

CURRICULUM VITAE

DONALD R. YOUNG

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EDUCATION

Clarion University of Pennsylvania	B.S. in Biology
University of Wyoming	M.S. in Botany
University of Wyoming	Ph.D. in Botany

RESEARCH INTERESTS

I study ecological patterns and processes in coastal environments within the context of climate change and including sea-level rise and coastal storms. My overarching objective is to understand adaptive mechanisms for survival and success and the interplay of physical stresses and biotic interactions on plant distributions across coastal landscapes. Much of my effort has focused on mechanisms that facilitate shrub expansion into coastal grasslands.

ACADEMIC EXPERIENCE

Professor Department of Biology, VCU	Aug 1997 – present
Associate Professor Department of Biology, VCU	Aug 1990 – Aug 1997
Summer Faculty Fellowship NASA, Stennis Space Center, Mississippi	June 1991 – Aug 1991
Assistant Professor Department of Biology, VCU	Aug 1984 – July 1990
Postdoctoral Research Scholar Division of Environmental Biology, UCLA	Oct 1983 – July 1984
Supply Assistant Professor Department of Botany, University of Wyoming	Sept 1982 – Sept 1983

ADMINISTRATIVE EXPERIENCE

Interim Dean College of Humanities and Sciences, VCU	Apr 2019 – July 2020
Senior Associate Dean for Finance & Admin College of Humanities and Sciences, VCU	Jun 2017– Apr 2019
Associate Dean for Finance & Administration College of Humanities and Sciences, VCU	Aug 2016 – May 2017

Department Chair Department of Biology, VCU	July 2009 – Aug 2016
Associate Department Chair Department of Biology, VCU	July 2003 – June 2009
Director of Graduate Program	July 1995 – June 2003

FUNDED RESEARCH

- National Science Foundation (subcontract through the University of Virginia), 2012-2018, \$210,000, LTER VI: barrier island vegetation alternate stable states and threshold responses.
- National Science Foundation, 2013-2016, \$577,413, Collaborative research: the role of ecomorphodynamic feedbacks in barrier island response to climate change. Co-PI with Dr. Laura Moore, Univ. of North Carolina - Chapel Hill. VCU funds \$99,276.
- VCU Quest Global Impact Award, 2014, \$14,381, VCU-University of Cordoba (UCO) collaboration: development of a synthetic, complementary degree program focusing on science of the James and Guadalquivir River ecosystems. Co-PIs: Dr. Julie Zinnert and Dr. Leonard Smock.
- Army Research Office, 2010-2012, \$234,994, Combined fluorescence and reflectance remote sensing of plants to detect UXOs.
- DOE NICCR, 2009-2010, \$249,413, Collaborative research: biogeomorphic controls on barrier island evolution in response to climate change. Co-Pi with Dr. Laura Moore, Univ. of Virginia, VCU funds, \$107,852.
- Army Research Office, 2006-2010, \$341,119, Remote sensing plant stress using combined fluorescence and reflectance measurements for the early detection of defoliant within the battlefield environment: a prediction of mobility.
- National Science Foundation (subcontract through the University of Virginia), 2006-2012, \$125,000, LTER V: barrier island shrub thicket dynamics and landscape level interactions.
- Virginia Division of Natural Heritage, 2005, \$9,000, Re-evaluation of the Swash Bay restoration sites for effectiveness of past Phragmites control and native plant establishment efforts.
- Virginia Division of Natural Heritage, 2004, \$19,000, Phragmites expansion on Parramore Island and at the Eastern Shore Wildlife Refuge.
- US Fish and Wildlife Service, 2004-2007, \$33,228, Experimental treatment effects on Japanese honeysuckle and fennel and response of native plants.
- Virginia Division of Natural Heritage, 2003, \$15,000, Response of Phragmites to disturbance by wildfire on Parramore Island.
- Army Research Office, 2001-2002, \$25,756, Fluorescence remote sensing and plant stress.
- National Science Foundation (subcontract through the University of Virginia), 2000-2006, \$59,994, LTER IV: Spatial/temporal in shrub colonization and growth.
- Virginia Department of Environmental Quality, 2000-2002, \$12,013, Evaluation of revegetation efforts on Swash Bay spoils.
- Virginia Department of Environmental Quality, 1999, \$35,626, Revegetation of coastal spoils in Swash Bay: the North Site.
- Virginia Department of Environmental Quality, 1998, \$12,722, Monitoring revegetated coastal spoils in Swash Bay.

Virginia Department of Environmental Quality, 1997, \$27,000, Revegetation of coastal spoils on Swash Bay.

U.S. Fish and Wildlife through The Nature Conservancy, 1996, \$3,000, Monitoring of herbicide treated stands of *Phragmites australis* along coastal Virginia.

