

THE PRESERVERS

THIS ISSUE: A NEW MEMBER JOINS!

#3 FREE!



FOR-MAR COMICS GROUP

THE NATURE'S SUPERHEROES! PRESERVERS™



Monarch's Tale

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 & 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 to establish For-Mar Nature Preserve & 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 first Superhero Trail opened at For-Mar Nature Preserve & Arboretum. This facility of the Genesee County Parks and Recreation Commission is home to The Preservers - except when they are busy traveling, with the For-Mar staff by their side, teaching and training Genesee County residents the skills that will help them become Nature's Superheroes too. You can meet and join them on their journeys at For-Mar's special superhero programs or large community events, or you can invite them to come to your school or special event. In this edition, the team finds a hungry little caterpillar and joins her as she tells her Monarch's Tale. Through her struggles to find food and habitat and fight against forces trying to destroy our natural world, our Nature's Superhero team learns how they can not just be superheroes for nature but for monarch butterflies too! Stay tuned for the fourth edition to learn about our superhero origins and how Growing Up Green has made them the Nature's Superheroes they are today!



SOCIALIZE

#Geneseecountyparks



geneseecountyparks.org



GENESEE COUNTY PARKS

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FOR-MAR NATURE PRESERVE & ARBORETUM

geneseecountyparks.org | 800.648.PARK



2142 North Genesee Road, Burton, MI, 48509-1209

Visitor's Center Hours: 8am - 5pm Daily
 Grounds Hours: 8am - Sunset Daily

Nature Preserve: 810.789.8567
 Arboretum: 810.789.8568



MEET: *THE Preservers* NATURE'S SUPERHEROES!

GRAND MASTER SNAPPER

LEADER AND MENTOR OF THE TEAM, GRAND MASTER SNAPPER HAS BEEN AROUND FOR MANY YEARS AND KNOWS MANY THINGS!



MISS Sun-Flower



CONTROLS SUNLIGHT WHICH SHE NOT ONLY USES TO HELP THINGS GROW, BUT SHE CAN ALSO SOLIDIFY IT TO DO WHATEVER SHE CAN IMAGINE IT TO DO FOR HER!

The Frog

FANTASTIC LEAPER AND EXPERT SWIMMER, THE FROG IS ALSO AN INDICATOR SPECIES AND CHANGES FROM GREEN, TO YELLOW, TO RED DEPENDING ON THE DANGER AROUND HIM!



OWL-GIRL



A NOCTURNAL PREDATOR WHO LIVES, SEES, AND FLIES IN THE DARKNESS OF NIGHT!

MEET: THE Preservers **NATURE'S SUPERHEROES!**



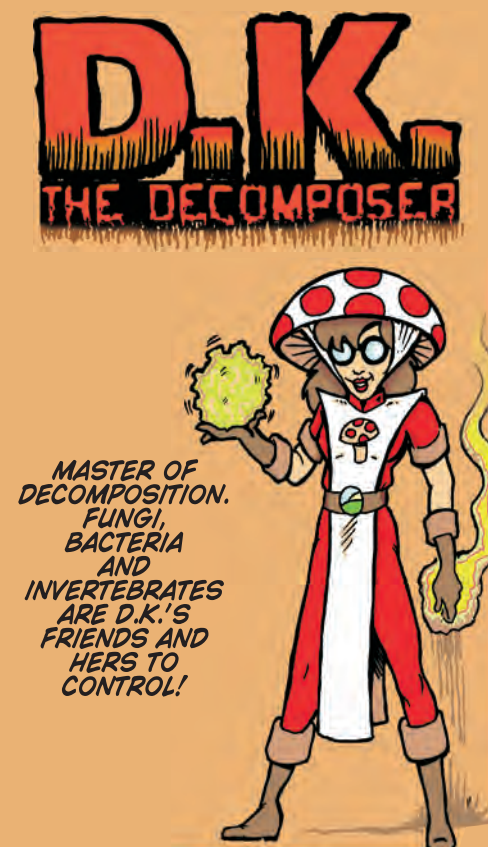
QUEEN BEE

A FLYING POLLINATOR WHO AIDS IN THE HEALTHY GROWTH OF PLANTS. HER ROSE SCEPTER CAN PACK A HEFTY STING!



RED HAWK

THIS FLYING DAYTIME TOP PREDATOR IS AS STRONG AND HEROIC AS HE IS FULL OF HIMSELF!



