



Research and Fellowship Reports from Pierce Cedar Creek Institute

The following are the titles of projects completed at Pierce Cedar Creek Institute since 2005. Each title includes students and faculty last names, project title, year, and the institution. Full research and fellowship reports are available at <https://www.cedarcreekinstitute.org/myPCCI> or by contacting Ellen Holste, Research and Community Engagement Manager at: eholste@cedarcreekinstitute.org.

Creative Arts Fellowship

2024 Fellows

Olivia Bacon, Kendall College
Drysen Geoghegan, Grand Rapids Community College
Sydney Higgins, Kendall College
Cass Kramer, Grand Rapids Community College
Emmet (Elia) Martin, Kendall College
Megan Myers, Grand Rapids Community College
Lucero Orduna-Rivera, Grand Rapids Community College
Kostandi Stephens, Western Michigan University
Claire Taylor, Kalamazoo College
Weston Wise, Central Michigan University

2023 Fellows

Kristen Brennan, Central Michigan University
Sara Daniels, Central Michigan University
Kipp De Man, Calvin University
Sophia Forystek, Kendall College
Emily Graves, Valparaiso University
Desirée García, Western Michigan University

Kenzie Hesselink, Grand Rapids Community College
Zoe Meyering, Kendall College
Kaitlin Riley, Grand Rapids Community College
Nalani Walits, Grand Valley State University

2022 Fellows

Julian Arpin-Cortez, Grand Rapids Community College
Sarah Craft, Western Michigan University
Madeline Devantier, Central Michigan University
Kathryn Lee, Kendall College
Valerie Salerno, Grand Rapids Community College
Francesca Smorch, Kendall College
Sara Trumbley, Kendall College
Katie VanDyke, Calvin University
Rine Wakeman, Calvin University
Edwin Williamson, Central Michigan University
Sophie Winks, Aquinas College

Gordon Art Fellowship Recipients

Katerberg, K. 2021. *Earth in Three Variations*. Grand Rapids Community College
Searcy, S. 2021. *The Unique Beauty of Arthropods*. Valparaiso University.
Henrickson, R. 2020. *Ode to salamander heaven*. Grand Valley State University
Postema, A. 2020. *An exploration of time, change, and nature*. Aquinas College
Hart, S. 2019. *Plein Air and Beyond*. Kendall College of Art and Design
Vanderlinden, E. 2019. *Legs, Wings, and Insect Things*. Kendall College of Art and Design
Beilby, E. *Their Home, Our Landfill*. Kalamazoo Community College
Stutz, J. 2018. *Life Everlasting*. Kendall College of Art and Design
Romersberger, J. 2017. *Dirt, Worms, Bugs, and Other Filthy Essentials of the Human Experience*. Valparaiso University
Walton, D. 2017. *Earth Colors*. Kendall College of Art and Design

Barrett, L. 2016. *Freedom in the Woods*. Kalamazoo Valley Community College
Whitman, L. 2016. *Art, Nature, and Mental Health*. Valparaiso University
Christoffersen, H. 2015. *Knock, Knock, Who's There?* Grand Rapids Community College.
Ruso, C. 2014. *The Beauty Beneath*. Grand Rapids Community College.
Bishop, T. 2013. *Concealed Wetlands*. Western Michigan University.
Giuliani, L. 2012. *Hijacking Nature*. Western Michigan University.
Brand, R. 2011. *Near Nature*. Western Michigan University.
Kauff, R. 2010. *Drawing from the Land*. Grand Valley State University.

Nature in Words Fellowship Recipients

Reynolds, I. 2021. *Memory as Preservation*. Grand Rapids Community College
House, A. 2020. *Cardboard castle*. Kalamazoo College
Lantinga, G. 2020. *Homebody*. Grand Rapids Community College
Walztoni, E. 2020. *The Fruiting Season*. Aquinas College
Chung, P. 2019. *Listening to Nature's Heartbeat*. Kalamazoo College.
Garcia, T. 2018. *A digital field guide*. Hope College
Houcek, E. 2017. *The East of the Fauna*. Kalamazoo College.
Ensink, E. 2016. *Field Guide to Disappearing*. Hope College
D'Addario, T. *Cedar Creek: Linked Short Stories Inspired by Nature*. Hope College.
Kinney, A. *Children in Nature: An Exploration*. Western Michigan University.
Hallinen, M. *Understory Science: Poems and Brief Essays*. Kalamazoo College.
Schlutt, P. *Communion in the Wilderness*. Aquinas College.
Jacob, C. *Nature, Global Justice, and the Creative Writer*. Olivet College.
Belew, K. *But That Was In a Different Life*. Kalamazoo College.
Kalmbach, C. *Ecopoetry: The New Nature Poetry*. Central Michigan University.
Menz, S. *A Creative and Critical Study of the Natural World*. Alma College.

