

Chelsea Dvorak Specht

Professor & Plant Organismal Biologist

Curator, University and Jepson Herbaria

Fellow, California Academy of Sciences

Department of Plant and Microbial Biology ❖ Department of Integrative Biology

University of California, Berkeley

111 Koshland Hall ❖ Berkeley, CA 94720 ❖ (510) 642-5601

cdspecht@berkeley.edu ❖ <http://spechtlab.berkeley.edu>

Education

Ph.D. – Biology, January 2004: New York University, New York, NY 10003.

Advisors: Gloria Coruzzi, Dennis Stevenson, and Rob DeSalle. Joint Program with NYU Department of Biology, the New York Botanical Garden (NYBG), and the American Museum of Natural History (AMNH).

M.S. – Biology, 1997: New York University; New York, NY 10003.

B.A. – Biology and Psychology, 1993: Degree with Distinction, Magna Cum Laude. University of Delaware, Newark, DE 19817.

Research Interests & Areas of Expertise

Molecular evolution, genetics and genomics of trait evolution including floral development, carnivory and plant thermogenesis. EvoDevo and floral trait evolution with specific focus on Zingiberales and monocots. Systematics, taxonomy, morphological evolution and population genetics in monocot groups (Zingiberales [Costaceae, Heliconiaceae, Zingiberaceae, Strelitziaceae], *Allium*, *Nolina*, *Calochortus*) and in cycads (*Dioon*). Biogeography, phylogeography and patterns of evolution in space and time. Rates of speciation and diversification in tropical plant groups. Plant population dynamics. Software development for comparative phylogenetics (arborworkflows.com).

Grants & Awards

Current sources of support for ongoing research:

- 2015 **France Berkeley Fund:** *Applications of next-generation sequencing techniques in plant evodevo: Using a comparative approach to understand the molecular evolution of organ morphology in angiosperms.* \$11,500 (FBF #2015-74)
- 2014 **National Science Foundation DDIG:** *Dissertation Research: A case study in the evolution of epigenetic regulators post-gene duplication; Understanding EMF2-mediated gene regulation in mosses.* \$20,337 (DEB 1407078, coPI Stephen Yee)
- 2013 **National Science Foundation:** *Resolving an ancient radiation: gingers, fossils and phylogenies.* (DEB 1257701, \$700,000 collaborative; \$357,000 to PI Specht)
- 2012 **National Science Foundation AVAToL:** *Arbor; a toolkit for comparative biology across the tree of life.* (DEB 1208666; 4.2M collaborative; \$610,000 to PI Specht)

Previous grants, honors and awards funding research:

- 2010 **National Science Foundation** *Evolution of Tropical Heliconia: NGS to capture big data.* \$25,000 supplement to DEB0816661 with co-PI Dr. Craig Barrett (CSU-LA).
- 2009 **National Science Foundation CAREER** (Early Faculty Career Development Award) *Floral development in the Zingiberales: An Integrative Approach to Understanding the Evolution of Plant Form and Function.* \$550,005 (IOS 0845641).
- 2008 **National Science Foundation** *Evolution of Tropical Heliconia: Temporal and Spatial Diversification at the Species Level.* \$600,000 (DEB 0816661).
- 2012 **UC MEXUS-CONACYT Collaborative Research Grant:** *Gene regulatory networks and their role in the evolution of monocot floral morphology.* Co-PI Dra. Elena Alvarez-Buylla \$25,000 (12,500 to UCB).

- 2011 **National Science Foundation DDIG: Dissertation Research: Evolution of floral morphology in Zingiberales: the role of positive selection on B class MADS box genes.** \$14,957. (DEB 1110461, co-PI Ana Almeida).
- 2011 **National Geographic Society** Committee for Research and Exploration Grant #8994-11 (\$15,500).
- 2010 **National Science Foundation DDIG: Dissertation Research: Chitinase Subfunctionalization in Carnivorous Plants: the Caryophyllales as a Test Case.** \$14,958. (DEB 1011021, co-PI Tanya Renner).
- 2010 **National Science Foundation DDIG: Dissertation Research: Characterization of Foliar Fungal Endophyte Communities of Sequoia sempervirens and Investigation of their Symbiotic Relationship.** \$14,400 (DEB 1011230, co-PI Kali Lader).
- 2009 **Hellman Family** Faculty Fund Award (\$50,000).
- 2008 **NSF DDIG: Dissertation Research: Evolution of floral symmetry in the petaloid monocot order Zingiberales.** \$12,000 (DEB 0808298, co-PI Madelaine Bartlett).
- 2008 **Prytanean** Faculty Award, UC Berkeley – recognition for mentorship of women (\$25,000)
- 2008 Faculty COR research grant (\$5,000)
- 2007 **UC MEXUS – CONACYT** Research Collaborative Grant (\$25,000) with Dra. Victoria Sosa
- 2007 Junior Faculty COR research grant (\$8,000)
- 2007 UC Berkeley Instructional Improvement Grant (\$3,500)
- 2007 **Heckard Fund** for Botanical Research, Jepson Herbarium (\$7,710)
- 2006 **UC MEXUS** Collaborative Research Development Grant (\$15,000)
- 2006 **MORPH –** Research Coordination Network (\$5,000)
- 2006 Junior Faculty COR research grant (\$5,500)
- 2004 Smithsonian Institution Postdoctoral Award for proposed research (\$30,000)
- 2004 Margaret and Herman Sokol Postdoctoral Research Award (\$5,000)
- 2004 PhD Class Representative, Graduate School of Arts and Science. (\$500.00)
- 2003 Molecular Evolution Workshop – MBL, Woods Hole (\$700 scholarship)
- 2002 NSF Doctoral Dissertation Improvement Grant (\$8,520, 1yr)
- 2002 Botanical Society of America John Sidney Karling Award (\$500)
- 2000 Selected for Membership - NYU Graduate Forum (\$1,500)
- 1997 - 1998 J. William Fulbright Research Fellowship (\$10,000)
- 1997 Federated State Garden Clubs, Inc. Cornelia H. Kellogg Award, National recipient (\$3,000)
- 1996 NYU Graduate School for Arts and Sciences Pre-dissertation Research Award (\$2,000)
- 1996 NYBG Graduate Research Award (\$2,500)
- 1996 NSF Graduate Research Fellowship (Predoctorate) - Honorable Mention
- 1995 - 2000 National Science Foundation GRT Fellowship for Graduate Research, NYU (stipend 3yrs)
- 1993 Phi Beta Kappa Induction
- 1993 Golden Key National Honors Society Induction
- 1993 Outstanding Senior Biology Major Award of Merit, University of Delaware (\$500)
- 1992-1993 Alumni Merit Award, University of Delaware (\$1,000)
- 1992-1993 John B. Lynch Trust Scholarship (\$1,000)
- 1991-1993 University Honors Program & Academic Incentive Scholarship, U. of Delaware (\$1000)

Honors and Awards:

- 2016 **Grady Webster Award:** Best publication in Plant Systematics for 2014-2015
- 2015 **Fellow,** California Academy of Sciences.
- 2011 **Kavli Fellow,** National Academy of Sciences.
- 2009 **Hellman Faculty Fellow,** UC Berkeley.
- 2009 **Presidential Chairs Fellow,** UC Berkeley.
- 2008 **Prytanean Faculty Award,** UC Berkeley.

Professional Experience

Research & Academic Fellowships:

Current:

- 2016 – present **Professor**, UC Berkeley. Departments of Plant and Microbial Biology & Integrative Biology.
 2012 – 2016 **Associate Professor**, UC Berkeley. Department of Integrative Biology.
 2011 – 2016 **Associate Professor**, UC Berkeley. Dept. of Plant and Microbial Biology.
 2005 – 2011 **Assistant Professor**, UC Berkeley. Dept. of Plant and Microbial Biology.
 2005 – present **Curator of Monocots**. The University Herbarium, University of California, Berkeley.
 2006 – present **Faculty Research Associate**. University of California Botanical Garden, UC Berkeley.

Past:

- 2014 **Visiting Researcher & Designated Collaborator**, University of Arizona, Department of Plant Sciences.
 2005 – 2011 **Assistant Professor**, University of California, Berkeley. Department of Plant & Microbial Biology.
 2004- Mar.2005 **Postdoctoral Fellow**. National Museum of Natural History, Department of Botany.
 2003 – 2004 **Herbarium Manager and Associate Curator**. Tryon Library and the Pringle Herbarium. University of Vermont, Department of Botany.
 2001 – 2003 **Research Associate**, Monocot systematics project. New York Botanical Garden. Collaboration with Dr. Jerry Davis (Cornell) and Dr. Dennis Stevenson (NYBG).
 May-Nov. 1997 **Graduate Research Assistant**. Monocot Systematics Project. New York Botanical Garden and American Museum of Natural History. Collaboration with Drs. Jerry Davis (Cornell), Dennis Stevenson (NYBG) and Rob DeSalle (AMNH).
 Jan.-May 1997 **Graduate Research Assistant**. Genetics and Evolution of Plant Development. New York University. Research carried out in the laboratory of Dr. Phillip Benfey (NYU).
 1996 **Herbarium Assistant**. New York Botanical Garden.
 1996 **Ethnobotanical Research Assistant**. Department of Science, New York Botanical Garden.
 1993 – 1995 **Laboratory Research Technician**. Pharmacology Department, Johns Hopkins University Medical School, Baltimore, MD.
 1991 – 1993 **Summer Research Intern**. DuPont-Merck Pharmaceuticals, Neuroscience. Wilmington, DE.
 1991 – 1993 **Undergraduate Research Assistant**. Department of Biology, University of Delaware, Newark, DE.