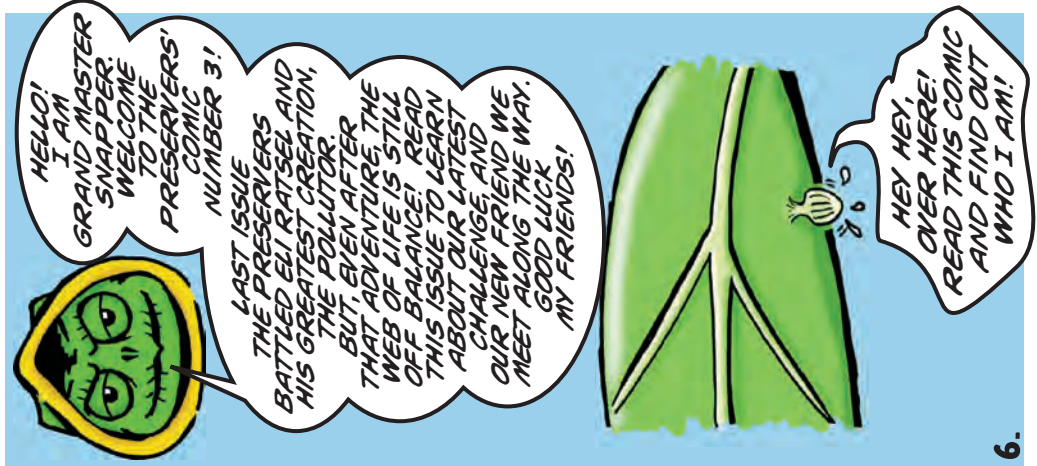
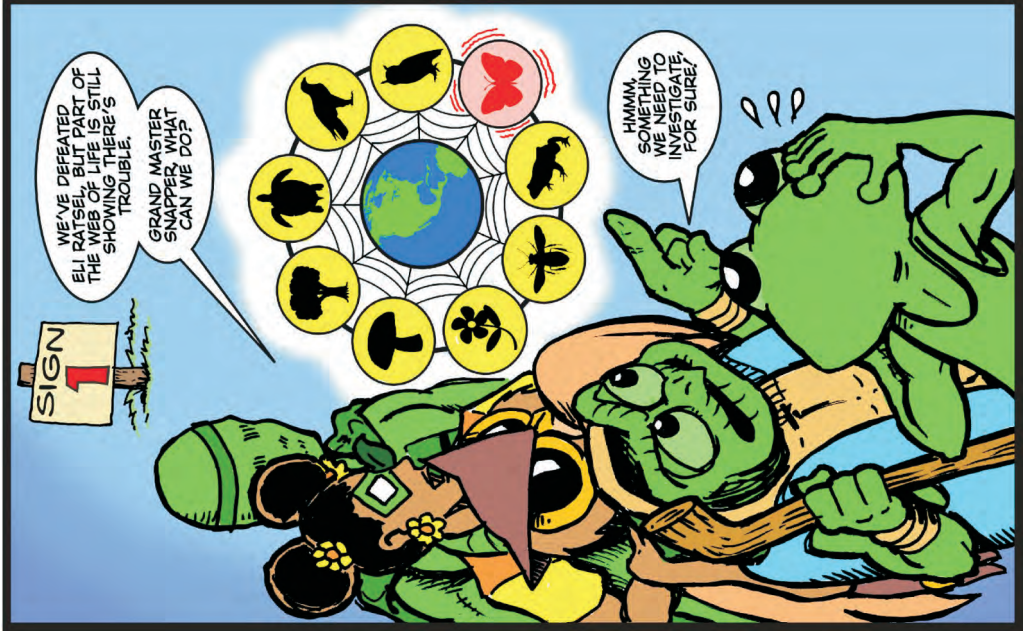
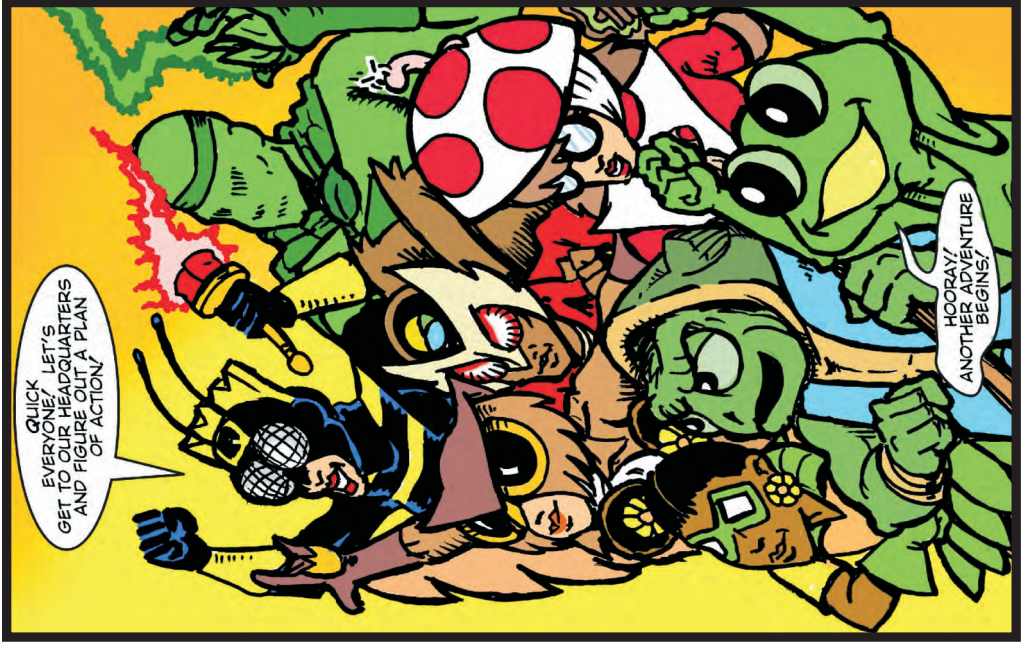
D.K.
THE DECOMPOSER

MASTER OF DECOMPOSITION. FUNGI, BACTERIA AND INVERTEBRATES ARE D.K.'S FRIENDS AND HERS TO CONTROL!

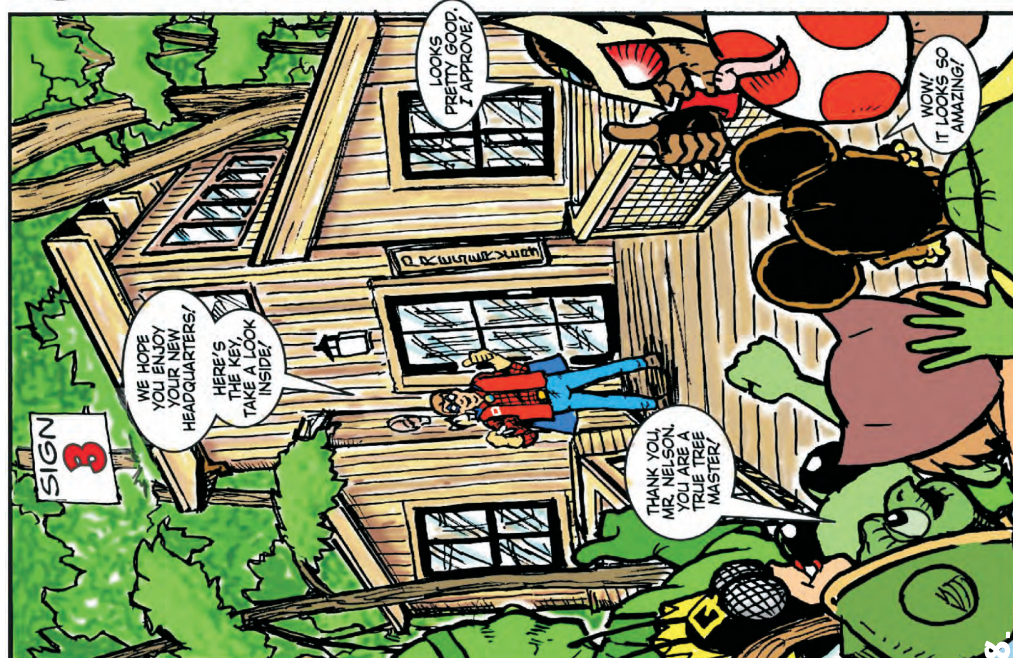
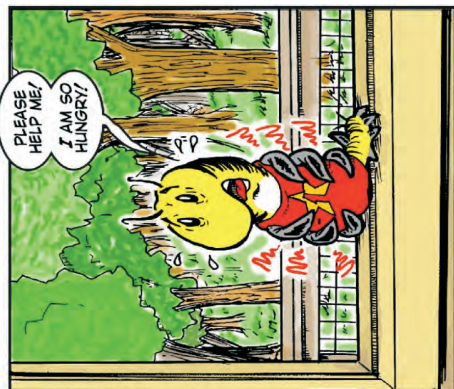


THE GREEN

TALL AND QUIET, THE GREEN CAN MAKE PLANTS AND TREES INSTANTLY GROW!







