

THE PRESERVERS

FOR-MAR COMICS GROUP

INTRODUCING:

#1
2015 FREE!

THE PRESERVERS



1st
ISSUE!



GENESEE COUNTY PARKS

Get away. Right away.

www.geneseecountyparks.org
www.facebook.com/Formarnaturepreserve

For-Mar Nature Preserve & Arboretum



Nature gives us so much, sometimes it's good to give back. Since 1970, that's been the spirit behind For-Mar Nature Preserve and Arboretum. With 383 acres of carefully preserved Michigan flora and fauna and one of the state's finest collections of rare trees, For-Mar is where Michigan goes to learn about — and from — the best of the world around us.

The Merkleys' Legacy

Forbes and Martha Merkley ran a successful dairy farm just a few minutes east of downtown Flint. It was a magnificent landscape with open meadows, mature forests, wetlands and ponds. The Merkleys wanted to preserve their special corner of Genesee County and make it available for environmental education as an arboretum and wildlife sanctuary. So they donated their property to the Genesee County Parks and Recreation Commission for the For-Mar Nature Preserve and Arboretum.



Update from The Preservers Genesee County Parks' Nature's Superheroes

Nature's Superheroes, The Preservers, made their debut to the public in April, 2015 when the Superhero Trail opened at For-Mar Nature Preserve and Arboretum. This facility of the Genesee County Parks and Recreation Commission has been home to The Preservers ever since. Since they united their efforts, they have been busy traveling throughout Genesee County teaching others how they can love and care about the environment. With the help of our For-Mar On The Road crew, they travel to 10 different park locations each week in the summer and train Genesee County youth in skills that will help them be SUPER DUPER Nature's Superheroes.



**For-Mar Nature Preserve
& Arboretum**

2142 North Genesee Road
Burton, MI, 48509-1209

Nature Preserve: 810.789.8567
Arboretum: 810.789.8568

www.facebook.com/Formarnaturepreserve
www.geneseecountyparks.org



GENESEE COUNTY PARKS
Get away. Right away.



THE PRESERVERS #1 (2015) Copyright © 2015 Genesee County Parks and Recreation Commission, Genesee County Michigan. All rights reserved. This publication is offered free on a one copy per person basis. For more information about Genesee County Parks, including news and events at For-Mar Nature Preserve, please visit our website: geneseecountyparks.org. Get Away. Right away. Printed in the U.S.A.



GREETINGS FRIENDS.

MY NAME IS GRANDMASTER SNAPPER AND I HAVE LIVED HERE FOR MANY YEARS. AND THROUGHOUT THOSE YEARS I HAVE SEEN MANY THINGS CHANGE INCLUDING MY HOME.

THE ENVIRONMENT WHERE I LIVE HAS BEEN THREATENED BY FORCES GREATER THAN ME AND I CANNOT STOP THEM BY MYSELF. I NEED A GROUP OF FRIENDS THAT CAN HELP ME FIGHT THESE EVIL FORCES.

MY FRIENDS NEED TO BE BRAVE AND FEARLESS AND THEY NEED TO HAVE THE POWER TO PRESERVE THE ENVIRONMENT. IN FACT, THEY NEED TO BE MORE THAN JUST MY FRIENDS, THEY NEED TO BE SUPERHEROES!

SUPERHEROES ARE PEOPLE THAT WORK TO PROTECT OUR HOMES FROM FORCES THAT THREATEN THEM. SUPERHEROES SEEK TO IDENTIFY THESE EVIL FORCES AND THEN TAKE ACTION TO ELIMINATE THEM AND FINALLY WORK TO RESTORE OUR ENVIRONMENTS.

COME ALONG WITH ME AS WE FIND THESE SUPERHEROES AND BRING THEM TOGETHER SO THAT TOGETHER WE CAN FIGHT THE FORCES THAT THREATEN OUR HOMES.

GOOD LUCK MY FRIENDS!



GREETINGS FRIENDS OF THE FOREST! OWL GIRL HERE, YOUR NIGHTTIME DEFENDER. IT'S MY JOB TO MAKE SURE THE FOREST REMAINS HEALTHY AND BALANCED WHILE RED HAWK IS SLEEPING. ONE WAY I CAN DO THAT IS BY CHECKING UP ON MY NOCTURNAL COHORTS, SINCE IT'S DIFFICULT TO SEE THESE CREATURES AT NIGHT I MUST USE MY KEEN SENSE OF HEARING TO LISTEN FOR THEM.

IN THE SPRING MANY TYPES OF AMOROUS AMPHIBIANS CAN BE HEARD ALL THROUGHOUT THE FOREST. SUCH AS THE SPRING PEEPER, THE WESTERN CHORUS FROG, THE EASTERN WOOD FROG, AND MANY OTHERS!

A HEALTHY FOREST WILL ALSO HAVE NOCTURNAL BIRDS, LIKE MYSELF, THE GREAT HORNED OWL, THE EASTERN SCREECH OWL,

THE AMERICAN WOODCOCK, THE COMMON Nighthawk AS WELL AS MANY MORE.

YOU MIGHT ALSO HEAR A FEW MAMMALS MAKING THEIR PRESENCE KNOWN LIKE COYOTES AND BATS.

JUST STOP AND LISTEN.



HI GUYS, THE FROG HERE...

I WANT YOU TO LISTEN CLOSELY WHENEVER YOU ARE IN HEALTHY HABITAT.

HOW MANY ANIMALS CAN YOU HEAR CALLING?