Teaching:

- 2005-present **Professor**. UC Berkeley.
Principles of Plant Morphology (C107/107L – 5/3 credits)
Evolution (IB 160 - 3 credits)
Topics in Plant Evolution and Diversification (PMB290 – 1 credit)
Comparative Morphology of Plants (PMB290 – 1 credit)
Plant Molecular Evolution (PMB201c – 1.5 credits)
Extreme Green: Plant adaptation to life on the edge (PMB24 – 2 credits).
 2003 **Instructor**. DNA Techniques: Genomics and Proteomics. New York University.
 2002 **Instructor**. New York Botanical Garden Continuing Education Program. Plant Morphology (college credit); Plant Biology III (college credit).
 2000 **Teaching Assistant**. Vertebrate Anatomy. New York University.
 1998 **Visiting Instructor**. Taxonomía y Sistemáticas de las plantas. Museo de Historia Natural Noel Kempff Mercado, Santa Cruz, Bolivia.

Conservation Administration:

- 2000 –2002 **Ecoregion Conservation Consultant**. World Wildlife Fund - US.
 1999 –2000 **Ecoregional Coordinator, Southwest Amazon**. World Wildlife Fund – US. Latin American and Caribbean Conservation Program.
 1998 –1999 **Program Officer, Amazonian Conservation Program**. World Wildlife Fund – Bolivia Program Office.

1998 –1998 **Consultant in Plant Diversity and Conservation Science.** Fundación Amigos de la Naturaleza, Department of Science (Working under contract with WWF - Bolivia).

Departmental and University service

Academic senate: Committee on Diversity, Equity and Campus Climate – member 2016-present; Demonstration and Student Actions (DSA) committee - member 2012-2013, chair 2013-2015; University Fellowship Committee, 2016-2017.

College of Natural Resources: CNR Honor's Symposium co-director (2008-2009); RESCOM (2015-2016).

Plant and Microbial Biology Department: Faculty Equity Advisor (2011- present); Stategic Plan, Diversity (2012; 2014-present); Undergraduate Courses and Curriculum (Chair, 2010-2013); Graduate Curriculum (2008-2010); Teaching Laboratories Advisory Council (2013-present); Graduate Admissions (2006-2010; ex officio as Equity Advisor); Seminar (2008-2010); Faculty Search Committees (2009, 2014); Tenure/Promotion/Adjunct Committees (2012, 2014).

Integrative Biology Department: Faculty Equity, Diversity and Welfare (2016-present); Faculty Welfare (2012-2015); Jane Gray Research Greenhouse Committee (2015-present), Diversity Committee (2015); Faculty Search Committee (2014, 2010); Tenure/Promotion Committee (2015).

Society Service and Leadership

2016

President Elect – American Society of Plant Taxonomists

Plant Science Research Network – Organizational committee & Workshop organizer/participant

Faculty Advisory Board (co-Chair) – University of California Botanical Garden, Berkeley

Scientific Advisory Committee – Boyce Thompson Arboretum, Phoenix AZ

Founding Officer and Council Member – PanAmerican Society for Evolutionary Developmental Biology

Board Member – Phylus Inc.

Specialty Chief Editor – Understanding Biodiversity, Frontiers for Young Minds

Review Editor – New Phytologist

Review Editor – Quarterly Review of Biology

Associate Editor – Frontiers in Plant Genetics and Genomics.

Associate Editor – AoB PLANTS

2010-2015

Council Member (Elected) – American Society of Plant Taxonomists (ASPT)

Chair: scholarships and awards committee – ASPT

Chair: public relations and outreach - ASPT

Council Member (Elected) – Society of Systematic Biologists (SSB)

Committee Chair (Nominated) - Katherine Esau and Student Awards committee, Botanical Society of America (BSA)

Committee Chair (Nominated) – Kaplan Memorial Lecture, BSA

PLANTS mentor – Botanical Society of America (BSA)

Board Member – California Botanical Society

Board Member – Heliconia Society International

Member: American Association for the Advancement of Science (AAAS), Association for Women in Science (AWIS), American Society of Plant Taxonomists (ASPT), Botanical Society of America (BSA), Society of Systematic Biologists (SSB), Society for the Study of Evolution (SSE), Society for Molecular Biology and Evolution (SMBE), The Torrey Botanical Society, Phi Beta Kappa

Service to Academic Community

Mentorship: *Current***Postdoctoral Advisor:**

Chodon Sass – Zingiberales systematics and evolution; bioinformatics; comparative phylogenetics.
William Iles – phylogenetics and fossils in the Zingiberales

Doctoral, Major Advisor (Committee Chair):

Jesus Martinez-Gomez (EvoDevo of floral form; *Integrative Biology*)
Riva Bruenn (Evolution of floral symmetry and the TCP genes in floral development; *Plant Biology*)
Joyce Chery – NSF GRF (Evolution of the liana habit with a focus on *Paullinia* (Sapindaceae):
Integrative Biology)
Carrie Tribble – NSF GRF (Biogeographic trends in the evolution of tropical forests; *Integrative Biology*)

Undergraduate Research:

Valerie Lavenberg (URAP)

Graduate PhD Thesis Committees: Rachel Thayer (MCB), Betsabe Castro (IB), Jenna Baughman (IB).

Qualifying Exam Committees: *MCB:* Stefanie Monica, Caitlin DeJong. *IB:* Bianca Knoll, Stephanie Stuart, Shobi Zenobia Lawalata, Susan Tremblay, Nick Matzke, Matt Williams, Jenna Baughman, Betsabe Castro, Michael Song. *PMB:* Clair Bendix, Elaine Shapland, Chris Vallalta, Devin O'Connor, Chris Ellison, Solomon Stonebloom, Nhu Nguyen, Jennifer Kerekes, Erin Nuccio, Devin Coleman-Derr, Patrick Shih. *ESPM:* Gordon Bennett. *Archaeology & Anthropology:* Jennifer Salinas, Katie Chiou.

Mentorship: *Past***Postdoctoral Advisor:**

Etelvina Gandara – population genetics in the *Calochortus venustus* context
Alma Pineyro Nelson – floral developmental evolution; LFY/UFO evolution.
Ana Maria Rocha de Almeida – floral developmental evolution and gene regulatory networks
Nisrine Machaka-Houri - phylogenetics and population dynamics of california *Calochortus*
Roxana Yockteng – floral development in tropical gingers; evolution of pollination syndromes
Mary Guisinger (NSF Postdoctoral Fellow) – Plastid evolution in grasses (Poales)
Eduardo Ruiz Sanchez (UC MEXUS Postdoctoral fellowship) – population genetics and phylogeography of *Nolina parviflora* (Ruscaceae)
Vincent Merckx (Belgium Science Foundation Fellow) – Evolution of mycoheterotrophic monocots

Doctoral, Primary Advisor:

2016 - Stephen Yee “EMF2 and its role in the developmental evolution of sporophytic dominance”
Plant Biology
2013 – Ana Almeida “Petaldoidy and the Plant Bauplan: Using floral development in the Zingiberales (Angiospermae: Monocotyledoneae) as a test case to understand the evolution of plant form and function.” *Plant Biology*
2011 - Tanya Renner “Plant Carnivory in the Caryophyllales: phylogenetic relationships, morphological adaptations, and molecular evolution of digestive enzymes among carnivorous genera.” *Plant Biology*
2010 - Madelaine Bartlett “The Evolution of Floral Development and Morphology in the Zingiberales.” *Plant Biology*
2010 - Chodon Sass “Phylogenetics, evolution and ancestral ecology of pineapple relatives, *Aechmea*”
Plant Biology

Doctoral, thesis committee:

Susan Tremblay (IB 2016); Matt Williams (IB 2015), Caitlin DeJong (MCB 2014), Susan Hepp (*Microbiology*), Stephanie Stuart (IB 2012), Ben Carter (IB 2010), Chris Villalta (PMB 2011), Devin O'Connor (PMB 2011), Roberta Hannibal (MCB 2010), Emily Limm (IB 2009), Eric Lyons (PMB 2008), Ruth Kirkpatrick (IB 2008), Juan Parra (IB 2008), Elizabeth Zacharias (IB 2007).

Masters, thesis advisor: Gracie Benson-Martin (2014); Carolina Gomez Navarro (2009); Kali Lader (*Microbiology*, 2011).

Doctoral, International Researchers

Thiago Andre (UFB Brasil). Etelvina Gandara (INECOL, Xalapa, Mexico).

Undergraduate Research UCB (2006-2015): 50 total; Includes 21 Honors/Senior Thesis