Jeffress Memorial Trust, 1996-1998, \$24,320, Interacting biotic mechanisms that control shrub establishment on Atlantic Coast barrier islands.

Virginia Department of Transportation, 1996-1999, \$140,000, Creation of coastal wetland on Swash Bay dredge spoils: a joint proposal with The Nature Conservancy.

U.S. Fish and Wildlife through The Nature Conservancy, 1995, \$5,000, Pre- and post-herbicide evaluation of *Phragmites australis* stands on Swash Bay dredge spoils.

National Science Foundation (subcontract through the University of Virginia), 1994, \$18,000, Spatial variations in shrub thicket production.

National Science Foundation (subcontract through the University of Virginia), 1994-2000, \$116,341, LTER III: Spatial variations in shrub growth on Hog Island.

National Science Foundation (subcontract through the University of Virginia), 1993, \$18,000, *Myrica* gap dynamics on Hog Island.

Virginia Commonwealth University Grants-In-Aid Program, 1992, \$6,931, Mycorrhizal associations for *Myrica cerifera* in a barrier island environment.

National Science Foundation, 1992-93, \$17,999, Effects of storm overwash on *Myrica cerifera* at the Virginia Coast Reserve LTER site.

National Science Foundation, 1990-91, \$10,000, Physiological recovery of an actinorhizal shrub, *Myrica cerifera*, from Hurricane Hugo.

National Geographic Society, 1990-91, \$18,122, Ecology of *Myrica* thickets on Atlantic Coast barrier islands.

National Science Foundation Research Opportunity Award, 1989, \$24,549, Effects of summer drought on *Myrica* water relations and photosynthesis at the Virginia Coast Reserve, LTER site. (Dr. Raymond Dueser of UVA, project director.)

Virginia Commonwealth University Grants-In-Aid Program, 1985, \$4,969, Daily and seasonal variation in the environment and water relations of the understory tree *Asimina triloba* (pawpaw).

Wyoming Water Research Center, 1983, \$52,650, Evaluation of factors and models pertinent to estimating natural losses in Wyoming streams.

Wyoming Water Research Center and Office of Water Policy, U.S. Dept. of Interior, 1983, \$10,559, Water relations of high-elevation willow phreatophytes in Wyoming. (Dennis Knight, co-PI)

PUBLICATIONS IN REFEREED JOURNALS

Allen, T., Behr, J., A. Bukvic, R.S.D. Calder, K. Caruson, C. Connor, C. D'Elia, D. Dismukes, R. Ersing, R. Franklin, K.J. McGlathery, M. Riedenbach, M., D. Young, J. Zinnert et al. 2021. Anticipating and Adapting to the Future Impacts of Climate Change on the Health, Security and Welfare of Low Elevation Coastal Zone (LECZ) Communities in Southeastern USA. J. Mar. Sci. Eng. 9, 1196. <https://doi.org/10.3390/jmse9111196>