REMEMBER A BIODIVERSE HABITAT IS A HOPPY HAPPY HABITAT!

SEE YOU ON THE TRAIL!

WELL HEY THERE, AS THE NEWEST MEMBER OF THE GANG I'D LIKE TO GIVE YOU SOME TIPS ON HOW YOU TOO CAN BECOME PART OF THE PRESERVES!

FIRST IF YOU WANT TO BE A NATURE'S SUPERHERO YOU HAVE TO REMEMBER WHEN YOU ARE HIKING ON THE TRAILS TAKE ONLY PICTURES AND LEAVE ONLY FOOT PRINTS.

SECOND: MAKE SURE YOU PICK UP AFTER YOU AND ALL OF THE OTHER FOREST VISITORS. PICKING UP LITTER NOT ONLY MAKE OUR ENVIRONMENT'S LOOK BETTER, IT ALSO MAKES SURE THAT MY ANIMAL FRIENDS DON'T TRY AND EAT OR MAKE HOMES OUT OF UNHEALTHY ITEMS.

THIRD: LEAVE WILDLIFE IN THE WILD, ALL ANIMALS AND PLANTS PLAY IMPORTANT ROLES IN THEIR ECOSYSTEMS BY REMOVING THEM YOU ARE REMOVING A LINK IN THE CHAIN AND WEAKENING OUR HABITATS.

FINALLY, I WANT YOU TO LISTEN CLOSELY BECAUSE THIS PART'S SO IMPORTANT... MAKE SURE YOU FIND A WAY TO LOVE AND CARE ABOUT THE EARTH EVERY SINGLE DAY, BECAUSE WHEN YOU CARE OTHERS WILL CARE TOO!

OK, NOW IT'S TIME FOR YOU READ OUR STORY TO LEARN ALL ABOUT ME AND MY SUPERHERO FRIENDS. I LOOK FORWARD TO SEEING YOU AT THE END! OH, AND REMEMBER YOU CAN BE A SUPERHERO TOO!



The Frog



IT'S NOT THAT BRING GREEN!

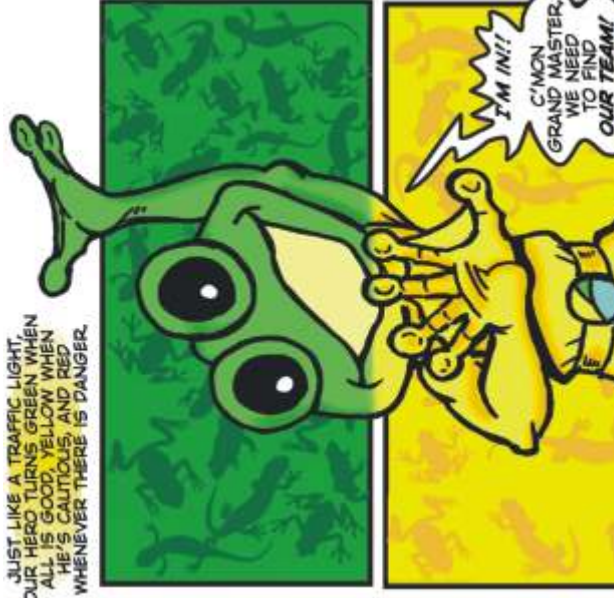


OUR HAPPY FROG IS AN INDICATOR SPECIES! SCIENTISTS WATCH THEM IN THEIR ENVIRONMENT!

FROG MY FRIEND, I AM COLLECTING A SUPER-TEAM TO HELP CONSERVE NATURE AND FIGHT FOR THE GOOD OF THE ENVIRONMENT!



THE ENVIRONMENT IS IN TROUBLE?? OH NO!!



I'M IN!!
C'MON GRAND MAISTER, WE NEED TO FIND OUR TEAM!

JUST LIKE A TRAFFIC LIGHT, OUR HERO TURNS GREEN WHEN ALL IS GOOD, YELLOW WHEN HE'S CAUTIOUS, AND RED WHENEVER THERE IS DANGER.

OUR HERO CAN NOT ONLY JUMP AND MOVE FAST, HIS SKIN COLOR CAN CHANGE AS A REACTION TO HIS SURROUNDINGS LIKE HIS AMPHIBIAN FRIENDS WHOSE PRESENCE HELP INDICATE THE HEALTH OF THE ECOSYSTEM.



BLUE-SPOTTED SALAMANDER



GREEN FROG



GRAY TREE FROG



HEALTHY WETLAND HABITAT

SALAMANDERS BREATHE THROUGH THEIR SKIN SO IF THEIR HABITATS BECOME CONTAMINATED BY PESTICIDES, FERTILIZERS, SEWAGE, OR INDUSTRIAL WASTES THEY NO LONGER EXIST IN THAT HABITAT.

FROGS HAVE LUNGS WITH WHICH THEY BREATHE, BUT DURING WINTERMATION THEIR SKIN CAN ABSORB TOXIC CHEMICALS.

FROGS HAVE SURVIVED FOR ABOUT 250 MILLION YEARS HAVING SURVIVED COUNTLESS ICE AGES, ASTEROID CRASHES, AND OTHER ENVIRONMENTAL DISTURBANCES, YET NOW ONE-THIRD OF AMPHIBIAN SPECIES ARE ON THE VERGE OF EXTINCTION. THIS SHOULD SERVE AS AN ALARM CALL TO HUMANS THAT SOMETHING IS DRASTICALLY WRONG IN THE ENVIRONMENT.