Environment Research Grant (Undergraduate Research Grants for the Environment)

2024 Recipients

Austin, A., Kaechele, S., and T. Schriever. 2024. Status and distribution of Michigan's lost salamander: the western lesser siren. Western Michigan University.

Glei, B. and A. Whitlock. 2024. Using unmanned aerial vehicles to survey for reptiles. Grand Valley State University.

Katz, H. and M. Craker. 2024. Secretive wetland bird survey. Cornerstone University.

Medley, A. and M. Vanderweide. 2024. Eastern Massasauga Rattlesnake Demography. Grand Valley State University.

Sweeney, A. and G. Hasse. 2024. Headstarted eastern box turtle (*Terrapene carolina carolina*) survival and spatial ecology in southwest Michigan. Grand Valley State University.

Taylor, K., O. Dubey, and A. Hewitt. 2024. Development of a cyanotoxin indicator. Central Michigan University.

2023 Recipients

Austin, A. and T. Schriever. 2023. Status and distribution of Michigan's lost salamander: the western lesser siren. Western Michigan University.

Millen, N. E. Taylor, and D. Dornbos, Jr. 2023 Current soil organic carbon content and potential carbon storage capacity of the terrestrial plant communities in a SW Michigan forest and prairie landscape. Calvin University.

Patterson, J., A. Huberts, and P. Keenlance. 2023. Is electric fencing a feasible and effective solution to turtle nest predation by raccoons? Grand Valley State University.

Sweeney, A. and F. Kuzma. 2023. Headstarted eastern box turtle (*Terrapene carolina carolina*) survival and spatial ecology in southwest Michigan. Grand Valley State University.

2022 Recipients

Kuzma, F. and E. Richards. 2022. Head-started eastern box turtle (*Terrapene carolina carolina*) growth, survival, and spatial ecology in southwest Michigan. Grand Valley State University.

Rainey, T. and K. Clarady. 2022. A tiny frog facing big problems: population and landscape genetics of a declining anuran (*Acris blanchardi*). Central Michigan University.

Gonzalez, M., K. Krawulski, and Z. Aljobeh. 2022. Water quality monitoring of Big and Little Cedar Lakes. Valparaiso University.

Boyle, A. and K. Bugajski. 2022. Spotted knapweed biocontrol. Valparaiso University.

2021 Recipients

Arnold, J. 2021. Assessing the short-term effects of translocation on freshwater mussels: is habitat or water quality more important. Grand Valley State University.

Fair, E, C. Moore, A. Wieten, and C. G. Partridge. 2021. Population assessment of wild rice (*Zizania spp.*). Grand Valley State University.

Kapteyn, A, A. Liebetreu, A. Vander Tuig, E. Shokoohi, and W. Miller. Evaluating the distribution of blacklegged ticks (*Ixodes scapularis*) in a region of recent expansion. Calvin University.

Lewis, C., T. Barkman, and T. Basset. Conservation genetics of hairy sunflower in Michigan. Western Michigan University.

Raona, A., F. Kuzma, J. Moore, and P. Keenlance. Growth, survival, and spatial ecology of headstarted eastern box turtles (*Terrapene carolina carolina*) at Pierce Cedar Creek Institute. Grand Valley State University.

2020 Recipients

Catoni, R. E. Jacobs, and B. Swanson. 2020. Influence of soil and water chemistry on wild rice in Michigan. Central Michigan University.

Moma, M, F. Kuzma, J. Moore, and P. Keenlance. 2020. Growth, survival, movement patterns, and habitat use of head-started eastern box turtles (*Terrapene carolina carolina*) at Pierce Cedar Creek Institute in Barry County, MI. Grand Valley State University.

Nippa, M. and K. Docherty. 2020. The establishment and success of *Baptisia alba* based on present soil microbial communities. Western Michigan University .

Vander Tuig, A., N. Wilkes, D. Dornbos. 2020. Competitiveness of *Rosa multiflora* Thunb. In varying plant communities and light regimes compared with co-habiting native species. Calvin University.

2019 Recipients

Bittman, B., S. Guenin, and B. Swanson. 2019. Distribution and frequency of endemic haplotypes in wild rice in south Michigan. Central Michigan University.

Catoni, R.*, J. Vanden Berg, and R. Keys. 2019. Bringing biodiversity to restored grasslands. Cornerstone University, *Central Michigan University.

