



“STRENGTHENING  
YOUTH  
INVOLVEMENT  
THROUGH  
CONSERVATION”

C E T Y

ANNUAL REPORT  
2020



# Calvert Environmental Trust for Youth

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P.O. Box 3348 • 489 Main Street  
Prince Frederick, MD 20678



## MISSION STATEMENT

The mission of Calvert Environmental Trust for Youth is to provide a financial mechanism whereby projects that have positive influence on youth and/or the environment can be adequately funded through a local entity.

## VISION STATEMENT

The vision of Calvert Environmental Trust for Youth is to see an increase and improvement in quality-based youth and environmental activities throughout the region.

In 1996 the Environmental Trust for Youth was formed to provide a funding mechanism that would support environmental and youth activities in Calvert County. Over \$100,000 was raised from local contributors within our first year. An additional \$401,850 has been contributed since then.

The interest earned from these funds is used to support environmental projects throughout the county. Since its inception, the Trust has awarded \$279,931 in grants. This year, we had requests for over \$24,818 in grants. The Trust appreciates all funding received from local contributors and is now in the process of applying for major foundation funding to match local support.



**Calvert Environmental Trust for Youth has 501(c)3 status as a nonprofit organization.**

**All Calvert Environmental Trust for Youth programs and services are offered on a nondiscriminatory basis, without regard to race, color, national origin, religion, sex, age, marital status or handicap.**

# Calvert Environmental Trust for Youth Projects

## Fiscal Year 2020



2020 Calvert County Envirothon	\$10,093
Calvert County Livestock Auction	\$5,311
Emily Sears Senior Agriculture Science Project	\$950
Kristina Dube Senior Agriculture Science Project	\$415
NHS Lorax Club Wonder of the Earch (WOE) Day	\$1,055
All Saints - Project Spudnik Chidren's Garden	\$1,000
Friends of JPPM - Pollinator Week	\$995
Calvert County 4-H Outdoor Discovery Camp	\$1,000
Calvert County Farm Bureau Nat'l Ag. Week Breakfast	\$2,500
The Wendt Group Online Auction	\$1,500

<b>Total</b>	<b>\$24,818</b>
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# CETY 2020 PROJECTS

## IMPACTS OF COVID-19 ON CETY

### **Envirothon** *A Collaborative Program for High School Students*

The Calvert County Envirothon is a collaborative program between the Calvert County Soil Conservation District, Calvert Forestry Board, Calvert County Natural Resource Division, Morgan State University (PEARL), American Chestnut Land Trust and the Calvert County Public School System's CHESPAX program. During this program, teams of students are trained and tested by professionals in the areas of Aquatics Resources, Forestry Management, Soils Conservation and Wildlife Management. Envirothon engages students in activities that will hone in their critical thinking skills on environmental problems and exposes the students to careers and technology in the Natural Resource field. In 2020, only one training session was completed in early Spring before COVID-19 cancelled remainder of the season. In 2021, the remaining funds will be used to host Envirothon utilizing virtual resources.

### **Outdoor Discovery Camp** *Hosted by Calvert County 4-H*

This grant was awarded to Calvert County 4-H with the goal of hosting a week-long day camp for up to 25 youths aged 8-18 years old. The camp aims to excite youth about science and build STEM skills; teach life skills such as teamwork, cooperation, and communication; develop an appreciation for the Chesapeake Bay; and to get youth outside to exercise and have fun. The Calvert County 4-H is grateful for the CETY donation and hopes to apply the funds to future camp or similar experience!

### **Wonders of the Earth (WOE) Day** *Hosted by Northern High School's Lorax Club*

The Lorax Club at Northern High School serves to raise awareness of recycling and environmental conservation around the school and community. WOE Day planned to use their CETY grant to educate third graders at Sunderland Elementary School on various environmental concerns and practices. The funds would have covered bus fees and various supplies needed for the lessons. Northern High School's Lorax Club is hopeful to use the funds in 2021 for WOE Day.