SALAMANDERS AND FROGS USE BOTH WOODLAND AND AQUATIC HABITS OF WHICH LOOKING AT THE NUMBERS OF AMPHIBIANS WE CAN KEEP IN MIND THAT THEY ARE A REPRESENTATION OF THE HEALTH OF THESE ECOSYSTEMS AS A WHOLE.

Take Action!

REDUCE, REUSE, AND RECYCLE.

CAREFULLY USE PESTICIDES WHICH ARE TOXIC TO AMPHIBIANS AND THEIR FOOD!

AVOID HANDLING THEIR SKIN AS THEY ARE SENSITIVE TO SOAPS AND LOTIONS!



THAT'S RABBITY!



LOOK AROUND YOU MR. FROG, TREES ARE EVERYWHERE! TREES QUIETLY PROVIDE ECO-SYSTEM SERVICES THAT PROVIDE THE MOST BASIC MATERIALS NEEDED FOR LIFE!

WHO ARE ON THE TEAM NEXT MASTER SNAPPER?

EXACTLY! TREES ALSO PROVIDE US WITH LUMBER, MEDICINES, AND FOOD! THEY PROVIDE HABITAT FOR WILD-LIFE AND PREVENT SOIL EROSION



THROUGH THE PROCESS OF PHOTOSYNTHESIS TREES USE THE SUN'S ENERGY TO CONVERT CARBON DIOXIDE AND WATER INTO FOOD WITH OXYGEN AS A WASTE PRODUCT.

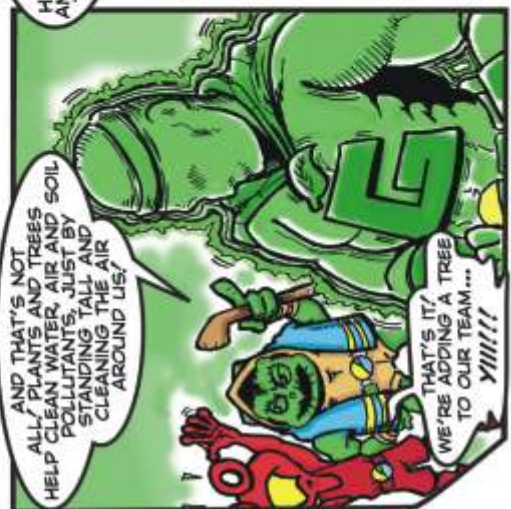
THEN THROUGH RESPIRATION, WE BREATHE IN THE OXYGEN AND EXHALE MORE CARBON DIOXIDE FOR THEM TO EAT!



THEY ALSO PROVIDE GREAT SHADE AND EVEN HELP KEEP US WARM WHEN IT'S COLD!

Take Action!

- PLANT AND CARE FOR A TREE!
- KEEP A LOOKOUT FOR IMPOSTERS- INVASIVE TREES.
- PROTECT AGAINST INVASIVE PESTS THAT THREATEN OUR TREES.



AND THAT'S NOT ALL! PLANTS AND TREES HELP CLEAN WATER, AIR AND SOIL POLLUTANTS, JUST BY STANDING TALL AND CLEANING THE AIR AROUND US!

THAT'S IT, WE'RE ADDING A TREE TO OUR TEAM... YIIII!

MR. FROG, MEET THE GREEN! HE STANDS TALL AND QUIET AND CAN MAKE PLANTS AND TREES INSTANTLY THRIVE AND GROW!

WELL, HELLO GREEN!

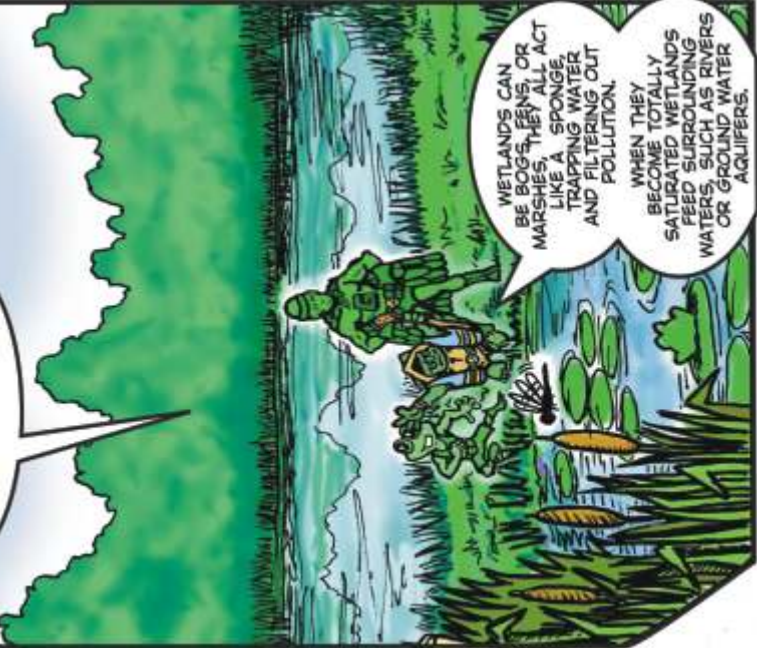


HEY KIDS! TAKE SOME OF THE GREEN HOME WITH YOU!



GRAND MASTER SWAPPER

THIS IS MY HOME, MY FRIENDS. THE WETLANDS ARE PART OF THE FOUNDATION OF OUR WATER RESOURCES AND ARE VITAL TO THE HEALTH OF WATERWAYS AND COMMUNITIES THAT LIVE DOWNSTREAM.