Horne, E., B. Kosnik, L. Ventura, and T. Aschenbach. 2019. The influence of spring prescribed fire on oak savanna restoration. Grand Valley State University.

Kuzma, F., and B. Hukill. 2019. Habitat use of eastern box turtles at Pierce Cedar Creek Institute. Grand Valley State University.

Laube, K., S. Riley, D. Van Andel, and W. Miller. 2019. Preliminary design and evaluation of an environmental DNA assay for wild rice (*Zizania spp.*) Calvin University.

Silverhart, M., M. Moma, and J. Moore. 2019. Growth and demographics of eastern massasaugua rattlesnakes at Pierce Cedar Creek Institute. Grand Valley State University.

2018 Recipients

Day, C., Vanhuis, D.*, and Keys, R. 2018. Bringing biodiversity to restored grasslands. Cornerstone College, *Aquinas College.

McWaters S. and Pangle, W. 2018. The effects of spatial familiarity on eastern chipmunks (*Tamias striatus*) while foraging. Central Michigan University.

Pakula, C., Guenin, S., and Swanson, B. 2018. Walking over wildlife: the effects of hiking trails on small and meso-mammals. Central Michigan University.

Radecki, J., Sheets, K., Wassilak, A., and Snyder, E. 2018. Assessing the impact of mussel bed presence on aquatic macroinvertebrate communities and stream function. Grand Valley State University.

Scholten C., Kamphuis, A., Vredevoogd, K., Lee, K., Atma, J., Shea, C., Lamberg, O., and Proppe, D. 2018. A drone-mounted thermal camera is as effective as traditional methods for locating grassland bird nests. Calvin College.

Willson, A., Clark, S., and Humphrey, R. 2018. Abiotic factors affecting the prevalence of *Rosa multiflora* (*Roasaceae*) populations at Pierce Cedar Creek Institute (Hastings, Michigan, USA). Aquinas College.

2017 Recipients

Arendsen, E. and M. Buckner. 2017. How Forest Edges Effect Non-Native Plant Species in Deciduous Michigan Forests at the Pierce Cedar Creek Institute. Hope College.

Engster, S. and C. Morris. 2017. Difference in Habitat Use Between the Sexes of *Chrysemys picta*. Central Michigan University.

Fuller, J. and M. Wells. 2017. The Effects of Forest Fragmentation on Microbial Communities and Substrate Metabolism at the Pierce Cedar Creek Institute in Southern Michigan. Hope College.

Scholten, C. and K. Strydhorst. 2017. Acoustic Stimuli are not Primary Drivers of Habitat Selection in Breeding Grassland Birds. Calvin College.

Syrtochen, J. and Y. Y. Ong. 2017. The Influence of Milkweed Modularity on Defense Against Aphid Herbivory. Western Michigan University.

Thacker A. and C. Krueger. 2017. Landscape Connectivity of Eastern Massasauga Rattlesnake Populations Located in Barry County, MI. Grand Valley State University.

2016 Recipients

Lamka, G., Damer, C., and Swanson, B. 2016. Flight initiation distance when encountering a novel predator. Central Michigan University.

Hindy, M, Mangione, T, and Keys, R. 2016. Vegetative effects on grassland bird biodiversity in Southwest Michigan. Cornerstone University.

Pitman, Z, Walker, K., and Aschenbach, T. 2016. The effect of fire season and temperature on spotted knapweed (*Centaurea maculosa*) removal and native species establishment. Grand Valley State University.

Preville, N., Walker, A. and Snyder E. 2016. Longitudinal influence of problematic roadstream crossings on the macroinvertebrate and fish communities of Cedar Creek, MI. Grand Valley State University.

Scholten, C., Strydhorst, K., and Proppe D. 2016. The effects of social cues and anthropogenic noise on settlement patterns and physical traits of Henslow's sparrows and four other grassland obligate songbirds. Calvin College.

2015 Recipients

Ajala, O., Zuhorski, A., and Swanson, B. 2015. The factors affecting infestation of Canada thistle by *Urophora cardui*. Central Michigan University.

Bartman, J., Kudla, N., Bradke, D., and Moore, J. 2015. Work smarter, not harder: Comparison of visual and supplemental survey methods for the eastern massasauga rattlesnake. Grand Valley State University.

Bradke, D., Kudla, N., Bartman, J., and Moore, J. 2015. The implications of effective population size and demography in three populations of eastern massasauga rattlesnakes. Grand Valley State University.

Breitenbach, S. 2015. Snake fungal disease. Plainwell High School.

Cooley, O., Preville, N., and Snyder, E. 2015. Aquatic insect drift as a tool for evaluating food web dynamics. Grand Valley State University.