- Zinnert, J.C., J.B. Nippert, J.A. Rudgers, S.C. Pennings, G.G. M. Alber, S.G. Baer, J.M. Blair, A. Burd, S.L. Collins, C. Craft, D. Di Iorio, W.K. Dodds, P.M. Groffman, E. Herbert, C. Hladik, F. Li, M. E. Litvak, S. Newsome, J. O'Donnell, W.T. Pockman, J. Schalles and D.R. Young. 2021. State changes: insights from the U.S. Long Term Ecological Research Network. *Ecosphere* 12(5): e03433.10.1002/ecs2.3433.
- Woods, N.N., D.B. Goldstein, L.J. Moore, D.R. Young and J.C. Zinnert. 2019. Interaction of seed dispersal and environmental filtering affect woody encroachment patterns in coastal grassland. *Ecosphere* 10(7):e02818.10.1002/ecs2.2818.
- Huang H., J.C. Zinnert, L.K. Wood, D.R. Young, and P. D'Odorico. 2018. Non-linear shift from grassland to shrubland in temperate barrier islands. *Ecology* 99: 1671-1681.
- Brown J.K., J.C. Zinnert and D.R. Young. 2018. Emergent interactions influence functional traits and success of dune building ecosystem engineers. *Journal of Plant Ecology* 11: 524-532.
- Shiflett, S.A., J.C. Zinnert and D.R. Young. 2017. Functional traits of thicket-forming shrubs: contrasting strategies between exotic and native species. *Ecosphere* 8(9) Article e01918.
- Harris, A.L., J.C. Zinnert and D.R. Young. 2017. Differential response of barrier island dune grasses to species interactions and burial. *Plant Ecology* 218: 609-619.
- Thompson, J., J.C. Zinnert and D.R. Young. 2017. Immediate effects of microclimate modification enhances native shrub encroachment. *Ecosphere* 8(2): Article e01687.
- Zinnert J.C., J.A. Stallins, S.T. Brantley and D.R. Young. 2017. Cross-scale studies, ecology, and the future of barrier islands. *Bioscience* 67: 39-52.
- Via S.M., J.C. Zinnert and D.R. Young. 2017. Multiple metrics quantify and differentiate responses of vegetation to Composition B. *International Journal of Phytoremediation* 19: 56-64.
- Bissett, S.N., J.C. Zinnert and D.R. Young. 2016. Woody expansion facilitates liana expansion and affects physical structure in temperate coastal communities. *Ecosphere* 7(6) Article: e01383.
- Via S.M., J.C. Zinnert and D.R. Young. 2016. Legacy effects of explosive contamination on vegetative communities. *Open Journal of Ecology* 6:496-508.
- Zinnert, J.C., S.A. Shiflett, S.M. Via, S.N. Bissett, B. Dows, P.J. Manley and D.R. Young. 2016. Spatio-temporal dynamics in barrier island upland vegetation: the overlooked coastal landscape. *Ecosystems* 19: 685-697.
- Zinnert J.C., Brantley S.T., and D.R. Young. 2016. Correspondence: Bistability and the future of barrier islands. *Nature Climate Change* 6: 5-6.
- Feagin, R.A., J. Figlus, J.C. Zinnert, J. Sigren, M.L. Martínez, R. Silva, W.K. Smith, D. Cox, D.R. Young and G.A. Carter. 2015. Go with the flow or against the grain? The promise of nature-based solutions for protecting beaches, dunes, and barrier islands. *Frontiers of Ecology and Environment* 13: 203-210.
- Via, S.M., J.C. Zinnert and D.R. Young. 2014. Differential effects of two explosive compounds on seed germination and seedling morphology of a woody shrub, *Morella cerifera*. *Ecotoxicology* 24: 194-201
- Shiflett, S.A., J.C. Zinnert and D.R. Young. 2014. Coordination of leaf N, anatomy, photosynthetic, capacity and hydraulics enhances evergreen expansive potential. *Trees* 28: 1635-1644.
- Brantley, S.T., S.N. Bissett; D.R. Young; C.W. Wolner and L.J. Moore. 2014. Barrier island morphology and sediment characteristics affect the recovery of dune building grasses following storm-induced overwash. *PLOS ONE* Vol 9, Issue 8, e104747.

- Bissett, S.N., J.C. Zinnert and D.R. Young. 2014. Linking habitat with associations of woody vegetation and vines on tow mid-Atlantic barrier islands. *Journal of Coastal Research* 30: 843-850.
- Shiflett, S.A., J.C. Zinnert and D.R. Young. 2014. Conservation of functional traits leads to shrub expansion across a chronosequence of shrub thicket development. *Trees* 28:849-858.
- Guglielmo, L., F. Azzaro, C. Baviera, A. Bergamasco, S.N. Bissett, C. Brugnano, G. Caruso, F. Decembrini, A.L. Garey, A. Granata, C. Cugliandolo, V. Lentini, M.A. Lo Gullo, T.L. Maugeri, M. Pansera, F. Raimondo, L.P. Rodriguez-Vlades, L.A. Smock, S. Spano, P. Trifilo, J.K. Vick, D.R. Young, G. Zagami, J.C. Zinnert and R. Minutoli. 2014. Multidisciplinary ecological assessment of the Alcantara River (Sicily, Italy) using Bioindicators. *Marine and Freshwater Research* 65: 283-305.
- Via, S.M., J.C. Zinnert, A.D. Butler and D.R. Young. 2014. Comparative plant physiological responses to RDX, TNT, and Composition B contaminated soils. *Environmental and Experimental Botany* 99: 67-74.
- Shiflett, S.A., J.C. Zinnert and D.R. Young. 2013. Seasonal patterns of light availability and light use of broadleaf evergreens in a deciduous forest understory: Potential mechanisms for expansion. *Open Journal of Ecology* 3: 151-160.
- Shiflett, S.A., J.C. Zinnert and D.R. Young. 2013. Changes in composition and structure during restoration of maritime communities. *Journal of the Torrey Botanical Society* 140: 89-100.
- Vick, J.K. and D.R. Young. 2013. Comparative responses of a non-N-fixing shrub and an actinorhizal N-fixing shrub to N fertilization. *Plant and Soil* 371: 377-385.
- Wolner, C.W., L.J. Moore, D.R. Young, S.T. Brantley, S.N. Bissett and R.A. McBride. 2013. Ecomorphodynamic feedbacks and barrier island response to disturbance: Insights from the Virginia barrier islands, Mid-Atlantic Bight, USA. *Geomorphology* 199: 115-128.
- Zinnert, J.C., S.A. Shiflett and D.R. Young. 2013. Plant functional traits of a shrub invader relative to sympatric native shrubs. *Ecosphere* 4(10): Article 119.
- Zinnert, J.C., S. Via and D.R. Young. 2013. Distinguishing natural from anthropogenic stress in plants: physiology, fluorescence and hyperspectral reflectance. *Plant and Soil* 366:133-141.
- Aguilar, C., J.C. Zinnert, M.J. Polo and D.R. Young. 2012. NDVI as an indicator for changes in water availability to woody vegetation. *Ecological Indicators* 23: 290-300.
- Brantley, S.R., J.C. Naumann and D.R. Young. 2011. Application of hyperspectral vegetation indices to detect variations in high leaf area index temperate shrub thicket canopies. *Remote Sensing of Environment*. 115: 514-523.
- Nordstrom N.L. Jackson, N.C. Kraus, T.W. Kana, R. Bearce, A. Hecht, L.M. Bocamazo, D.R. Young, and H.A. De Butts. 2011. Enhancing geomorphic and biologic functions and values on backshores and dunes of developed shores: a review of opportunities and constraints. *Environmental Conservation* 38: 288-302.
- Vick, J.K. and D.R. Young. 2011. Spatial variation in environment and physiological strategies for forb distribution on coastal dunes. *Journal of Coastal Research* 27: 1113-1121.
- Young, D.R., S.T. Brantley, J.C. Zinnert, and J.K. Vick. 2011. Landscape position and habitat polygons in a dynamic coastal environment. *Ecosphere* 2(6): Article 71.
- Zinnert, J.C., S.A. Shiflett, J.K. Vick and D.R. Young. 2011. Woody vegetative cover dynamics in response to recent climate change on an Atlantic coast barrier island: a remote sensing approach. *Geocarto International* 26: 595-612.