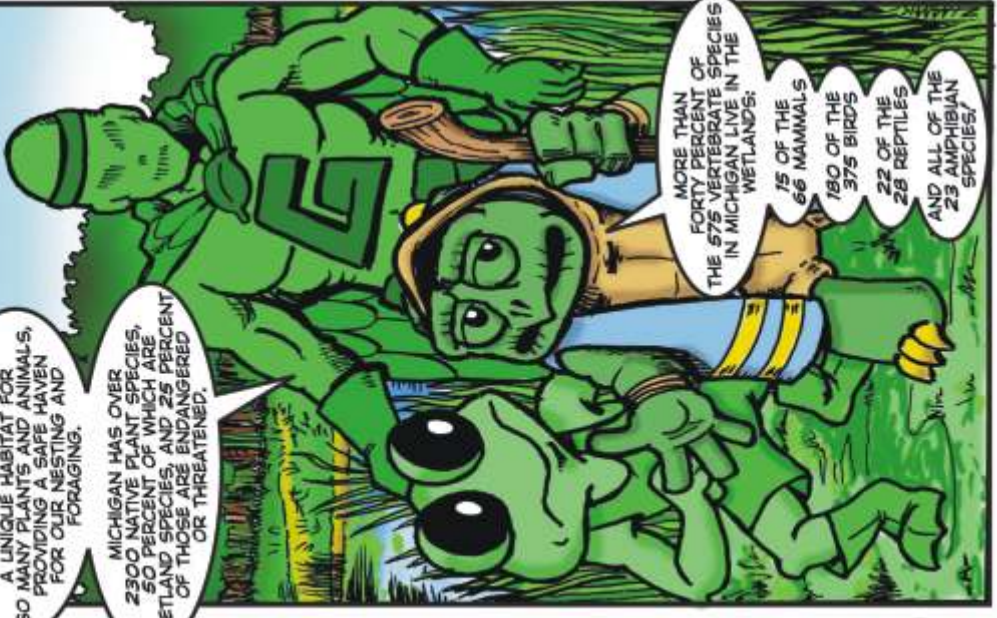


WETLANDS CAN BE BOGS, FENS, OR MARSHES. THEY ALL ACT LIKE A SPONGE, TRAPPING WATER AND FILTERING OUT POLLUTION.

WHEN THEY BECOME TOTALLY SATURATED WETLANDS FEED SURROUNDING WATERS, SUCH AS RIVERS OR GROUND WATER AQUIFERS.

THIS IS NOT JUST MY HOME, THESE WETLANDS PROVIDE A UNIQUE HABITAT FOR SO MANY PLANTS AND ANIMALS, PROVIDING A SAFE HAVEN FOR OUR NESTING AND FORAGING.

MICHIGAN HAS OVER 2300 NATIVE PLANT SPECIES, 50 PERCENT OF WHICH ARE WETLAND SPECIES, AND 25 PERCENT OF THOSE ARE ENDANGERED OR THREATENED.



MORE THAN FORTY PERCENT OF THE 575 VERTEBRATE SPECIES IN MICHIGAN LIVE IN THE WETLANDS:

- 15 OF THE MAMMALS
- 66 MAMMALS
- 180 OF THE BIRDS
- 375 BIRDS
- 22 OF THE REPTILES
- 28 REPTILES
- AND ALL OF THE AMPHIBIAN SPECIES!
- 23 AMPHIBIAN SPECIES!



THIS IS OUR HOME, AND WE NEED TO FIGHT TO SAVE IT!

WE'LL ALL HELP YOU GRAND MASTER! NOW WE BETTER HOP ALONG AND COLLECT THE REST OF THE TEAM!



Take Action!

- PROTECT WETLAND AREAS BY NOT LITTERING
- REDUCE PESTICIDE USE AROUND WETLANDS
- KEEP INVASIVE PESTS FROM ESTABLISHING IN THE AREA

HISTORY'S



THESE FOUR PEOPLE ARE SUPERHEROES OF CONSERVATION FROM HISTORY!

CAN YOU GUESS WHO THEY ARE?

READ BELOW THEIR PICTURE TO FIND OUT!

HE CREATED THE FIRST ARBOR DAY ON APRIL 10TH, 1872 IN WHICH A MILLION TREES WERE PLANTED OVER CONCERNS TO STOP RAMPANT SOIL EROSION!



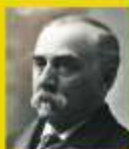
PRESIDENT OF THE UNITED STATES FROM MARCH 4, 1933- APRIL 12, 1945

HE CREATED THE CIVILIAN CONSERVATION CORPS (CCC) IN AN EFFORT TO RESTORE AMERICAN FARMLAND AND TO GIVE JOBS TO CITIZENS ENDURING THE AFTERMATH OF THE GREAT DEPRESSION.



WHO IS THIS "CAPTAIN ARBOR" IN REAL LIFE?

Julius Sterling Morton
(1832 - 1902)



HE WAS FASCINATED WITH TREES AND HAD OVER 270 SPECIES OF TREES AND SHRUBS PLANTED AROUND HIS HOME FROM ALL OVER THE WORLD!

HE WAS APPOINTED AS THE U.S. SECRETARY OF AGRICULTURE FROM MARCH 7, 1872 - MARCH 5, 1897



WHO WAS THIS CHAMPION OF CONSERVATION IN REAL LIFE?

