

THE CASE WESTERN RESERVE UNIVERSITY FARM

SQUIRE VALLEEVUE AND VALLEY RIDGE FARMS 2018 ANNUAL REPORT



*"A place where
the teachers and
students can come
in close contact with
Mother Earth."*

ANDREW SQUIRE 1934



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Dr. Ron Oldfield and Ichthyology students, spring 2018 (BIOL 338)

Squire Valleevue and Valley Ridge Farms

Background

The Case Western Reserve University Farm, located on Fairmount Boulevard in the Village of Hunting Valley, is a 400-acre property that includes within its boundaries forests, ravines, waterfalls, meadows, ponds, a self-contained natural watershed, seven residences, many other structures, and several miles of roads and trails. The farm came to the university as the result of five gifts:

The late Andrew Squire gave 277 acres (Squire Valleevue Farm) in the late 1930s; the heirs of Jephtha Wade II gave Case Western Reserve 104 adjoining acres (Valley Ridge Farm) in 1977; and John and Elizabeth Hollister deeded five acres to Case Western Reserve in 1984 and another five acres in 1995. In 2013, nine acres were added to the property thanks to a generous gift by an anonymous donor.

In his will Squire wanted the farm to be cultivated and preserved as a farm for educational purposes, and to be a place where the practical duties of life may be taught; where the teachers and students can come in close contact with Mother Earth.

As a condition of the Wade gift, the university officers report annually to the Board of Trustees of the university and to the trustees of the Cleveland Museum of Natural History with respect to the operation of the donated property in 1977.

The farm continues to be a magnificent asset that provides a wide variety of opportunities for education, research, community service and recreation.

FARM MANAGEMENT

Stephen M. Campbell
Vice-President for
Campus Planning and
Facilities Management

FARM STAFF

Ana B. Locci
Director and Department
of Biology Adjunct
Assistant Professor

Patty Gregory
Department Coordinator

Ryan Bennett
Farm Food Program
Coordinator

Alan Alldridge
Farm Associate 2

Matt Burtonshaw
Farm Associate 2

Emily Pek
Farm Associate

Shane Brown
Facilities Group Leader

Joe Miller
Facilities Crew Assistant

Greg Kosakowski
Facilities Crew Assistant



Tim Shuckerow and Martha Lois Raku Ceramic students, summer 2018

Operations and Finances

Since 2011, Stephen Campbell, vice president for campus planning and facilities management, reports to the Division of Administration regarding the overall management of the farm.

Ana Locci, farm director and adjunct assistant professor in the Department of Biology, manages the farm operations, staff and finances. Locci reports directly to Stephen Campbell. Shane Brown, farm facilities group leader, is responsible for the daily on-site supervision of the farm and reports directly to Locci. Joe Miller and Greg Kosakowski work with

Shane Brown on the maintenance of buildings and grounds. Patty Gregory is the department coordinator and Manor House program administrator. Ryan Bennett is the Farm Food Program coordinator.

Other staff members with the expanding Food Program include Alan Alldridge, Matt Burtonshaw, and Emily Pek. Summer students working at the farm were undergraduate student Melissa Pax to assist with the food program and Gabi Kosakowski to assist the farm Administration Office.



The Genes and Evolution students, fall 2018 (BIOL 214)



Dr. Michael Benard and Herpetology Lab students, fall 2018 (BIOL 305)

Academic and Research Programs

Academic activities at the farm continue showing a significant increase. The research areas have shown the greatest increase followed by courses and student life activities.

UNDERGRADUATE AND GRADUATE COURSES

Academic programs at the University farm have greatly expanded during the last sixteen years. In 2018, the farm's indoor and outdoor facilities were used by 15 credit courses at the undergraduate and graduate levels including courses in the fields of ecology, geology, entomology, herpetology lab, introduction to biology, engineering, nutrition, nursing, social

studies, SAGES classes, and visual arts. Over 2,345 students and faculty visited the farm to teach or take credit classes.

Undergraduate and graduate courses offered included eighteen lab sections with over 650 students enrolled in the Genes and Evolution (BIOL 214), Ichthyology (BIOL 338), Aquatic Ecology Laboratory (BIOL 339), Ecophysiology of Global Change (BIOL 353/453), Introductory Entomology (BIOL 318L/BIOL 418L), Herpetology Lab (BIOL 305), Public Health Nutrition (NTRN 528) and several art classes including Raku Ceramic Workshops (ARTS 214/314, ARTS 220, ARTS 339 and ARTS 602), and Photography 220.



