

THE PRESERVERS

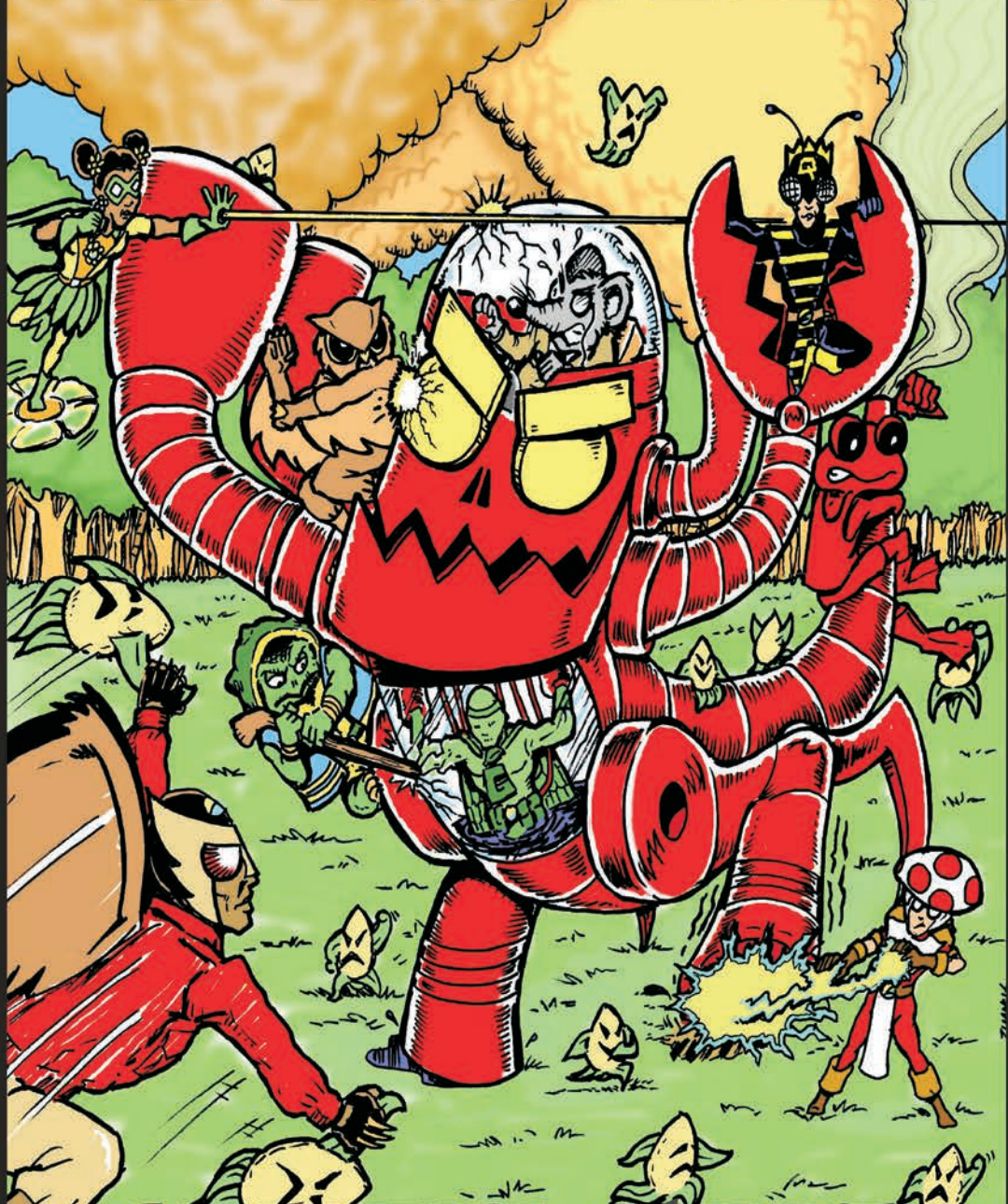
FOR-MAR COMICS GROUP



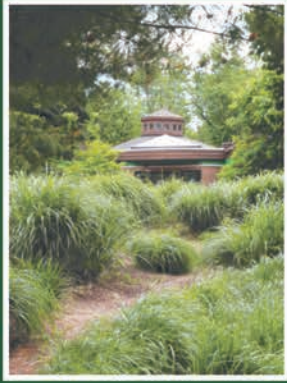
#2 FREE!

THE NATURE'S SUPERHEROES! PRESERVERS

TM



SAVE THE GREEN!