Lambert, W., Lozon, D., and Keys, R. 2015. The influence of habitat and landscape associations on breeding birds in managed grasslands of Southwest Michigan. Cornerstone University.

Simon, N., Swets, J., and Laureto, P. 2015. The effects of purple loosestrife on wetland biodiversity and the impacts of biocontrol insects. Grand Rapids Community College.

Smit, K., Tubergen, P., and Dornbos, D. 2015. The influence of autumn olive on its rhizosphere soil chemistry and neighboring plant community composition. Calvin College.

Stoller, P., and Bugajski, K. 2015. How predator presence influences blow fly oviposition through chemical and visual cues. Valparaiso University.

2014 Recipients

Bartman, J., Kudla, N., and Moore, J. 2014. Mark recapture population study of the eastern massasauga rattlesnake: Effects of prey abundance on habitat use. Grand Valley State University.

Buehler, D., Buehler, M., and Prendeville, H. 2014. Examining the Comparative Fitness of the American Bellflower (*Campanulastrum americanum*) in a Novel Environment. Western Michigan University, Hastings High School, and University of Virginia.

Cnossen, L., and Douglas, M. 2014. The biodiversity of aquatic, semi-aquatic, and nearshore bugs at the Institute to compare their grooming and cleaning behavior. Grand Rapids Community College.

Cunningham-Rhoads, B., Gribbin, W., and Girdler, B. 2014. *Anything but Knaptime—A Study of Invasive Spotted Knapweed (Centaurea stoebe Asteraceae)*. Kalamazoo College.

Ellison, S., and Swanson, B. 2014. Estimated raccoon (*Procyon lotor*) density with track-plate foot-printing. Central Michigan University.

Grady, M., and Douglas, M. 2014. Biodiversity Survey of Spiders at PCCI and Study of Sexual Size Dimorphism in Order *Araneae*. Grand Rapids Community College.

Jensen, J., and Laureto, P. 2014. Ordination and Classification of Mesic Hardwood Forests at Pierce Cedar Creek Institute. Grand Rapids Community College.

Kemper, J., Bayha, A., and Fraser, A. 2014. Assessing the impacts of European honeybees (*Apis mellifera*) on native bees in prairie ecosystems. Kalamazoo College

Sterling, D., Poyner, C., and Swanson, B. 2014. Distribution, rate of expansion and subspecific make-up of *Phragmites australis* at Pierce Cedar Creek Institute. Central Michigan University.

Taylor, H., Bennett, S., Locher, A., and Aschenbach, T. 2014. Modeling the Presence of Exotic Invasive Shrubs in West Michigan Forests Based on Habitat Characteristics. Grand Valley State University.

Wing, A.J., Isles, K., and Kourtev, P. 2014. The relationship between ecosystem diversity and function focused on the leaves of the northern pitcher plant (*S. purpurea*) as a model system. Central Michigan University.

2013 Recipients

Bradke, D., Kiel, B., and Moore, J. 2013. Population demography of eastern massasauga rattlesnakes in relation to habitat management. Grand Valley State University.

Burnsvold, S., Marley, K., and Aljobeh, Z. 2013. Dynamic water quality model for Brewster Lake—simulation phase. Valparaiso University.

Cushman, D., Johnson, T., and Keys, R. 2013. Using Electronic Field Recordings to Increase the Accuracy of Point Counts by Field Observers. Cornerstone University.

DeVries, C., and Laureto, P. 2013. A Study of Invasive Spotted Knapweed (*Centaurea stoebe Asteraceae*) in the Restored Prairies at Pierce Cedar Creek Institute. Grand Rapids Community College.

Faydenko, J., Butler, L., and Swanson, B. 2013. Interconnectedness of Nymphal and Adult Dragonfly Populations. Central Michigan University.

Finch, E., and Proppe, D. 2013. Temporal Modification of Songbird Singing Behavior in the Presence of Punctuated Noise Events. Calvin College.

Gabriel, L., and Swanson, B. 2013. Impact of Anthropogenic Disturbance on Snake Population Structure. Central Michigan University.

Gilginas, J., Harvey, M., Jacquot, J., and Keenlance, P. 2013. Spatial Ecology of Raccoons at Pierce Cedar Creek Institute, in Relation to Raccoon Latrine Sites Know Foci for the Spread of *Baylisascaris procyonis*, Raccoon Roundworm. Grand Valley State University.

Harris, D., Geleyense, K., and Dornbos, D. 2013. Development of a GIS Model to Optimize the Gross Primary Productivity of Terrestrial Plant Communities and the Potential to Store Carbon in Soils at PCCI. Calvin College.