Franklin D. Roosevelt
(1882 - 1945)



THE CCC CREATED MANY RECREATIONAL RESOURCES AND UTILITIES SUCH AS: 48,060 BRIDGES, 13,513 CABINS AND DWELLINGS, 70,237 FIRE LOOKOUT HOUSES AND TOWERS, AND OVER 2.6 MILLION ACRES OF PLANTING AND SEEDING.

IF YOU VISIT THE PAVILIONS AT RICHFIELD COUNTY PARK YOU WILL SEE FIRSTHAND SOME OF THE WORK THE CCC'S DID IN OUR COUNTY.

PRESERVERS



KNOWN AS "THE FATHER OF WILDLIFE MANAGEMENT", THIS HERO WAS ONE OF THE NATION'S LEADING SCIENTISTS, ECOLOGIST, FORESTER, CONSERVATIONIST, AND ENVIRONMENTALIST.

HE BROUGHT AWARENESS OF OUR NATURAL RESOURCES THROUGH PUBLISHING "A SAND COUNTY ALMANAC."



**WHO
WAS THIS
GOLDEN AGE
PRESERVER
IN REAL LIFE?**

Aldo Leopold

(1887 - 1948)



ONE OF THE WELL-KNOWN QUOTES FROM THE BOOK WHICH CLARIFIES HIS LAND ETHIC AND WHICH SHAPED THE ENTIRE FOCUS OF CONSERVATION MANAGEMENT SINCE IS AS FOLLOWS:

"A THING IS RIGHT WHEN IT TENDS TO PRESERVE THE INTEGRITY, STABILITY, AND BEAUTY OF THE BIOTIC COMMUNITY. IT IS WRONG WHEN IT TENDS OTHERWISE."



SHE WAS AN AMERICAN MARINE BIOLOGIST AND CONSERVATIONIST.

HER BOOK "SILENT SPRING" AND OTHER WRITINGS ARE CREDITED WITH ADVANCING THE GLOBAL ENVIRONMENTAL MOVEMENT.



**WHO
WAS THIS
ENVIRONMENTAL
SUPER-WOMAN
IN REAL LIFE?**

Rachel Carson

(1907 - 1964)



"SILENT SPRING" CREATED AN AWARENESS OF PESTICIDES, SPECIFICALLY DDT, AND DETAILED THE EFFECTS THEY HAVE ON NOT ONLY THE ECO-SYSTEMS BUT ON HUMAN HEALTH. THIS LED TO A NATIONWIDE BAN ON DDT FOR AGRICULTURAL USES AND INSPIRED AN ENVIRONMENTAL MOVEMENT THAT LED TO THE CREATION OF THE U. S. ENVIRONMENTAL PROTECTION AGENCY.

HISTORY'S



IF YOU LEARN TO LOVE AND CARE FOR THE EARTH...

YOU CAN GO DOWN IN HISTORY AS A PRESERVER TOO!

PRESERVERS

D.K. THE DECOMPOSER



DECOMPOSERS TAKE ALL ORGANIC WASTE THAT PLANT, ANIMALS AND PEOPLE CREATE AND TURN IT INTO VITAL NUTRIENTS FOR OUR ECOSYSTEMS.

THERE ARE MANY DIFFERENT KINDS OF DECOMPOSERS LIKE FUNGI, BACTERIA, AND A VARIETY OF INVERTEBRATES LIKE WORMS!

OUR HERO D.K. WORKS WITH, AND CONTROLS, ALL THESE KINDS OF DECOMPOSERS, CAUSING ITEMS TO DECAY WITH A TOUCH AS WELL AS MAKING MUSHROOMS BY THROWING AND GROWING SPORES!

YOU MIGHT THINK SHE'S A VILLAIN AND HER POWERS ARE VILKY AND PERHAPS EVEN DANGEROUS TO HUMANS, BUT SHE'S ACTUALLY ONE OF NATURE'S STRONGEST HEROES!

HER ABILITIES PROVIDE SPACE AND NUTRIENTS FOR EVERYTHING TO THRIVE AND SURVIVE!



FUNGI!

BACTERIA!

AND INVERTEBRATES!

TO USE MY POWERS, I CALL ON THE F.B.I. THAT STANDS FOR...

Take Action!

START YOUR OWN COMPOST PILE AT HOME!

DON'T USE EXCESSIVE FERTILIZERS WHICH CAN HARM DECOMPOSERS!

I HAVE MY OWN TEAM, WHY SHOULD I JOIN YOURS?

BECAUSE YOU ARE AN IMPORTANT PART OF THE CYCLE OF NATURE THAT WE WILL BE PRESERVING!

SINCE YOU PUT IT THAT WAY, SLIRE, I'LL JOIN YOUR GROUP.

THAT SOUNDS WONDERFUL! C'MON EVERYBODY! IT'S GONNA BE A PARTY!!!

HER ABILITIES PROVIDE SPACE AND NUTRIENTS FOR EVERYTHING TO THRIVE AND SURVIVE!

WAAHOO!! NOW, ON TO THE NEXT TEAM MEMBER!



NATIVE PLANTS PROVIDE A GREAT MANY ECOLOGICAL SERVICES. ONCE ESTABLISHED, MANY PLANTS NEED ONLY RAINFALL TO SURVIVE AND HAVE DEVELOPED THEIR OWN DEFENSES AGAINST MANY PESTS AND DISEASES.

ELIMINATING THE NEED FOR PESTICIDES.



NATIVE PLANTS ARE ALSO PERFECT FOR NATIVE WILDLIFE AS THE TWO HAVE EVOLVED TOGETHER FOR THOUSANDS OF YEARS.