Annie Zell (SMART); Michelle Liu (*Honors*/URAP); Lynn Ly (*Honors*/SPUR); Christian Superbio Cabuslay (*Honors*/SPUR); Roman Ramos (SPUR); Katrina Yee (URAP, IB); Grady Pierroz (SPUR/**Honors**: Tissue culture and methylation in *Musa* (banana)); Katharine Yu (URAP/**Honors**: Evolution of gametophyte dominance in *Physcomitrella patens*); Cameron Musser (SPUR: floral diversification via AP1 in Zingiberales); Neha Kumar (URAP: co-evolution of plants and viruses in *Musa* (banana)); Kelsie Moroika (SPUR; **Honors**: YABBY gene evolution and diversification); Olivia Cope (SPUR: comparative phylogenetics and *Heliconia*); Jared Nathanson (URAP; **Honors**: Gametophyte/sporophyte transition in *Physcomitrella patens*); Miranda Sun (URAP; **Honors**: AP1 gene evolution and floral diversification); Colin Hill (URAP: thermogenesis in *Macrozamia* (Cycadales)); Eli Koral (SPUR: Fungal endophytes in California redwoods); Crystal Sun (URAP: Floral development in tropical gingers), Shalika Gupta (**Senior Thesis**: SPUR: Species distribution modeling in *Heliconia*), Stacy Shen (**Honors**: URAP: Evolution of pollination and niche diversification in *Costus*), Shayla Salzman (**Honors**: SPUR: Thermogenesis in *Macrozamia*), Andrew Brown (**Senior Thesis**: SPUR: Floral developmental evolution and C class genes), Wallace Chan (SPUR: Gametophyte/sporophyte transition in *Physcomitrella patens*), Amy Yu (URAP: Evolution of plastid genomes in the grasses), Chris Sangster (URAP: Floral developmental evolution and C class genes), Josephine Wong (SPUR/**Honors**: Evolution of enzymes in carnivorous caryophyllales), Willie Du (Fungal community ecology of coastal redwood epiphylls), Duke Shao (URAP: Evolution of plastid genomes in the grasses), Ben Wong (SPUR: systematics and pollination diversification in new world *Costus*), Amy Wray (URAP: Developing a transformation protocol for tropical gingers), Gracie Benson-Martin (SPUR: Systematics and evolution in the tropical genus *Heliconia*), Sara Fraley (SPUR: Systematics and evolution of New World *Costus*), Emily Markham (SPUR: Identity and role of the fungal community in coastal redwood ecology), Ivet Ramirez Ortiz (Pre-IMSD/BSP; evolution of gluconases in carnivorous plants), Jiao “Joyce” Xue (**Honors**: *Heliconia* diversification and evolution), Susana Torres (Evolution of thermogenesis genes in cycads), Aaron Zhan (Evolution of plant defense response in cycads), Claudia Garcia (**McNair**: Population genetics in the Mexican cycad genus *Dioon*), Irene Liao (**Honors**: Virus induced gene silencing in monocots; systematics of *Allium* and *Costus*), Esther Kim (**BSP-CNR/HHMI**: VIGS in *Zingiber officinale*), Ellen Young (**Honors**: population study of Hawaiian *Pipturus*), Katrina Hong (CYC-like gene expression in Zingiberales), Claudia Henriquez (**Honors**: Evolution of *Milla* complex), Laura Lagomarsino (**Honors**: Ecology and Phylogenetics of *Heliconia*), Sarah Starkey (**Honors**: Systematics and diversity of *Ancistrocladus* (Nepenthaceae), Jennifer Bartlau (Floral developmental evolution in Zingiberales), Hillary Cooper (**Honors**: Systematics of Ruscaceae); Debra Wang (Systematics of Gingers); Yizhuo Wang (**Honors**: Systematics of *Costus*); Sankar Sridaran (**Honors**: Comparative Floral Development), Christina Johnson (Evolution of Cheilantheid ferns).
Undergraduate Research (International): Maria Eduarda Maldaner (2012-2013; Visiting Student from Sao Paulo, Brazil); Alejandro Rodriguez (2003; REU at New York University); Magdalena Zopf (2004; Botanical Scholar at Smith College).

Review Services: Graduate Women in Science Fellowship (2005-2007), National Science Foundation (2002-present), NSERC (2006-present), American Journal of Botany (2003-present), Annals of Botany (2006-present), Australian Journal of Botany (2004-present), BMC Evolutionary Biology (2007-present), Canadian Journal of Botany (2001-present), Caldesia (in Spanish; 2005), Cladistics (2000-present), Evolution (2005-present), International Journal of Plant Sciences (2007-present), Journal of Biomedical Informatics (2005), Journal of Biogeography (2006-present), Journal of Caribbean Biogeography (2006-2007), Journal of the Linnean Society (2006-present), Journal of Molecular Evolution (2010), Kew Bulletin (2006-present), Molecular Phylogenetics and Evolution (2001-present), Plant Cell (2009-present), Science (2005), Systematic Biology (2005-present), Systematic Botany (2003-present), PLoS Biology (2008-present), PLoS ONE (2008-present).

Panel Services & Selection Committees: National Science Foundation Panel Member (Dissertation Improvement Grant 2006, 2010; Evolution of Developmental Mechanisms 2010; Systematics 2006; Phylobiogeography 2007); Goldwater Scholarships, UCB (2007 - 2010); Nathan & Violet David Scholar, UCB (2007,08).

Meetings/Symposia Organized:

2016: Plant Science Research Network Workshop on Postgraduate Training

- 2016:** Plant Science Research Network Scenario Modelling Workshop: HHMI
2014: Bioinformatics and EvoDevo (with Paula Mabee): symposium at Euro EvoDevo, Vienna.
2013: Organizing Committee: NESCent workshop on the future of EvoDevo. PI Cassandra Extavour
2013: Symposium Organizer: Population Level Processes in Monocot Evolution. International Meeting of Monocot Biology (Monocots V), Bronx, NY.
2013: Symposium Organizer: Evolution of floral form in Monocots: Monocots V, Bronx, NY.

Major Postdoctoral and Graduate Research & Fellowship Awards supported

- 2016 Hellman Dissertation Fellowship: Jesus Martinez-Gomez
 2016 University Chancellor's Fellowship: Jesus Martinez-Gomez
 2015 Tinker Award: Carrie Tribble
 2015 NSF Graduate Research Fellowship: Carrie Tribble
 2014 CONACYT Postdoctoral Fellow: Etelvina Gandara
 2014 Hellman Dissertation Fellowship: Susan Hepp
 2014 NSF Doctoral Dissertation Improvement Grant: Stephen Yee
 2014 University Chancellor's Fellowship: Joyce Chery
 2013 NSF Graduate Research Fellowship: Joyce Chery
 2013 UC MEXUS Postdoctoral Fellowship: Alma Pineyro-Nelson
 2012 UC MEXUS Dissertation Research Grant: Stephen Yee
 2011 NSF Doctoral Dissertation Improvement Grant: Ana Almeida
 2011 UC Berkeley Dissertation Finishing Grant: Kali Lader
 2010 UC MEXUS Postdoctoral Fellowship: Eduardo Ruiz-Sanchez
 2010 NSF Doctoral Dissertation Improvement Grant: Kali Lader
 2010 NSF Doctoral Dissertation Improvement Grant: Tanya Renner
 2010 Tien Environmental Dissertation Fellowship: Tanya Renner
 2010 UC MEXUS Dissertation Research Grant: Carolina Gomez Navarro
 2009 Save the Redwoods League Research Grant: Kali Lader
 2009 NSF Postdoctoral Fellowship in Bioinformatics: Mary Guisinger
 2009 Tien Environmental Dissertation Fellowship: Chodon Sass
 2008 NSF Doctoral Dissertation Improvement Grant: Madelaine Bartlett
 2008 UC MEXUS Dissertation Research Grant: Chodon Sass
 2008 NSF Graduate Research Fellowship: Tanya Renner
 2007 NRF (National Research Foundation, South Africa) Dissertation Fellowship: Madelaine Bartlett

Undergraduate Research Awards supported

- 2016 SMART Mentored Research (\$8500 to Riva Bruenn and Annie Zell)
 2015 SPUR student initiated research (\$2,000 to Christian Cabuslay)
 2015 SURF/Rose Hill (\$5,000 to Lynn Ly)
 2013 SPUR student initiated research (\$2,000 to Grady Pierroz)
 2012 SPUR student initiated research (\$2,000 to Kelsie Morioka)
 2012 SURF/Rose Hill (\$5,000 to Jared Nathanson)
 2011 SPUR student initiated research (\$1,100 to Andrew Brown)
 2010 Honors Thesis Research, SPUR (\$2,000 to Gracie Benson-Martin)
 2010 SPUR student initiated research (\$2,000 to Josephine Wong)
 2009 Honors Thesis Research, SPUR (\$2,000 to Jiao Xue)
 2009 Honors Thesis Research, SPUR (\$2,000 to Irene Liao)
 2009 McNair Scholarship (to Claudia Garcia)
 2009 Undergraduate Biology Fellows travel scholarship (\$2000 to Ellen Young)
 2008 RTP: Research and Training Program, Smithsonian Institution, NMNH (to I. Liao)
 2008 Honors Thesis Research, SPUR (\$2,000 to Sarah Starkey; GPB 2008)
 2008 Honors Thesis Research, SPUR (\$2,000 to Laura Lagomarsino; GPB 2009)
 2007 Honors Thesis Research, SPUR (\$2,000 to Claudia Henriquez; GPB 2008)

- 2007 RTP: Research and Training Program, Smithsonian Institution, NMNH (to L.Lagomarsino)
 2006 Nathan and Violet David Scholar (\$18,000 to Laura Lagomarsino; GPB 2008)
 2006 Honors Thesis Research, SPUR (\$2,000 to Hillary Cooper; GPB 2007)
 2006 Honors Thesis Research, SPUR (\$2,000 to Sankar Sridaran; MEB 2007)
 2006 Honors Thesis Research, URAP (\$1,000 to Yizhuo Wang; MCB 2007)