- Brantley, S.T. and D.R. Young. 2010. Shrub expansion stimulates soil C and N storage along a coastal soil chronosequence. *Global Change Biology* 16: 2052-2061
- Brantley, S.T. and D.R. Young. 2010. Linking light attenuation, sunflecks and canopy architecture in mesic shrub thickets. *Plant Ecology* 206: 225-236.
- Feagin, R.A., W.K. Smith, N.P. Psuty, D.R. Young, M.L. Martinez, G.A. Carter, K.L. Lucas, J.C. Gibeaut, J.N. Gemma and R.E. Koske. 2010. Barrier islands: coupling anthropogenic stability with ecological sustainability. *Journal of Coastal Research* 26: 987-992.
- Naumann, J.C., J.E. Anderson and D.R. Young. 2010. Remote detection of plant physiological responses to TNT soil contamination. *Plant and Soil* 329: 239-248
- Naumann, J.C., S.N. Bissett, D.R. Young, J. Edwards, and J.E. Anderson. 2010. Diurnal patterns of photosynthesis, chlorophyll fluorescence, and PRI to evaluate water stress in the invasive species, *Eleocharis umbellata* Thunb. *Trees* 24: 237-245.
- Shiflett, S.A. and D.R. Young. 2010. Avian seed dispersal on Virginia barrier islands: potential influence on vegetation community structure and patch dynamics. *American Midland Naturalist* 164: 91-106.
- Brantley, S.T. and D.R. Young. 2009. Contribution of sunflecks is minimal in expanding shrub thickets compared to temperate forests. *Ecology* 90: 1021-1029.
- Naumann, J.D., D.R. Young, and J.E. Anderson. 2009. Spatial variations in salinity stress across a coastal landscape using vegetation indices derived from hyperspectral imagery. *Plant Ecology* 202: 285-297.
- Vick, J.K. and D.R. Young. 2009. Corticular photosynthesis: a mechanism to enhance shrub expansion in coastal environments. *Photosynthetica* 47: 26-32.
- Brantley, S.T. and D.R. Young. 2008. Shifts in litterfall and dominant nitrogen sources after expansion of shrub thickets. *Oecologia* 155: 337-345.
- Knapp, A.K., J.M. Briggs, S.L. Collins, S.R. Archer, M.S. Bret-Harte, B.E. Ewers, D.P. Peters, D.R. Young, G.R. Shaver, E. Pendall, and M.B. Cleary. 2008. Shrub encroachment in North American grasslands: shift in growth form dominance rapidly alters control of ecosystem carbon inputs. *Global Change Biology* 14: 615-623.
- Naumann, J.D., J.E. Anderson, and D.R. Young. 2008. Linking physiological responses, chlorophyll fluorescence and hyperspectral imagery to detect salinity stress using the physiological reflectance index in the coastal shrub, *Myrica cerifera*. *Remote Sensing of Environment*. 112: 3865-3875.
- Naumann, J.C., D.R. Young, and J.E. Anderson. 2008. Leaf fluorescence, reflectance, and physiological response to freshwater and saltwater flooding in the evergreen shrub, *Myrica cerifera*. *Environmental and Experimental Botany* 63: 402-409.
- Brantley, S.T. and D.R. Young. 2007. Leaf area index and light attenuation in rapidly expanding shrub thickets. *Ecology* 88: 524-530.
- Naumann, J.C. and D.R. Young. 2007. Relationship between community structure and seed bank to describe successional dynamics of an Atlantic Coast maritime forest. *Journal of the Torrey Botanical Society* 134: 89-98.
- Naumann, J.C., D.R. Young, and J.E. Anderson. 2007. Linking leaf chlorophyll fluorescence properties to physiological responses for stress detection in coastal plant species. *Physiologia Plantarum* 131: 422-433.
- Young, D.R., J.H. Porter, C.M. Bachmann, G. Shao, R.A. Fusina, J.H. Bowles, D. Korwan, and T.F. Donato. 2007. Cross-scale patterns in shrub thicket dynamics in the Virginia barrier complex. *Ecosystems* 10: 854-863.