CREATING IDEAL HABITATS AND RESOURCES FOR ANIMALS TO USE.

TIME TO GET TO WORK ON THESE INVASIVE PLANTS!



WHEN NATIVE PLANTS ARE LOST THE ENTIRE ECOSYSTEM IS AFFECTED.

ANIMALS LOSE THEIR FOOD, THEIR SHELTER AND EVEN THE VERY SOIL IS ALTERED.

NATIVE PLANTS CAN BE FOUND FOR EVERY TYPE OF ENVIRONMENT, FROM DRY AND SUNNY, TO SOGGY AND SHADY.



WITH A VARIETY OF COLORS, HEIGHTS, FOLIAGE AND BLOOM TIMES, THEY CAN ADD BEAUTY AND INTEREST TO ANY LANDSCAPE.



BLOODROOT

JACK IN THE PULPIT

TWINLEAF

YELLOW TROUT LILY

Take Action!

PLANT NATIVE PLANTS!
TAKE PICTURES NOT FLOWERS FROM NATIVE PLANTS!
KEEP AN EYE OUT FOR NON-NATIVE PLANTS!

WOO HOO! IT'S ALL PRETTY NOW! WHO ARE WE ADDING TO THE TEAM NEXT?



ONCE NIGHT FALLS, SUPERHEROES OF THE NIGHT COME OUT!

HERE IN THE FOREST THERE ARE MANY NOCTURNAL ANIMALS LIKE OWLS AND BATS AROUND.

WOW, IT GOT DARK FAST!



OWLS ARE SNEAKY RAPTORS THAT HAVE SHARP BEAKS AND STRONG TALONS. OWLS ARE KNOWN AS SILENT PREDATORS OF THE NIGHT, CAPABLE OF FLYING JUST INCHES FROM THEIR PREY WITHOUT BEING DETECTED.

WHOOO'S IN MY FOREST?



IF YOU'RE LOOKING FOR A NOCTURNAL PREDATOR TO JOIN YOUR TEAM, I CAN HANDLE THE NIGHT SHIFT!

THERE'S NO NEED TO FEAR...

OWLEGGIA IS HERE!



AN OWL'S WING FEATHERS HAVE SOFTER EDGES THAT HELP MUFFLE THE SOUND OF THEIR WING BEATS, MOST PREY, AS WELL AS HUMANS, DON'T HEAR ME COMING!



EASTERN SCREECH OWL



BATS ARE NOCTURNAL SUPERHEROES TOO. THEY FEED ON HARMFUL PESTS, AID IN POLLINATION AND SEED DISPERSAL, AND EVEN THEIR GUANO IS VALUABLE AS A RICH FERTILIZER.

BATS CAN FLY UP TO TWO MILES HIGH AND CAN REACH SUPER FAST SPEEDS OF MORE THAN 60 MILES PER HOUR!

BATS FIND THEIR FOOD IN TOTAL DARKNESS BY USING ECHolocation. FINDING THEIR PREY BY USING ONLY SOUND. THEY CAN SEE EVERYTHING BUT COLOR AS FINE AS A HUMAN HAIR.



LITTLE BROWN BAT

REDUCE LIGHT POLLUTION BY TURNING OFF LIGHTS.

CREATE HOMES FOR NESTING.

Take Action!



WELL, IT'S SUNRISE AND IT'S GETTING PAST MY BEDTIME, I'LL BE AROUND WHENEVER YOU NEED ME!

SAY WHO'S GOING TO DO HER JOB DURING THE DAY?

CONTINUED ON THE NEXT PAGE



I HEARD YOU WERE LOOKING FOR A TOP PREDATOR!

YOU ARE IN LUCK FELLOW CITIZENS OF THE FOREST! I AM HERE TO JOIN YOUR TEAM!

I AM...

AND ALONG WITH MY FELLOW TOP PREDATORS, GRAND MASTER SNAPPER, AND THAT NOCTURNAL OWL GIRL, WE ARE HERE TO PRESERVE THE NATURAL ORDER OF THE FOOD CHAIN.

YOU ARE WELCOME!

WE CONTROL HERBIVORE POPULATIONS WHICH KEEP THE PRIMARY PRODUCERS, THE PLANTS, PLENTIFUL.

WITHOUT US THOSE HERBIVORES WILL OVERRUN THE ECOSYSTEM, EATING ALL THE PLANTS, DRINKING ALL THE WATER, EVEN CHANGING SOIL BACTERIA, THAT IS KNOWN AS A TROPIC CASCADE.

WE KEEP THE NATURAL ORDER HEALTHY BY PREYING ON THE WEAK, OLD, YOUNG, SICK, AND VULNERABLE. WE ENSURE MAXIMUM FITNESS IN THE PREY POPULATIONS KEEPING THE WHOLE FOOD CHAIN AT IT'S HEALTHIEST.

BY EATING SMALLER ANIMALS LIKE ~~SNAPPERS~~ ME? ME?

ABSOLUTELY, AND AGAIN, YOU ARE WELCOME!

WE KEEP THE ORDER! WE KEEP THE ENVIRONMENT HEALTHY BY REDUCING THE POSSIBILITY OF DISEASE DEVELOPMENT AND SPREAD! WE...

WE ARE THE REGULATORS OF THE FOOD WEB! WITHOUT US TOP PREDATORS, MESOPREDATORS LIKE COYOTES OR FOXES TRY TO MAKE UP FOR US, BUT CAN'T DO THE JOB NEARLY AS WELL.