### **National Ag Week Farm-to-Table Breakfast** *Hosted by the Calvert County Farm Bureau*

The Calvert County Farm Bureau hosts an Annual Farm-to-Table Breakfast to provide agriculture education to youth and their families. The CETY funds granted to the Calvert County Farm Bureau would assist in venue costs, educational materials, and helps fund college scholarships for high school seniors. Last year, at their 4th annual breakfast, the Bureau served over 450 people in just four hours and was able to donate \$7,843.00 towards scholarships. The Calvert County Farm Bureau looks forward to hosting a Farm to Table Breakfast in 2021.



**The remaining CETY grant recipients were able to complete their projects - some with social distancing measures in place and others went completely virtual. Read through their projects to learn how they overcame a global pandemic to bring environmental education to our youth.**



# Beneficial Bugs: A Pollinator Week Celebration

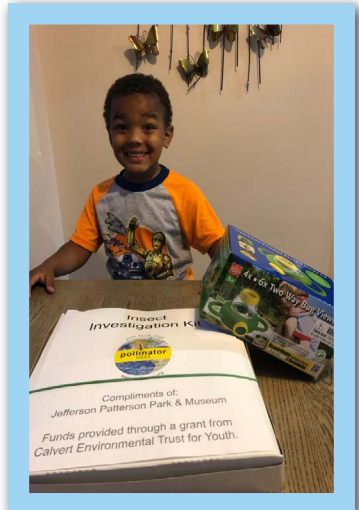
By Lindsay Hollister



In honor of National Pollinator Week, Jefferson Patterson Park & Museum hosted a virtual celebration of our connectedness to the weird and wonderful “bugs” that live all around us. Our primary objective was to help people, especially children, feel comfortable around insects and other invertebrates. Our secondary objective was to raise awareness that most of our food depends on pollinators. With these

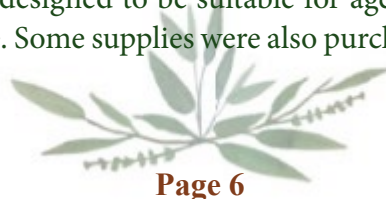
objectives in mind, our goal was to showcase the joy of the natural world and empower participants with the knowledge that everyone can take actions that are good for people, planet, and pollinators.

Originally, (pre-COVID-19) our plan was to offer an open house at the park with education stations and guided activities for homeschool families and the public that help them understand how pollination works, how invertebrates self-regulate in a healthy habitat, and that the vast majority of “bugs” are not only harmless, but beneficial to humans. For our modified version, we took the list of supplies and adjusted the format so that families could register for a take-home kit to conduct self-guided, staff facilitated activities. Fun facts were posted on our social media pages to boost awareness.



Additionally, participants received updates throughout the week leading up to a Saturday Q&A to learn more, ask questions, and take our insect quiz.

By the end of Pollinator Week, we had 20 families registered with 12 families receiving a take-home kit, and 8 families winning pollinator raffle prizes. The activities were designed to be suitable for ages pre-k through grade 6 and we met our target audience. Some supplies were also purchased to keep at the park for future events.