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 and 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. Join them at For-Mar's special Superhero programs and large community events, or invite them to come to your school or special event. In this edition the adventure continues as The Preservers battle against forces trying to destroy our natural world and *Save the Green*. Stay tuned for the Third Edition to learn more about the new treehouse headquarters built by the *Treehouse Masters* just for them and visitors at For-Mar Nature Preserve & Arboretum.



SOCIALIZE #Geneseecountyparks
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GENESEE COUNTY PARKS
Get away. Right away.

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!



D.K. THE DECOMPOSER

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

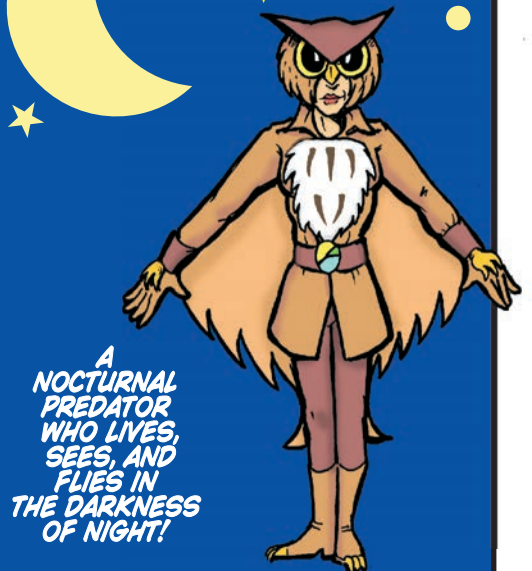


MISS SUNFLOWER



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!

OWL-GIRL



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

MEET: *THE Preservers* NATURE'S SUPERHEROES!

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!

THE GREEN



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

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!

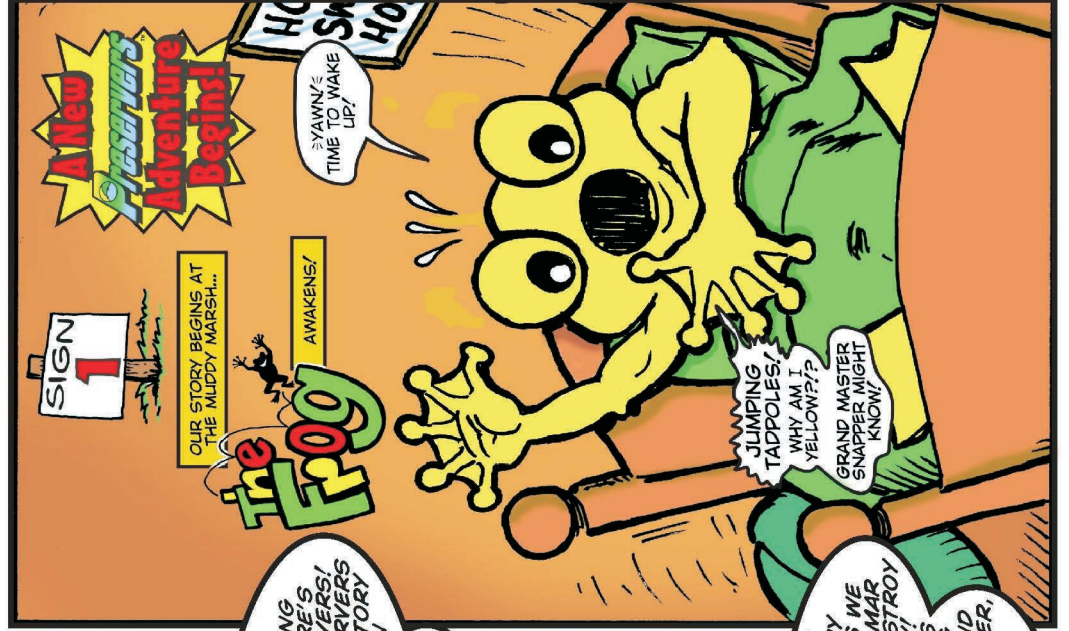


A QUICK HOP TO GRAND MASTER'S MIDHOLE AND...

HELLO GRAND MASTER! LOOK AT ME, I'M YELLOW!

YES, COME IN MR. FROG! WE MUST FIGURE OUT WHAT'S WRONG!

Zippin's



A New Adventure Begins!

SIGN 1

OUR STORY BEGINS AT THE MUDDY MARSH...

The Frog

AWAKENS!

YAWN! TIME TO WAKE UP!

JUMPING TADPOLES! WHY AM I YELLOW??