"WE" HAVE NO PROBLEM BOASTING ABOUT OUR IMPORTANCE DO WE?

COME ALONG TEAM, WE STILL HAVE A FEW MORE MEMBERS TO COLLECT!



Take-Action!

DO NOT REMOVE TOP PREDATORS FROM THE ECOSYSTEM UNNECESSARILY.

NEVER FEED WILD ANIMALS AS THEY MAY LOSE THEIR FEAR OF HUMANS.



NEXT, WE NEED A POLLINATOR. THEY COLLECT POWDERY POLLEN AND AID IN PLANT REPRODUCTION BY TRANSFERRING IT BETWEEN FLOWERING PLANTS. ALL WHILE GATHERING NECTAR TO EAT.



THEN YOU'LL NEED MY HELP! I AM...

QUEEN BEE

AGRICULTURE DEPENDS HEAVILY ON US POLLINATORS!

HONEYBEES ALONE ACCOUNT FOR ABOUT 80% OF INSECT POLLINATION!

IN FACT, ONE COLONY OF BEES CAN COLLECT 66 POUNDS OF POLLEN A YEAR!



MONARCH BUTTERFLY SPHINX MOTH POLLINATING

THE REST ARE POLLINATED MAINLY BY BUTTERFLIES, MOTHS AND BATS.

BUTTERFLIES CAN SEE THE COLOR RED, AND POLLINATE MANY FLOWERS. HONEYBEES DO NOT.

BATS AND MOTHS POLLINATE AT NIGHT AND HELP PLANTS THAT ONLY BLOOM IN THE DARK!



POLLINATORS ARE ESSENTIAL TO OUR ECOSYSTEM AND THAT MAKES AN ESSENTIAL MEMBER OF OUR TEAM!

USING MY SCEPTER I CAN HEAL WOUNDS AND MAKE PLANTS BLOSSOM AND REPRODUCE!

NOW, WE HAVE ANOTHER MEMBER TO ADD TO OUR TEAM!



HELP! HELP! HELP!

QUICK GROUP! TO THE COMMUNITY GARDEN!

Take Action!

KEEP A GARDEN FULL OF FLOWERS THAT BLOOM AT VARIOUS TIMES OF THE YEAR.

MINIMIZE USE OF PESTICIDES BY HAND PULLING WEEDS.

BUILD BAT HOUSES FOR YOUR NEIGHBORHOOD.

CONTINUED ON THE NEXT PAGE...

YOU CALLED FOR HELP?

YES, I CAN HELP.

I AM MISS Sunflower

I'VE USED MY POWERS TO ABSORB ALL THE POLLUTANTS AND TOXINS FROM THE SOIL IN THIS AREA, BUT I HAVE NOTHING TO GROW IN IT.

CAN YOU HELP ME?

BESIDES LOOKING PRETTY AND SUPPLYING HUMANS AND ANIMALS WITH FOOD, OILS AND EVEN BUILDING MATERIALS, AND PAPER, SUNFLOWERS HAVE BEEN FOUND TO BE A GOOD CHOICE FOR ENVIRONMENTAL CLEAN-UPS OR PHYTOREMEDIATION INITIATIVES.

...NOW D.K. WILL DECOMPOSE THE ORGANIC MATTER, RETURNING VITAL NUTRIENTS TO THE SOIL!

THE GREEN WILL PLANT SEEDS AND INITIATE THE GROWTH PROCESS...

THEN THE QUEEN BEE WILL POLLINATE THE VEGETATION, CAUSING PLANTS TO PRODUCE FRUIT.

FINALLY, THE ANIMALS RETURN TO EAT THE PLANTS

OR GULP! OTHER SMALLER ANIMALS FEEDING ON THE PLANTS.

AND THE WHOLE CYCLE BEGINS AGAIN!

NOW THAT WE HAVE MISS SUNFLOWER ON OUR TEAM, THERE'S ONLY ONE MORE MEMBER WE NEED TO ADD!

NOT TO WORRY MISS SUNFLOWER, I HAVE ALREADY ASSEMBLED A WISE AND WORTHY TEAM FOR YOU TO BE AN IMPORTANT PART OF.

YOU'VE ALREADY CLEANSED THE SOIL...

Take Action!

PREVENT POSSIBLE CONTAMINATION BY USING CHEMICALS SAFELY

CLEAN UP SPILLS.

CREATE HEALTHY SOILS BY MULCHING GRASS CLIPPINGS



I HAVE ASSEMBLED
A MIGHTY TEAM OF HEROES
FROM THE DIFFERENT LINKS
OF THE FOOD CHAIN AND
ECOSYSTEM.

We are

THE **Preservars**

BUT THERE
IS STILL ONE LAST MEMBER
THAT WE NEED TO ADD TO
OUR TEAM, PERHAPS THE MOST
IMPORTANT MEMBER
OF US ALL.



WHO COULD
THAT BEE?/P
LOOK BELOW AND
FIND OUT!

YOU CAN BE A NATURE SUPERHERO TOO!

EARTH AND FUTURE GENERATIONS OF PLANTS, ANIMALS AND PEOPLE NEED YOU TO BE A SUPERHERO EACH AND EVERY DAY. THE SMALL CHOICES YOU MAKE CAN HAVE A BIG IMPACT ON THE HEALTH OF PLANET EARTH. REDUCE YOUR ENVIRONMENTAL FOOTPRINT STARTING TODAY! THE FOLLOWING ACTION STEPS WILL NOT ONLY SAVE RESOURCES AND REDUCE POLLUTION, THEY MAY ALSO SAVE YOU MONEY AND HAVE POSITIVE HEALTH IMPACTS.