FOR-MAR'S SUPERHERO TREEHOUSE HEADQUARTERS

A couple of years ago, a group of kids from a Wild Adventurers program at For-Mar were tasked with presenting a proposal to Genesee County Parks' Director, Amy McMillan. Their goal was to prove to her a treehouse was a worthy addition for For-Mar. After truly impressing her, the Genesee County Parks Commission agreed to adding a treehouse and began saving funds to make it possible. They also applied to Nelson Treehouse and Supply with a copy of the video from that presentation. Two years later, the Parks Commission had raised sufficient funds and had begun scouting locations for a treehouse when a call from Treehouse Masters changed the plans.

Although a treehouse was in the plan, we had



no idea that we would end up with a custom built treehouse from the "treehouse master" himself, Pete Nelson. The goal was to add additional classroom space because the Visitor's Center space was operating at capacity. That meant it needed to hold at least 30 kids plus instructors. It also needed to be barrier free, allowing even those in wheelchairs an opportunity to experience the joys of being in the trees.

The crew at Nelson Treehouse and Supply came through with a beautiful AND functional

design. It took a little over a month for them to turn that design into a reality, but now visitors of all ages and abilities coming to For-Mar will have the opportunity to experience a treehouse overlooking the Kearsley Creek. Nestled back in black cherry, red oak, white oak, basswood and bitternut hickory trees, the treehouse stands approximately 30 feet above the bed of the Kearsley Creek oxbow and can be accessed by either staircase or the ramp with grades to meet ADA requirements.

To the trees!

On the inside visitors will find tools and equipment for educational programming. The treehouse has an additional level of excitement as it was designed to be the headquarters for The Preservers.

The treehouse build was featured on Animal Planet's show *Treehouse Masters* in January of 2017, season 8 episode 3. Highlights from the build can be found on Animalplanet.com. In August of 2017 the For-Mar treehouse celebrated its first birthday and that first year boasted over 55,000 people visiting the treehouse. It has become our most popular field trip location. Visit us at For-Mar Nature Preserve & Arboretum and see it for yourself!





WHILE FOR SOME FOOD FOR YOU, MY LITTLE FRIEND, TELL US ABOUT YOURSELF.

MY NAME IS KATIE PILLAR, AND I AM A MONARCH CATERPILLAR, SEARCHING FOR FOOD FOR MYSELF AND ALL MY FAMILY MEMBERS TO EAT!

I AM IN THE SECOND STAGE OF MY TRANSFORMATION TO BECOME A MONARCH BUTTERFLY!

THAT FOUR STAGE PROCESS IS KNOWN AS METAMORPHOSIS!

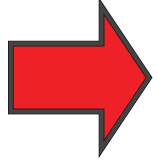
SIGN 4



HAPPY TRAVELS, PRESERVERS! I AM OFF TO BUILD SOME HOUSES IN THE TREES!

SO LONG CAPTAIN SAPPYANTS! THAT WAS HIS NAME, RIGHT?

CHECK OUT THE NEXT PAGE AND LEARN ABOUT MY LIFE CYCLE!



THE LIFE CYCLE OF THE MONARCH BUTTERFLY



MOTHER MONARCHS WILL SEARCH FOR A COMMON MILKWEED OR SWAMP MILKWEED PLANT TO LAY THEIR EGGS ON. THEY LOOK FOR LOCATIONS WITH PLENTY OF OTHER PLANTS FOR THEIR BABIES TO EAT ONCE THEY ARE HATCHED.



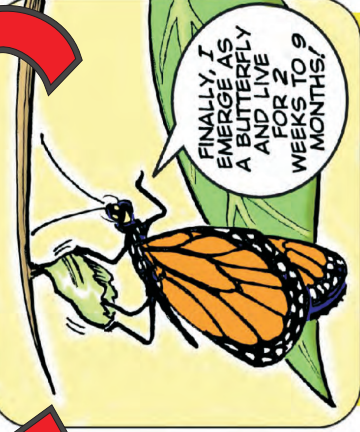
MONARCHS WILL CREATE CHRYSALISES ON MANY KINDS OF PLANTS AND STRUCTURES.

GROWING PLANTS LIKE HIBISCUS, MORNING GLORY, AND BUTTERFLY BUSH PROVIDE PLACES FOR THESE CHRYSALISES TO DEVELOP.



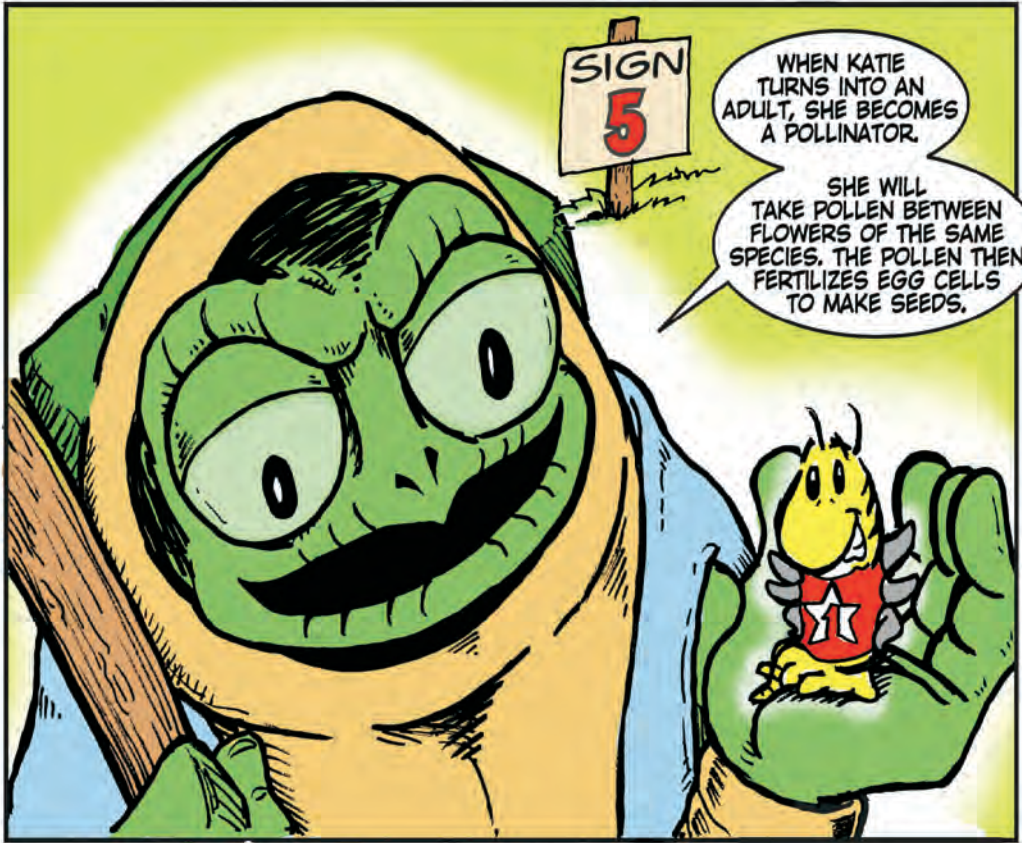
WHORLED MILKWEED IS A PREFERRED FOOD FOR MONARCH CATERPILLARS.

