WENDY B. ZOMLEFER ~ ACHIEVEMENTS
CUMULATIVE (4.8 YEARS): 15 AUGUST 2011–31 MAY 2016

Dr. Wendy B. Zomlefer's faculty career at the University of Georgia, Department of Plant Biology, has spanned nearly 16 years. On 1 August 2000, she was hired as Curator of the University of Georgia Herbarium in the position of *Associate Research Scientist*—a 12-month, non-tenure track, faculty position; she was promoted to *Senior Research Scientist* in August 2006. On 17 August 2009, her position transitioned into the 9-month tenure-track *Assistant Professor*, with a 3-year credit towards tenure, and she was promoted to Associate Professor on 15 August 2011. Dr. Zomlefer was provided with $23,800 in start-up funds/equipment when hired as an *Associate Research Scientist* in 2000; she received no start-up (nor summer salary) for the conversion to the tenure-track *Assistant Professor* position.

Dr. Zomlefer's formal EFT assignment of administration, service, research, and teaching has varied during her years at UGA; Years 2011–2016 are summarized in TABLE 1. Since 35% of Dr. Zomlefer's time is currently budgeted for curatorial activities (service + administration EFTs), this document is divided into four sections—service & administration (curatorial), teaching, research, and general professional service—with focus on years 2011–2016.

TABLE 1. % EFT (75% total), 2011–2016.

	2011	2012-2015	2016
Administration	25	35	10
Service	0	0	25
Research	25	15	15
Teaching	25	25	25

A. ACHIEVEMENTS IN SERVICE & ADMINISTRATION (CURATORIAL ACTIVITIES)

a. Overview. For academic years 2011–2016, Dr. Zomlefer was budgeted for administration as follows: 25% (2011), 35% (2012–2015), and 10% (2016). For her first 15.5 years at UGA, the "Administration" EFT represented her curatorial activities; however, as of 1 Jan. 2016, she was assigned 25% formal Service EFT—an unusual allocation for a faculty member in the Franklin College and the maximum percentage allowed by the college.

Dr. Zomlefer is Curator of the University of Georgia Herbarium, a research collection of pressed, dried, and labeled plant specimens arranged by a classification scheme. The Curator of a herbarium is responsible for the administration and program development of the collection, supervision of staff and day-to-day operations, and the active pursuit of grants and other funding sources to support collections activities. A Curator is also responsible for setting policies for herbarium protocols and for the maintenance/improvements of the herbarium physical plant.

The GA [official acronym] Herbarium facility occupies 4,939 square feet (9 rooms) in a prominent location in the Plant Sciences building across the hall from Plant Biology departmental offices. The GA Herbarium, founded in the 1920s, is one of the largest such collections in the southeastern United States, with holdings of over 274,000 accessioned sheets of vascular plants from around the world. Emphasis is on plants from the Southeast, particularly those from Georgia (about one-third of the specimens). These research collections are vouchers for plant identification and document plant locations, habitat, abundance, and flowering/fruiting periods. The specimens are also a priceless DNA repository for many kinds of future studies.

b. Funding. Between 2011–2016, Dr. Zomlefer has continued to successfully procure funding from the National Science Foundation (NSF), National Park Service (NPS), and other sources (e.g., UGA; Georgia Botanical Society; Georgia Department of Natural Resources [GA-DNR]) to support herbarium staffing, specimen acquisition, and infrastructure upgrades (TABLE 2). She established the DiGioia Herbarium Endowment Fund in 2007 (current value $85,400), and through her efforts, Herbarium Discretionary Fund donations from private individuals have averaged $260/yr over the past 4 years.

TABLE 2. Grant and contract funding supporting Herbarium programs, 2011–currently.