Leonard, S., Meppelink, J., Keenlance, P., and Jacquot, J. 2013. Distribution and prevalence of *Baylisascaris procyonis* in Raccoon Populations in Allegan and Barry Counties. Grand Valley State University.

2012 Recipients

Argueta, G., and Aljobeh, Z. 2012. Dynamic Water Quality Model Development for Brewster Lake. Valparaiso University.

Betts, J., and Dornbos, D. 2012. Productivity of gramineae species from nitrogen produced by autumn olive and cowpea grown in soils of differing quality. Calvin College.

DeMuro, M., Rossi, M., Jacquot, J., and Keenlance, P. 2012. Prevalence and Distribution of *Baylisascaris procyonis* in Raccoon Populations at Pierce Cedar Creek Institute in Barry County, MI. Grand Valley State University.

Faydenko, J., McVay, T., and Swanson, B. 2012. Population structure of the dragonfly *Sympetrum obtrusum* at Pierce Cedar Creek Institute. Central Michigan University.

Graeff, A., Huisman, K., and Laureto, P. 2012. Hybridization dynamics of invasive cattail (Typhaceae) stands at Pierce Cedar Creek Institute: A molecular analysis. 2012. Grand Rapids Community College.

Oosterhouse, J.D., Vander Geld, A.L., and Keys, R. 2012. Analysis of vegetative structure in the choice of nesting habitat by midwestern songbirds. Cornerstone University.

Sheikh, E., and Douglas, M. 2012. Biodiversity, phenology, and thermoregulatory strategies of odonates at Pierce Cedar Creek Institute. Grand Rapids Community College.

Smith, N.C., and Fraser, A. 2012. Detection of iridoids in snapdragons and methods to observe effects of toxic nectar on pollination behavior of bumblebees. Kalamazoo College.

Wald, M., and Fraser, A. 2012. Effects of simulated herbivory on cardenolide levels in *Asclepias syriaca* and consequences for butterfly pollinators. Kalamazoo College.

2011 Recipients

Armagost, J.E., Johnson, A.C., and Malcolm, S. 2011. Temporal and spatial changes in monarch butterfly population synchrony in Michigan and density-dependent influences on the incidence of the protozoan parasite, *Ophryocystis elektroscirrha*. Western Michigan University.

Berigan, K., Poirer, B., and Bajema, R. 2011. Comparison of ant (*Lasius neoniger* and *Prenolepis imparis*) nesting sites at Pierce Cedar Creek Institute and the influence of temperature on *L. neoniger* activity. 2011. Aquinas College.

Cannan, M.J., Hillman, T.L., Keenlance, P., Jacquot, J., and Henshaw, M.T. 2011. Southern flying squirrel (*Glaucomys volans*) den site selection and genetic relatedness of summer nesting groups. Grand Valley State University.

Egerer, M., and Girdler, B. 2011. On the Edge: Imperiled butterfly monitoring in Southwest Michigan. Kalamazoo College.

Herakovich, H., and Eberhardt, L. 2011. The quantification of autumn olive's (*Elaeagnus umbellata*) structure and its effect on bird behavior. Valparaiso University.

Messenger, J., Freeman, A., and Douglas, M. 2011. Butterfly insect parasitoid fauna at Pierce Cedar Creek Institute. Grand Rapids Community College.

Rowe, L., Stevens, J., and Malcolm, S. 2011. Hostplant-derived cardenolide fingerprints as labels of spring migration strategy and a test of the "oogenesis-flight syndrome" in monarch butterfly arrivals to Michigan. Western Michigan University.

Sefton, L, McColl, C., and Swanson, B. 2011. Species diversity and richness of prairies at Pierce Cedar Creek Institute. Central Michigan University.

VanderGeld, A., Oosterhouse, J., and Keys, R. 2011. The effects of trophic cascading by *Odocoileus virginianus* on breeding songbird populations. Cornerstone University.

VanDongen, J., K. Poczekaj, and E. Snyder. 2011. Understanding nutrient pathways and reciprocal subsidies between stream and riparian zones using stable isotope analysis. Grand Valley State University.

2010 Recipients

Aljobeh, Y., K. Engerer, and Z. Aljobeh. 2010. Autumn olive impacts on the soil and water quality of the PCCI ecosystem. 2010. Valparaiso University.

Alverson, D., Crane, S., and Sotherland, P. 2010. Variation of roost site selection observed in *Myotis lucifugus* at PCCI. Kalamazoo College.