MILKWEED PLANTS ARE IMPORTANT BECAUSE THEY ARE THE PRIMARY FOOD SOURCE FOR THE DEVELOPING LARVAE

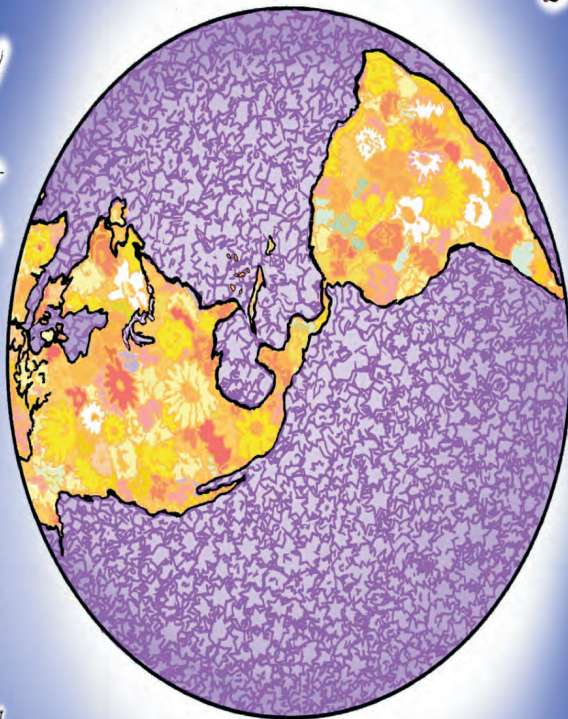


MONARCH BUTTERFLIES ARE ATTRACTED TO BRIGHT COLORS. PLANTING NATIVE FLOWERS, LIKE JOE-PYE WEED, WILL PROVIDE EXCELLENT FOOD SOURCES AND AREAS TO HIDE FOR THE BUTTERFLIES.





A WORLD OF POLLINATORS



LESSER LONG-NOSED BAT
(*LEPTOTERUS SACAEVE VENTRAE*)
POLLINATES THE
WHERE: MEXICO, ARIZONA,
NEW MEXICO AND TEXAS



BLUE-TAILED DAY GECKO
(*PHYLLOSCOPUS TETRACHETA*)
POLLINATES THE
FLOWER
MASTITUBS IN THE
INDIAN OCEAN



KINKAJOU
(*PROTOS FASCIUS*)
POLLINATES THE
WHERE: CENTRAL AND SOUTH
AMERICA



BUMBLEBEE
(*BOMBUS*)
POLLINATES
WHERE: MOST OF
NORTH AMERICA



SNOW MOSQUITO
(*ANOPHELES*)
POLLINATES
WHERE: NEW JERSEY



BLACK LEMURS
(*LEMUROS*)
THE TRAVELLERS PALM PLANT
WHERE: MADAGASCAR



CHOCOLATE MIDGE
(*GERTATEROPODIDAE*)
POLLINATES CACAO TREES
(CHOCOLATE)
WHERE: AFRICA
AND ASIA



SWIFT PARROT
(*STREPTOPARUS*)
POLLINATES THE
WHERE: AUSTRALIA



NORONHA SKINK
(*TELEOMYLIS ATLANTICA*)
POLLINATES THE
WHERE: NORTHEASTERN BRAZIL



CAPE ROCK SENGI
(*ELEPHANTINUS*)
POLLINATES
WHERE: SOUTH AFRICA



Me la Flint



Mom la Tennessee

THERE'S A WHOLE WORLD OF POLLINATORS OUT THERE. MY FAMILY HAS MET MANY OF THEM ON THEIR MIGRATION, AND WE REALLY GET AROUND!

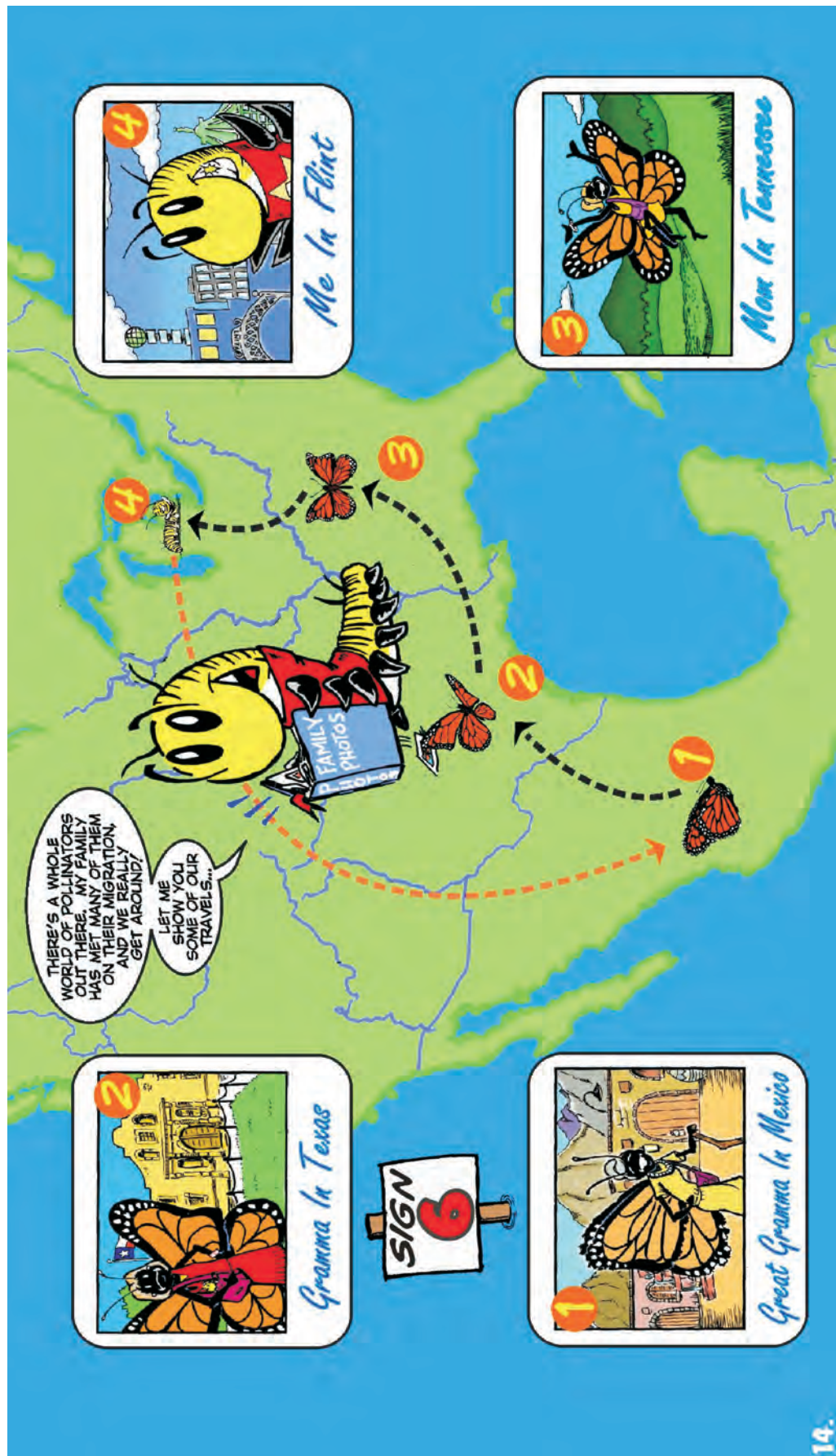
LET ME SHOW YOU SOME OF OUR TRAVELS...