Invited Lectures, Presentations and Public Education

- 2016 “Genotyping Phenotypes: ontologies and the hope for comparative plant phenomics” International Conference on Biological Ontology & BioCreative (ICBO); Corvallis, Oregon USA
 2016 “Petaloidy and Pollination: the evolution of floral form in the Zingiberales” 1st James Crouch Endowed Lecture, San Diego State University.
 2016 “The evolution of form and function: linking genetic and phenotypic diversity” Department of EEB and Plant Sciences Seminar Series, University of Arizona.
 2016 “Resolving ancient radiations in the Zingiberales: the generation and use of big, interdisciplinary data” Beyond the Tree of Life: the future of plant systematics Academy Colloquium, The Royal Netherlands Academy of Arts and Sciences, Amsterdam.
 2016 “Diversity of phenotypic form: what we can learn from Plant Ontologies” NSF Phenoscope Research Coordination Network, Oracle, AZ.
 2015 “What can we learn from Floral Ontogeny: Comparative studies, developmental processes, and trends in evolution through the lens of Shirley Tucker’s insights” Symposium honoring Dr. Shirley Tucker, Louisiana State University.
 2015 “Undergraduate research & cascading mentorship: a recipe for scientific excellence” UC Berkeley Reunion and Parent’s Weekend Homecoming Lecture. (<https://homecoming.berkeley.edu/events/parents>)
 2015 “Tree thinking, speciation and co-evolution” Lecture to ‘Think Evolution’ workshop, UCMP.
 2015 “Petaloidy, Polarity and Pollination: The evolution of Organ Morphology Networks” Rancho Santa Ana Botanical Garden.
 2015 “Petaloidy, Polarity and Pollination: The evolution of Organ Morphology Networks” Missouri Botanical Garden.
 2015 “Petaloidy, Polarity and Pollination: The evolution of Organ Morphology Networks” University of Idaho, Biology seminar series.
 2015 “Petaloidy, Polarity and Pollination: The evolution of Organ Morphology Networks” Biology Outstanding Women in Science symposium, University of Wisconsin, Madison.
 2014 “Gene Regulatory Networks and their influence on the evolution of floral morphology” Euro Evo Devo 2014, Vienna, Austria.
 2014 “Petaloidy, Polarity and Pollination: The evolution of Organ Morphology Networks” Plant and Animal Genomes (PAG) 2014, San Diego, CA.
 2013 “Rebranding Evo-Devo: creating a united front of evolutionary and developmental investigators” Presentation to NESCent workshop on the future of EvoDevo research, Durham NC.
 2013 “Evolution of gene regulation in the tropical gingers: from development to diversification” Graduate Student invited speaker, Plant Sciences. Cornell University, Ithaca NY.
 2013 “To be or not to be (resolved): Fossils and Phylogenies of Zingiberales.” International Workshop on incorporating Fossils in Phylogenies, France Berkeley Fund. Berkeley, CA.
 2013 “Homoplasy, Evolution and Diversification of the tropical gingers: flowers, phylogenies and fossils” International Meeting on the Comparative Biology of Monocots (Monocots V), Bronx, NY.
 2013 “Forming Flowers: How Beauty and Function Evolve” Friends of Sausal Creek, Oakland CA.
 2013 “Pollination, Petaloidy and Functional Morphology of Flowers” UC Botanical Garden Public Lecture Series/Docent&Employee training.
 2013 “Homoplasy and emerging complexity in the evolution of floral form: petaloidy, pollination and polarity” Bonnie C. Templeton Lecture, Oregon State University, Corvallis, OR.
 2012 “Homoplasy and emerging complexity in the evolution of floral form: Zingiberales as a non-model system” European Evo-Devo Symposium on “Morphological Misfits”, Lisbon.

- 2012 “Emerging complexity and the evolution of floral form” UC Riverside, Botany and Plant Sciences Seminar Series.
- 2012 “Comparative Evolution, Form and Function: the gingers as a model clade” UCLA, Ecology and Evolutionary Biology Departmental Seminar.
- 2012 “Evolution of form and function: data from gingers and carnivores” Oklahoma State University Plant Biology Seminar Series.
- 2012 “Emerging complexity in the age of genomics: data from gingers and carnivores” UC Davis Plant Sciences Seminar.
- 2012 “The Evolution of Flowers: fanciful sex on planet earth” Close to Home Lecture series.
- 2011 “Emerging complexity in tropical gingers: flowers, form and diversification” International Botanical Congress, Melbourne Australia. Organized symposium “Thinking outside the evo-devo box”.
- 2011 “Homoplasy and the evolution of flowers” National Academy of Sciences Kavli Emerging Frontiers Symposium, Bogor, Indonesia.
- 2011 “Emerging complexity in tropical flowers” University of Vermont Marvin Seminar Series, Burlington, Vermont.
- 2010 “Evolution of the Zingiberales: Phylogeny and Flowers” California Academy of Sciences, San Francisco, CA.
- 2010 “Monocot flowers: from bauplan to gestalt” Plant Biology and Botany seminar series, University of California, Riverside.
- 2009 “Making the monocot flower: understanding the evolution of B-class genes across monocots” Ecology and Evolutionary Biology Seminar Series, University of California, San Diego.
- 2009 “Floral evolution, pollination syndromes, and the diversification of gingers” Biology and Graduate Student Seminar Series, Humboldt State University, Arcata, CA.
- 2009 “Making the monocot flower: what we can (and cannot) learn from derived model systems” 56th Annual Systematics Symposium, Angiosperm Phylogeny and Biotic Evolution. Missouri Botanical Garden.
- 2009 “Floral evolution and diversification in monocots” Society for Developmental Biology, Satellite Symposium “Plants in a changing world” (invited speaker and co-organizer).
- 2009 “Pollination and heterotopy in the stamen whorl of Zingiberales.” AAAS Pacific Division Annual Meeting, Evolutionary Innovations symposium.
- 2009 “Bringing morphology into the field: diversity, complexity, and adaptation of plant form” Invited Dinner Lecture, Botanical Society of America Development and Structural Section, Botany 2009, Snowbird UT.
- 2009 “How the ginger got its labellum: evolution of the stamen whorl in tropical monocots.” Ecology, Evolution and Marine Biology Seminar series, UCSB, Santa Barbara, CA.
- 2009 “How the ginger got its labellum: Evolution of the stamen whorl in Zingiberales.” Ecology and Evolutionary Biology Seminar, SFSU, San Francisco CA.
- 2008 “Floral evolution with a focus on the stamen whorl.” International Meeting of Monocot Biology IV: Comparative Biology and Evolution 2008. Copenhagen.
- 2008 “The effects of evolution on the ABCs of floral development.” Ecology and Evolutionary Biology Departmental Seminar, University of Arizona, Tucson AZ.
- 2008 “Floral development in the Zingiberales; from bananas to gingers” Departmental Seminar Series, Plant Biology Department, Cornell University, Ithaca NY.
- 2008 “Developmental constraints and floral evolution: the Zingiberales and pollination” Departmental Seminar Series, Biology Department, San Diego State University, San Diego CA.
- 2007 “How the ginger got its labellum: phylogeny and floral development” Graduate Seminar Series, Rancho Santa Ana Botanical Garden, Claremont CA.
- 2007 “Evolution in space and time: Rate of floral evolution in the tropical gingers as a model for molecular diversification” Plant Biology Seminar Series, UC Davis.
- 2007 “Bananas about Gingers: tropical diversity and the Zingiberales” Unselt Public Lecture Series, UC Botanical Garden.
- 2007 “Molecular evolution & adaptation: a case of going bananas” Biology Fellows Summer Seminar Series, UC Berkeley.

- 2006 “Focusing on diversification: A phylogenetic approach to understanding the evolution of form and function.” Society of Developmental Biology West Coast Regional meetings, Pacific Grove, CA.
- 2006 “Pollination Syndromes and Diversification Rates in the tropical Gingers: the labellum as a key innovation” Integrative Biology seminar series, University of California, Berkeley.
- 2005 “The birds and the bees: Pollination and the Globalization of Tropical Gingers.” The Botanical Society of Washington Evening Seminar Series.
- 2005 “Evolution of the Gingers (Zingiberales): Diversification, Systematics and Biogeography.” National Museum of Natural History, Botany Seminar Series.
- 2004 “Evolution of the tropical gingers (Zingiberales): diversification and conservation of charismatic megaflores.” George Mason University, Department of Environmental Science and Policy.
- 2004 “Evolution of the Gingers (Zingiberales): species diversity and tropical biogeography.” University of Vermont, Department of Biology Seminar Series.
- 2003 “Perspective on Graduate Studies at the NYBG” presentation to Botanical Science Committee, NYBG.
- 2003 “New Perspectives on Pollination and Species Diversification from the Phylogeny of Costaceae.” University of Vermont, Marvin Lecture Series, Department of Botany.
- 2003 “Ties and Dyes: A conservatory tour” presentation focusing on traditional uses of plants found throughout the conservatory for housing, clothing, and a splash of color. NYBG.
- 2003 “The Gingers: bringing beauty and spice to life” presentation for the Long Island Unit of the Herb Society of America.
- 2002 “Biodiversity Vision for the Amazon River and Flooded Forest ecoregion” presentation for LAC Subcommittee Meeting, WWF-US.
- 2001 “Notes from the Field” presentation for NYBG Patrons Council.
- 2001 “Recent Advances and Progress in Botanical Research” presentation for Botanical Science Council, NYBG.
- 2001 “The role of genomics in plant systematics” presentation for High School teachers summer workshop in genomics sponsored by Princeton University and the AMNH.
- 2001 “Plant phylogenomics” presentation for Uniondale (Long Island) high school students course in scientific research.
- 1999 “Ecoregional Planning in the South American Tropics” presentation for Presidential and Latin America Subcommittee Meeting, WWF US.
- 1998 “Biogeografía de la familia tropical Costaceae” presentation for the Sociedad Botánica de Bolivia.

Collecting

- 2011 Gabon, Africa. *Costus* and mycoheterotrophs.
- 2008 Panama. *Zamia* (Cycadales) & *Heliconia* (Zingiberales).
- 2007 Mexico. *Allium* & *Milla* (*Themidaceae*) in the northern Chihuahuan desert.
- 2006 Mexico. Cheilanthoid Ferns along the Eastern mountains.
- 2005 Gabon. Collecting gingers with diverse pollination syndromes (4 weeks).
- 2004 Hawai'i. Collection of Costaceae and *Heliconia* material - Lyon Arboretum (2 weeks).
- 2002 Queensland, Australia. *Tapeinochilos* and *Costus* from living collections (1 week).
- 2002 Hawai'i. Collection of Costaceae and *Alpinia* material - Lyon Arboretum (3 weeks).
- 2001 Hawai'i. Collection of Costaceae material from Lyon and Waimea arboreta (1 week).
- 2001 Costa Rica. Focus on *Dimerocostus* for population/biogeography study (1 week).
- 2001 Perú. In search of *Monocostus* in San Martín (1 week).
- 2000 Perú. Iquitos and surroundings. (2 weeks).
- 2000 Puerto Rico. (4 days).
- 1999 Perú. Puerto Maldonado and surroundings (1 month).
- 1998 Camiri, Bolivia. Collecting for Environmental Impact Assessment (6 weeks).
- 1997 - 1999 Bolivia. Various multi-disciplinary expeditions (18 months).
- 1996 Puerto Rico. Dry Forest Caribbean Biogeography (2 weeks).
- 1996 Bolivia. Ethnobotanical collections (3 weeks).
- 1995 Belize. Course in Tropical Botany (2 weeks).