Updated Vascular Plant Inventories at Congaree National Park and Ocmulgee National Monument			
NPS	$ 14,260	7 yrs (ext.)	2007–2013
Collaborative Research – From Acorus to Zingiber: Assembling the phylogeny of the monocots, J. H. Leebens-Mack [PI] & W. B. Zomlefer [co-PI]			
NSF	$ 614,591 [UGA portion] $ 135,000 [to Zomlefer]	6 yrs (ext.)	2008–2014
Plant Specimen Curation and Publication of Baseline Inventories for Ocmulgee & Congaree Nat'l Parks			
NPS	$ 8,337	4 yrs (ext.)	2009–2013
Imaging GA Herbarium Collections: A Pilot Study			
OVPR/UGA Faculty Research Grant	$ 7,760	1 yr	2010–2011
Vascular Flora and Vegetation Analysis of the South Atlantic Coastal Plain Limestone Forest			
Georgia Dept. Natural Resources	$ 1,725	1 yr	2010–2011
Supplemental Funding for Costs of Published Reports			
NPS (supplement)	$ 8,225	5 yrs (ext.)	2010–2014
Plant Survey of the Lower Ogeechee River Corridor, A Treasure of Diverse Coastal Habitats in Bryan, Chatham, and Effingham Counties, Georgia – Year 1 of a Two-Year Project			
Georgia Dept. of Natural Resources	$ 17,003	2 yrs	2011–2013
The GA-VSC Herbaria Collaborative: Phase I of a Statewide Consortium, **Zomlefer [PI, state lead]**			
NSF	$ 395,315 [Total grant] $ 198,255 [UGA portion]	6 yrs (ext.)	2011–2016
Plant Survey of Andersonville National Historic Site for the National Park Service			
NPS	$ 12,000	2 yrs	2012–2013
Floristic Inventory and Quality of Gabbro Upland Depression Swamps in the Georgia Piedmont			
Georgia Native Plant Society	$ 600	1 yr	2012–2013
Rare Plant Survey of the Chattahoochee River National Recreation Area for the National Park Service			
NPS	$ 22,500	2 yrs	2012–2014
REU Supplement: Supporting an Underrepresented Student for a Career in Science via the GA Herbarium WebFlora of Coastal Georgia			
NSF (supplement)	$ 6,000	3 yrs (ext.)	2012–2015
Floristic Inventory and Quality of Gabbro Upland Depression Forests in the Georgia Piedmont			
Georgia Botanical Society	$ 600	1 yr	2013
Plant Survey of the Lower Ogeechee River Corridor – Year 2 of a Two-year Project			
Georgia Dept. of Natural Resources	$ 13,702	2 yrs (ext.)	2013–2014
Assistance in Completing Plant Inventory of the Park			
Friends of Andersonville Historic Site	$ 3,540	1 yr	2013–2014
Provost's Summer 2014 Research Grants: Floristics of Georgia: Training the Next Generation			
UGA Provost Office	$ 5,000	1 yr	2014
Digitization TCN: Collaborative Research: The key to the cabinets: Building and Sustaining a Research Database for a Global Biodiversity Hotspot, **Zomlefer [PI, state lead]**			
NSF	$2,543,058 [Total grant] $ 74,385 [UGA portion]	4 yrs	2014–2018
PSO Fellowship: Building a Bridge between the University of Georgia Herbarium and the State Botanical Garden			
UGA Office of Public Service and Outreach	$ 15,000	1 yr	2015
From the Field to the Folder: Workshop on Herbarium Specimen Curation and Best Practices			
NSF	$ 16,000	2 yrs (ext.)	2015–2016

Zomlefer supervises one Research Professional I (Collections Manager) who is a permanent full-time employee of the department; all other curatorial workers are paid from Zomlefer's grants and contracts to work on herbarium projects. During the past 5 years, her awards have been used to hire 19 undergraduates, five graduate students, three NSF REU interns, and seven post-baccalaureates in the herbarium.

During this time period, Dr. Zomlefer was awarded her second and third NSF collections-related grants (TABLE 2), both focused on digitizing the herbarium, which involves barcoding and imaging the vouchers themselves, databasing (transcribing) specimen label data, and making these images + data publically available on the Web. The NSF CSBR (Collections in the Service of Biological Research) + REU award (2011–2016), was a cooperative endeavor with the Valdosta State University Herbarium, the second largest herbarium in Georgia. For this project, Zomlefer examined 90,000 specimens from the state of Georgia at GA Herbarium, and she and her collaborator directed the digitization of 153,000 specimens from the two herbaria. These data recently became available on-line as *The Vascular Plant Atlas of Georgia* (http://www.georgiaherbaria.org/), and county maps for GA Herbarium specimens are generated at http://www.georgiaherbaria.org/atlas/. The collaborative project was featured in a project information booklet published by NSF in 2015 (*Collections in Support of Biological Research*).