- Barimo, J.F. and D.R. Young. 2002. Grasshopper (Orthoptera: Acrididae) - plant - environmental interactions in relation to zonation on an Atlantic Coast barrier island. *Environmental Entomology* 31: 1158-1167.
- Joy, D.A. and D.R. Young. 2002. Promotion of mid-successional seedling recruitment and establishment by *Juniperus virginiana* in a coastal environment. *Plant Ecology* 160: 125-135.
- Wijnholds, A.E. and D.R. Young. 2000. Interdependence of the host plant, *Myrica cerifera*, and the actinomycete, *Frankia*, in a coastal environment. *Journal of Coastal Research* 16: 139-144.
- Crawford, E.R. and D.R. Young. 1998. Gap dynamics within shrub thickets on an Atlantic Coast barrier island. *American Midland Naturalist* 140: 68-77.
- Crawford, E.R. and D.R. Young. 1998. Spatial/temporal variations in shrub thicket soil seed banks on an Atlantic Coast barrier island. *American Journal of Botany* 85: 1739-1744.
- Shao, G., D.R. Young and J.H. Porter. 1998. An integration of remotes sensing and GIS to examine the responses of shrub thicket distributions to shoreline changes on Virginia barrier islands. *Journal of Coastal Research* 14: 299-307.
- Martin, D.W. and D.R. Young. 1997. Small-scale distribution and salinity response of *Juniperus virginiana* on an Atlantic Coast barrier island. *Canadian Journal of Botany* 75: 77-85.
- Tolliver, K.S., D.W. Martin and D.R. Young. 1997. Freshwater and saltwater flooding response for woody species common to barrier island swales. *Wetlands* 17: 84-92.
- Erickson, D.L. and D.R. Young. 1995. Salinity response, distribution, and possible dispersal of a barrier island strand glycophyte, *Strophostyles umbellata* (Fabaceae). *Bulletin of the Torrey Botanical Club* 122: 95-100.
- Semones, S.W. and D.R. Young. 1995. VAM association in the actinorhizal shrub *Myrica cerifera* on a Virginia, USA barrier island. *Mycorrhiza* 5: 423-429.
- Shao, G., H.H. Shugart and D.R. Young. 1995. Simulation of transpiration sensitivity to environmental changes for shrub (*Myrica cerifera*) thickets on a Virginia barrier island. *Ecological Modeling* 78: 235-248.
- Tolliver, K.S., D.M. Colley and D.R. Young. 1995. Inhibitory effects of *Myrica cerifera* on *Pinus taeda*. *American Midland Naturalist* 133: 256-263.
- Young, D.R., G. Shao and M.M. Brinson. 1995. The impact of the October 1991 northeaster storm on barrier island shrub thickets (*Myrica cerifera*). *Journal of Coastal Research* 11: 1322-1328.
- Young, D.R., G. Shao and J.H. Porter. 1995. Spatial and temporal growth dynamics of barrier island shrub thickets. *American Journal of Botany* 82: 638-645.
- Young, D.R., D.L. Erickson and S.W. Semones. 1994. Salinity and the small-scale distribution of three barrier island shrubs. *Canadian Journal of Botany* 72: 1365-1372.
- Carter, G.A. and D.R. Young. 1993. Foliar spectral reflectance and plant stress on a barrier island. *International Journal of Plant Science* 154: 298-305.
- Johnson, S.R. and D.R. Young. 1993. Factors contributing to the decline of *Pinus taeda* on a Virginia barrier island. *Bulletin of the Torrey Botanical Club* 120: 431-438.
- Johnson, S.R. and D.R. Young. 1992. Variation in tree ring width in relation to storm activity for mid-Atlantic barrier island populations of *Pinus taeda*. *Journal of Coastal Research* 8: 99-104.