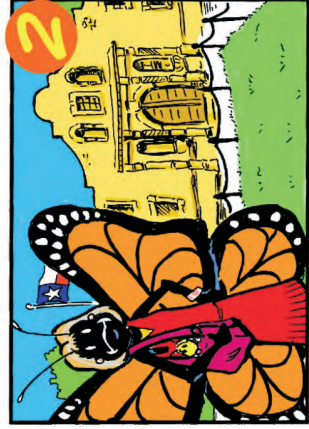
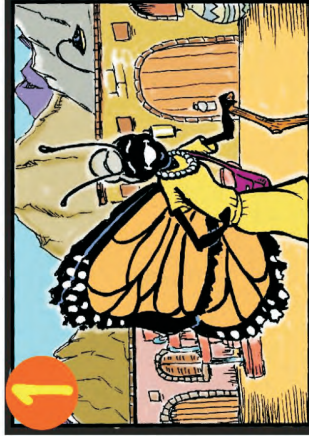


Gramma la Texas



Great Gramma la Mexico

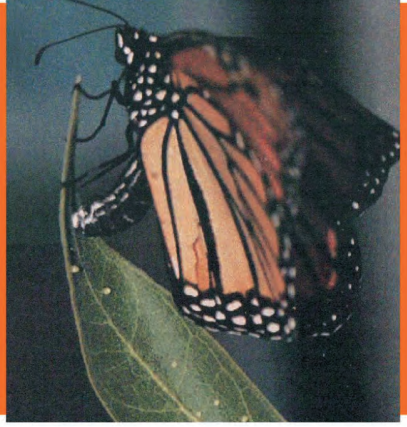




GREAT GRAMMA'S GENERATION SPENDS HER WINTER HIBERNATING IN MEXICO AND SOUTHERN CALIFORNIA, IN EITHER OYAMEL FIR OR EUCALYPTUS TREES.



GRAMMA'S GENERATION HEADS NORTH TO LOOK FOR MILKWEED PLANTS TO LAY HER EGGS ON, THAT USUALLY GETS HER AROUND TEXAS.



MOM'S GENERATION ONLY LIVES 3 TO 5 WEEKS COMPARED TO 8 OR 9 MONTHS FOR THE OVER-WINTERING ADULTS. SO THEY MAKE SEVERAL STOPS WHILE ON THEIR WAY NORTH TO MICHIGAN.



I CAN'T SURVIVE THE WINTERS HERE IN MICHIGAN SO I'LL BE FLYING SOUTH 3000 MILES TO MEXICO OR CALIFORNIA AROUND SEPTEMBER - NOVEMBER. MY GENERATION IS ACTUALLY LARGER THAN THE OTHERS AND CAN HAVE A WINGSPAN OF OVER 4 INCHES!



"A HABITAT IS ANY ANIMAL'S OR PLANT'S HOME IN NATURE WHERE THEY CAN FIND FOOD, WATER, SHELTER, SPACE AND FRESH AIR."

TODDLING TADPOLES!
I'VE TURNED RED!
THERE MUST BE PROBLEMS
WITH OUR MONARCH
HABITAT'S???

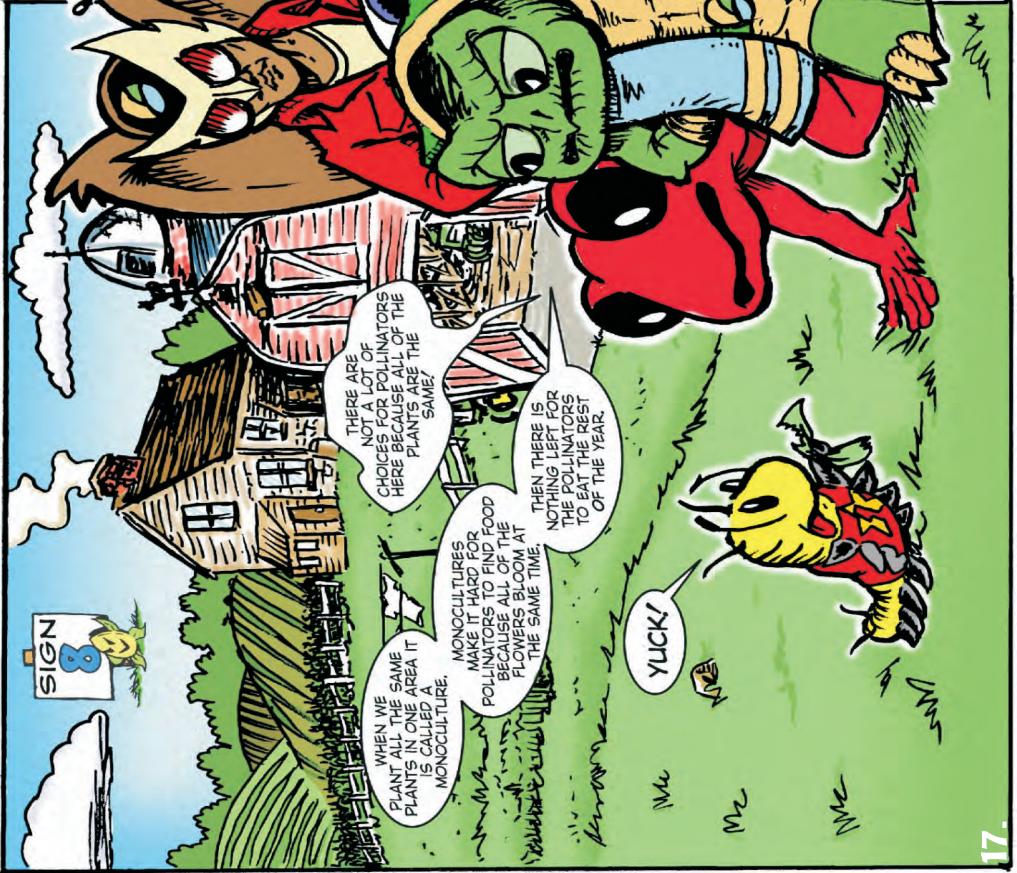
WHAT'S A
HABITAT?