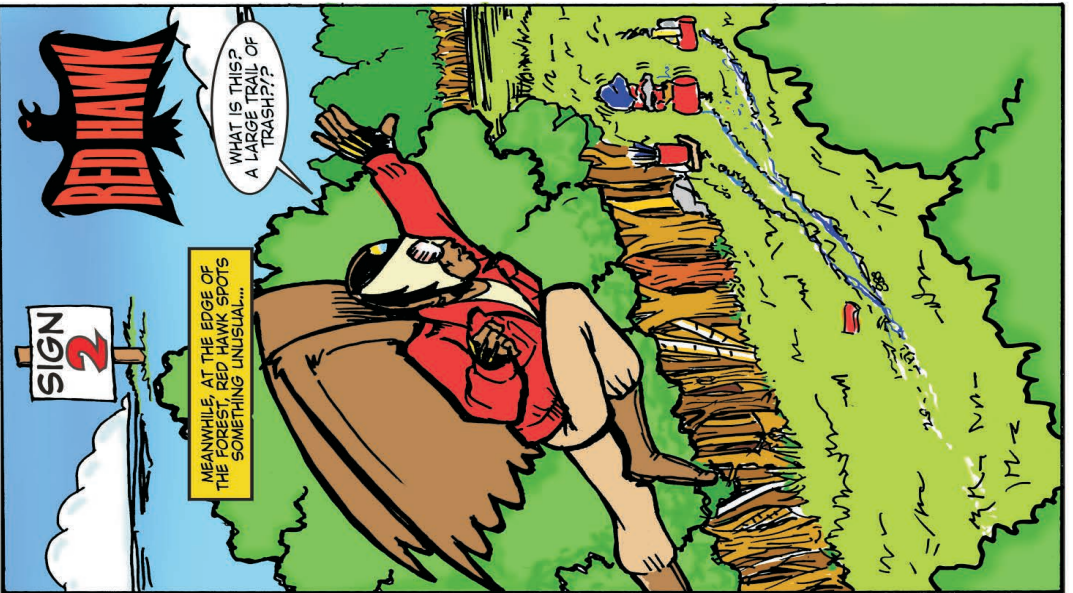
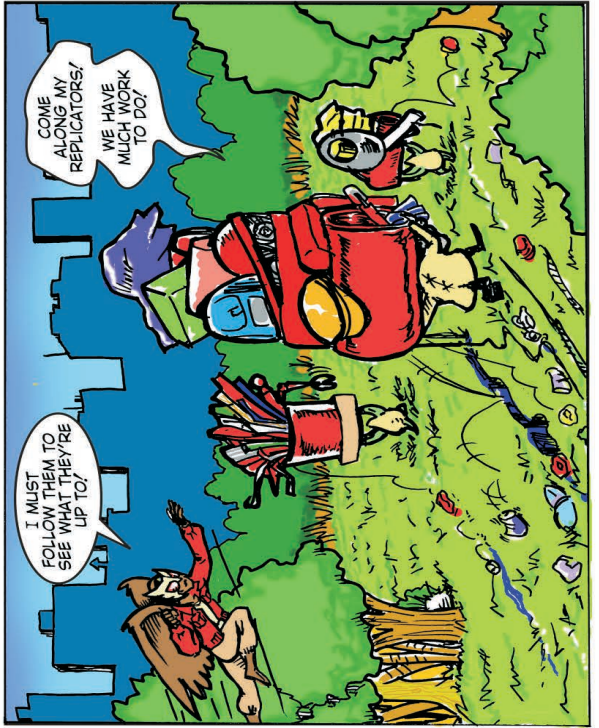
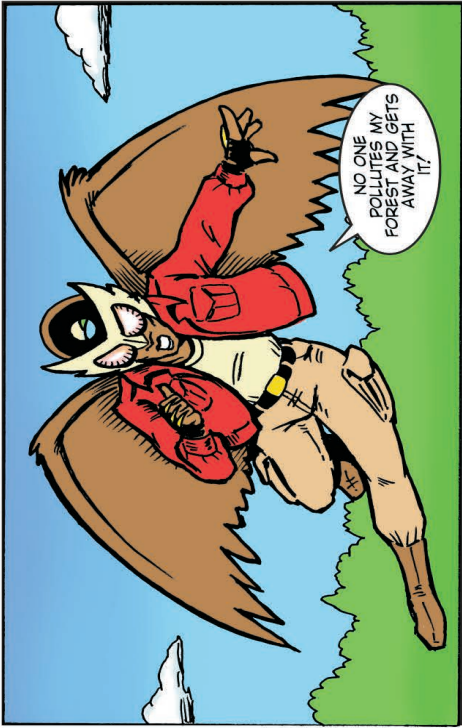
GRAND MASTER SNAPPER MIGHT KNOW!

