Plants: An overview of EPA's standard approach to plant risk assessments	Oral Paper	Farruggia, Frank.	

			Log in to add this item to your schedule			
--	--	--	--	--	--	--

- g. The Economic Botany section business meeting will take place on Monday, July 29 at 4:30pm. At the business meeting, we plan to discuss changes in governance and documentation, section media, the recruitment of membership, and possible fundraising activities.