Auer, D., Kuipers, D., Woolnough, D., and Zanatta, D. 2010. Pelecypod and gastropod communities at PCCI: variation in understudied organisms. Central Michigan University.

Bayci, M., Fraser, A., and Sotherland, P. 2010. Effects of a neonicotinoid insecticide on eggs and larval stages of the green frog. Kalamazoo College.

Cummings, A., Williams, J., and Gill, S. 2010. Understanding the behavioral and physiological consequences of life in the city: A comparison of urban and rural chipping sparrows. Western Michigan University.

Gibson, A., Villalobos, L., and Snyder, E. 2010. Ecosystem responses to dam removal: assessment of algae, macroinvertebrates, fish, community metabolism, and physical habitat recovery 1 year post-removal. Grand Valley State University.

Jeffers, J. and R. Bajema. 2010. The selection of trees by woodpeckers for nesting and foraging purposes. Aquinas College.

MacLeod, A., Snyder, C., and Koretsky, C. 2010. Comparison of urban/suburban lakes and rural lakes for eutrophication and salinity. Western Michigan University.

Oldenkamp, R., and Douglas, M. 2010. Arthropod defense communities of the bracken fern, *Pteridium aquilinum*. Grand Rapids Community College.

Redemsky, R., and Wilterding, J. 2010. Biological inventory of macro moths of PCCI (*Lepidoptera noctuioidea*). Olivet College.

Rentschler, S., Bouma, C., and Dornbos, D. 2010. Relationship between nitrogen fixation rate, apparent photosynthesis rate, and chlorophyll content of autumn olive and potential impacts on the competitiveness of cohabitating native plant species. Calvin College.

2009 Recipients

Boersma, S., Wiersma, A., and Dornbos, D. 2009. Carbon assimilation and its variation among plant communities. Calvin College.

Borek, K., and Silvius, S. 2009. DNA barcoding of *Quercus sp.* at Pierce Cedar Creek Institute using the matK gene. Aquinas College.

- Boroski, K., and Aljobeh, Z. 2009. Impacts of the invasive species *Elaeagnus umbellata* on the Pierce Cedar Creek Institute ecosystem soil and water quality. Aquinas College.
- Caldwell, C., and Snyder, E. 2009. Response of chemico-physical variables and macroinvertebrate communities to the presence and drawdown of a low-head dam. Grand Valley State University.
- Houghton, D., Soley, C., and Eberhardt, L. 2009. The impacts of an invasive shrub, autumn olive (*Elaeagnus umbellata*), on behavior and nesting success of American robins (*Turdus migratorius*) and northern cardinals (*Cardinalis cardinalis*). Valparaiso University.
- McLaughlin, L., Seeley, S., and Henshaw, M. 2009. Prey preferences in three species of *Polistes* found in Michigan: *P. fuscatus*, *P. dominulus* and *P. metricus*. Grand Valley State University.
- Mills, Z., and Dunn, J. 2009. Factors that determine distribution of butterflies within complex prairie habitats at Pierce Cedar Creek Institute, Barry County, MI. Grand Valley State University.
- Powell, C., and Swanson, B. 2009. Effects of camera and bait type on a carnivore survey. Central Michigan University.
- Sindorf, V., Vande Zande, P., and Keys, R. 2009. The utilization of white-tailed deer (*Odocoileus virginianus*) trails by vertebrates as a means of traversing gaps in landscape matrices. Cornerstone University.
- Vander Hyde, J., Fleser, A., and Bajema, R. 2009. Colonization of substrate in lotic ecosystems on the macro and micro scale. Aquinas College.
- Webb, R., A. Warner, and R. Keys. 2009. Microhabitat distribution and selection amount colubrid snake species of the Pierce Cedar Creek Institute. Cornerstone University.

2008 Recipients

- Arnosky, S., and Fraser, A. 2008. Native bee diversity of Pierce Cedar Creek Institute. Kalamazoo College.
- Baziari, F., and Cowan, D. 2008. Development and behavioral ecology of *Tetrasticus jonsoni* (Hymenoptera: Eulophidae). Western Michigan University.
- Burton, S., Weeks, D., Fouty, R., and Lodewyk, R. 2008. Factors influencing calling male green frogs at Pierce Cedar Creek Institute. Grand Valley State University, Western Michigan University, and Aquinas College.
- Fish, M., Menerey, M., and Bieneman, P. 2008. Nocturnal thermal stratification in selected valleys at Pierce Cedar Creek Institute and Conklin, Michigan. Aquinas College.
- Hesselink, R., and Dornbos, D. 2008. Characterization of the physiological competitiveness of autumn olive (*Elaeagnus umbellata*). Calvin College.