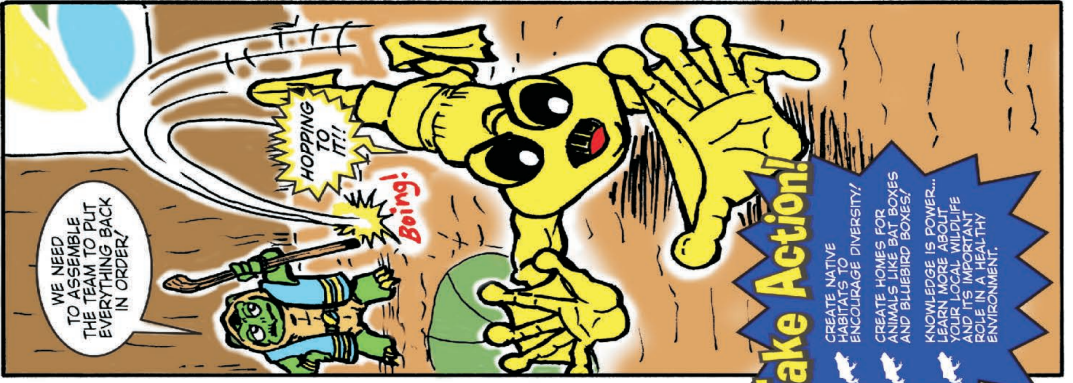


SOMETHING IS NOT RIGHT AT FOR-MAR! THE GREEN HAS GONE MISSING AND I MUST ASSEMBLE NATURE'S SUPERHERO TEAM, THE PRESERVERS! IT IS UP TO YOU AND THE PRESERVERS TO FOLLOW ALONG WITH THE STORY AND HELP SAVE THE GREEN FROM THE EVIL VILLAINS LOOKING TO HARM OUR NATURAL HABITAT! GOOD LUCK, MY FRIENDS!



IT IS I, ELI RATSEL! WITH THE HELP OF MY SUPER VILLAIN FRIENDS WE HAVE MOVED INTO FOR-MAR AND ARE LOOKING TO DESTROY ITS NATURAL BEAUTY! ME AND MY BUDDIES ARE HERE PLANTING INVASIVE SPECIES AND POLLUTING YOUR WATER, AIR AND LAND! STOP ME, IF YOU DARE!



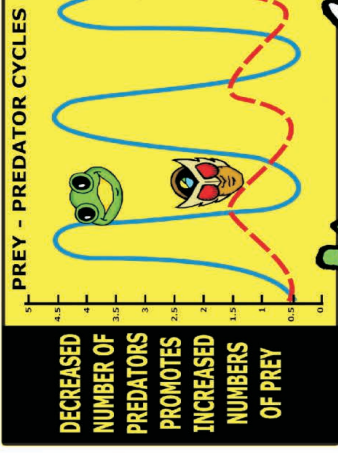
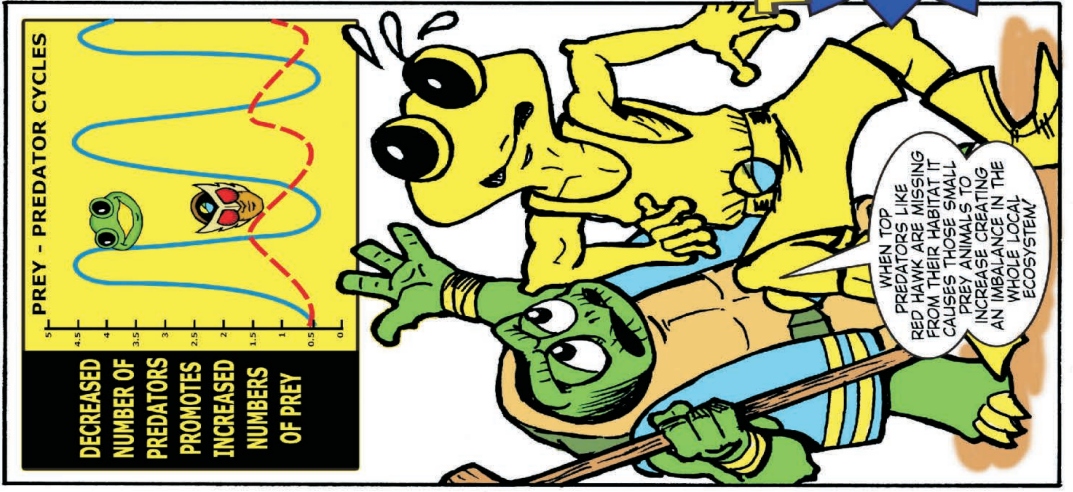


WE NEED TO ASSEMBLE THE TEAM TO PLIT EVERYTHING BACK IN ORDER.

Take Action!