The most recent NSF grant is funding a large, collaborative, ADBC-TCN (Advances in Digitization of Biological Collections–Thematic Collections Network) project (total $ 2.5 million), awarded to 13 PIs/institutions, with Zomlefer as the lead for the state of Georgia. The goals of this project are to digitize 4.7 million specimens from 107 herbaria in the Southeast and expose these data on-line. Besides heading up the effort in Georgia, Zomlefer is supervising the digitization of the rest of GA Herbarium, ca. 180,000 specimens collected from outside of Georgia; as of this writing, 89,000 of these specimens at GA Herbarium have been imaged.

c. Collections Growth and Use. Under Dr. Zomlefer's direction, the accessioned collection has increased over 15,000 over the past 5 years—for a total of 274,000 specimens—making GA one of the largest collections of vascular plants in the southeastern United States. Approximately 179,000 specimens in the herbarium have now been imaged. Also during this time, over 10,000 duplicate specimens have been sent out in exchange to other institutions. Visitation and use of the herbarium remain high with averages of 400 (incl. 90 scientific) visitors/yr, 20 tours (100 participants)/yr, and 100 information-identification requests/yr. Loans over this time period totaled 2,358 specimens to 16 institutions and 3,730 specimen images ("virtual loans") to 24 institutions.

d. Herbarium Outreach. Dr. Zomlefer promotes the collection through frequent invited talks, demonstrations, and workshops about herbaria, Georgia flora, and plant identification to various amateur, professional, and stakeholder organizations, such as the Atlanta History Center (2011); Georgia Dept. of Natural Resources-Coastal Resources Division *Coastfest Saturday* (Brunswick, GA; 2012, 2013); Osher Lifelong Learning Institute (OLLI; Athens; 2014); Coastal Georgia Research Council (Brunswick; 2015), and Piedmont-South Atlantic Coast Cooperative Ecosystems Studies Unit (2015). Exposure of the GA Herbarium has been vastly increased with the release of *The Atlas of Georgia Plants* (see **b. Funding**, above), an on-line University of Georgia/Valdosta State University virtual herbarium linked to specimen images and label data.

Zomlefer is also very active in outreach to the herbarium community. In 2009, she founded the Georgia Herbarium Alliance, a consortium of the (then) seven herbaria in Georgia. She sponsored the first two Alliance meetings (2010 and 2012; Athens and Valdosta) with various grant funds. In 2014, her NSF-CSBR grant covered all participant costs for the third

Alliance meeting at Georgia Southern University, Statesboro, for representatives of all eight herbaria in Georgia. Zomlefer's recent NSF Workshop grant (TABLE 2) funded an expanded fourth Alliance meeting on "Herbarium Specimen Curation and Best Practices" (UGA, 19–22 May 2016) for 26 participants from 7 southeastern U.S. states (+ the NSF program officer). The program included demonstrations (specimen preparation, imaging), and discussion topics such as common collections concerns and possible funding sources for future consorted efforts.

Dr. Zomlefer's outreach endeavors were augmented Fall 2015 when she was awarded the prestigious *Public Service and Outreach Fellowship* that included $15,000 in funding. As a PSO Fellow, she had a unique opportunity to integrate her activities as Herbarium Curator (Franklin College of Arts and Sciences) with the programs of the State Botanical Garden of Georgia (a unit of the Office of Public Service and Outreach). The Garden and the Herbarium have a similar mission: botanical education/outreach focused around plant collections as a teaching tool. However, these two units are completely separated administratively and physically (the Garden is off-campus, several miles from the herbarium).

Zomlefer's fellowship activities included demonstrations at Garden public events (e.g., Fall Festival), and involvement with several ongoing outreach projects at the Garden, including a 2-day workshop for the Native Plant Certificate program, presentations for the Friends volunteer group and the Nature Ramblers, assessment and extensive improvements to the neglected Garden herbarium teaching collection, and conducting a vouchered plant survey of the Piedmont Prairie natural preserve at the Garden. She maintained this remarkable pace of outreach activities at the Garden during a time when she endured cancer surgery and subsequent medical treatments. Her Fellowship efforts were recognized by the UGA President and Provost at the 25th annual Public Service and Outreach Awards Luncheon, 11 April 2016.

e. Incorporation of Herbarium in Instruction. Dr. Zomlefer has emphasized the role of GA Herbarium as a training facility for students by encouraging enrollment in her graduate-level *Directed Studies in the Herbarium* (1–2 students/yr) and the undergraduate *Natural History Museum Internship* (1–4 herbarium interns/semester; 20 the past 5 years) for which students work on herbarium projects closely with Zomlefer and other herbarium staff (TABLE 3). She has also revitalized the Master's degree program in floristics, with her second student graduating in 2013 (Sewell & Zomlefer 2014; TABLE 5), and another student benefiting directly from her guidance (Lynch & Zomlefer 2014, Lynch & Zomlefer in press, Lynch et al. 2016).