Dr. Sarah Diamond and Ecophysiology of Global Change students, fall 2018 (BIOL 353/453)



Bird watching and nature walks continuing education classes at the farm

Academic and Research Programs, continued

CONTINUING EDUCATION

The Laura and Alvin Siegal Lifelong Learning Program (LASLL) offered seven continuing education courses year-round during 2018.

The Summer in the Country program offered 6 courses: writing poetry, writing creative nonfiction, nature walks, bird watching, outdoor painting, and foraging.

Each class had between seven and 18 participants resulting in 285 person-visits to the farm during the months of May to July. During fall the LASLL office offered two classes including nature walks and writing creative nonfiction.

The farm administration offered continuing education classes during winter and fall, including beekeeping, mushroom production and foraging.



Tim Shuckerow and Martha Lois Raku ceramic students, summer 2018



Post Doc Lacy Chick working on acorn ants populations



Graduate student, David Dimitrie, study on tree frogs

Academic and Research Programs, continued

RESEARCH

The number of faculty and students actively doing research at the farm continue increasing. Research areas include ecology, environmental studies, engineering and conservation. Projects included graduate, undergraduate capstone and high school senior research. Some of the research projects at the farm are supported by the Oglebay Trust.

Active research projects onsite include: Studies on salamander populations and movements by Michael Benard, Department of Biology associate professor. Professor Benard's main research study organisms are amphibians. His research focuses on the importance of determining why amphibians are declining and how to stop those declines. Amphibians provide important ecological services and they can also serve as a sensitive indicator of environmental change that might directly harm humans. Dr. Benard's research lab consists of graduate students Hilary Rollins and David Dimitrie.

Another ongoing project initiated by Dr. Benard consists of the characterization of the farm's biodiversity using the iNaturalist App. So far over 2,827 observations and 848 species have been recorded and identified by name, location and date. Researchers participating in the data collection including: Mike Benard, Ana Locci and Dave Dimitrie.

Jean Burns, Department of Biology associate professor, continues her research program on the mechanisms governing community assembly and biological invasions in plant communities. Work in the Burns lab includes field and greenhouse experiments, demographic modeling, and phylogenetic comparative studies. Dr. Burns' lab consists of graduate students Andrew Lance, Jennifer Murphy, Grant Yu Liu, and Anne Osvaldsson. Andrew Lance continues his project on forest restoration at the farm.

Post-doc, Lacy Chick, continues studying how acorn ant populations have the ability to keep pace with rapid changes in climate. The predictive physiological ecology tries to understand the basis of biotic responses to these environmental challenges by quantifying the contributions of canalization, phenotypic plasticity without genetic change, and evolved plasticity to changes in physiological traits under different environmental conditions.

Devastation of the American Beech forests by the Beech Leaf Disease (BLD) is being monitored by Drs. Ana Locci and Joseph Koonce using drone photos and video as well as field samples at several sites of the farm primary forests.

During fall the Cleveland Metroparks surveyed the farm ponds for invasive aquatic plants species.



Farm Food Program products and growing areas, 2018

Conservation Programs and Green Initiatives

The conservation programs continue to expand at the farm. The programs are focused on the expansion of the teaching opportunities while increasing habitat for wildlife and reducing energy consumption.

The natural gas fueled bus acquired by the university to provide transportation to and from campus and farm has been a great success. This service meets the needs for academic, volunteer, and recreational activities. During the 2018 calendar year, a total of 99 round trips were provided for 3,652 riders. Transportation served 37 programs

including credit courses, volunteer groups, student groups, and special events.

The Farm Food Program (FFP) continues to provide new educational opportunities for faculty and students by studying local food production in a sustainable way using methods consistent with organic farming.

During the 2018 spring, summer and fall, labor was provided by farm staff, (Alan Alldridge, Matt Burtonshaw, Emily Pek and Ryan Bennett) and many other students, alum and staff volunteers.