CREATE NATIVE HABITATS TO ENCOURAGE DIVERSITY!
 CREATE HOMES FOR ANIMALS LIKE BAT BOXES AND BLUEBIRD BOXES!

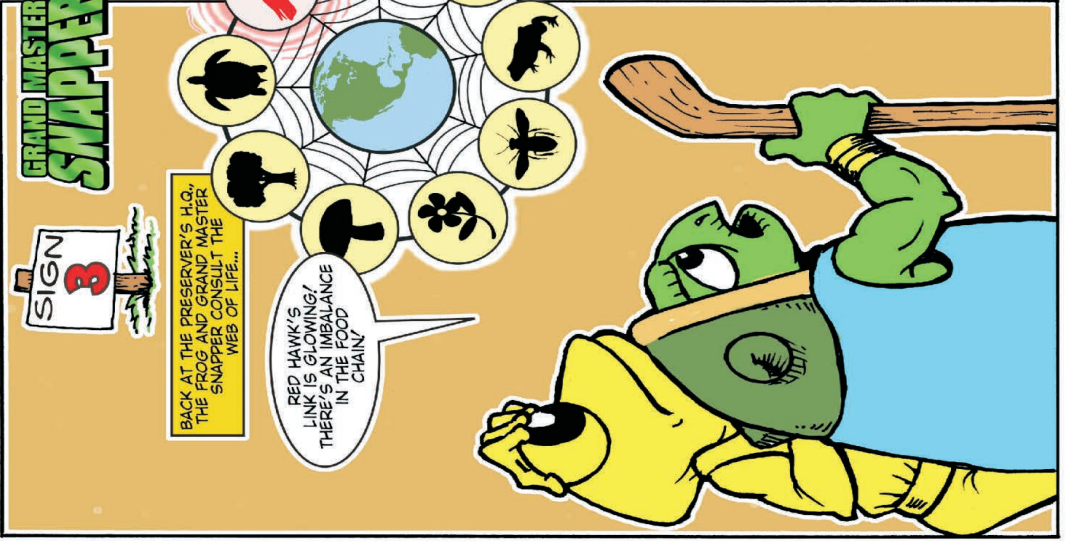
KNOWLEDGE IS POWER... YOUR LOCAL WILDLIFE AND ITS IMPORTANT ROLE IN A HEALTHY ENVIRONMENT.



WHEN TOP PREDATORS LIKE RED HAWK ARE MISSING FROM THEIR HABITAT IT CAUSES THOSE SMALL PREY ANIMALS TO INCREASE CREATING AN IMBALANCE IN THE LOCAL ECOSYSTEM!



RED HAWK IS MISSING AND HIS ABSENCE IS CAUSING AN INCREASE IN PREY ANIMALS LIKE MICE AND OTHER SMALL WOODLAND CREATURES.



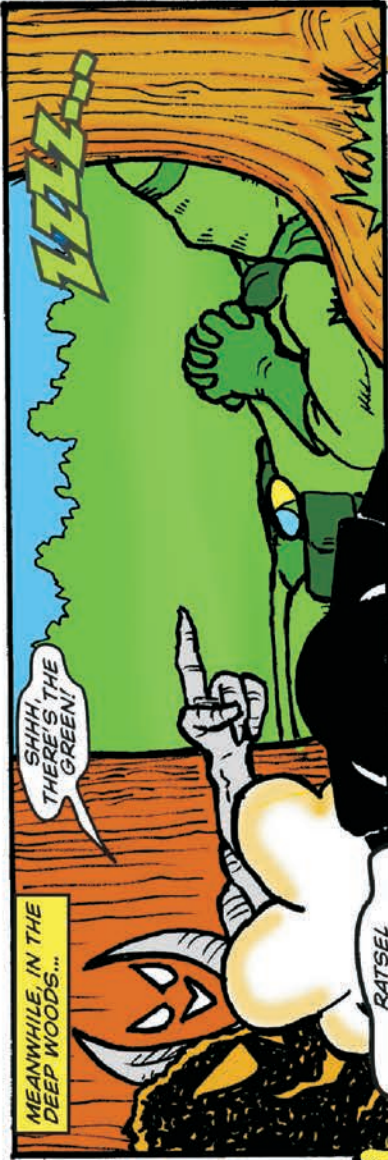
GRAND MASTER SNAPPER

SIGN 3

BACK AT THE PRESERVER'S H.Q., THE FROG AND GRAND MASTER SNAPPER CONSULT THE WEB OF LIFE...



RED HAWK'S LINK IS GLOWING! THERE'S AN IMBALANCE IN THE FOOD CHAIN!



