

Jason Ager Koontz

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Education

1993 B.S. (Botany) Iowa State University, Ames, IA
(with Distinction, Honors Program, and Phi Beta Kappa)
1995 M.S. (Botany) Miami University, Oxford, OH
2000 Ph.D. (Botany) Washington State University, Pullman, WA

Current Position

7/14-present: Chair of Biology
8/11-7/14: Co-Chair of Biology
8/10: Tenured and promoted to Associate Professor
9/04-8/10: Assistant Professor of Biology
Becoming Biologists (BI150), General Botany (BI220), Cell Biology (BI210), Nutrition (BI263; 2004-2006), Natural History of Ireland (BI328; 2010, 2013), Conservation Biology (BI410), Conservation Biology Senior Inquiry (BI464)

Non-Academic Positions

5/12-present: Research Associate, Rancho Santa Ana Botanic Garden, Claremont, CA.
1/06-present: Research Associate, Department of Botany, The Field Museum of Natural History, Chicago, IL.
10/04-present: Adjunct Assistant Professional Scientist, Illinois Natural History Survey, Prairie Research Institute, University of Illinois Urbana-Champaign, IL.
5/00-9/04: Assistant Research Scientist III, Plant Systematist, Centers for Biodiversity and Wildlife and Plant Ecology, Illinois Natural History Survey, Champaign, IL.

Academic Positions

10/01-12/07: Affiliate Assistant Professor, Department of Plant Biology, University of Illinois at Urbana-Champaign, IL.
8/95-5/00: Graduate Teaching Assistant, Department of Botany, Washington State University, Pullman, WA
8/93-8/95: Graduate Assistant, Department of Botany, Miami University, Oxford, OH

Professional Societies

American Society of Plant Taxonomists, Botanical Society of America, Society for Conservation Biology, California Botanical Society, Southern California Botanists, Illinois State Academy of Science, National Association of Biology Teachers, California Native Plant Society, Illinois Native Plant Society, *Delphinium* Society

Grants & Awards Received (since 2000)

Faculty Research Fund, Augustana College; 2013—"June 2013 larkspur hunt: More fieldwork in southern California" \$2,220.

Faculty Research Fund, Augustana College; 2012—"Understanding *Delphinium*: Fieldwork in southern California" \$1,900.

US Fish and Wildlife Service; 2011—"Seed ecology and population genetic studies for *Scutellaria floridana* (Florida scullcap) and *Pinguicula ionantha* (Panhandle butterwort)" \$21,390. (B. Molano-Flores and J. Coons, co-PIs)

Council on International Educational Exchange; 2008—Ping Faculty Development Fellowship to attend the CIEE International Faculty Development Seminar, "Celtic Tiger: Reality or Myth" \$1,500.

Large Grants Project, Wildlife Preservation Fund, Illinois Department of Natural Resources; 2007—"Demographic and genetic evidence to determine the rarity status of wild blue larkspur (*Delphinium carolinianum*) in Illinois" \$14,487.

New Faculty Research Award, Augustana College; 2007—“Using AFLP markers to test the hybrid origin of gypsum-loving larkspur” \$4,000.

Faculty Research Fund, Augustana College; 2007—“What is the distribution and abundance of wild blue larkspur in Illinois?” \$1,800.

Faculty Research Fund, Augustana College; 2006—“AFLP analyses of gypsum-loving larkspur (*Delphinium gypsophilum*), a putative hybrid species” \$1,500.

New Faculty Research Award, Augustana College; 2005—“ A proposal for equipment to develop ISSRs and AFLPs to study larkspur conservation genetics” \$4,000.

Academic Affairs, Office of the Dean, Augustana College; 2005— Supplemental Travel grant to attend SEESP 2005, Pennsylvania State University, College Station, PA \$600.

Science and Engineering Education Scholars Program, Pennsylvania State University; 2005—To attend SEESP 2005, Pennsylvania State University, College Station, PA \$500.

Alumni Board, Augustana College; 2005—“The search for *Delphinium carolinianum* (wild blue larkspur) in Illinois” \$400.

Faculty Research Fund, Augustana College; 2005—“Conservation genetics in the endangered Baker’s larkspur” \$1,030.

New Faculty Research Award, Augustana College; 2004—“Proposal to purchase equipment for DNA extraction” \$4,000.

Small Grants Project, Wildlife Preservation Fund, Illinois Department of Natural Resources; 2003—“ An investigation of hybridization between the rediscovered *Baptisia tinctoria* and *Baptisia lactea*” \$1,000 (M. A. Feist co-PI).

Small Grants Project, Wildlife Preservation Fund, Illinois Department of Natural Resources; 2002—“An investigation of hybridization between the threatened *Solidago sciaphila* (cliff goldenrod) and the common *Solidago hispida* (hairy goldenrod)” \$1,000.