# Senior Agriculture Project

by Emily Sears



The subject of the experiment was six, seven-week-old, *Sus scrofa domesticus*, Chester White pigs. All subjects were female from the same sow. The purpose of this experiment was to show hog farmers which feed will allow the pig to grow the most meat mass. My hypothesis was Amish feed would allow the most meat mass. In feeds there are a different percentage of Crude Protein (CP), Crude Fat (CF), and Crude Fiber (CFi). From the start of this experiment I felt Amish Hog Grower feed would allow the most meat mass because this is what most local hog growers use. The Amish Hog Grower did allow the most meat mass. Purina's Nature's Match Pig and Sow allowed the least mass. The pigs were kept in a 123" x 92" pallet pen. Food was provided every morning and night. They had access to water every day, all day. Each pair of pigs were given a certain type of feed, Amish, Purina, or Producer's Pride. Pigs in pen one received Amish feed (#4 and #5), pen two received Purina feed (#7 and #2), and pen three received Producer's Pride feed (#3 and #6). To weigh the pigs 2 people were needed. Both leading the pigs into the barn, one shutting the barn door and the other leading the pig into the dog cage. The pigs were put in a barn and walked in a dog cage one at a time. Under the dog cage was a livestock scale and they were weighed one at a time. After all pigs were weighed, measurements were taken around their butt, barrel, and neck. To make sure they were weighed in the same spot each time, they were measured about 2 inches from behind their ear to get neck measurements. For their butt, they were measured from flank to flank. For barrel, the stomach, there was a green line draw on them with livestock safe chalk. When the pigs were weighed and measured the data would go on a chart with the date and the pigs tag number. On the days that the pigs were not weighed, they were given attention to work on getting them into the cage for weight and measurement days such as sitting around letting them come up to smell or work on touching them.





# Project Spudnik Children's Garden



*Building the garden.*

Project Spudnik is a Master Gardener-sponsored program of community gardens located on the grounds of All Saints Episcopal Church, Sunderland, MD. The name Spudnik is an adaptation from the movie The Martian and the first satellite in space, Sputnik. To interest youth in gardening the first year, adult leaders showed them the movie. In it, an astronaut was stranded on Mars and had to survive until rescue. To do so, he made soil and planted potatoes that had been taken on the expedition. The Spudnik youth were challenged, like the astronaut in the movie, to make their own container soil from components and to grow potatoes in grow bags. If they successfully grew potatoes, they survived on Mars like the astronaut. From that beginning, Project Spudnik developed into a full

vegetable garden, with a pollinator garden completed in 2019.

This year, despite the COVID-19 pandemic, adult and youth volunteers were able to add a Children's Garden, thanks to the grant from the Calvert Environmental Trust for Youth. We began with a special planning session in February with all our volunteers, including 14 teens, 6 pre-teens, and 10 adults. After discussion and thoughtful work by our volunteers, the group selected a fish design for three reasons: the fish is an ancient Christian symbol and the garden is on church grounds; it would be a fun shape for the children; and it would complement the vegetable and pollinator gardens. We also decided to plant both vegetables and native flowers in this garden. Additionally, we planned for children to create a fairy garden in it.

The purpose of the garden complements the goals and objectives of Project Spudnik for children. It is to educate children and youth in environmentally sound gardening by constructing and planting the garden in a fun and safe way and to teach them community responsibility by donating garden produce to local food pantries. In early March, we completed our



*Adding plants to the garden.*

plans, made our parts lists and began purchasing our components. Then COVID-19 hit and the Governor's safety restrictions caused us to continue with a greatly reduced group of 10 core adult and teen volunteers. In spite of the setback and the delays and problems, we completed the Children's Garden.

While we have not been able to meet all of our educational objectives this year due to COVID-19 restrictions, all is not lost. Early next spring, we will begin once again to plant the Children's Garden and realize its full potential of creating an interest for gardening in our youth, educating them in sound gardening practices and caring for those in need. Project Spudnik is



*Completed Spudnik Garden.*

open to all youth and adult volunteers interested in environmentally responsible container gardening and supports those in need with donations of fresh produce from the gardens. Once again, all of our volunteers at Project Spudnik extend our warmest appreciation to the Calvert Environmental Trust for Youth for its generous grant support that made the construction of the Children's Garden possible.