-  **DRIVE LESS: -CAR POOL - BIKE OR WALK WHENEVER POSSIBLE**
-  **PICK UP LITTER**
-  **GET TO KNOW YOUR FARMER OR GROW YOUR OWN FOOD**
-  **TAKE SHOWERS INSTEAD OF BATHS**
-  **UNPLUG APPLIANCES WHEN NOT IN USE**
-  **TURN OFF LIGHTS**
-  **BRING YOUR OWN REUSABLE SHOPPING BAGS TO THE GROCERY**
-  **REDUCE, RE-USE, RECYCLE, REPAIR**
-  **LEARN MORE ABOUT YOUR ENVIRONMENT**
-  **PLANT NATIVE PLANTS AND TREES**
-  **STOP THE SPREAD OF INVASIVE SPECIES:-DON'T TRANSPORT FIREWOOD -WASH BOATS AND OUTDOOR FURNITURE**
-  **BECOME A CITIZEN SCIENTIST!**

Superhero Word Search

Word Bank

C X R O D G V O W L G I R L X I J O T Q
 N D S U R P R E S E R V E R S H B Z U B
 K A I F A X U F P D E C O M P O S E R J
 W G B S L W L S F K W J L J R O X Q S R
 O R P O L L I N A T O R S N Z I B U U A
 Y E L A Y T N M V X S J N N Z L A E P K
 A E S Z Q U S N A P P E R N N Y I Q E E I
 J N U L P Y P B V T V C M N W R E N R F
 K S N Y F O R M A R S G J R S R V B H K
 F K F Z B I O D I V E R S I T Y Z E E X
 R P L B X N T S C I B G Z V S B K E R M
 O R O B C R E D H A W K P K R D H K O D
 G E W H L L C S S P A W W E C W T W Y J
 C Y E W Y I T L N J B P R E D A T O R Z
 Z L R E K G Z G H T H A B I T A T L X D

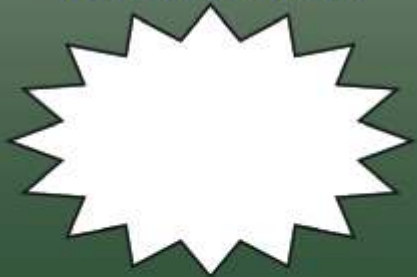
- Snapper
- Sunflower
- Red hawk
- Frog
- Owl Girl
- Decomposer
- Green
- Queen bee
- Habitat
- ForMar
- Preservers
- Superhero
- Biodiversity
- Protect
- Predator
- Prey
- Pollinator

MY COMIC IS ALL MIXED UP!
 PUT THE COMIC IN THE CORRECT ORDER
 ON THE LINE BELOW.



WRITE 3 WORDS THAT DESCRIBE
 YOUR SUPER POWERS.

Draw YOURSELF as a Superhero.



Super Sounds!

Bam! Beep! Zoom! Onomatopoeia words are everywhere in superhero comics.

What is an onomatopoeia you ask?

They are words formed by an imitation of the sound it is associated with... aka sound words. Boing... Boing... Boing! See onomatopoeias in action with our Superhero friend **The Frog!**



Test YOUR Superhero Skills

Write the missing Sound Word in each sentence.

Crunch Chirp Peep Tic-Toc Buzzzzed

1. Queen Bee _____ through the Children's Garden.
2. Owl Girl doesn't make a _____ as she flies through For-Mar.
3. I can hear the calling birds' _____.
4. The leaves make a loud _____ when I walk down the superhero trail.
5. The clock went _____ as The Green waited for the plants to grow.



Now it's your turn to try your hand at adding Onomatopoeias to the Nature's Superhero comics below.



Here are some sound words to help you with your task:

BOING!

BANG!

SPLAT!

BOOM!

ZAP!

ZAP!

POP!

CRASH!

GENESEE COUNTY PARKS

Get away. Right away.

Bluebell Beach



For-Mar Nature Preserve & Arboretum



Crossroads Village & Huckleberry Railroad



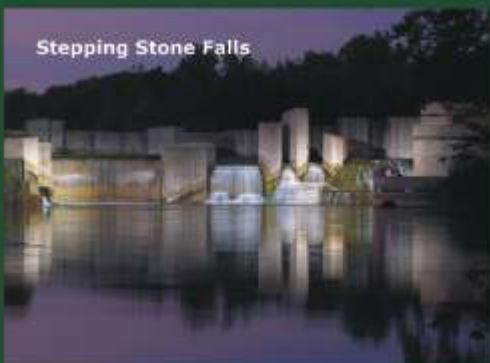
The Genesee Belle on Mott Lake



E.A. Cummings Event Center



Stepping Stone Falls



Get away. Right away. Any day.

Busy as life can be, sometimes you just need to get away, right away. Welcome to the Genesee County Parks, Michigan's largest county park system. With more than 11,000 acres of woods, rivers, lakes, trails, beaches and campgrounds, getting away in the great outdoors is as close as one of the 21 Genesee Parks. A full year of family time and fun is here whenever you need it, so when your routine starts to feel a little too routine, slip away to Mid-Michigan's favorite outdoor playground. It's just around the corner. At your Genesee County Parks.

Genesee County Parks & Recreation Commission
5045 Stanley Road, Flint, MI, 48506
800.648.PARK
www.geneseecountyparks.org
www.facebook.com/GeneseeCountyParks