f. Summary. Dr. Zomlefer has contributed significantly to the development of the University of Georgia Herbarium as a nationally and internationally recognized resource. She has been an outstanding curator who has continued to improve and revitalize the GA Herbarium during the past 5 years. She has incorporated the herbarium into the UGA educational process for both undergraduates and graduate students and has maintained a high level of public outreach and interaction for the Herbarium. As a result of these efforts, she has been uniquely successful in obtaining external funding for Herbarium activities (TABLE 2). Her leadership maintains the GA Herbarium facility as an active and vital research, educational, and outreach facility.

B. ACHIEVEMENTS IN TEACHING

a. Overview. For academic years 2011–2016, Dr. Zomlefer was budgeted 25% EFT for teaching. During this time, she made significant contributions to the department with various instructional activities.

b. Classroom Instruction. TABLE 3 summarizes formal instruction for Fall 2011 through Spring 2016. Dr. Zomlefer has taught *Plant Taxonomy*, a co-listed

undergraduate/graduate student course, eight times at UGA, including five times during the past 5 years (Spring semesters 2012–2016). She also taught a new yearly service course, *Life Sciences for Middle School Teachers* (PBIO 2010), for the second time, Fall semester 2011. Other instructional activities include those directly associated with herbarium projects, *Natural History Museum Internship* (undergraduate) and *Directed Study in the Herbarium* (graduate); these are discussed under **A. ADMINISTRATION, e. Incorporation of Herbarium in Instruction**.

TABLE 3. COURSES TAUGHT AT THE UNIVERSITY OF GEORGIA, 2011 (Fall semester)–currently. Responsibility for course: ** = 100%; * = 50% U/G = Undergraduate/Graduate students; student evaluation = overall course score [standard deviation in brackets], 1 = Strongly disagree (poor) to 5 = Strongly agree (excellent); na = course not numerically rated.

Academic Year	Course Number, Title	Credits	G/U	Number of students	Student evaluations
2011–2012	*PBIO 2010, Life Sciences for Middle School Teachers	4	U	10	3.67 [0.52]
	**PBIO 4650/6650, Plant Taxonomy	4	U/G	31	4.50 [0.50]
	**PBIO 4261, Natural History Museum Internship	3	U	5	na
	**PBIO 8040, Directed Study (Herbarium)	1–3	G	5	na
2012–2013	**PBIO 4650/6650, Plant Taxonomy	4	U/G	21	4.67 [0.82]
	**PBIO 4261, Natural History Museum Internship	3	U	4	na
	**PBIO 8040, Directed Study (Herbarium)	2	G	1	na
2013–2014	**PBIO 4650/6650, Plant Taxonomy	4	U/G	10	5.00 [0.00]
	**PBIO 4261, Natural History Museum Internship	3	U	4	na
2014–2015	**PBIO 4650/6650, Plant Taxonomy	4	U/G	15	4.00 [1.00]
	**PBIO 4261, Natural History Museum Internship	3	U	2	na
2015–2016	**PBIO 4650/6650, Plant Taxonomy	4	U/G	15	5.00 [0.00]
	**PBIO 4261, Natural History Museum Internship	3	U	5	na

Zomlefer's teaching has been favorably reviewed by students in her courses (TABLES 3 and 4). Her instructor ratings based on 1 = Strongly disagree (poor) to 5 = Strongly agree (excellent) for *Plant Taxonomy* (Spring 2012–2016), ranged from 4.33–5.00, and overall course scores (TABLE 3) ranged from 4.00–5.00. Students consistently praise her enthusiasm, and willingness to help them master the material; they also readily acknowledge her well-prepared lecture materials that include plants, props, and other hands-on demonstrations (TABLE 4).