Publications (coauthors: *-graduate student (major advisee); **-graduate student; +-undergraduate student)**in review**

- Eduardo M.B. Prata, Chodon Sass, Fabricius Domingos, Camila C. Ribas, Doriane P. Rodrigues, Gabriel D. do Vale, **Chelsea D. Specht**, Paul Fine and Alberto Vicentini. Exploring the boundaries: using high-throughput DNA sequencing, morphology, ecology and NIR spectroscopy for species delimitation in the *Pagamea guianensis* complex (Rubiaceae). *IJPS*, in prep.
- Alma Pineyro-Nelson, K. Frank-Hoeflich, E. Martinez-Salas, P.J. Rudall, E. Flores-Sandoval, J. Davila, **C.D. Specht** and E.R Alvarez-Buylla. Phylogenetic inference of Pandanales and ancestral character reconstruction analyses support a euanthial hypothesis for Triuridaceae. *Annals of Botany*, in review.
- Benedict, J.C., S.Y. Smith, M.E. Collinson, J. Leong-Skornickova, D.Y. Parkinson, F. Marone, and C.D. Specht. Understanding patterns of phenotypic diversity: a case study of seeds of Zingiberales. *Evolution*, submitted.
- William J. D. Iles, Chodon Sass, Laura Lagomarsino, Gracie Benson-Martin, Heather E. Driscoll, & Chelsea D. Specht. The phylogeny of Heliconia (Heliconiaceae) and the evolution of floral presentation. *Molecular phylogenetics and evolution*, submitted.

2016

- Thiago Andre**, Shayla Salzman+, Tania Wendt, and **C.D. Specht**. Speciation dynamics and biogeography of Neotropical spiral gingers (Costaceae). *Molecular Phylogenetics and Evolution*. doi:10.1016/j.ympev.2016.07.008
- Chodon Sass, Will J.D. Iles, Craig Barrett, Selena Y. Smith, and C.D. Specht. 2015. Revisiting the Zingiberales: Using multiplexed exon capture to resolve ancient and recent phylogenetic splits in a charismatic plant lineage. *PeerJ*. 4-e1584.
- Specht, C.D. The rise of evo-devo: the Pan American Society for Evolutionary Developmental Biology sets the stage. *Am. J. Bot.* 103: 1-4.

2015

- Kelsie Morioka+, Roxana Yockteng, Ana M.R. Almeida* and **C.D. Specht**. 2015. Loss of YABBY2-like gene expression may underlie the evolution of the laminar style in *Canna* and contribute to floral morphological diversity in the Zingiberales. *Frontiers in Plant Science*. <http://dx.doi.org/10.3389/fpls.2015.01106>
- John C. Benedict, Selena Y. Smith, Margaret E. Collinson, Jana Leong-Škorničková, **C. D. Specht**, Julie L. Fife, Federica Marone, Xianghui Xiao, and Dilworth Y. Parkinson. 2015. Seed morphoanatomy and its utility in recognizing subfamilies and tribes of the Zingiberaceae. *American Journal of Botany*.
- Moczek, A.P. et al. 2015. The significance and scope of evolutionary developmental biology: a vision for the 21st century. *Evolution & Development*. 17(13): 198-219. DOI:10.1111/ede.12125.
- Andre, Thiago, **C.D. Specht**, S. Salzman, Clarisse Palma-Silva, and Tania Wendt. 2015. Evolution of species diversity in the genus *Chamaecostus* (Costaceae): molecular phylogenetics and morphometric approaches. *Phytotaxa* 204(4): 265-276. doi: 10.11646/phytotaxa.204.4.3
- Almeida, A.M.R., Yockteng, R., Otoni, W.C., and **C.D. Specht**. 2015. Positive selection on the K domain of the AGAMOUS protein in Zingiberales suggests a mechanism for the evolution of androecial morphology in the order. *BMC EvoDevo*.
- A.M.R. Almeida, R. Yockteng and **C.D. Specht**. 2015. Evolution of petaloidy in the Zingiberales: an assessment of the relationship between untrastructure and gene expression patterns. *Developmental Dynamics* (special issue on *Evolution & Morphological Diversity*).
- John C. Benedict, Selena Y. Smith, Margaret E. Collinson, Jana Leong-Škorničková, **C. D. Specht**, Julie L. Fife, Federica Marone, Xianghui Xiao, and Dilworth Y. Parkinson. 2015. Evolutionary significance of seed structure in Alpinioideae (Zingiberaceae). *Botanical Journal of the Linnean Society*. 178 (3): 441-466. Doi: 10.1111/boj.12257.
- A.R. Deans et al. 2015. Finding our way through phenotypes. *PLoS Biology*. DOI: 10.1371/journal.pbio.1002033.
- Shayla Salzman+, Heather Driscoll, Tanya Renner*, Thiago Andre**, Stacy Shen*, and **C. D. Specht**. 2015. Spiraling into History: A molecular phylogeny and investigation of biogeographic origins of floral

evolution for the genus *Costus* (Costaceae). *Systematic Botany*. 40(1): 104-115. DOI 10.1600/036364415X686404.

C.D. Specht & Dianella Howarth. 2015. Adaptation of floral form: an evodevo perspective. *Tansley Review: New Phytologist*. doi: 10.1111/nph.13198

2014

Yockteng, R., Ana M.R. Almeida, Alma Pineyro-Nelson and **C.D. Specht**. 2014. Chapter 7: Adaptation of floral form: an evo-devo approach to study adaptive evolution in floral morphology. In *Mechanisms in Plant Adaptation* Roosa Laitinen (ed). Wiley Press.

Ana M.R. Almeida*, Roxana Yockteng, James C. Schnable**, Elena R. Alvarez-Buylla, Michael Freeling & **C. D. Specht**. 2014. Co-option of the polarity gene network shapes filament morphology in the angiosperms. *Nature: Scientific Reports*, 4: 6194. doi:10.1038/srep06194.

Etelvina Gandara**, **C.D. Specht** and Victoria Sosa. 2014. Origin and diversification of the *Milla* clade (Brodiaeoideae, Asparagaceae): a neotropical group of six geophyte genera. *Molecular Phylogenetics and Evolution*. Doi: 10.1016/j.ympev.2014.02.014

Craig F. Barrett, **C. D. Specht**, Jim Leebens-Mack, Dennis Wm. Stevenson, Wendy B. Zomlefer and Jerrold I. Davis. 2014. Resolving ancient radiations: can more data help resolve deep relationships among the tropical ginger (Zingiberales Griseb.). *Annals of Botany*, 113: 119–133. doi:10.1093/aob/mct264

Eduardo Ruiz-Sanchez & **C. D. Specht**. 2014. Ecological speciation in *Nolina parviflora* (Asparagaceae): Lacking spatial connectivity along the Trans-Mexican Volcanic Belt. *PLoS ONE*. 9(6):e98754. DOI:10.1371/journal.pone.0098754.

2013

Roxana Yockteng, Ana M.R. Almeida*, Stephen Yee*, Thiago Andre**, Colin Hill* and **C. D. Specht**. 2013. A method for extraction high quality RNA for next-generation sequencing and gene expression analyses. *Applications in Plant Sciences*. 1(12). DOI: 10.3732/apps1300070.

Roxana Yockteng, Ana M.R. Almeida*, Kelsie Morioka+, Elena R. Alvarez-Buylla & **C.D. Specht**. 2013. Molecular evolution and patterns of duplication in the SEP/AGL6-like lineage of the Zingiberales: a proposed mechanism for floral diversification. *Molecular Biology and Evolution* 30(11):2401–2422. DOI: 10.1093/molbev/mst137.

Tanya Renner & **C.D. Specht**. 2013. Inside the trap: gland morphologies, digestive enzymes, and the evolution of plant carnivory in the Caryophyllales. *Current Opinions in Plant Biology*. DOI: 10.1016/j.pbi.2013.06.009.

Ana M.R. Almeida*, Andrew Brown+ & **C.D. Specht**. 2013. Tracking the development of the petaloid fertile stamen in *Canna indica*: Insights into the origin of androecial petaloidy in the Zingiberales. *AoB PLANTS*. DOI: 10.1093/aobpla/plt009.

Luke J. Harmon, J. Baumes, C. Hughes, J. Soberon, **C.D. Specht**, W. Turner, C. Lisle, R. Thacker. 2013. Arbor: comparative analysis workflows for the tree of life. *PLOS Currents* 5. DOI: 10.1371./currents.tol.099161de5eabdee073fd3d21a44518dc.

Eduardo Ruiz-Sanchez and **C.D. Specht**. 2013. Influence of the geological history of the Trans-Mexican Volcanic Belt on the diversification of *Nolina parviflora* (Asparagaceae: Nolinoideae). *Journal of Biogeography*. 40(7): 1336-1347. DOI: 10.1111/jli.12073.