Annual Grants Program, Genetic Resources Conservation Program, University of California; 2000— “Conservation genetics in Baker’s larkspur, *Delphinium bakeri* (Ranunculaceae)” \$1,385.

Peer-Reviewed Publications

Bryant B*, Eyler B*, Johnsrud S*, **Koontz J**. 2012. Genetic variation in the Illinois-threatened hill prairie larkspur. Proceedings of the 22nd North American Prairie Conference: 96-100. *Augustana student authors.

Fuhr S, Douglas K, **Koontz J**, Scott L, Wegman-Geedey D. 2012. Using scientific process (as defined by the inquiry wheel) to guide multi-session inquiry-based laboratory experiences in the biology major. Proceedings of the Association for Biology Laboratory Education 33: 251-258.

Koontz JA, Warnock MJ. 2012. *Delphinium*, pp. 1136-1143 *In* The Jepson Manual, 2nd ed, Baldwin B et al. [eds]. California: Berkeley.

Koontz JA, Warnock MJ, Wilken DH. 2012. *Consolida*, p. 1136 *In* The Jepson Manual, 2nd ed, Baldwin B et al. [eds]. California: Berkeley.

Koontz JA, Lundberg J, Soltis DE. 2007. Rouseaceae, pp. 611-613 *In* The Families and Genera of Vascular Plants, K. Kubitzki [ed.], vol. VIII, Flowering Plants, Eudicots, Asterales, J. W. Kadereit and C. Jeffrey [eds.]. Springer: Berlin.

Scott LM, Molano-Flores B, **Koontz JA**. 2007. Genetic variation and cross pollination potential in the USFS regional forester’s sensitive species *Rudbeckia fulgida* var. *sullivantii* (Asteraceae) and its cultivar. Transactions of the Illinois Academy of Science 100: 129-144.

Molano-Flores B, **Koontz JA**, Feist MA. 2007. Genetic diversity of the threatened species *Agalinis auriculata* (Orobanchaceae) and two congeners using RAPD and allozyme markers. *American Midland Naturalist* 158: 279-291

Molano-Flores B, **Koontz JA**, Feist MA. 2007. Seed germination in the Illinois-threatened *Agalinis auriculata* (Michx.) Blake (Orobanchaceae). *Castanea* 72: 116-118

Koontz JA, Soltis PS, Soltis DE. 2004. Using phylogeny reconstruction to test hypotheses of hybrid origin in *Delphinium* section *Diedropetala* (Ranunculaceae). *Systematic Botany* 29: 345-357.

Koontz JA, Soltis PS, Brunsfeld SJ. 2001. Genetic diversity and tests of the hybrid origin of the endangered yellow larkspur. *Conservation Biology* 15: 1608-1618.

Koontz JA and Soltis PS. 2001. Polyploidy and segregation analyses in *Delphinium gypsophilum* (Ranunculaceae). *Madroño* 48: 90-97.

Soltis DE, Kuzoff RK, Mort ME, Zanis M, Fishbein M, Hufford L, **Koontz J**, Arroyo MK. 2001. Elucidating deep-level phylogenetic relationships in Saxifragaceae using sequences for six chloroplastic and nuclear DNA regions. *Annals of the Missouri Botanical Garden* 88: 669-693.

Koontz JA and Soltis SE. 1999. DNA sequence data reveal polyphyly of Brexioidae (Brexioideae; Saxifragaceae sensu lato). *Plant Systematics and Evolution* 219: 199-208.

Brubaker CL, **Koontz JA**, Wendel JF. 1993. Bidirectional cytoplasmic and nuclear introgression in the New World cottons, *Gossypium barbadense* and *G. hirsutum* (Malvaceae). *American Journal of Botany* 80: 1203-1208.

Other Publications (since 2000)

Primer S, Molano-Flores B, Coons J, Annis J, O'Brien J, **Koontz J**. 2013. Conservation and management of a rare carnivorous plant, *Pinguicula ionantha*, in the Florida Panhandle. *Illinois Natural History Survey Reports* 409 (Winter): 1 and 8.

Koontz JA. 2007. Book Review: *Flowers: How They Changed the World*. *Systematic Botany* 32: 701-702.

Koontz JA. 2006. Book Review: *The Golden Spruce: A True Story of Myth, Madness, and Greed*. *Plant Science Bulletin* 52: 63-64.

Koontz JA. 2005. Book Review: *Timber Press Pocket Guide to Shade Perennials*. *Plant Science Bulletin* 51: 103-104.

Koontz JA. 2003. Genetic diversity of rare Illinois Plants. *Illinois Natural History Survey Reports* 376: 2, 5.

Koontz JA. 2002. Book Review: *Inventory of rare and endangered plants of California* (sixth edition). *Plant Science Bulletin* 48: 70.