LET
ME TELL
YOU LITTLE
ONE...

UNFORTUNATELY,
DUE TO INVASIVE
SPECIES, ELI RATSSEL'S
REPLICATORS, AND
OTHER FACTORS,
KATIE'S HABITAT IS
EXPERIENCING A
NUMBER OF
DISRUPTIONS!

LET ME
EXPLAIN...

**CONTINUED ON
THE NEXT SIGN...**



SIGN

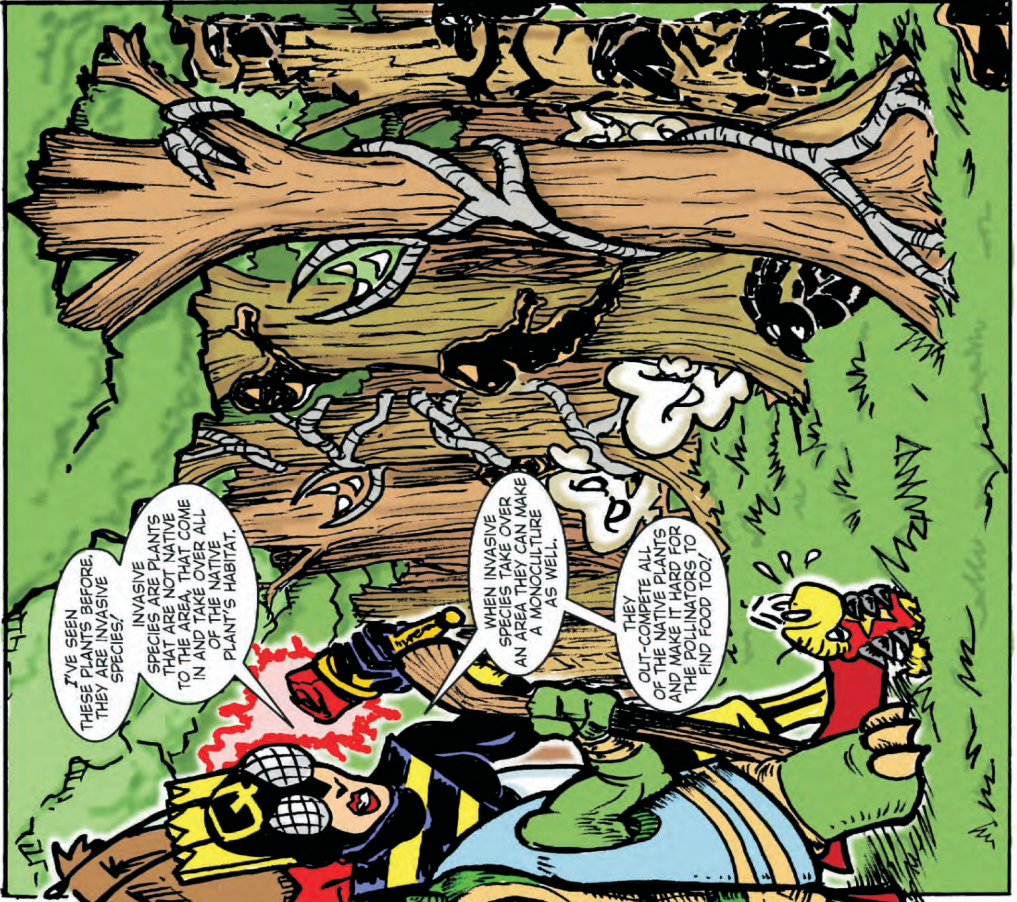
WHEN WE PLANT ALL THE SAME PLANTS IN ONE AREA IT IS CALLED A MONOCULTURE.

MONOCULTURES MAKE IT HARD FOR POLLINATORS TO FIND FOOD BECAUSE ALL OF THE FLOWERS BLOOM AT THE SAME TIME.

THEN THERE IS NOTHING LEFT FOR THE POLLINATORS TO EAT THE REST OF THE YEAR.

THERE ARE NOT A LOT OF CHOICES FOR POLLINATORS HERE BECAUSE ALL OF THE PLANTS ARE THE SAME!

YUCK!



I'VE SEEN THESE PLANTS BEFORE. THEY ARE INVASIVE SPECIES!

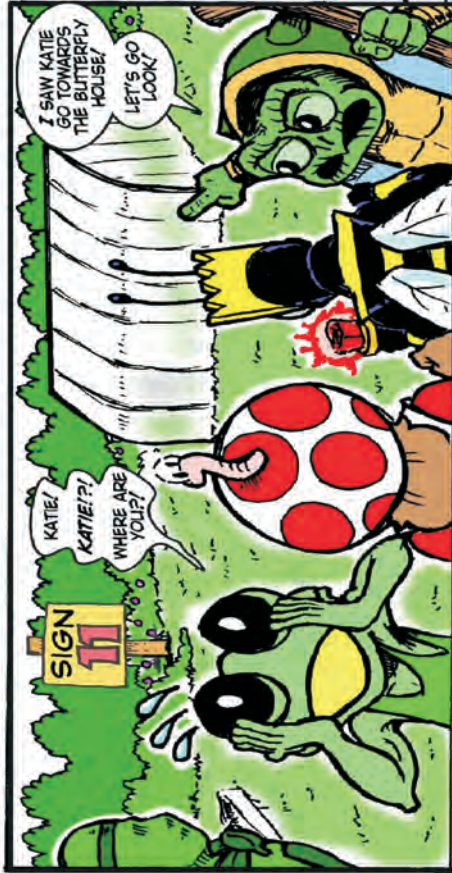
INVASIVE SPECIES ARE PLANTS THAT ARE NOT NATIVE TO THE AREA, THAT COME IN AND TAKE OVER ALL OF THE NATIVE PLANT'S HABITAT.

WHEN INVASIVE SPECIES TAKE OVER AN AREA THEY CAN MAKE A MONOCULTURE AS WELL.

THEY OUT-COMPETE ALL OF THE NATIVE PLANTS AND MAKE IT HARD FOR THE POLLINATORS TO FIND FOOD TOO!



**CONTINUED ON
THE NEXT SIGN...**



SIGN

KATIE!
KATIE?!
WHERE ARE YOU?!