The farm produced over 13,000 lbs. of fresh food for the Case Western Reserve



Campus Bon Appetit event "Eat Local Challenge"



Ryan Bennett, FFP Coordinator, monitoring compost



Tree swallows hatchlings

Conservation Programs and Green Initiatives, continued

campus during the 2018 harvest season (over 110,000 lbs. since 2010), either in direct sales to Bon Appetit, farm stands and Cleveland area restaurants including Trentina, Sara's Place, Café Avalaum, Black Pig, Coquette, Table 45, Spice Kitchen, Café Felice, Salt, Sweet teeth Confections, and Noble Beast Brewing. Local academic institutions that visited the farm to tour the FFP facilities included the Lorain County Community College sustainability program students.

Since October 2015, the FFP, working with the campus Sustainability Office and Bon Appetit chefs, has been able to compost food scraps from six campus dining areas, including the pulper at the Tinkham Veale University Center and Jolly Scholar Brewery. In summer of 2017, a local company was hired to help manage the compost program.

Since then, Rust Belt Riders has assisted with the delivery of the green materials from 6 campus dining units, and training and consulting campus kitchens on compost management. Rust Belt Riders partnership greatly increased the amount of recycling material and compost quality and quantity.

With the diversion of over 180,000 lbs. of campus greens to the farm compost piles, increased greens delivered to the farm from 2,000 lbs. to up to 18,000 lbs. per month. In 2018, the farm installed

permanent educational signage by the piles to describe the composting process. All compost material generated by this program is used around the food production gardens to enhance the soil without the usage of inorganic chemicals.

Teaching and research opportunities provided by the FFP in 2018 included visits by SAGES courses, Engineering classes and Public Nutrition classes.

The FFP staff continues to provide support for research activities, such as growing tobacco plants for Dr. Mark Willis lab. Another Greenhouse activity is the overseeing of plants for Dr. Chris Cullis and Dr. Jean Burns studies. Other educational activities include farm-sponsored, day-long symposiums including beekeeping.

The Eastern Bluebird Trail, in its seventeenth season, includes 50 Peterson houses located around the research ponds and nearby fields. Alumnus Bill Jirousek, University staff member Betsy Banks, farm neighbor Bruce Resnik, and farm friend Laurel Hart, all volunteers, checked the trail weekly during the April to August 2018 nesting season, recorded data, and banded hatchlings.

Many of the farm's Eastern Bluebirds wintered over and the first Bluebird egg was laid on May 1st; the last Bluebird



Dr. David Cavallo Public Health Nutrition students (NTRN 528)

Conservation Programs and Green Initiatives, continued

fledged on August 24th. A total of 134 birds fledged (144 in 2017) – 79 Bluebirds (85 in 2017), 35 Tree Swallows (39), and 20 House Wrens (20) – another good year on the trail.

The total number of Bluebirds fledged over seventeen seasons is now 932. Trail data, recorded and analyzed at the farm as part of a long-term study, continues to be included in the Holden Arboretum's, Ohio Bluebird Society's, and Cornell University's (national database) totals.

FACILITIES AND EQUIPMENT UPGRADES

Yearly facilities improvements continue largely focusing on projects to reduce energy consumption and enhance the teaching and research facilities.

Projects completed at Valley Ridge Farm included water well repairs and upgrades, and wood trail repair from Squire Valleevue Farm to Valley Ridge Farm.

Much needed improvements were made to the Kutina Classroom: upgraded AV equipment, new flooring, larger projection screen, electrical outlets with USB charging capability, tables and chairs, and window treatments.

Improvements made at the farm's largest event facility, The November Meeting Center included replacement of back concrete patio, resurfacing of the gravel parking lot, front lobby area window replacement, and new energy efficient window treatments in main room.

A new 38" x 30" concrete pad was poured at the outdoor kiosk information area.

Paving projects included the May House driveway and Main Barn Courtyard.

Some of the Greenhouse improvements included repairs to side fans and control systems, and repairs of the steam boiler. Construction of three new cold frames and planting beds to expand the year-round FFP growing areas.

Ongoing projects include: Manor House water proofing, painting of the Main Barn, Pink Pig and Pump House, at the Squire Valleevue Farm.

Main Barn 2nd floor administrative offices had a very much needed overhaul with new flooring in two of the offices.

Equipment purchases made in 2018 included: 2018 Transit Cargo Van for the FFP produce delivery, Flexxifinger screen and rock picker for sifting compost piles, road sweeper, leaf vaccum, and salt spreader.

Replacement of old wooden picnic tables with new 8-ft commercial grade thermoplastic coated tables at the Pink Pig, Picnic Shelter #3 and Valley Ridge Farm Silo outdoor area.