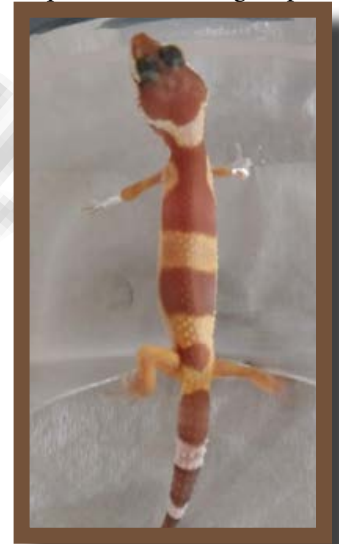
# The Effect of Temperature on the Growth Rate of *Eublepharis macularius* By: Kristina Dube



*Eublepharis macularius*, the common leopard gecko, is a part of the order Squamata and is native to dry and semi-desert areas in Afghanistan, Iraq, Iran, and northwest India. The leopard gecko makes a good indicator species, as most reptiles and amphibians do, for they are sensitive to environmental changes such as temperature, humidity, and possible toxins. This coupled with their widespread availability, they are the most common reptile in the pet trade, makes the common leopard gecko a near perfect subject for an experiment on the effects of climate change on wildlife. To conduct the experiment, obtain 3 ten-gallon tanks, 3 under-tank heaters, and 3 temperature control systems. Label the tanks tank 1, tank 2, and tank 3. Plug the heaters into the temperature control systems and set to 33°C, 29°C, and 35°C, respectively. Acquire six hatchling leopard geckos and place two into each tank at random. Label the geckos from 1 to 6 and have distinctive ways to tell them apart such as specific patterns on the individual. Measure initial weights of each gecko using an electronic balance scale and record as day 0. Leave a small dish with 4.0g, measured with an electronic balance scale, of mealworms and replace every day from Monday to Friday.

Record the weight of each gecko using the electronic balance scale and the temperature of each tank from Monday to Friday for 90 days.

After the 90 days, the average daily growth rate of each tank's occupants are 0.0104 grams/day, 0.0041 grams/day, and 0.0074 grams/day. Throughout the experiment, Geckos 3 and 6 have been anomalies, because they did not react the same way as their tankmates. Gecko 3 did not consistently gain weight at any time in the experiment, making it seem as if there was an internal problem, such as parasites or a birth defect, causing the gecko to be unable to process and store fat as its tankmate, Gecko 4, did. Gecko 3 had an average daily growth rate of -0.0023 grams per day whereas Gecko 4 has a growth rate of 0.0106 grams per day, which is a difference of 0.0129. The difference between Gecko 3 and Gecko 4 is the largest in the experiment, meaning Tank 2 has the largest variation in results. If Gecko 3's data were to be disregarded, then Tank 2 would have the overall greatest growth rate; However, without testing to determine if Gecko 3's growth rate was a result of the temperature it was kept or if there were outside factors effecting the rate, there is no way to determine if the data is sound. Gecko 6 has a similar issue as the gecko died on day 57, which could have been a result of outside parameters or a negative effect of being kept at the above average temperature. Up until that point, Gecko 6 seemed to be healthy from optical inspection. The gecko had good color (was not pale) and muscle mass. With a growth rate of 0.0094, Gecko 6 appeared to be the healthier gecko of Tank 3 for it had a greater growth rate than Gecko 5. This causes me to question if Gecko 6's fast growth rate was the problem. The lizard could have been growing too fast for gecko's body to keep up, like how humans gain stretch marks when the skin is unable to grow fast enough. When strictly looking at the average growth rate in each tank, it can be said that the common leopard gecko will have a higher growth rate at the maximum livable temperature than the lowest livable temperature. Tank 3, set at 35°C, had an average daily growth rate of 0.0074 g/day while Tank 2, set at 29°C had an average daily growth rate of 0.0041 g/day. This does not mean that the reptile will be able to thrive in a post climate change world. This is evident by comparing both Tank 2 and Tank 3's average daily growth rates to that of the Tank 1, the control, which was set at 33°C and maintained the greatest average growth rate of 0.0104 g/day. This goes to show that the extremizing of seasons caused by climate change will cause harm to the wild leopard gecko's growth rate and eventually population for the reptile will be unable to perform at maximum capability. Earth's temperature has been recorded to have changed by approximately 1.5°F, far greater than the difference between temperatures at which the leopard geckos in this experiment were kept. Wild leopard geckos are subjected to even more extreme temperatures than shown in this experiment. The trends in the data of this experiment should be reflected in the wild leopard gecko population