- Sande, E. and D.R. Young. 1992. Effect of sodium chloride on growth and nitrogenase activity in seedlings of *Myrica cerifera* L. *New Phytologist* 120: 345-350.
- Young, D.R. 1992. Photosynthetic characteristics and potential moisture stress for the actinorhizal shrub, *Myrica cerifera*, on a Virginia barrier island. *American Journal of Botany* 79: 2-7.
- Young, D.R., E. Sande and G.A. Peters. 1992. Spatial relationships of *Frankia* and *Myrica cerifera* on a Virginia, USA barrier island. *Symbiosis* 12: 209-220.
- Knapp, A.K., W.K. Smith and D.R. Young. 1989. Importance of intermittent shade to the ecophysiology of subalpine herbs. *Functional Ecology* 3: 753-758.
- Payne, J.L., D.R. Young and J.F. Pagels. 1989. Plant community characteristics associated with the endangered northern flying squirrel, *Glaucomys sabrinus*, in the Southern Appalachians, U.S.A. *American Midland Naturalist* 121: 285-292.
- Lau, R.R. and D.R. Young. 1988. Influence of physiological integration on survivorship and water relations in a clonal herb. *Ecology* 69: 215-219.
- Silverman, F.P., D.R. Young and P.S. Nobel. 1988. Effects of applied NaCl on *Opuntia humifusa*. *Physiologia Plantarum* 72: 343-348.
- Turner, G.D., R.R. Lau and D.R. Young. 1988. Effect of acidity on germination and seedling growth of *Paulownia tomentosa*. *Journal of Applied Ecology* 25: 561-567.
- Young, D.R. 1987. Daily and seasonal variations in the water relations of the understory tree, *Asimina triloba*. *Acta Oecologia/Oecologia Plantarum* 8: 59-68.
- Young, D.R. and J.B. Yavitt. 1987. Differences in leaf structure, chlorophyll and nutrients for the understory tree *Asimina triloba*. *American Journal of Botany* 74: 1487-1491.
- Young, D.R. and P.S. Nobel. 1986. Predictions of soil water potentials in the northwestern Sonoran Desert. *Journal of Ecology* 74: 143-154.
- Young, D.R. 1985. Crown architecture, light interception and stomatal conductance patterns for sympatric deciduous and evergreen species in a forest understory. *Canadian Journal of Botany* 63: 2425-2429.
- Young, D.R., I.C. Burke and D.H. Knight. 1985. Water relations of high-elevation phreatophytes in Wyoming. *American Midland Naturalist* 114: 384-392.
- Young, D.R. 1985. Microclimatic effects on water relations, leaf temperatures and the distribution of *Heracleum lanatum* at high elevations. *American Journal of Botany* 72: 357-364.
- Fahey, T.J. and D.R. Young. 1984. Soil and xylem water potential and soil water content in contrasting *Pinus contorta* ecosystems, southeastern Wyoming, USA. *Oecologia* 61: 346-351.
- Smith, W.K., D.R. Young, G.A. Carter, J.L. Hadley and G.M. McNaughton. 1984. Autumn stomatal closure in six conifer species of the Central Rocky Mountains. *Oecologia* 63: 237-242.
- Smith, W.K., A.K. Knapp, J.A. Pearson, J.H. Varman, J.B. Yavitt and D.R. Young. 1983. Influence of microclimate and growth form on plant temperatures of early spring species in a high-elevation prairie. *American Midland Naturalist* 109: 380-389.
- Young, D.R. 1983. Comparison of intraspecific variations in the reproduction and photosynthesis of an understory herb, *Arnica cordifolia*. *American Journal of Botany* 70: 728-734.
- Young, D.R. and W.K. Smith. 1983. Effect of cloudcover on photosynthesis and transpiration in the subalpine understory species, *Arnica latifolia*. *Ecology* 64: 681-687.

- Young, D.R. and W.K. Smith. 1982. Simulation studies of the influence of understory location on the transpiration and photosynthesis of *Arnica cordifolia* on clear days. *Ecology* 63: 1761-1770.
- Young, D.R. and W.K. Smith. 1980. Influence of sunlight on photosynthesis, water relations, and leaf structure in the understory species, *Arnica cordifolia*. *Ecology* 60: 1380-1390.
- Young, D.R. and W.K. Smith. 1979. Influence of sunflecks on the temperature and water relations of two subalpine understory congeners. *Oecologia* 43: 195-205.