Restoration of two antique cane back chairs located at the Manor House.

Main Barn farm equipment storage garage received a new 9' x 8" rolling service door.



Farm Harvest Festival herbs planting, fall 2018

Student Life

Student-initiated scheduled use of the farm facilities continues to be a popular site for students to host their events. Fifty-three student groups reserved the facilities in 2018. The student reservations included groups using the Pink Pig, November Meeting Center, Manor House, Kutina Classroom, picnic grounds, Green Barn, and Silo Theater.

Among the student groups using the facilities were: Alpha Chi Omega, Alpha Phi, Alpha Phi Omega Sorority, Alpha Kappa Psi, Anthropology, Beta Nu of Theta Chi, Biology Graduate students, Bioethics Graduate students, Biomedical Engineering, Campus Crusade for Christ, Case Concert Choirs, Case University Singers, CWRU Film Society, School of Medicine, Women and Men's Cross Country teams, Track team, Cycling Club, College Scholars Program, Delta Sigma Theta, Delta Upsilon, Delta Psi Omega, Delta Tau Delta, Geological Society, German Immersion, Graduate Student Senate, Iranian Academic Assoc., Inter Society Council, Inter-Varsity Christian Fellowship, International Student Fellowship, Material Science Graduate students, Law School, Master of Public Health (MPH), MGSA, MSASS, Phi Delta Upsilon, Beta Theta Phi, Phi Kappa Psi, Phi Kappa Tau, Phi Beta Phi, Phi Gamma Delta, Phi Sigma Rho, Phi Mu Sisterhood, Pi Beta Phi, Nursing School

Graduate students, Amateur Radio Club, Zimmerman Lab Graduate students, Physics Grad Students, Organizational Behavior, Students President's Round Table, Sigma Phi Epsilon Fraternity, Sigma Psi Sorority, SMDEP, Student Sustainability Council, Tau Beta Pi, Theta Chi Fraternity, Turkish Student Association, WSOM.

On September 21st, the ninth annual "Farm Harvest Festival" event took place at Squire Valleevue Farm. The event was co-sponsored by the Case Western Reserve University's Student Sustainability Council (SSC) and the University Farm.

The festival was intended to expose students to activities at the farm and raise awareness of the Farm Food Program. The event guest list included alumni, staff, faculty, graduate and undergraduate students, and their families. The attendance was estimated to be around 1,800. The fundraising effort was led by SSC's Co-Chairs Maia Gallagher and Peter Thompson.

Over \$5,000 was raised to support the festival. SSC also coordinated volunteers from other student organizations. The council members reached out to the university community by making class announcements, coordinating volunteer groups, organizing student performance



Grape vines crafts



Harvest festival SSC student leaders and farm staff

Student Life, continued

groups, sending emails, posting event fliers and promoting word-of-mouth. During the event SSC members welcomed visitors, and helped with the many indoor and outdoor activities.

Event activities included corn-hole and badminton tournaments, farm animal's petting zoo, cooking demonstration by Bon Appetit chefs, knitting classes, mushroom cultivation demonstrations, and making lip balm and sea salt scrub. Other outdoor "hands-on" activities included a tall grass field maze and planting and taking home herb plants.

This year's festival theme was Concord grapes. Theme related activities included handmade grape vine head wreaths and grape tasting.

ATHLETICS

Two University cross country meets took place in August and October. Four colleges participated in the Sudeck at Sundown Cross Country Invitational Friday, August 31, with over 300 athletes, coaches and visitors. The Alumni race on October 6 brought more than 40 CWRU alumni alone, plus about 50 team members.



Grape vines crafts



Sudeck at Sundown Cross Country Invitational, August 2018



Manor House winter view

Facilities Usage

All of the facilities continue to be a popular destination for university classes, department events and meetings, student group meetings and retreats, and outreach programs. Events hosted at the various facilities range

from wellness retreats, international conferences, outdoor training programs to small weekend retreats. The historic facilities are not only excellent venues to host such events, but hold many memories for university alumni.

Community Service

As part of its strategic plan, the university is committed to encouraging other organizations to use the farm. Area museums, academic institutions, local schools and community service groups are encouraged to use the farm's facilities, property and research areas for academic purposes.