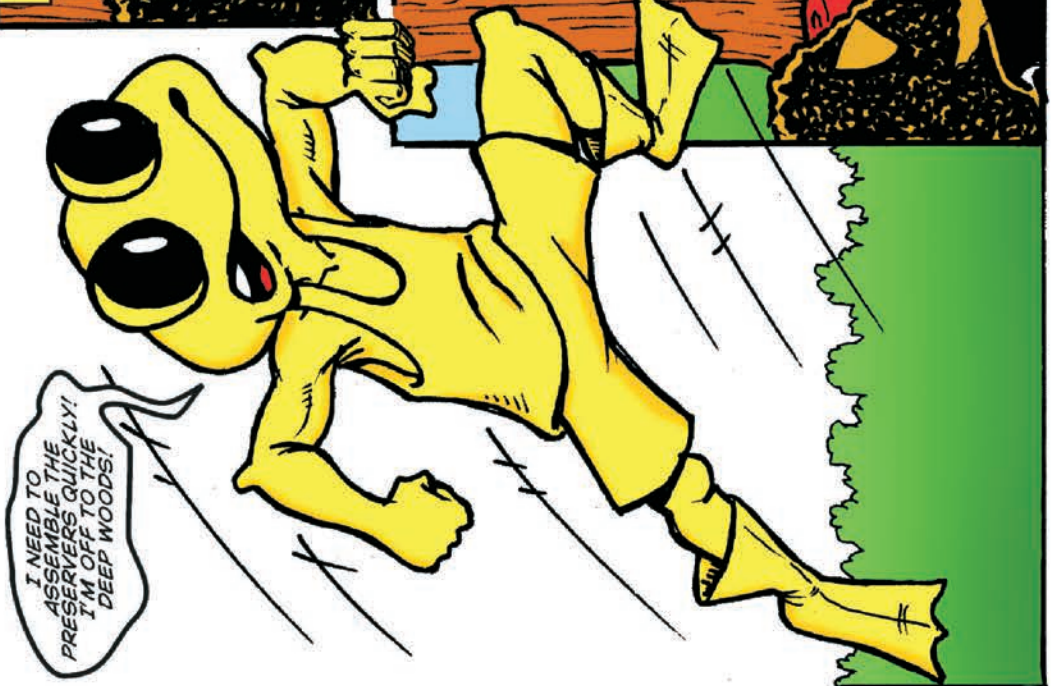
MEANWHILE IN THE DEEP WOODS...

SHHHH THERE'S THE GREEN!



RATSEL SAID TO CATCH HIM ALONE AND BIND HIM TIGHT!

IF WE ALL TAKE HIM AT ONCE HE WON'T STAND A CHANCE! GET YOUR GROUPS TOGETHER...



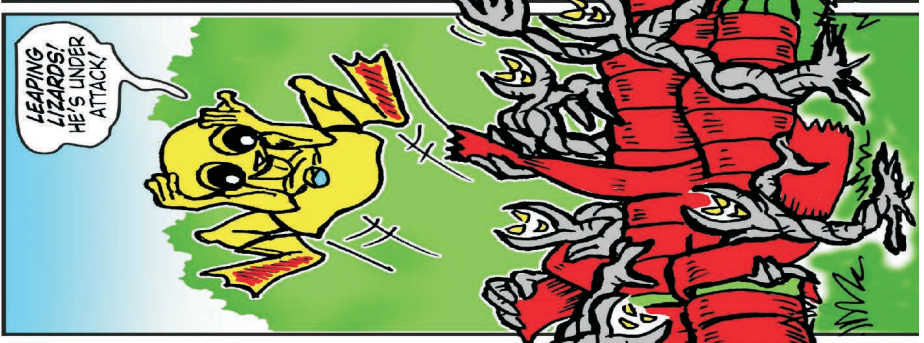
I NEED TO ASSEMBLE THE PRESERVERS QUICKLY! I'M OFF TO THE DEEP WOODS!