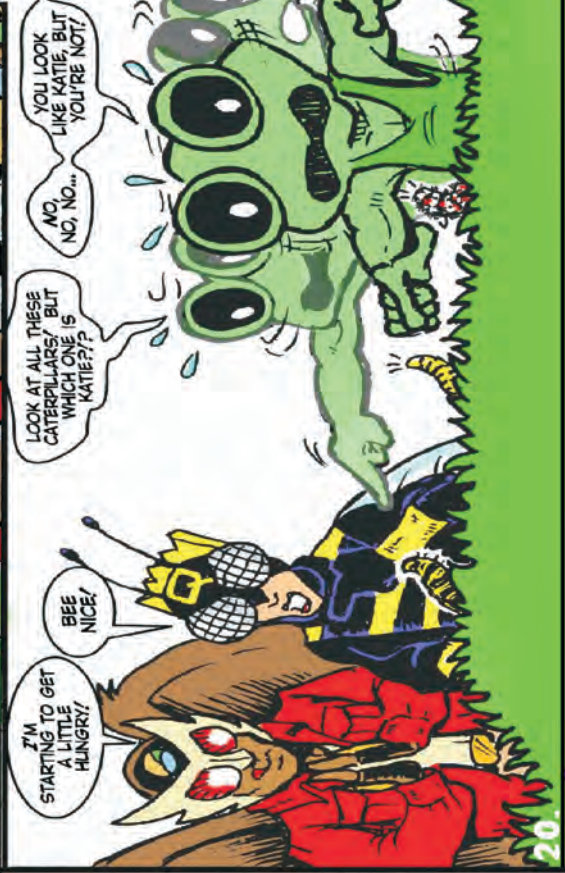
I SAW KATE GO TOWARDS THE BUTTERFLY HOUSE!
LET'S GO LOOK!



SHORTLY, INSIDE THE BUTTERFLY HOUSE...

WOW!
LOOK AT THIS PLACE AND ALL THESE PLANTS!

HEY PRESERVERS!
I THINK KATE'S OVER HERE!



I'M STARTING TO GET A LITTLE HUNGRY!

BEE NICE!

LOOK AT ALL THESE CATERpillARS! BUT WHICH ONE IS KATIE??

NO, NO... NO, NO... NO, NO... YOU LOOK LIKE KATIE, BUT YOU'RE NOT!



NO, NO... NO, NO... NO, NO... YOU LOOK LIKE KATIE, BUT YOU'RE NOT!

PERHAPS KATE HAS GONE INTO THE THIRD STAGE OF METAMORPHOSIS, A CHRYSALIS.

THERE'S A CHRYSALIS OVER HERE!

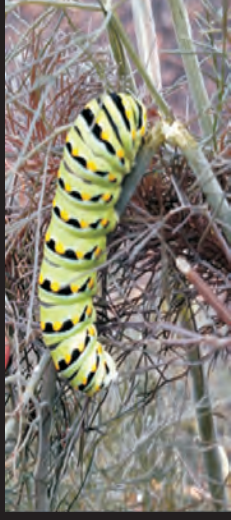
CONTINUED ON THE NEXT SIGN...

BE ON
THE LOOKOUT
FOR MY NATIVE
CATERPILLAR
FRIENDS!

VISIT MY
BUDDIES AT
FOR-MAR'S
CATERPILLAR
HOUSE!



AMERICAN LADY



BLACK SWALLOWTAIL



EASTERN COMMA



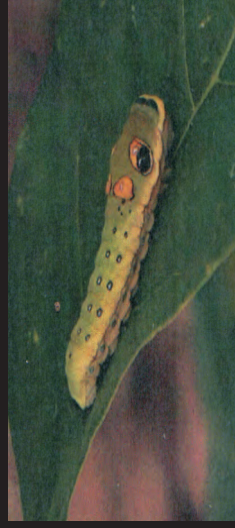
MONARCH



RED ADMIRAL



QUESTION MARK

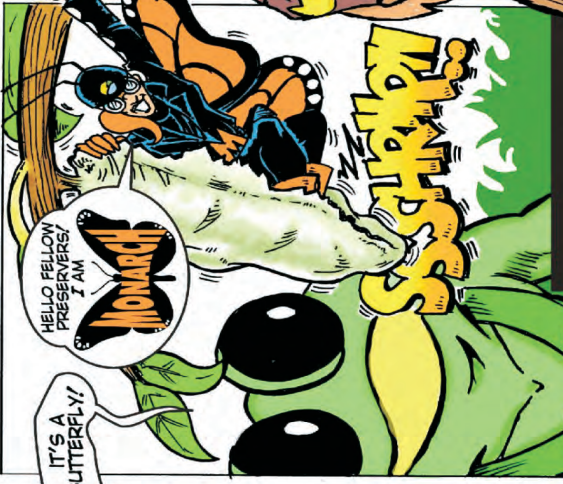


SPICEBUSH SWALLOWTAIL



WE HAVE A NEW HEADQUARTERS, YOU KNOW!

WELCOME TO THE PRESERVERS MONARCH!



HELLO FELLOW PRESERVERS, I AM **MONARCH**

IT'S A BUTTERFLY!

THERE'S SOMETHING COMING OUT!

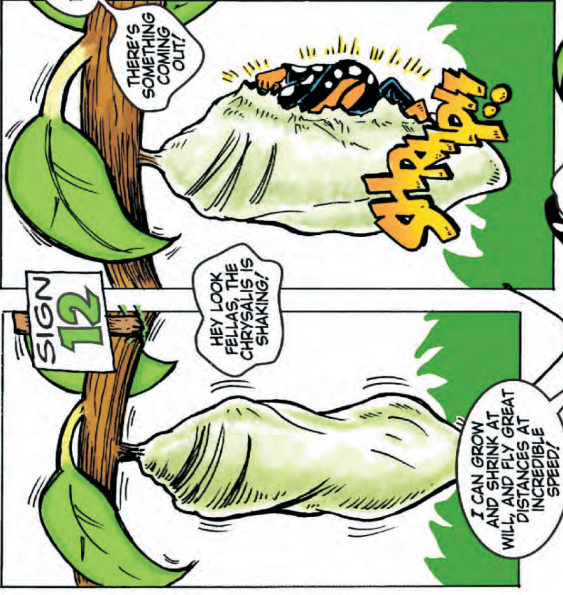
HEY LOOK FELLAS THE CHRYSALIS IS SHAKING!

SIGN 12

I CAN GROW AND SHRINK AT WILL. I'M A GREAT DISTANCE AT INCREASE SPEED!



THAT SPOT MIGHT BE HARD TO SEE UNLESS THE MALE SPREADS HIS WINGS.



WELL, MR MONARCH!