PUBLISHED PROCEEDINGS

- Massaro, R., J. Zinnert, J. Anderson, J. Edwards, E. Crawford and D. Young. 2012. LIDAR flecks: modeling the influence of canopy type on tactical foliage penetration by airborne, active sensor platforms. *Proceedings of SPIE* 8360: 08, 1-1, Baltimore, MD.
- Wolner, C.W.V., L.J. Moore, D.R. Young, S.T. Brantley, S.N. Bissett, M.D. Wilson and B.D. Watts. 2011. Dune builders vs. overwash maintainers: ecomorphodynamic feedbacks on the Virginia Coast Reserve barrier islands. Pgs 258-271 In: P. Wang, J.D. Rosati and T.M. Roberts (eds.) *Proceedings of the Coastal Sediments '11*. Miami, FL.
- Nelson, J.D., J.C. Zinnert., J.E. Anderson, E. Mendoza and D.R. Young. 2010. Remote lifetime imaging – advanced technology for vegetation fluorescence sensing. *Proceedings 4th International Workshop on Remote Sensing of Vegetation Fluorescence*, Valencia, Spain.
- Naumann, J.C., K. Rubis and D.R. Young. 2010. Fusing chlorophyll fluorescence and plant canopy reflectance to detect TNT contamination in soils. *Proceedings of SPIE* 7664: 1L-1-7, Orlando, FL.
- Zinnert, J.C, J.D. Nelson, J.K. Vick, A.M. Hoffman and D.R. Young. 2010. Rethinking chlorophyll responses to stress: fluorescence and reflectance remote sensing in a coastal environment. *Proceedings of the 4th International Workshop on Remote Sensing of Vegetation Fluorescence*, Valencia, Spain.
- Guglielmo, L., L.A. Smock, D.R. Young and M.J. Polo. 2009. Ecological water quality assessment using bioindicators. *Proceeding of the Center for Integrative Mediterranean Studies*, Messina, Italy.
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BOOK CHAPTERS

- Nichols, C.R., J. Zinnert and D.R. Young. 2018. Degradation of coastal ecosystems: Causes, impacts and mitigation efforts. Pgs. 119-136. In: L.D. Wright and C.R. Nichols (eds.) *Tomorrow's coasts: Complex and impermanent*. Springer, Switzerland.
- Neufeld, H.S. and D.R. Young. 2014. Physiological ecology of understory herbs. Pgs. 35-95, In: F. Gilliam (ed.) *The herbaceous layer in forests of eastern North America*, 2nd edition. Oxford University Press, New York.

- Young, D.R. 2006. Estimating aboveground net primary production in shrub-dominated ecosystems. In: T.J. Fahey and A.K. Knapp (eds.) Principles and standards for measuring net primary production in long-term ecological studies. Oxford University Press, NY.
- Neufeld, H.S. and D.R. Young. 2003. Physiological ecology of understory herbs. Pgs. 38-90, In: F. Gilliam and M. Roberts (eds.) The herbaceous layer in forests of eastern North America. Oxford Press

INVITED PAPERS AND SEMINARS

- 1981 – Ecological Society of America symposium, “Ecology of forest understory plants”
- 1985 – Department of Botany, University of Maryland
- 1987 – Blandy Experimental Farm and Field Station, University of Virginia
- 1991 – Department of Biological Sciences, Old Dominion University
- 1992 – Department of Environmental Sciences, University of Virginia
- 1996 – Department of Biology, Virginia Tech University
- 1997 – Coastal Ecology Institute, Louisiana State University
- 1998 – Division of Biology, Kansas State University
- 1999 – Department of Biological Sciences, Old Dominion University
- 2001 – Department of Plant Sciences, Arizona State University
- 2001 – Department of Biology, Appalachian State University
- 2001 – Department of Biology, University of Richmond
- 2004 – Department of Botany, North Carolina State University
- 2004 – Eastern Shore Laboratory, Virginia Institute of Marine Sciences
- 2005 – LTER Coordinating Committee
- 2007 – Department of Biology, University of Richmond
- 2007 – Workshop on “Vegetation stress detection with remote sensing imagery,” Instituto de Agricultura Sostenible, University of Cordoba, Spain
- 2008 – Un mar de culturas: Sicilia, Andalucía y el Mediterraneo, University of Cordoba, Spain
- 2008 – Center for Integrative Mediterranean Studies, University of Messina, Sicily
- 2010 – SPIE: Detection of Sensing of Mines, Explosive Objects, and Obscured Targets XV, Orlando, FL
- 2010 – Bald Head Island, NC Community Association
- 2011 – Department of Viticulture, University of Rioja, Spain
- 2011 – Department of Agronomy, University of Cordoba, Spain
- 2011– Center for Integrative Mediterranean Studies, University of Cordoba, Spain
- 2012 - Bald Head Island, NC Community Association
- 2013 - Department of Biological Sciences, Old Dominion University
- 2013 – 44th Binghamton Geomorphology Symposium, Newark, NJ
- 2014 – NSF LTER Science Council, Manhattan, KS
- 2016 – Faculty of Sciences, University of Cordoba, Spain

CONTRIBUTED PAPERS*

- 1978 – Ecological Society of America
- 1979 – Ecological Society of America; Southwestern and Rocky Mountain AAAS
- 1980 – Ecological Society of America; Southwestern and Rocky Mountain AAAS
- 1981 – Ecological Society of America; Southwestern and Rocky Mountain AAAS