Feng-Xia Xu, Dong-Qin Chen, and C.D. Specht. 2013. Comparative microsporogenesis and anther development of selected species of Magnoliaceae. *Nordic Journal of Botany*. DOI: 10.1111/j.1756-1051.2012.01445.x

V.S.F.T. Merckx, J. Kissling, H. Hentrich, S.B. Janssens, C.B. Mennes, **C.D. Specht** and E.F. Smets. 2013. The phylogenetic relationships of the mycoheterotrophic genus *Voyria* and their implications for the early biogeographic history of Gentianaceae. *American Journal of Botany*. DOI: 10.3732/ajb.1200330.

V.S.F.T. Merckx, E.F. Smets and **C.D. Specht**. 2013. Biogeography and conservation of mycoheterotrophic plants. In V. Merckx [ed.], *Mycoheterotrophic plants: The Biology of Plants Living on Fungi*. Springer Science, New York, NY.

2012

- C.D. Specht**, Roxana Yockteng, Ana M.R. Almeida*, B.K. Kirchoff, W.J.Kress. 2012. Homoplasy, Pollination, and emerging complexity during the evolution of floral development in the tropical gingers (Zingiberales). *Botanical Review* 78: 440-462.
- H. Maas-Van de Kamer, P.J.M. Maas and **C.D. Specht**. 2012. *Costus loangensis*, an exciting new species from Gabon. *Phytokeys* 18: 11-18.
- G.V. Cron, C. Pirone**, M.E. Bartlett*, W.J. Kress and **C.D. Specht**. 2012. Phylogenetic relationships and evolution in the Strelitziaceae (Zingiberales). *Systematic Botany* 37(3): 606-619. doi: 10.1600/036364412X648562
- T. Renner* and **C.D. Specht**. 2012. Molecular evolution and selection patterns of class I chitinase genes in the carnivorous plants of the Caryophyllales. *Molecular Biology and Evolution*. 29(10):2971-2985. doi: 10.1093/molbev/mss106
- V.S.F.T. Merckx, S.B. Janssens, N.A.Hynson, **C.D. Specht**, T.D.Bruns, and E.F. Smets. 2012. Mycoheterotrophic interactions are not limited to a narrow phylogenetic range of arbuscular mycorrhizal fungi. *Molecular Ecology*, 21(6): 1524-1532. doi: 10.1111/j.1365-294X.2012.05472.x.
- A. Angelova, Z. Shenghuo, Y. Lin, J. Wong+, and **C.D. Specht**. Development and deployment of a large-scale flower recognition mobile app. *NEC technologies report*, 2012.

2011

- T. Renner* and **C.D. Specht**. 2011. Escaping the trap: Redefining carnivorous plant gland evolution in the Caryophyllales. *International Journal of Plant Sciences* 172(7): 889-901.
- A. Carroll** and **C.D. Specht**. 2011. Understanding plant cellulose synthases through a comprehensive investigation of the cellulose synthase family sequences. *Frontiers in Plant Genetics and Genomics (Front. Plant Sci.)* 2:5.
- M.E. Bartlett* and **C.D. Specht**. 2011. Changes in copy number and expression pattern of the TEOSINTE BRANCHED-like genes in the Zingiberales provide a mechanism for evolutionary shifts in symmetry across the order. *American Journal of Botany*, 98(2):227-243.
- David B. Wake, Marvalee H. Wake and **C. D. Specht**. 2011. Homoplasy: from detecting pattern to determining process and mechanism of evolution. *Science*. 331:1032-1034.

2010

- A.D. Poulsen and **C.D. Specht**. 2010. A new species of Costaceae from Borneo. *Gardens Bulletin Singapore* 62 (1): 143-150.
- C. Sass* and **C.D. Specht**. 2010. Phylogenetic estimation of the core Bromeliads with an emphasis on the genus *Aechmea* (Bromeliaceae). *Molecular Phylogenetics and Evolution*. 55(2): 559-571.
- M.E. Bartlett* and **C.D. Specht**. 2010. Evidence for the involvement of GLOBOSA-like gene duplications and expression divergence in the evolution of floral morphology in the Zingiberales. *New Phytologist*, 187: 521-541.
- Gene Robinson, Jody Banks, Dianna Padilla, Warren Burggren, C. Cohen, Charles Delwiche, Vicki Funk, Hopi Hoekstra, Erich Jarvis, Loretta Johnson, Mark Martindale, Carlos Martinez del Rio, Mónica Medina, David Salt, Saurabh Sinha, **Chelsea Specht**, Allan Spradling, Kevin Strange, Joan Strassmann, Billie Swalla, and Lars Tomanek. 2010. Empowering 21st Century Biology. *BioScience*. 60(11): 923-930.

2009

- C.D. Specht** and M.E. Bartlett*. 2009. Flower evolution: the origin and subsequent diversification of the angiosperm flower. *Annual Review of Ecology Evolution and Systematics* 40:217-243.
- Kirchoff, B.K., L.P. Lagomarsino+, W.H. Newman, M.E. Bartlett* & **C.D. Specht**. 2009. Early floral development in *Heliconia latispatha* and comparative evolution across Zingiberales. *American Journal of Botany* 96(3):1-15.
- Renner, T. *, J. Bragg, H.E. Driscoll, J. Cho**, A. Jackson & **C.D. Specht**. 2009. Viral Induced Gene Silencing as a tool for investigating floral developmental genetics in the Zingiberales. *Molecular Plant* 3:1-11.
- Ling-Jing Chen, Zhao-Yan Diao, **C.D. Specht**, and Z. Renee Sung. 2009. Molecular Evolution of VEF-Domain-Containing PcG Genes in Plants. *Molecular Plant* 2:738-754. doi:10.1093/mp/ssp032

2008

- Nguyen, N.**, H.E. Driscoll, and **C.D. Specht**. 2008. A molecular phylogeny of the wild onions (*Allium*; Alliaceae) with a focus on the western North American center of diversity. *Molecular Phylogenetics and Evolution* 47: 1157-1172.
- Bartlett, M.E.*, B.K. Kirchoff, and **C.D. Specht**. 2008. Epi-illuminescence microscopy coupled to *in situ* hybridization and its utility in the study of evolution and development in non-model species. *Development, Genes and Evolution* 218(5): 273-279.

2007

- Kress, W. J., M. Newman, A. Poulsen, and **C. D. Specht**. 2007. An analysis of generic circumscriptions in tribe Alpinieae (Alpinoideae: Zingiberaceae). *The Gardens' Bulletin Singapore* 59: 113-128.
- Sass, C.*, D. Little, D.W. Stevenson and **C.D. Specht**. 2007. DNA-Barcoding in the Cycadales: Testing the potential of proposed barcoding markers for species identification of Cycads. *PloS-ONE*. 11: e1154.
- Funk, Vicki and **C.D. Specht**. 2007. Meta-trees: grafting for a global perspective. *Proceedings of the Biological Society of Washington*. 120(2): 233-241.
- Specht, C.D.** 2007. A fine look at gingers of South India: Review of "Zingiberaceae and Costaceae of South India" by M. Sabu. *Taxon* 56(1): 276-277. (February 2007)
- Sjölander, K. and **Specht, C.D.** "Functional prediction through phylogenetic inference and structural classification of proteins." 2007. In R. Apweiler [ed.], *The Encyclopedia of Genetics, Genomics, Proteomics, and Bioinformatics*. J. Wiley & Sons, Ltd., West Sussex, UK.

2006

- Davis, J.I., G. Petersen, O. Seberg, D.W. Stevenson, C.R. Hardy, M.P. Simmons, F.A. Michelangeli, D.H. Goldman, L.M. Campbell, **C.D. Specht**, and J.I. Cohen. 2006. Are mitochondrial genes useful for the analysis of monocot relationships? *Taxon* 55:857-870.
- Specht, C.D.** "Gondwanan Vicariance or Dispersal in the Tropics? The biogeographic history of the tropical monocot family Costaceae (Zingiberales)." 2006. In J. T. Columbus, E. A. Friar, C. W. Hamilton, J. M. Porter, L. M. Prince, and M. G. Simpson, [eds.], *Monocots: comparative biology and evolution*. Rancho Santa Ana Botanic Garden, Claremont, California.
- Kress, W.J. and **Specht, C.D.** "The evolutionary and biogeographic origin and diversification of the tropical monocot order Zingiberales." 2006. In J. T. Columbus, E. A. Friar, C. W. Hamilton, J. M. Porter, L. M. Prince, and M. G. Simpson, [eds.], *Monocots: comparative biology and evolution*. Rancho Santa Ana Botanic Garden, Claremont, California.
- Petersen, G., O. Seberg, J.I. Davis, D.H. Goldman, D.W. Stevenson, L.M. Campbell, F.A. Michelangeli, **C.D. Specht**, M.W. Chase, M.F. Fay, J.C. Pires, J.V. Freudenstein, C. R. Hardy and M.P. Simmons. "Mitochondrial DNA and Monocot Phylogeny." 2006. In J. T. Columbus, E. A. Friar, C. W. Hamilton, J. M. Porter, L. M. Prince, and M. G. Simpson, [eds.], *Monocots: comparative biology and evolution*. Rancho Santa Ana Botanic Garden, Claremont, California.
- Specht, C.D.** and Stevenson, D.W. 2006. "A revised taxonomy for Costaceae (Zingiberales)." *Taxon* 55(1): 153-163.
- Specht, C.D.** 2006. "Systematics and Evolution of the tropical monocot family Costaceae (Zingiberales): a multiple dataset approach." *Systematic Botany* 31(1):88-108.