- Holderread, A., and Aljobeh, Z. 2008. Water quality and hydrology in the Cedar Creek watershed within the Pierce Cedar Creek Institute property. Valparaiso University.
- Hovey, J. 2008. A landscape history of Pierce Cedar Creek Institute from pre-Columbian times to the present. Western Michigan University.
- Krintz, M., and Eberhardt, L. 2008. The effects of autumn olive (*Elaeagnus umbellata*) on breeding bird nest predation and activity at Pierce Cedar Creek Institute. Valparaiso University.
- Lodewyck, R., Fouty, R., Weeks, D., and Burton, S. 2008. Comparison of various population parameters for green frogs across three different wetland habitats at Pierce Cedar Creek Institute. Aquinas College, Western Michigan University, and Grand Valley State University.
- McMartin, K., and Malcolm, S. 2008. Defense expression in the aphid *Myzocallis asclepiadis*. Western Michigan University.
- Norris, R., and Jacquot, J. 2008. Morphological and habitat differentiation between *Peromyscus leucopus* and *P. maniculatus*.
- Schumacher, K., and Swanson, B. 2008. Identifying hybrids of *Peromyscus leucopus* and *P. maniculatus* in Michigan using molecular genetics. Central Michigan University.
- Stephens, J., and McCurdy, D. 2008. Parasitism and stress levels in green frogs, *Rana clamitans*, in Western Michigan. Albion College.

2007 Recipients

- Dunham, T., and Rohrer, T. 2007. Impacts of acid precipitation and buffering on two lotic ecosystems. Central Michigan University.
- Converse, P., and Rowe, J. 2007. Activity, body temperature variation and movements of the midland painted turtle (*Chrysemys picta marginata*). Alma College.
- Edwards, K., and Dornbos, D. 2007. Characterization of the competitiveness of autumn olive in a mature forest. Calvin College.
- Emery, B., Taylor, M., and Morris, G. 2007. Ozone data analysis and source partitioning. Valparaiso University.
- Finger, J., and Eberhardt, L. 2007. Mapping and testing a possible control method for garlic mustard (*Alliaria petiolata*). Valparaiso University.
- Ginnons, K., and Swanson, B. 2007. Effect of fragmentation on isolation of salamanders in Michigan's Lower Peninsula. Central Michigan University.
- Hathaway, B., and Klatt, P. 2007. A survey of the breeding birds at Pierce Cedar Creek Institute. Ferris State University.
- Koperski, C., and Dunn, J. 2007. Lepidopterans and Hemipterans and their use as prairie bioindicators. Grand Valley State University.

Paladino, A., and Keys, R. 2007. Effects of potential habitat fragmentation by white-tailed deer (*Odocoileus virginianus*) on raccoon (*Procyon lotor*) home range. Cornerstone University.

Roshanmanesh, J., and Swanson, R. 2007. An investigation into mouse-ear cress (*Arabidopsis thaliana*) flowering schedule and pollination mechanism. Valparaiso University.

Schuiteman, E. and Swarthout, D. 2007. Screening for drought tolerance in plant communities at PCCI. Hope College.

Soper, M., and Silveus, S. 2007. Formation of Pierce Cedar Creek Institute interactive tree key for common plants along trails. Aquinas College.

Warren, D., and Jacquot, J. 2007. Home range dynamics of meadow jumping mice (*Zapus hudsonius*). Grand Valley State University.

Weeks, D., and Burton, S. 2007. Is territorial behavior in green frogs (*Rana clamitans*) related to defending oviposition sites or protection from predators? Grand Valley State University.

Wohlford, E., and Malcolm, S. 2007. Chemical defense dynamics in milkweed-aphid interactions. Kalamazoo College and Western Michigan University.

Weidenhaft, E., and Swarthout, D. 2007. Mechanical stomatal diversity and rates of CO₂ conductance in PCCI plant communities. Hope College.

2006 Recipients

Engers, W., and Bultman, T. 2006. Foraging habits of *Neoantistea magna* (Araneae: Hahniidae). Hope College.

Fleischmann, E., and Keys, R. 2006. Effects of environmental variables on plant communities in a ravine system in Southwest Michigan. Cornerstone University.

Gardner, D., and Bultman, T. 2006. Natural history and reproductive biology of a *Hahniid* spider in Southwestern Michigan. Hope College.

Gleave, P., and Wilterding, J., III. 2006. Preliminary inventory of the moth fauna of the fen and cedar swamp complexes at Pierce Cedar Creek Institute. Olivet College.

Goedhart, J., and Warners, D. 2006. Assessment of prairie pot transplants as a restoration tool. Calvin College.