1982 – Colorado-Wyoming Academy of Sciences; Ecological Society of America (2)
1983 – Colorado-Wyoming Academy of Sciences; Ecological Society of America
1984 – Ecological Society of America
1985 – Botanical Society of America
1986 – Ecological Society of America
1987 – Association of Southeastern Biologists (3); Ecological Society of America
1988 – Ecological Society of America
1989 – Association of Southeastern Biologists (2); Virginia Academy of Sciences (2)
1990 – Botanical Society of America (2); Ecological Society of America (2)
1992 – Ecological Society of America
1993 – Association of Southeastern Biologists (3); 8th Annual United States Landscape Ecology Symposium; Ecological Society of America (3); Long-Term Ecological Research All Scientists Meeting (3); 9th International Conference on *Frankia* and Actinorhizal Plants; Virginia Coast Reserve All Scientists Meeting (4)
1994 – Ecological Society of America; Virginia Academy of Sciences
1995 – Association of Southeastern Biologists (3); Ecological Society of America (2); Virginia Coast Reserve All Scientists Meeting (4)
1996 – Association of Southeastern Biologists (2); Ecological Society of America (2); Virginia Coast Reserve All Scientists Meeting (4)
1997 – Ecological Society of America (2)
1998 – Ecological Society of America (3)
1999 – Ecological Society of America
2000 – Ecological Society of America; Long-Term Ecological Research All Scientists Meeting
2001 – American Institute of Biological Sciences, Virginia Coastal Partners Workshop, Virginia Dept. of Environmental Quality
2003 – Ecological Society of America; Long-Term Ecological Research All Scientists Meeting
2004 – Southeastern Ecology and Evolution Conference, Ecological Society of America
2005 – Ecological Society of America (2)
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2007 – Ecological Society of America (4)
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2009 – Ecological Society of America (5), Long-Term Ecological Research All Scientists Meeting (2)
2010 – Association of Southeastern Biologists (4); Ecological Society of America (5); 4th International Workshop on Remote Sensing of Vegetation Fluorescence.
2011 – Ecological Society of America (5)
2012 – Mid-Atlantic Ecological Society of America (2),
2012 – Ecological Society of America (7), Association of Southeastern Biologists (3)
2013 – Association of Southeastern Biologists (3), International Phytotechnology Conference
2014 – Ecological Society of America (3), International Phytotechnology Conference (2), American Geophysical Union (3)
2015 – Ecological Society of America (4), Long-Term Ecological Research All Scientists Meeting (3), International Phytotechnology Conference
2017 – Ecological Society of America
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GRADUATE STUDENTS TRAINED

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- Odum Award for the outstanding ecology paper presented by a student at the 1987 Association of Southeastern Biologist meeting
- JD in Environmental Law, University of Virginia, 1991
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- VCU Dept. of Biology Graduate Student of the Year for 1994
- PhD in Botany, University of Georgia, 2000
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- PhD in Ecology, Evolution and Conservation Biology, University of Nevada at Reno, 1999
- Range and wildlife management specialist, Los Angeles Department of Water and Power

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 - VCU Dept of Biology Graduate Student of the year for 2004
 - Assistant Professor, Dept. of Biology, VCU

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 - Assistant Professor, Dept. of Biology, VCU

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 - Assistant Professor, UNC - Wilmington.

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 - DMV, practicing in Fredericksburg, VA

Kathryn Rubis (MS, 2011)
 - Wetlands Specialist, The Nature Conservancy, Virginia

Stephen Via (MS, 2012: PhD Integrative Life Sciences, VCU)
 - Outstanding Student Paper Presentation, International
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 - Assistant Professor, Norfolk State University

Molly Hokkanen (MS, 2013)
 - Middle school teacher, Potomac, MD

Benjamin Dows (MS, 2014)

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Paul Manley (MS, 2015)

- Currently working towards a PhD, Missouri University of Science and Technology.

April Harris (MS, 2016)

- Recipient of the Biology Graduate Student Teaching Award

- Greenhouse manager, UNC Greensboro

Joseph Brown (MS, 2016)

- Recipient of the Graduate Student Ecology Research Award

- PhD candidate, Integrative Life Sciences, VCU

Joseph Thompson (MS, 2016)

- Environmental Scientist, VHB

COURSES TAUGHT

General Biology (U)

Ecology (U)

Honors Ecology (U)

Ecology Lab (U)

Capstone Seminar (U)

Physiological Ecology (G)

Quantitative Ecology (G)

Biological Complexity, directed (G)

Science Communication: Research Proposals (G)

Science Communication: Fundamentals (G)

Current Topics: Theories in Biology (G)

Research Seminar in Ecology (G)

Plant Ecology (U/G)

Barrier Island Ecology (U/G)

January 2023