Papers in Preparation

Koontz JA. Field guide to southern California Larkspurs (*Delphinium*) to be published in *Crossoma*. Already have spoken with the editor, it will be a stand-alone issue with 2 pages of color figures. It will be peer-reviewed. In the writing stage, need to be in California with access to Rancho Santa Ana Botanical Garden's collections to complete the work, anticipated completion in 2017 or 2018.

Zangori L and **Koontz JA**. Integrating systems thinking in an undergraduate botany course. Submitted to *Journal of Biological Education* on April 25, 2016, accepted with minor revisions August 9, 2016.

Zaya DN, Molano-Flores B, Feist MA, **Koontz JA**, Coons J. Assessing genetic diversity for the USA endemic carnivorous plant *Pinguicula ionantha* R.K. Godfrey (Lentibulariaceae). Submitted to *Conservation Genetics* on May 10, 2016.

Papers Presented (since 2000)

Zangori L and **Koontz JA**. 2015. Integrating ecology in an undergraduate botany course. National Association of Biology Teachers Professional Development Conference, Providence, RI. Abstracts for this meeting are peer-reviewed.

Bryant B*, Eyer B*, Johnsrud S*, **Koontz J.** 2010. Genetic variation in the Illinois-threatened hill prairie larkspur. 22nd North American Prairie Conference, Cedar Falls, IA. *Augustana student author

Badtke L*, Linscott T, **Koontz J.** 2007. Using AFLPs for Genetic analyses of the rare Oconee Bell (*Sibthoria galacifolia*). Botany 2007, Chicago, IL. *Augustana student author

Koontz JA and Segraves KA. 2007. AFLP data refute hypothesis of hybrid speciation in *Delphinium*. Botany 2007, Chicago, IL.

Scott LM, Molano-Flores B, **Koontz J.** 2005. Genetic diversity and potential hybridization in *Rudbeckia fulgida* var. *sullivantii* (Asteraceae), a USFS regional forester's sensitive species. Botany 2005, Austin, TX.

Elrick LM, Molano-Flores B, **Koontz J.** 2004. Reproductive Biology, genetic diversity, and hybridization in Sullivan's coneflower (*Rudbeckia sullivantii* Ait.), a USDA forest service sensitive species. 31st Natural Areas Conference, Chicago, IL.

Elrick LM, Molano-Flores B, **Koontz J.** 2004. Reproductive Biology, genetic diversity, and hybridization of *Rudbeckia sullivantii* Ait. (Asteraceae), a USDA forest service sensitive species. XCVI Annual Meeting of the Illinois State Academy of Science, Charleston, IL.

Feist MA, **Koontz JA**, Carroll C, Molano-Flores B. 2004. Rediscovery of the rare yellow wild indigo (*Baptisia tinctoria*, Fabaceae) in East Central Illinois: Can hybridization jeopardize this discovery? 31st Natural Areas Conference, Chicago, IL.

Molano-Flores B, Feist MA, **Koontz J**, Mulvaney C, Whelan C. 2003. Conservation efforts for the Illinois threatened *Agalinis auriculata* (Orobanchaceae): How much do we know? 30th Natural Areas Conference, Madison, WI.

Koontz JA and Forbes H. 2003. One population left: the past, present, and future of the endangered Baker's larkspur (*Delphinium bakeri*). Annual meeting of SSE/ASN/SSB, Chico, CA.

Koontz JA, Molano-Flores B, Feist MA, Whelan C. 2002. Host preferences and genetic diversity in the Illinois-Threatened, *Agalinis auriculata* (Scrophulariaceae). Annual meeting of SSE/SSB, Champaign, IL.

Posters Presented (since 2000)

Zangori L. and **Koontz J.** 2016. Supporting Upper-level undergraduate students in building a systems perspective within a botany course. 2016 annual meeting of Modeling and Model-Based Reasoning in STEM, Purdue University, West Lafayette, IN.

Eyer EA* and **Koontz JA.** 2009. A threatened existence: a tale of the Illinois hill prairie larkspur. Illinois State Academy of Science Meeting, Edwardsville, IL. *Augustana student author

Badtke L*, Gschwend A*, **Koontz J.** 2006. Genetic diversity in the endangered Baker's larkspur: Implications for conservation. Botany 2006, Chico, CA. *Augustana student authors

Feist MA, Molano-Flores B, **Koontz J**, Whelan C. 2003. Host preferences and genetic diversity in the Illinois-threatened *Agalinis auriculata* (Michaux) Blake (eared fox-glove, Orobanchaceae). Illinois State Academy of Science Meeting, Normal, IL.

Koontz JA. 2003. Hybridization, polyploidy, and rarity: a molecular systematic study of speciation in *Delphinium*. 11th New Phytologist Symposium: Plant Speciation. Plant Canada 2003, Antigonish, Nova Scotia, Canada.