2001 - 2005

- Specht, C.D.** 2005. "Phylogenetics, Floral Evolution, and Rapid Radiation in the Tropical Monocot Family Costaceae (Zingiberales)." Pp. 29-60 in *Plant Genome: Biodiversity and Evolution*. A.K Sharma and A. Sharma (Eds.) Science Publishers, Inc. Enfield, NH. USA.
- Kress, W. J. and **C. D. Specht**. 2005. "Between Cancer and Capricorn: phylogeny, evolution, and ecology of the tropical Zingiberales." In I. Friis and H. Balslev, eds. *Proceedings of a symposium on plant diversity and complexity patterns - local, regional and global dimensions*. Biologiske Skrifter, The Royal Danish Academy of Sciences and Letters, Copenhagen.
- Davis, J.I., D.W. Stevenson, G. Petersen, O. Seberg, L.M. Campbell, J.V. Freudenstein, D.H. Goldman, C.R. Hardy, F.A. Michelangeli, M.P. Simmons, **C.D. Specht**, F. Vergara-Silva, and M.A. Gandolfo. 2004. "A phylogeny of the monocots, as inferred from rbcL and atpA sequence variation, and a comparison of methods for calculating jackknife and bootstrap values." *Systematic Botany* 29(3):467-510.

- Specht, C.D.** and Stevenson, D.W. 2003. "Easy Trees? - Review of "Phylogenetic trees made easy: a how-to manual for molecular biologists" by Barry Hall." *Molecular Phylogenetics and Evolution*. 27:168-171.
- Specht, C.D.**, Kress, W.J., Stevenson, D.W., and DeSalle, R. 2001. "A Molecular Phylogeny of Costaceae (Zingiberales)." *Molecular Phylogenetics and Evolution* 21(3):333-345.

1997-2000

- Stevenson, D.W., Davis, J.D., Freudenstein, J.V., Hardy, C.R., Simmons, M.P., and **Specht, C.D.** 2000. "A Phylogenetic analysis of the Monocotyledons based on Morphological and Molecular character sets, with comments on the placement of *Acoris* and Hydatellaceae." *Monocots: Systematics and Evolution*. Eds K.L. Wilson and D.A. Morrison. CSIRO:Melbourne.
- Lim, J., Heliarutta, Y., **Specht, C.D.**, Jung, J., Sims, L., Bruce, W.B., Diehn, S., and Benfey, P.N. 2000. "Molecular Analysis of the SCARECROW Gene in Maize Reveals a Common Basis for Radial Patterning in Diverse Meristems." *The Plant Cell* 12:1307-1318.
- Specht, C.D.** and Caffrey, P. 1999. "Manejo Sostenible de Recursos y Conservación de la Biodiversidad." *BOLFOR* 17: 1-3.
- Goldstein, Paul Z. and **Specht, C.D.** 1997. "Pitfalls in phylogenetic analysis of Large Molecular Data." In *Molecular Ecology and Evolution*, in B. Schierwater et al. (eds.) Berlin: Birkhauser Verlag.

Published Abstracts and Scientific Presentations (1997-present: presenting author in bold) (coauthors: *-graduate student (major advisee); **-graduate student; +-undergraduate student)

- Molly Ng****, Chelsea D. Specht, Selena Y. Smith. Investigating a *Heliconia* plant-pollinator relationship using climatic niches. Botany 2016, Savannah GA, USA.
- John C. Benedict**, Selena Y. Smith, Chelsea D. Specht. Using X-ray tomographic data to teach seed morphology, phylogenetics and dichotomous keys. Botany 2016, Savannah GA USA.
- Alma Pineyro-Nelson, Ana M.R. Almeida**, Chodon Sass, William Iles, and C.D. Specht. Change of fate, laminarity and developmental plasticity as agents of floral diversification in the Zingiberales. Genetics, Genomics and Development, Berkeley CA.
- Chelsea D. Specht**, Chodon Sass, Gracie Benson-Martin*, Shalika Gupta+, Molly Ng** and Heather Driscoll. Evolution of *Heliconia*: spatial and temporal diversification. Botany 2015, Edmonton, CA.
- Amanda Salvi+**, SY Smith, J. Leong-Škorničková & Chelsea D. Specht. Leaf Architecture and evolution in the tropical gingers. Botany 2015, Edmonton, Canada.
- John C. Benedict**, SY Smith, CD Specht and D. Parkinson. A re-examination of the enigmatic North American zingiberalean fossil fruit and seed record. Botany 2015, Edmonton, Canada.
- Curtis Lisle**, Jeffrey Baumes, Anthony Wehrer, Luke Harmon, Robert W. Thacker, Chelsea D. Specht, Charles Hughes, Jorge Soberon. Arbor Workflows: a web-hosted environment for biological dataset analysis. VizBi 2015, Boston MA.
- Amanda Salvi+**, Selena Y. Smith, John C. Benedict, Jana Leong-Škorničková & Chelsea D. Specht. Leaf Architecture in Gingers and Relatives (Zingiberales). Botany 2014, Boise, Idaho.
- Craig Barrett**, Chodon Sass, Selena Y. Smith and C.D. Specht. Botany 2014, Boise, Idaho.
- C.D. Specht**, Ana M.R. Almeida*, R. Yockteng, A. Pineyro-Nelson. Gene regulatory networks and adaptive evolution of flower form. 2014. EuroEvoDevo, Vienna Austria.
- C.D. Specht**, Ana M.R. Almeida*, R. Yockteng. Petaloidy, Polarity and Pollination: The evolution of Organ Morphology Networks" Plant and Animal Genomes (PAG) 2014, San Diego, CA.
- Ana M.R. Almeida***, Roxana Yockteng, Wagner Otoni and C.D. Specht. Evolution of the AGAMOUS gene family in the Zingiberales: insights into androecial petaloidy. Botany 2013, New Orleans, LA.
- Selena Y. Smith**, J. C. Benedict, C.D. Specht et al. Reevaluation of the oldest fossils in Zingiberales and implications for inferring the evolutionary history of gingers, bananas and relatives. Botany 2013, New Orleans, LA.
- Ana M.R. Almeida***, R. Yockteng, and C.D. Specht. Petaloidy in the Zingiberales: On floral morphological evolution and gene regulatory networks. Monocots V, 2013, Bronx NY.
- John C. Benedict**, Selena Y Smith, C.D. Specht et al. Morphology and anatomical variation in fruits and seeds of extant and fossil Zingiberales and their systematic significance. Monocots V, 2013, Bronx NY.

- Eduardo Ruiz-Sanchez** and C.D. Specht. The role of the trans-mexican volcanic belt on speciation within a pachycaulous zerophyte *Nolina parviflora* complex (Asparagaceae: Nolinoideae). *Monocots V*, 2013, Bronx NY.
- Chelsea D. Specht**, S. Y. Smith, R. Yockteng, A.M.R. Almeida*, C. Sass*, J.C. Benedict and C. Barrett. Homoplasmy and Emerging Complexity in the Evolution of the Zingiberales. *Monocots V*, 2013, Bronx NY.
- Thiago Andre***, Tania Wendt, Clarisse Palma-Silva and C.D. Specht. Adventuring through dry forests: *Chamaecostus subsessilis* (Costaceae) phylogeography, spatial distribution and evolution. *Monocots V*, 2013, Bronx NY.
- Shayla Salzman+**, T. Andre and C.D. Specht. Spiralling into history: Molecular phylogeny, biogeography, and ancestral character state reconstruction of distribution and pollination syndrome for *Costus* (Costaceae). *Monocots V*, 2013, Bronx NY.
- Ana M.R. Almeida***, R. Yockteng, M. Freeling and C.D. Specht. The evolution of Zingiberales petaloid staminodes through the ab/ad polarity lens: implications for plant body plan evolution. *Evolution* 2013, Snowbird UT.
- Luke Harmon**, J. Baumes, C. Hughes, J. Soberon, C.D. Specht, R. Thacker, W. Turner and C. Lisle. *Arbor: Comparative Analysis Workflows for the Tree of Life*. *Evolution* 2013, Snowbird UT.
- C.D. Specht**, A.M. Almeida* and R. Yockteng. Emerging complexity in the tropical gingers (Zingiberales): homoplasmy and floral evolution. *Euro EvoDevo* 2012, Lisbon, Portugal.
- Tanya Renner*** and C.D. Specht. Molecular evolution of class 1 chitinases utilized for plant carnivory in the Caryophyllales. *Euro EvoDevo* 2012, Lisbon, Portugal.
- Ana M.R. Almeida***, Roxana Yockteng, and C.D. Specht. Petaloidy and floral diversification in the Zingiberales. *Evolution* 2012, Ernst Mayr symposium.
- Etelvina Gandara****, Victoria Sosa and C.D. Specht. *Origin and diversification of the Milla clade (Brodiaeoideae, Asparagaceae): a Neotropical group of six geophyte genera*. *Botany* 2012, Columbus OH. Abstract #788.
- J. Mike Heaney****, E. Ruiz Sanchez, C.D. Specht, D. Soltis, P. Soltis. Phylogenetics of *Nolina* (Nolineae, Ruscaceae). *Botany* 2012, Columbus, OH. Abstract #1025.
- Roxana Yockteng**, A.M. Almeida*, and C.D. Specht. *The role of SEPALLATA genes in floral evolution in the Zingiberales*. *Botany* 2011, St. Louis MO. Abstract #675.
- J. Mike Heaney****, H.Cooper+, E. Ruiz Sanchez, C.D. Specht, D. Solits, P. Soltis. *Systematics of Nolina (Nolineae, Ruscaceae)*. *Botany* 2011, St. Louis MO. Abstract #675.
- Eduardo Ruiz Sanchez** and C.D. Specht. *Phylogeography and ecological niche modeling of the Mexican endemic shrub Nolina parviflora (Nolinoideae: Asparagaceae)*. *Botany* 2011, St. Louis MO. Abstract #173.
- Ana M.R. Almeida***, W. Otoni, R. Yockteng, C.D. Specht. *Gingers BCs: The role of MADS-box genes in floral evolution in the Zingiberales*. *Botany* 2011, St. Louis MO. Abstract #101.
- Gracie Martin+**, W. John Kress, H.E. Driscoll, I. Lopez, S. Fraley+, S. Gupta+, C.D. Specht. *An analysis of speciation modes within Heliconiaceae: a biogeographical approach*. *Botany* 2011, St. Louis MO. Abstract #749.
- C.D. Specht**, H. Driscoll, C. Sass*, J.J.Xue+ and W.J.Kress. *Evolution of Tropical Heliconia: Ecological and Spatial Diversification at the species level*. *Botany* 2010, Providence RI. Abstract #347.
- C.D. Specht**, H. Driscoll, C. Sass*, J.J.Xue+, S. Fraley+ and W.J.Kress. *Evolution of Tropical Heliconia: Ecological and Spatial Diversification at the species level*. *Evolution* 2010, Portland OR. Abstract #144.
- Tanya Renner*** and C.D. Specht. *Chitinase Subfunctionalization in Carnivorous plants*. *Evolution* 2010, Portland OR. Abstract #143.
- Ana Maria R. Almeida***, M.E.Bartlett*, & C.D.Specht. *Class B gene expression in the Zingiberales and its role in the evolution of pollination syndromes through alterations in floral form*. *Botany and Mycology* 2009, Snowbird, UT. Abstract #234.
- Madelaine E. Bartlett*** & C.D. Specht *CYCLOIDEA-like genes and the evolution of floral symmetry in the Zingiberales*. *Botany and Mycology* 2009, Snowbird, UT. Abstract #105.
- Kali Lader***, T. Dawson and C.D. Specht. *Community Structure of Foliar Endophytic Fungi Associated with Sequoia sempervirens*. *Botany and Mycology* 2009, Snowbird, UT. Abstract #793.
- Chodon Sass*** and C.D. Specht. *Multi-gene molecular phylogeny of Aechmea and allied Bromelioideae genera (Bromeliaceae)*. *Botany and Mycology* 2009, Snowbird, UT. Abstract #282.