Dr. Zomlefer also taught the organismic-botany portion (half of the lectures) of *Life Sciences for Middle School Teachers* for the second time in Fall 2011. Her instructor rating was 3.50 [SD 0.55], and overall course score (TABLE 3) was 3.67. The education majors' main criticisms cite the amount of material covered (too much for future middle-school teachers) and the struggle of these students to listen to lecture and take some notes at the same time; however, the class average for Zomlefer's portion of the course was 84.6%, and the overall average was 84.2% for the entire lecture portion of the course.

c. Mentorship. During this time period, Dr. Zomlefer supervised one Master's student and one Ph.D. student, who completed their degrees in 2013 and 2015, respectively. She served on three other Ph.D. and one Master's degree committees and also guided three NSF Research Experience for Undergraduates (REUs) in the herbarium. She also mentors the graduate teaching assistants for the Plant Taxonomy labs: most have little/no experience with the subject matter, necessitating Zomlefer's intensive TA instructional sessions twice a week.

Dr. Zomlefer's exceptional mentoring recently (Dec. 2015) received special recognition in writing from UGA President Jere Moorehead. As part of the 2015 Commencement ceremonies promotion, the Public Affairs Division asked 15 graduating seniors whether there had been a particular staff or faculty member who had made a big impact on their time at UGA. One student (Carmen Kraus) responded, in part [http://commencement.uga.edu/2015/kraus.html]:

> *One of my favorite classes at UGA was Plant Taxonomy with Wendy Zomlefer… She cemented my interest in botany and always brought food to class from the plant family we were studying. I took a museum internship course over the summer at the UGA Herbarium where she is the curator. She hired me [there]… Working at the UGA Herbarium is enjoyable, and I participated in several field collection trips. Additionally, Zomlefer is a scientific illustrator; she helped me with my botany illustrations, and I am happy to have an example of a professor who has successfully integrated science and art.*

The president concluded his letter to Zomlefer: "…thank you for all that you do to support student success at the University of Georgia. Without a doubt, the strong bonds between faculty members and students help to create an exceptional learning environment…"

TABLE 4. SELECTED COMMENTS FROM STUDENT COURSE EVALUATIONS.
Plant Taxonomy (PBIO 4650/6650), Spring 2012–2015.

"She just makes the class too darn fun, is it really possible that we can learn while having fun? Apparently so!"	"Very knowledgeable, very enthusiastic about the subject. Very helpful, and has a wealth of information."
"I loved this class – lecture and lab. I always enjoyed coming to this class, and I feel like I've learned a lot."	"She keeps lectures very organized and informative, and does a good job of engaging the students in the lecture."
"One of my favorite electives. Talked about plants outside of class all semester. Definitely will continue to learn plant families and characters."	"She uses teaching techniques outside of just lecturing. She brings hands-on examples for students to see."
"The time and effort Dr. Zomlefer puts into teaching Plant Taxonomy should be rewarded, as it is clear to all her students that it is no small undertaking. Thanks for a great class Dr. Zomlefer."	"She is very enthusiastic about the material and tries to bring things in (like food!) to help the students make a connection with the topic."
"Giving a full understanding of the subjects covered and answering any curiosities I had. If I had any questions, I could always rely on her to provide an answer and some interesting side information."	"The teacher uses very high resolution photographs, high quality scientific illustration, and pressed specimens to help explain class material."
"One thing the instructor does well is explaining concepts, organizing lecture information (seriously refreshing), great slides, considerate grading."	"Keeps the class entertained…as well as providing some really great visuals/ppts."
"Gets students involved, and engages them."	"Dr. Z's passion for the subject made the class much more interesting."
	"Engages the class and shows enthusiasm for the subject."
	"…the orchid lectures were perfect! It was so much fun pollinating the flowers."

d. Summary. Dr. Zomlefer's teaching reflects her enthusiasm and life-long love of organismic biology. She has made substantial contributions to UGA's instructional program 2011–2016. This includes development of a new course, the supervision of undergraduates in herbarium projects, and involvement in graduate education. She also participated in the week-long National Academies Southeast Summer Teaching Institute (May 2015, UGA).

Her contribution to *Life Sciences for Middle School Teachers* (PBIO 2010) for the second time in Fall 2011 fulfilled the Board of Regents *Work in the Schools* initiative (Policy 803.17) for training future teachers. Plant Taxonomy (PBIO 4650), with two labs per week (with four to six lab sections per week), has served as an option for the "intensive lab course" requirement for Biology majors. The Natural History Museum Internship course (PBIO 4261)—which Zomlefer has offered every semester for 16 years (60 students)—now merits special recognition at UGA via the *Experiential Learning Initiative* instituted in 2015.