meaning that these geckos are suffering from the change in temperature and unable to perform at their most efficient; However, there is no current data to prove this. Since the leopard gecko has a standard reptile digestion tract and no particularly unique features that would affect their ability to be a representative species, it is fair to say that the effects on the leopard gecko can be applied to most other reptiles. Based on the daily average growth rate of each tank, my initial hypothesis, the geckos in their current natural temperatures will have the best growth rate, is correct. Tank 3 had a greater growth rate than Tank 2, but the control tank had the greatest overall daily average growth rate. So, while it appears that the common leopard gecko would do better in a too warm climate than a too cold climate, it is best to remain at the optimal temperature. This indicates that humans should do all we can to slow down or stop climate change, because animals are not able to adapt quick enough to survive in extreme temperatures.



# 2020 Calvert County Youth Virtual Livestock Auction

2020 was a year of abnormality and pivoting! Even before the fair was cancelled a group of Calvert County livestock parents got together to plan a livestock show and auction for the 17 youth raising livestock in the county. The Calvert County Livestock Committee obtained approval and funding from the Calvert County Farm Bureau for the show, the Calvert County Fair Board for use of the barn areas at the fairgrounds and premiums for the youth, the Calvert County Health Department for the rules and regulations to safely hold the show, the Maryland State Veterinarian for the assistance to check the animals health, and the Calvert Environmental Trust for Youth for the funding to hold our online auction! All these things were done for our youth safely despite COVID!

On October 1, 2020, the 17 Calvert County Youth showed up at the Calvert County Fairgrounds for the market show. There were 34 hogs, 5 goats, 6 sheep and 3 steers shown that day! For the auction there were 25 hogs, 5 goats, 7 lambs and 2 steers. All the animals listed in the auction were sold, all costs for both events were covered, and the youth were able to get some additional money in the way of premiums and gift cards!

2020

**Calvert County Youth Livestock Auction**

<https://auctions.thewendtgroup.com/auction/9663>

October 2 12 PM until October 3 6 PM





**CALVERT ENVIRONMENTAL TRUST FOR YOUTH**  
**Statement of Receipts and Disbursements**  
**For the Period of January 1, 2020 through December 31, 2020**

**OPERATING & GRANT FUNDS AVAILABLE JANUARY 1, 2020 .....\$25,549.29**

**RECEIPTS:**

Grant Funds (90% of 2020 Interest Earned) .....\$20,222.00  
 Operating Funds (10% of 2020 Interest Earned).....1,123.00  
 Donation from CSCD (specified to go to grants).....6,500.00  
 Donation from CSCD .....8,000.00

**TOTAL RECEIPTS.....\$35,845.00**

**SUBTOTAL.....\$61,394.29**

**DISBURSEMENTS:**

**Operating Expenses:**

Rymer & Assoc. (tax preparation) .....\$650.00  
 Maryland Nonprofits (information service) .....100.00  
 Postmaster (Post Office box fee).....134.00

**Total Operating Expenses.....\$884.00**

**Grants Awarded:**

Grant #205 Calvert SCD Envirothon Competition .....\$10,093.00  
 Grant #206 Calvert LAC .....5,310.95  
 Grant #207 Emily Sears-CASE project .....950.00  
 Grant #208 Northern HS-WOE Day .....1,055.00  
 Grant #209 All Saints-Project Spudnik.....1,000.00  
 Grant #210 Kristina Dube-CASE.....415.00  
 Grant #211 Friends of JPPM-Pollinator Week.....995.00  
 Grant #212 University of MD-Discovery Camp .....1,000.00  
 Grant #213 Farm Bureau Breakfast.....2,500.00  
 Grant #214 The Wendt Group-On-line auction .....1,500.00