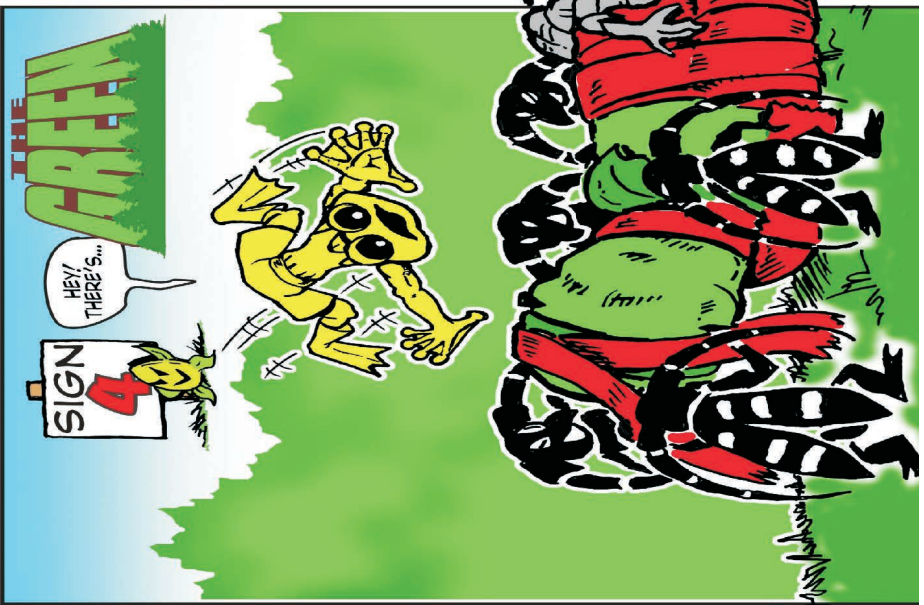
I NEED TO GET HIM TO HELP TOO!



THE INVASIVE SPECIES HAVE OVERWHELMED THE GREEN!



LEAPING LIZARDS! HE'S UNDER ATTACK!



HEY! THERE'S...

SIGN 4

THE GREEN




**WHO IS THIS
INVASIVE INSECT?
ASIAN LONGHORN BEETLE**

THIS STARRY NIGHT BEETLE IS BLACK AND WHITE, AND IS QUITE A SIGHT. IT BORES ITS WAY THROUGH THE TRUNK AND DESTROYS IT FROM THE INSIDE OUT.




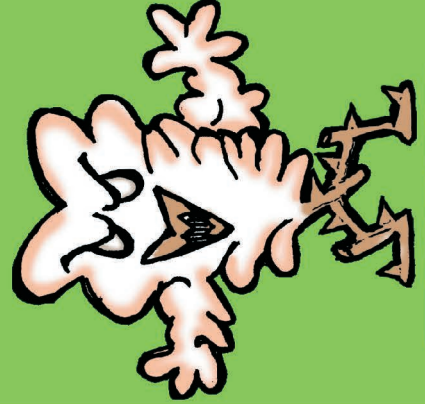

**WHO IS THIS
VICIOUS VINE?
ORIENTAL BITTERSWEET**

THIS INVASIVE VINE PRODUCES COLORFUL SEED THAT IS ATTRACTIVE IN LATE FALL AND EARLY WINTER. AS IT GROWS THE VINE WRAPS ITSELF AROUND A TREE FOR SUPPORT AND OVER TIME STRANGLES THE TREE, OFTEN KILLING IT.


**WHO IS THIS
FRIGHTENING FUNGUS?
OAK WILT**

THIS FUNGUS PIGGY BACKS ON ITS WAY FROM TREE TO TREE ON A SMALL BEETLE AND WHEN IT GETS INTO AN OAK IT CLOGS UP THE VESSELS THAT TRANSPORT WATER WITHIN THE TREE.

**WHO IS THIS
TERRIFYING TREE?
BLACK LOCUST**

THIS INVASIVE TREE DISGUISES ITS BAD INTENTIONS, (AND THORNS) BEHIND BEAUTIFUL AND FRAGRANT FLOWERS, BUT DON'T LET ITS DISGUISE FOOL YOU. BELOW GROUND ITS ROOTS LET OFF A TOXIN THAT PREVENTS OUR NATIVE PLANTS FROM GROWING.



How Long UnrTV It's Gone?

GLASS BOTTLE	1 MILLION YEARS
MONOFILAMENT FISHING LINE ..	600 YEARS
PLASTIC BEVERAGE BOTTLES	450 YEARS
DISPOSABLE DIAPERS	450 YEARS
ALUMINUM CANS	80-200 YEARS
FOAMED PLASTIC BUOY	80 YEARS
RUBBER BOOT SOLE	50-80 YEARS
FOAMED PLASTIC CUP	50 YEARS
TIN CAN	50 YEARS
LEATHER	50 YEARS
NYLON FABRIC	30-40 YEARS
PLASTIC FILM CANISTER	20-30 YEARS
PLASTIC BAG	10-20 YEARS
CIGARETTE FILTER	1-5 YEARS
WOOL SOCK	1-5 YEARS
PLYWOOD	1-3 YEARS
WAXED MILK CARTON	3 MONTHS
APPLE CORE	2 MONTHS
NEWSPAPER	6 WEEKS
ORANGE OR BANANA PEEL	2-5 WEEKS
PAPER TOWEL	2-4 WEEKS