C. Achievements in Research, Scholarship and Other Creative Activities

a. Overview. For academic years 2011–2016, Dr. Zomlefer has been budgeted for research as follows: 25% (2011) and 15% (2012–2016). For comparison, faculty in her department (other than the two biology educators) are assigned 50% research EFT. Despite a relatively low research assignment, Dr. Zomlefer has successfully maintained a well-funded program in floristics and systematics. As befits a Curator, her research consistently incorporates the GA Herbarium collections—either by acquisition of significant specimen sets from her (or her students') floristic surveys or by her use/contribution of vouchers for her systematic work.

b. Floristics. Floristics (or biodiversity inventory) is the study of the number, distribution, and relationships of plant species in one or more locales. Floristic surveys are essential to government agencies concerned with invasives and/or rare species, as well as to entities (developers, corporations) requiring environmental impact statements.

Dr. Zomlefer has established a flourishing floristics program coordinated with herbarium activities. For the period of 2011–2016, Zomlefer's funding from National Park Service (NPS) and the Georgia Department of Natural Resources (GA-DNR) has allowed travel and hands-on field training for three undergraduate and five graduate students. Through her survey work, over 5,000 specimens have been collected in duplicate—one set for GA Herbarium acquisition and one set for federal/state agency repositories or for exchange with other herbaria.

A series of NPS contracts (ca. $ 247,000 total; $68,900 for 2011–2016, TABLE 2) have funded vascular plant inventories of nine national parks (including several barrier islands) in Georgia, Florida, and South Carolina. To date, seven inventories (and three ancillary papers) have been published, most recently (TABLE 5) on the Chattahoochee River National Recreation Area (Zomlefer et al. 2012) and Ocmulgee National Monument (Zomlefer et al. 2013b), both national parks in Georgia. During the past 5 years, Zomlefer also conducted comprehensive inventories of four floristically significant sites along the Ogeechee River (total 2,700 acres; Bryan, Chatham, and Effingham Counties) for the GA-DNR–Coastal Resources Division (2011–2014), and a rare plant survey of eight units the NPS Chattahoochee River park (2012–2014) along a 77 km (48 mi) portion of the river.

Dr. Zomlefer's Master's degree students have conducted surveys and vegetation analyses on rare plant associations with support from Georgia Native Plant Society, the Georgia Botanical Society, and the GA-DNR (TABLE 2). These include studies conducted in central Georgia on the Piedmont Gabbro Upper Depression Forest (Sewell & Zomlefer 2014), and the South Atlantic Coastal Plain Limestone Forest (Lynch & Zomlefer 2014, in press; Lynch et al. 2016). The Georgia Natural Heritage Program has identified these vegetation types as high priority systems for conservation, and the surveys support conservation initiatives with critical floristic data.

Zomlefer has been widely recognized for her floristic expertise. She and her recent Master's student were presented the *Windler Award* (2015) by the Southern Appalachian Botanical Society for the best systematics paper published in *Castanea* the previous year (Sewell

& Zomlefer 2014). In 2013, Zomlefer was asked to serve as a panel expert for the Southeast Wetland Workgroup, a weeklong workshop sponsored by the North Carolina Department of Environment and Natural Resources. This committee assigned Coefficient of Conservatism (C of C) values to over 2,600 wetland indicator species of the southeastern United States according to five general physiographic regions (Zomlefer et al. 2013a; https://sewwg.rti.org/CoefficientsofConservatismWorkgroup/tabid/73/Default.aspx). Zomlefer has also been invited to present the *Regional Botany Special Lecture* at the upcoming annual Botanical Society of America conference (Botany 2016, Savannah, GA), which will provide a floristic overview via her various surveys throughout Georgia (http://www.botanyconference.org/symposia.html).

TABLE 5. REFEREED PUBLICATIONS ON FLORISTICS, 2011 – currently.

Zomlefer, W.B. & L.M. Kruse. 2011. Scientific Note. Addendum to the flora of Cumberland Island National Seashore, Camden County, Georgia. *Castanea* 76(2): 183-186.

Zomlefer, W.B., D.E. Giannasi, M.W. Denslow, D.B. Poindexter, & P. Ball. 2011. Noteworthy collections: Georgia. *Castanea* 76(2): 187-189.

Zomlefer, W.B., D.E. Giannasi, A. Reynolds, & K. Heiman. 2012. Vascular plant flora of Chattahoochee River National Recreation Area, a conservation corridor from the Buford Dam to Atlanta, Georgia. *Rhodora* 114(957): 50-102.