The School Visitation Program is a hands-on program designed to reinforce concepts and field methods in the areas of environmental science, food production and ecology for local middle and high school students. During the academic year 2017-2018, the farm hosted local school visits with over 250 student-visits, 25 teachers and chaperones. The schools participating were Hathaway Brown, NASA Lewis Little Ones Summer Camp, Cleveland Schools Sponsored by

CWRU Focus Group, and Beachwood. Several other groups came for one-day educational visits to learn about the importance of bees.

During the academic year 2017-2018, Beachwood Schools offered the "Outward Boundless Bryden Elementary Program", an after-school club that comes to the farm each week with groups of students in Kindergarten and 1st Grade. During their visits they explore and play in the natural world. Bryden Elementary students were able to hike in the creeks, roll in the grass, climb in the trees, play in the snow, and slosh through the mud – rain or shine. Led by Beachwood staff members Wendi Bomback and Jason Downey, the kids had the freedom to play creatively, navigate terrain, be social and challenge themselves physically.



Manor House winter view

The students love the opportunity, which has given them direct access to a natural environment in which to study, learn and play. In 2018 the program was expanded for 2nd and 3rd graders from Beachwood Hilltop Elementary School.

Gilmour Academy and Padua Franciscan High School continue to use the farm's facilities as a location to host school events. Gilmour reserved the November Meeting Center in September and April for their 7th and 8th grade student retreats. Padua hosted a HS faculty retreat in August with over 100 faculty in attendance. Padua faculty spent the afternoon volunteering around the Farm assisting with grape vine maintenance, a Bio Blitz hike to Valley Ridge Farm, weeding gardens and harvesting produce, outdoor cleanup, and making grape vine wreaths for the Farm Harvest Festival craft project.

Hathaway Brown School and Case Western Reserve University continued their collaboration and usage of the farm facilities. During the academic year 2017–2018, 39 events were hosted at the farm facilities bringing more than 1,350 students, staff and guests to the farm. Their use of the farm facilities included the November Meeting Center, Pink Pig, Kutina Classroom, Manor House, picnic grounds and outdoor space. Visits included upper school Brauvres retreat and ASPIRE Leadership mentor program; environmental programs for second, fourth and fifth graders, creative writing camps, early education student retreat; year-round weekly PK hikes, week-long and overnight student groups, and faculty and staff professional meetings.

Grants and Gifts

A Farm Annual Fund to raise funds to support new farm initiatives and programs was initiated in 2005. By means of this fund, individuals can now contribute directly to the farm during the university's annual fund drive. To date, \$58,000 has been raised thanks to the generosity of farm friends and neighbors. This fund is already being used for new initiatives such as trails brochures, green initiatives and support for the Farm Visitation Program.

Two new benches were generously donated to the farm in 2018. There have been a total of 36 benches donated to the farm by families of alumni, faculty and staff. This program helps to improve the farm's outdoors while providing a new funding source to update the facilities.

Other generous donors for the Farm Food Program included the Ivy Garth Seed Company for their continued donation of seeds.



Metroparks Research Fall 2018

Thanks for Your Generous Support to the Farm

Your continuous support has allowed us to develop new academic programs and to update our teaching and research facilities. Thanks again for your generosity.

Your philanthropy for the farm can be expressed in several ways including:

- **Farm Annual Fund:** Gifts received in any amount to provide unrestricted income to develop new academic and conservation initiatives, as well as small facilities improvements.
- **Farm Bench Dedication Program:** A \$2,000 bench donation would help to update our art teaching facilities and to improve our outdoor areas at the farm. For more information, please go to: studentaffairs.case.edu/farm/support/bench.html.
- **University Farm Endowment:** This fund was established in 2007 to help improve and maintain the property

with more than 20 structures and 400 acres of green space. Many of the farm buildings are over 100 years old and require extensive upkeep to preserve their rich history.

- **Planned Giving:** A planned gift to the farm would provide a benefit to you and your family by bringing immediate and deferred tax advantages to both you and your heirs.
- **Memorial Tree Donation:** A \$1,500 donation will plant a lasting memorial at the farm. Gift includes the cost of a tree, selected by the farm administration, and memorial plaque. Funds for this program also help to support Farm Food Program initiatives and School Visitation Program.

If you would like to contribute or have questions about any of these opportunities, please contact us at 216.368.0274 or visit our website and Facebook page.

**Squire Valleevue and
Valley Ridge Farms**
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<http://case.edu/farm/>



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UNIVERSITY EST. 1826