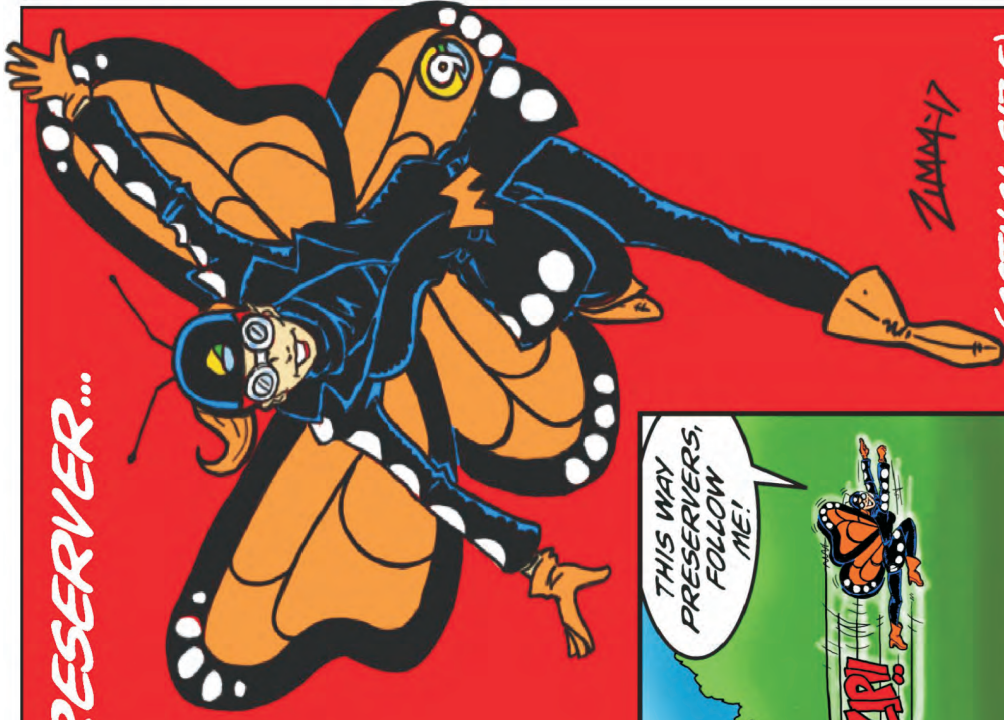
NO FROG, I AM A FEMALE MONARCH!

YOU CAN TELL BY MY LARGER WING VEINS, PLUS THE MALES ALL HAVE A SPOT ON THEIR LOWER WINGS.

INTRODUCING: THE NEWEST PRESERVER...



*MONARCH
CAN GROW
AND SHRINK
AT WILL,
FLY INCREDIBLY
FAST AND
TRAVEL LONG
DISTANCES.*



ZIMM-17

(ACTUAL SIZE)



SIGN 13

SO GLAD TO BE A PART OF YOUR TEAM, THE PRESERVERS. BUT I'LL NEVER STAY IN ONE PLACE FOR LONG. IT'S TIME FOR ME TO TRAVEL ON!

THEN LET US "TAG" YOU WITH THIS STICKER ON YOUR WING SO WE CAN FOLLOW YOUR ADVENTURES!

NEAT-O!



THE STICKER "TAG" PUT ON A MONARCH WING ALLOWS SCIENTISTS TO TRACK THE MIGRATION ROUTE OF INDIVIDUAL MONARCHS, WHICH WILL HELP US BETTER UNDERSTAND THE LIFE CYCLE OF THE MONARCH, AND HOW WE CAN PROTECT THEM.



SO LONG FELLOW PRESERVERS! I'LL STAY IN TOUCH AND RETURN OFTEN!

NEXT TIME WE'RE GROWING UP GREEN!

WATCH ME AND MY MONARCH FRIENDS ON OUR MARATHON JOURNEY AND LEARN MORE ABOUT MONARCHS AND HOW YOU CAN BE A SUPERHERO FOR MONARCHS TOO! VISIT MONARCHWATCH.ORG

LOOK FOR OUR NEXT BUTTERFLY PROGRAM AT GENESEECOUNTYPARKS.ORG.



HAVE YOU SPOTTED ANY OF MY FRIENDS IN YOUR BACK YARD?

MONARCH BUTTERFLIES AND CATERpillARS ARE EASY TO ATTRACT AND WOULD LOVE A NICE SPOT TO REST!

CHECK OUT THIS GREAT RESOURCE!



Monarch Watch.org
Education • Conservation • Research



- IT'S REALLY EASY TO CREATE A MONARCH WAYSTATION RIGHT IN YOUR OWN BACK YARD! HERE'S A FEW THINGS YOUR WAYSTATION SHOULD INCLUDE:
- SPACE!** CHOOSE ONE SPOT OR TWO IN YOUR YARD. YOU WILL NEED SOME SPACE FOR HABITAT MUST HAVES.
 - SUN!** AND LOTS OF IT!
 - FOOD!** MILKWEED IS EASY TO GROW AND THERE ARE SEVERAL VARIETIES! SEE PAGE 11 FOR MORE FOOD DETAILS!
 - SHELTER!** A WAY FOR BUTTERFLIES TO TAKE COVER FROM BAD WEATHER OR OTHER CRITTERS. FOR MORE DETAILS SEE PAGE 11!
 - A PLAN!** IT'S A GOOD IDEA TO HAVE A PLAN TO KEEP YOUR BUTTERFLY HABITAT HEALTHY. WATERING THE PLANTS OR CREATING A DRINKING POOL FOR BUTTERFLIES ARE TWO EASY WAYS TO MAINTAIN THE HABITAT.



MEET THE NEWEST MONARCH AT FOR-MAR!

This Sculpture was made possible by the Lighter, Quicker, Cheaper, Shaping Neighborhoods and Cities through Placemaking grant from the Michigan Realtors®. The East Central Association of Realtors, Inc. submitted the application on our behalf.



Using the funding, we were able to work with local artist, Ryan Gregory, to create a one-of-a-kind monarch sculpture that will be placed near the Butterfly House at For-Mar in the Spring of 2018. The unique sculpture is made from metal objects sourced from local scrap yards creating an anatomically correct Monarch Butterfly Sculpture.

DRAW THE BUTTERFLY'S METAMORPHOSIS!

STARTING FROM AN EGG ON A LEAF

GROWING AS A CATERPILLAR

DRAW THE FOUR STAGES OF A BUTTERFLY'S LIFE CYCLE!



IF YOU NEED HELP, LOOK AT PAGE 11!

EMERGING FROM THE CHRYSALIS A FULLY FORMED BUTTERFLY THAT WILL EVENTUALLY LAY EGGS AND START THE CYCLE OVER AGAIN!

MERGING INTO A CHRYSALIS HANGING FROM A PLANT BRANCH

COUNT THE MALE MONARCHS



CAN YOU FIND ALL THE MALE MONARCH BUTTERFLYS IN THIS PICTURE?

FOR HELP LOOK AT PAGE 22!



**FIND THE ITEMS
A MONARCH
NEEDS FOR A
HEALTHY HABITAT:**

- FOOD**
- WATER**
- SUN**
- SHELTER**



GET AWAY. RIGHT AWAY. ANY DAY.

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Buell Lake County Park



For-Mar Nature Preserve & Arboretum



Crossroads Village & Huckleberry Railroad



Wolverine Campground



E.A. Cummings Event Center



Stepping Stone Falls

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 Genesee Parks. 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.



GENESEEE COUNTY PARKS
Get away. Right away.