Zomlefer, W.B., D.E. Giannasi, J.B. Nelson, & L.L. Gaddy. 2013a. A baseline vascular plant survey for Ocmulgee National Monument, Bibb County, Macon, Georgia. *Journal of the Botanical Research Institute of Texas* 7(1): 453-473.

Zomlefer, W.B., L. Chafin, J.R. Carter, & D.E. Giannasi. 2013b. Coefficient of conservatism rankings for the flora of Georgia: Wetland indicator species. *Southeastern Naturalist* 12(4): 790-808.

Sewell, S.Y.S. & **W.B. Zomlefer**. 2014. Floristics of piedmont gabbro upland depression forests in Jasper County, Georgia. *Castanea* 79(3): 195-220.

Lynch, P.S. & **W.B. Zomlefer**. 2014. An introduction to the south Atlantic coastal plain limestone forest communities. *Tipularia* 29: 38-46.

Lynch, P.S., **W.B. Zomlefer**, & J.L. Hamrick. 2016. Vegetation analysis of the south Atlantic coastal plain limestone forest association. *Journal of the Torrey Botanical Society* 143(2): 135-168. doi: 10.3159/TORREY-D-15-00004.

Lynch, P.S. & **W.B. Zomlefer**. 2016. Vascular plant flora of the south Atlantic coastal plain limestone forest: A globally imperiled association endemic to central Georgia. *Southeastern Naturalist* 15: (in press).

c. Systematics. Dr. Zomlefer has an active research program in phylogenetics, as evidenced by her refereed publications (TABLE 6) and contributed papers by herself and students (posters and oral presentations) at national and international meetings (see resume), such as the Botanical Society of America, European Network of Palm Scientists (EUNOPS) Conference, and International Conference on the Comparative Biology of the Monocotyledons. Dr. Zomlefer is also the author of a well-known and authoritative text, *Guide to Flowering Plant Families* (Zomlefer 1994) that still serves as a standard reference. The book was translated into Spanish (*Guía de las Familias de Plantas con Flor*, 2004, Editorial Acribia, Zaragoza, Spain). Sales of the English-version surpassed 22,000 copies in June 2015.

Dr. Zomlefer's systematics research focuses on a group of petaloid monocotyledons (family Melanthiaceae), related to lilies and greenbriers. She uses analyses of molecular markers correlated with morphological characters, chromosome number, and geography to trace patterns of evolution. Her work on these taxa (e.g., cv and TABLE 6) has been most recently published in journals such as *Novon* (Zomlefer 2012), *Systematic Botany* (Zomlefer et al. 2014) and *New Phytologist* (Pellicer et al. 2014). Currently, she is completing her second manuscript

on new species of *Schoenocaulon*, a little-studied genus of ca. 25 cryptic species that are mainly rare Mexican endemics. She is also analyzing AFLP data from populations of *Veratrum woodii*, a rare species in the Southeast previously documented from only five locations in Georgia; Zomlefer and her team have vouchered seven new sites.

Her research has expanded to other monocot groups via her role as coPI on the UGA portion of the NSF-funded Assembling the Tree of Life (AToL) project (2008–2014): "From *Acorus* to *Zingiber*: Assembling the Monocot Tree" (TABLE 2). This collaborative project award totaled $3,000,000 to nine PIs at six institutions (two PIs at UGA). With her portion of this grant, Zomlefer supported her Ph.D. student's research on phylogenomics of the core Arecoid group of palms, resulting thus far in four publications (Barrett et al. 2015; Comer et al. 2015, 2016 a,b; TABLE 6), plus two presentations at international venues (Monocots V, 2013; EUROPS, 2014). Zomlefer also contributed her expertise (and crucial samples) to collaborative studies by AtoL grant coPIs on other monocot taxa, including the gingers (Barrett et al. 2014) and entire lily order (Givnish et al. 2016).

TABLE 6. REFEREED PUBLICATIONS ON PLANT SYSTEMATICS, 2011 – currently.

Zomlefer, W.B. 2012. Validation of the name *Veratrum hybridum* (Liliales, Melanthiaceae): the correct name for crisped bunch-flower. *Novon* 22(1): 125-127.