Griffiths, L, Sturm, R., and Jensen, E. 2006. An analytical study of heavy metal concentrations in soils at Pierce Cedar Creek Institute. Aquinas College.

Heys, B., and Keys, R. 2006. The potential habitat fragmentation caused by white-tailed deer (*Odocoileus virginianus*) and its impact on nest predation. Albion College.

Higgins, J., and Bajema, R. 2006. Characterizing the physical and biological environments of the lotic ecosystems of Pierce Cedar Creek Institute. Aquinas College.

Honsowitz, A., and Rohrer, T. 2006. Post-glacial palynology and paleoecology of the Brewster Lake basin, Barry County, Michigan as determined by evaluation of sediment cores. Central Michigan University.

Hunt, D., and Kohler, S. 2006. The effect of habitat condition on the abundance of freshwater copepods. Western Michigan University.

Kammer, K., and Klatt, P. 2006. A survey of breeding birds present at Pierce Cedar Creek Institute. Ferris State University.

Lupek, M., and McCurdy, D. 2006. Stress levels in green frogs in relation to colonization by a waterborne pathogen. Albion College.

Ritsema, M., and Dornbos, D. 2006. Characterization of the photosynthetic competitiveness of autumn olive. (*Elaeagnus umbellata*). Calvin College.

2005 Recipients

Baylis, D., Van Strien, L., and Bajema, R. 2005. A survey of macroinvertebrates of the lentic and lotic ecosystems of Pierce Cedar Creek Institute. Aquinas College.

Broderick, M., and Jensen, E. 2005. Water chemistry of Brewster Lake, Pierce Cedar Creek Institute. Aquinas College.

DeWitt, D., and Bultman, T. 2005. A comparison of cursorial arachnofauna at the Pierce Cedar Creek Institute and Hope College nature preserve. Hope College.

Haydon, J., and Jacquot, J. 2005. Effects of tree-of-heaven toxins on rodent herbivory. Grand Valley State University.

Honsowitz, A., and Rohrer, T. 2005. Bathymetric mapping and baseline limnological study of Brewster Lake, Barry County, Michigan. Central Michigan University.

Krum, K., and McCurdy, D. 2005. Prevalence of *Aeromonas hydrophilia* in frogs and toads at the Pierce Cedar Creek Institute. Albion College.

McCarthy, P., and Rowe, J. 2005. Activity and movement of stinkpot turtles at Brewster Lake. Alma College.

Muter, B., and Strasser, K. 2005. Effect of walking trails on the community of macroinvertebrates in grassland and forest habitats. Ferris State University.

Sprague, K., and McCurdy, D. 2005. Microhabitat selection by *Plethodontid* salamanders at the Pierce Cedar Creek Institute. Albion College.

Travis, J. and J. Wilterding. 2005. Assessment of Autumn Olive (*Elaeagnus umbellata*) Population at Pierce Cedar Creek. Olivet College.

Van Portfliet, M., and Denning, R. 2005. Pierce Cedar Creek Institute GIS development – final report. Grand Valley State University.

Walker, C., and Keys, R. 2005. An analysis of habitat structure and corridor connectivity for wildlife at the Pierce Cedar Creek Institute. Cornerstone University.

Natural Resource Fellowship Recipients

2024 – Camille Aper (Grand Valley State University), Naomi Dykstra (Calvin University), Shanna McElrath (Grand Valley State University), Joey Pietrogallo (Grand Valley State University)

2023 – Alyssa LaFave (Grand Valley State University), Morgan Morin (Western Michigan University), Sarah Mominee (Western Michigan University), Jack Rioux (Aquinas College)

2022 – Lindsey Ackerman (Cornerstone University), Emma Fitzgerald (Grand Valley State University), Eleanor McFarlan (Central Michigan University), Anna Miller (Grand Valley State University), Theo Saillant (Western Michigan University)

2021 – Elisia Fritz (Grand Valley State University), Kelly Giles (Western Michigan University), Allison Lester (Western Michigan University), Anna Miller (Grand Valley State University)

2020 – Grayson Kosak (Grand Valley State University), Micah Meindertsma (Calvin University), Ana Wassilak (Grand Valley State University), Zach Whitacre (Western Michigan University)

2019 – Elizabeth Walztoni (Aquinas College), McGregor Wright (Grand Valley State University)

2018 - Grant Bacik (Kellogg Community College), Grant VanderLaan (Calvin College)

2017 – Katy Fassett (Grand Valley State University), Alyssa Willson (Aquinas College)

2016 – Hannah Christoffersen (Grand Valley State University), Corey Lucas (Western Michigan University)