- Tanya Renner*** and C.D. Specht. *The Evolution of Plant Carnivory in the Caryophyllales*. Botany and Mycology 2009, Snowbird, UT. Abstract #269.
- Laura Lagomarsino+**, W.J. Kress, V. Gowda, E.J. Temeles and C.D. Specht. *Phylogeny and Floral Evolution of Heliconia section Heliconia*. Botany and Mycology 2009, Snowbird, UT. Abstract #841.
- Irene Liao+**, H.E. Driscoll, T. Renner*, J. Huston+ and C.D. Specht. *Virus-induced gene silencing (VIGS) as a functional genomic tool across monocots*. Botany and Mycology 2009, Snowbird, UT. Abstract #236.
- Heather E. Driscoll**, I. Liao+, Y. Wang+, and C.D. Specht. *Molecular phylogeny of the genus Costus (Costaceae)*. Botany and Mycology 2009, Snowbird, UT. Abstract #1246.
- Madelaine E. Bartlett***, A.M. R- Almeida* & C.D. Specht. *PISTILLATA and the evolution of floral morphology in the Zingiberales*. 2009 "The evolution of plant development" 25th Plant Biology Symposium, Riverside, CA.
- C. D. Specht**. *Floral evolution with a focus on the stamen whorl*. International Meeting of Monocot Biology IV: Comparative Biology and Evolution 2008. Copenhagen. (invited)
- W. J. Kress**, L. Lagomarsino, & C. D. Specht. *A new molecular phylogeny for Heliconia (Heliconiaceae) and evidence for a plant-pollinator adaptive radiation*. International Meeting of Monocot Biology IV: Comparative Biology and Evolution 2008. Copenhagen.
- Dennis Wm. Stevenson**, JI Davis, LM Campbell, C Hardy, and CD Specht. *Commelinoids or Palms Up: Facts, Fantasies and Fictions*. Monocots 2008. Copenhagen.
- C. D. Specht**, C. Gomez-Navarro*, H.E. Driscoll & V. Handley. *Phylogeny and clues to population structure in Mexican species of Dioon (Zamiaceae; Cycadales)*. Botany 2008. Vancouver, BC. Abstract # 150.
- C. D. Specht**, M.E. Bartlett* & T. Renner*. *Evolution of the stamen whorl in the Zingiberales*. Botany 2008. Vancouver, BC. Abstract # 142.
- Chodon Sass*** & C.D. Specht. *Phylogenetic estimation of Central American Aechmea (Bromeliaceae) using low-copy nuclear and chloroplast gene regions*. Botany 2008. Vancouver, BC. Abstract # 232.
- Madelaine E. Bartlett*** & C.D. Specht. *CYCLOIDEA-like genes and the evolution of floral symmetry in Zingiberales*. Botany 2008. Vancouver, BC. Abstract # 533.
- Laura Lagomarsino+**, W.J. Kress & C.D. Specht. *Molecular Phylogeny and Evolution of Heliconia (Zingiberales: Heliconiaceae)*. Botany 2008. Vancouver, BC. Abstract # 201.
- Sankar Sridiran+, Solomon Stonebloom**, **Madelaine Bartlett***, and C.D. Specht. 2007. *The labellum of Costus and the ABC model of floral development*. Abstract #1178; BOTANY and Plant Biology, Chicago, IL. USA.
- C.D. Specht** *A phylogenetic approach to understanding the rate and mode of floral evolution in the Zingiberales*. SSB/SSE Evolution meetings. 2006. Stony Brook, NY.
- C.D. Specht** *Focusing on diversification: understanding the evolution of floral form in the Zingiberales*. Abstract #137, Botany meetings. 2006. Chico, CA.
- C.D. Specht** and Kress, W. J. *Origins and diversification of the major lineages of the Zingiberales: testing tropical distributions*. SSB/SSE Evolution meetings. 2004. Fort Collins, Colorado.
- C.D. Specht** *Biogeography of Costaceae: Gondwanan Vicariance or Dispersal in the Tropics?* MonocotsIII/GrassesIV. 2003. Ontario, California.
- W. J. Kress and **Specht, C.D.** *Biogeography of the Zingiberales*. MonocotsIII/GrassesIV. 2003. Ontario, CA.
- Petersen, G.**, O. Seberg, J.I. Davis, D.W. Stevenson, L.M. Campbell, J.V. Freudenstein, D.H. Goldman, C. R. Hardy, F.A. Michelangeli, M.P. Simmons, and C.D. Specht. "Mitochondrial data in monocot phylogenies." Monocots III. March 2003. Rancho Santa Ana, California.
- Specht, C.D.** *Species level phylogenetics in the monocot family Costaceae: rapid radiation and floral evolution*. Presentation at conference "Plant species-level systematics: patterns, processes and new applications". 2002. Leiden.
- Specht, C.D.** and Stevenson, D.W. *Untangling complex characters: the use of combined morphological and molecular analysis to determine relationships in the Costaceae*. Botany 2002, Madison, Wisconsin.
- Specht, C.D.** and Stevenson, D.W. "Systematics and floral evolution of Costaceae (Zingiberales)." Botany 2001 Albuquerque, NM.
- Davis, J.I.**, Stevenson, D.W., Campbell, L., Goldman, D., Hardy, C., Michelangeli, F., Simmons, M.P., and Specht, C.D. *Phylogenetic relationships among the monocots as inferred from morphology and nucleotide sequence variation in three genes*. Botany 2001 Abstracts *American Journal of Botany*, 2001. Albuquerque, NM.
- Specht, C.D.** *Combined data analysis aids in interpreting the systematic relationships in a family of tropical monocots undergoing rapid molecular and morphological evolution*. Willi Hennig Society, 2001. Corvallis, OR.

- Specht, C.D.** *A Molecular Phylogeny of Costaceae (Zingiberales): implications on floral evolution and tropical biogeography.* Presentation at the meeting of the Association for Tropical Biology, 2001. Bangalore, India.
- Specht, C.D.**, Powell, G.W., Riveros, J.C., Ferriera, L., Lemos, R., Vasquez, P., Cavalier, J. *Conservation planning for a species-rich, data-poor landscape.* Society for Conservation Biology, 2001. Hilo, HI.
- Specht, C.D.** *Ethnobotanics: A predictive analysis of medicinal properties of plant families based on the ethnopharmacopoeia of the Chacobo, Beni, Bolivia.* Presentation at the meetings of the International Society for Ethnobotany, 1997. London, England.
- Specht, C.D.** *Root apices and Quiescence: the point of doing nothing.* Presentation at joint meeting of the American Institute of Biological Sciences (AIBS) and Botanical Society of America (BSA), 1997. Montreal, Canada.

Papers published from lab members developed and submitted during their tenure in my lab:

- Qian Fu, **Huanfang Liu**, **Ana Almeida**, Yanfeng Kuang, Pu Zou and Jingping Liao. 2014. Molecular basis of floral petaloidy: insights from androecia of *Canna indica*. *AoB PLANTS*. doi: 10.1093/aobpla/plu015
- Eduardo Ruiz-Sanchez**. 2012. A new species of Otatea (Poaceae: Bambusoideae: Bambuseae) from Queretaro, Mexico. *Acta Botanica Mexicana* 99:21-29.
- Eduardo Ruiz-Sanchez**, Flor Rodriguez-Gomez & Victoria Sosa. 2012. Refugia and geographic barriers of populations of the desert poppy, *Hunnemannia fumariifolia* (Papaveraceae). *Organisms Diversity & Evolution* 12:133-143.
- Angelique D'Hont... **Ana Almeida** et al. 2012. The banana (*Musa acuminata*) genome and the evolution of monocotyledonous plants. *Nature*. doi:10.1038/nature11241.
- Ulrike Bauer, C.J. Clemente, **T. Renner**, W. Federle. 2011. Form follows function: morphological diversification and alternative trapping strategies in a carnivorous plant genus. *Journal of Evolutionary Biology*. Doi: 10.1111/j.1420-9101.2011.02406.x