Pellicer, J., L.J. Kelly, I.J. Leitch, **W.B. Zomlefer**, & M.F. Fay. 2014. A universe of dwarfs and giants: Genome size and chromosome evolution in the monocot family Melanthiaceae. *New Phytologist* 201 (4): 1484-1497. doi (2013): 10.1111/nph.12617. 14 pp.:

Barrett, C.F., C.D. Specht, J. Leebens-Mack, Dennis W. Stevenson, **W.B. Zomlefer** & J.I. Davis. 2014. Resolving ancient radiations: Can complete plastid gene sets elucidate deep relationships among the tropical gingers (Zingiberales)? *Annals of Botany* 113(1): 119-133. doi (2013): 15 pp.: 10.1093/aob/mct264.

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d. Summary. Dr. Zomlefer is well known in her discipline as a result of her journal publications, survey work, and her authorship of a standard reference text in taxonomy. She has developed an active research program in her areas of expertise of floristics and plant systematics, continuing a steady rate of publication for 2011–2016. These programs have been funded by the National Science Foundation and National Park Service, as well as smaller grants

from the Georgia Botanical Society, the Georgia Native Plant Society, and the Georgia Department of Natural Resources (TABLE 2). She incorporates her research directly into herbarium activities and involves undergraduate and graduate students in her work, as well.

D. ACHIEVEMENTS IN SERVICE TO SOCIETY, THE UNIVERSITY, AND THE PROFESSION

a. Outreach. Dr. Zomlefer's outreach activities to the community at large are directly related to GA Herbarium programs detailed under **A. ADMINISTRATION/SERVICE** sections on **Collections Growth and Use** and **Herbarium Outreach**. Outreach includes tours of the facility, the plant identification service, and invited presentations to amateur and community-based groups, such as the Atlanta History Center (2011), Osher Lifelong Learning Institute (OLLI, 2014), Trees Atlanta (a non-profit organization; 2015), and Georgia Coastal Research Council (2015). The GA Herbarium's public Web presence has been significantly enhanced by the availability of *The Atlas of Georgia Plants* (http://www.georgiaherbaria.org/).

b. University Service. Dr. Zomlefer has continued her high levels of service to UGA during 2011–2016. She was a member of the panel for the *Applied Life Sciences Faculty Research Grants Review* panel for the Office of the Vice President of Research (OVPR) for 3 years (2014–2016), for which she reviewed 50 proposals. She also served 3 years on the *University Council* (2012–2015), representing the Franklin College Life Sciences Division. During this time, Zomlefer also served on the Plant Biology Department's *Peer Teaching Evaluation Committee* (Spring 2011); invited and hosted one seminar speaker (2011); and volunteered to be *Faculty Judge* at the Plant Biology Graduate Student Symposium for the oral presentations (2012) and poster session (2014).

c. Service related to the Discipline. Related to national recognition of Dr. Zomlefer's research activities is her election to Council Member-at-Large (2009–2012) and President (2012-2014) of the Southern Appalachian Botanical Society (SABS). As a SABS council member, she initiated the SABS Student Awards, and as Chair of this new awards committee, she organized the judging of student presentations (posters and oral presentations) at two Association of Southeastern Biologists annual conferences (2010 and 2011). She also served as a member of the Nominations Committee for the American Society of Plant Taxonomists (2009–2011).

As listed in her resume, Dr. Zomlefer has contributed a significant number of peer reviews for journal articles and grant proposals. During the past 4 years, she reviewed 17 manuscripts for 14 journals, such as *Acta Botanica Venezuela*, *Molecular Phylogenetics and Evolution*, *Plant Systematics and Evolution*, *Systematic Botany*, and *Taxon*. She also reviewed the *Phylogeny and Classification* and *Plants* chapters of a biology textbook.

During this time, she served on a National Science Foundation Panel (Collections in Support of Biological Research, 2013) and provided four additional ad hoc proposal reviews for NSF for the Partnerships for Enhancing Expertise in Taxonomy [PEET], Research Coordination Networks [RCN], and Systematic Biology and Biodiversity Science programs.

In 2011, Dr. Zomlefer also furnished promotion and tenure reviews (Associate Professor) for dossiers from Mississippi State University and the University of Alabama. Since her position transitioned from Senior Research Scientist (equivalent to Full Professor in the tenure-track line) to Assistant/Associate Professor, she has had to decline several requests (e.g., from George Mason University, VA) to review promotion packages for full professor.

d. Summary. Service is a critical facet of good citizenship at UGA, and Dr. Zomlefer has made indispensable contributions via outreach, committee work, and review. Upper administrators (e.g., program officers at NSF, deans, department head at UGA and elsewhere) value her expertise, conscientiousness, and willingness to serve.