Feist MA, Molano-Flores B, **Koontz J**, Whelan C. 2002. Host preferences and genetic diversity in the Illinois-Threatened, *Agalinis auriculata* (Scrophulariaceae). Botany 2002, Madison, WI.

Invited Seminars (since 2005)

Koontz JA. 2015. Conservation biology in larkspurs (*Delphinium*; Ranunculaceae): examples from Illinois and California. Department of Biology, University of South Dakota. February 23.

Koontz JA. 2008. *Delphinium* ID: Why a good key is hard to find. 32nd Annual Southern California Botanists Symposium, California State University, Fullerton. October 18.

Koontz JA. 2005. Living dangerously: conservation genetics of rare plants in California and Illinois. Department of Biology, Wabash College, Crawfordsville, IL. September 29.

Service

Augustana College

Augustan Future Initiatives Think Tank (by Presidential invitation, 2015-present), Environmental Studies Advisory Board (2015-present), Faculty Leadership Academy (2015-present), Field Stations Advisory Board (2016-present), Pre-Medicine Advisory Board (2014-present), General Education Committee (2010-2011), Women's and Gender Studies Program Advisory Board (2009-10); New Faculty mentor to Paul Croll (Sociology; 2008-09); Teagle Capstone Assessment Committee (2008-12); Faculty Senate (2006-09, 2011-13; Steering Committee, representing Assistant Professor Rank 2007-08, Associate Professor Rank 2010-11); Global Affect, Faculty Advisor (2005-11); Student Publications Board (2005-07); Library/Bookstore Committee (2005-2009; Chair 2007-2009); Landscape Taskforce (2005-07); Project Kaleidoscope (PKAL) Leadership Initiative (2004-06); Faculty mentor for United Board for Christian Higher Education in Asia Scholars (Dr. Rachel Daniel, India) 2004-05.

Community

Friends of Hauberg Civic Center Board (Secretary, 2016-present); Quad City Botanical Center Education Committee (2009-2014); State-Wide Illinois Master Naturalist Advisory Committee, University of Illinois Extension (2006-07); State-Wide Illinois Master Naturalist Partnering Agencies Subcommittee, University of Illinois Extension (2007-2011), Master Naturalist Advisory Committee, University of Illinois Extension-Rock Island County (2005-2011); Grand Prairie Friends Board of Directors (2002-04; President, 2004)

Professional

Society of Conservation Biology's Ecology Footprint Committee (2010-present); Manuscript reviewer for: *American Journal of Botany*, *Biodiversity and Conservation*, *Canadian Journal of Botany*, *Castanea*, *International Journal of Plant Sciences*, *Molecular Phylogeny and Evolution*, *Natural Areas Journal*, *New Phytologist*, *Novon*, *Rhodora*, *Systematic Botany*, and *Western North American Naturalist*

Graduate Students (graduation date)

Fengjie Sun, Ph.D. 2003. Plant Biology, University of Illinois at Urbana-Champaign. Served on graduate committee.

Lynne (Elrick) Scott, M.S. 2005. Natural Resources and Environmental Sciences, University of Illinois at Urbana-Champaign. Co-Advisor with Brenda Molano-Flores.

Eloisa Lasso, Ph.D. 2008. Program in Ecology and Evolutionary Biology, University of Illinois at Urbana-Champaign. Served on preliminary exam committee.

Brian Lowery, Ph.D. 2018 anticipated. Department of Biology, University of South Dakota. Serving on graduate committee.

Undergraduate Research Students (graduation date) and project(s)

Ashley Hagemann. 2006. Developing and testing the utility of ISSR markers in Baker's larkspur.

Andrea Gschwend. 2006. Developing AFLP makers in Baker's larkspur (recipient of a 2005-2006 Biology Club Undergraduate Research Grant)

Laura Badtke. 2007. Developing AFLP makers in Baker's larkspur (recipient of a 2005-2006 Berntsen Student Research Award). Genetic Diversity analysis of the rare Oconee Bell using AFLP markers (recipient of a 2006-2007 Hill-Erickson Student Research Grant).

Jonathan Seyfert. 2009. Using STRUCTURE to analyze AFLP data.

Elizabeth Eyler. 2009. Demography and genetic variation in hill prairie larkspur.

Jayne Krippel. 2011. Demography and genetic variation in hill prairie larkspur.

Stefan Johnsrud. 2010. Demography and genetic variation in hill prairie larkspur.

Brooke Bryant. 2011. Demography and genetic variation in hill prairie larkspur.

Honors Projects (LS330) mentored

Laura Badtke. 2007. The fight to be seen and heard: A biological and cultural investigation of the discriminatory medicalization of the dwarf and deaf communities.