Total Grants Awarded .....\$24,818.95

**TOTAL DISBURSEMENTS .....\$25,702.95**

**TOTAL OF ALL FUNDS AVAILABLE DECEMBER 31, 2020 .....\$35,691.34**

**CALVERT ENVIRONMENTAL TRUST FOR YOUTH**

**Account Information and Donations Received**

Edward Jones Investment Account Value December 31, 2019 .....	\$540,903.84
Edward Jones Investment Account Value December 31, 2020 .....	\$570,901.00

**2021 PROPOSED BUDGET**

**INTEREST ALLOCATION:**

2020 Interest Earned .....	\$22,469.79
90% to Grants .....	\$20,222.00
5% to Operating Expenses .....	\$1,123.00
5% to Principal.....	\$1,124.79

**GRANT FUNDS:**

Grant Funds available after 2020 grants awarded.....	\$2,210.72
2020 year-end interest earned (90%) .....	<u>22,222.00</u>
<b>Total 2021 Grant Funds Available .....</b>	<b>\$22,432.72</b>

**OPERATING FUNDS**

Operating Funds available after 2020 expenses.....	\$4,132.62
2020 interest earned (5%) .....	<u>1,123.00</u>
<b>Total 2021 Operating Funds Available .....</b>	<b>\$5,258.62</b>

**ESTIMATED OPERATING EXPENSES**

Tax preparation .....	\$700.00
Annual post office box fee .....	140.00
Maryland Nonprofits Membership .....	100.00
Renewal of Charitable Registration/State of Maryland .....	<u>100.00</u>
<b>Total 2021 Estimated Expenses .....</b>	<b>\$1,040.00</b>



**Calvert Environmental Trust for Youth (CETY)  
Summary of Grants Approved by Year**

<u><i>Year</i></u>	<u><i>Total</i></u>
1997	602
1998	1,000
1999	4,960
2000	7,979
2001	7,472
2002	4,500
2003	9,133
2004	8,554
2005	7,115
2006	7,357
2007	10,161
2008	9,985
2009	8,828
2010	10,473
2011	11,022
2012	8,806
2013	11,523
2014	16,796
2015	18,164
2016	25,926
2017	19,035
2018	20,599
2019	25,129
2020	24,818
<b>Total Amount of Grants Awarded</b>	<b>\$279,931</b>

## Calvert Environmental Trust for Youth (CETY)

### Summary of Grants Approved by Organization 1997 – 2020

	Number of Grants	Amount
<b>Battle Creek Nature Center (Outdoor Heritage Foundation, Junior Ranger Corp Projects, Girl Scout Gold Award)</b>	<b>11</b>	<b>9,175</b>
<b>4-H Livestock Auction at Calvert County Fair</b>	<b>8</b>	<b>41,848</b>
<b>Boy Scouts</b>	<b>12</b>	<b>9,010</b>
<b>Girl Scouts</b>	<b>2</b>	<b>1,015</b>
<b>Calvert County Public Schools</b>	<b>86</b>	<b>52,199</b>
<b>Calverton School</b>	<b>1</b>	<b>200</b>
<b>CHESPAX (Calvert County Public Schools)</b>	<b>19</b>	<b>18,793</b>
<b>Calvert County Forestry Board</b>	<b>1</b>	<b>40</b>
<b>Calvert Marine Museum</b>	<b>2</b>	<b>1,550</b>
<b>Calvert Farm Bureau</b>	<b>4</b>	<b>5,950</b>
<b>Calvert Future Farmers of America</b>	<b>3</b>	<b>1,400</b>
<b>Cooperative Extension Services (4-H)</b>	<b>11</b>	<b>9,080</b>
<b>Envirothon</b>	<b>25</b>	<b>100,126</b>
<b>Combined Groups (Student Ambassador) (Agricultural Educational Center) (Ann's Circle, Inc.) (Friends of Jefferson Patterson Park) (Calvert Nature Society)</b>	<b>17</b>	<b>29,552</b>
<b>TOTAL</b>	<b>202</b>	<b>\$279,931</b>