**75% OF THE TRASH
PRODUCED EACH YEAR
IS RECYCLABLE, BUT
WE ONLY RECYCLE 30%**

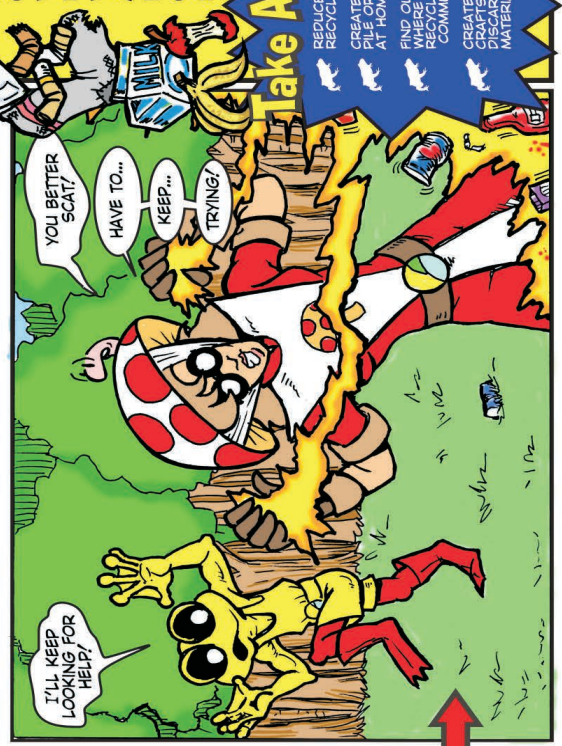
COME
ON GUYS! WE
CAN DO
BETTER!

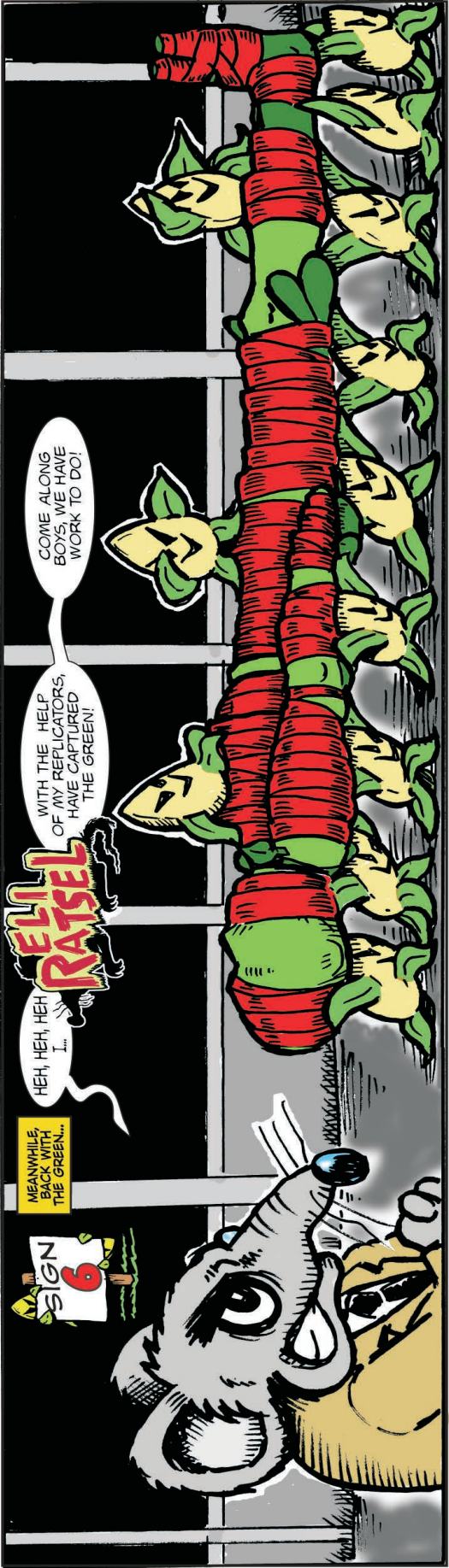
Take Action!

REDUCE, REUSE, AND
RECYCLE!
CREATE A COMPOST
PILE OR WORM BIN
AT HOME.

FIND OUT WHAT AND
HOW TO RECYCLE IN YOUR
COMMUNITY.

CREATE ART AND
GRAPHS USING
DISCARDED
MATERIALS.





MEANWHILE,
BACK WITH
THE GREEN...

SIGN
6

HEH, HEH, HEH
I...

WITH THE HELP
OF MY REPLICATORS,
I'VE CAPTURED
THE GREEN!

COME ALONG
BOYS, WE HAVE
WORK TO DO!



STRAP HIM
INTO THE MACHINE
MY REPLICATORS!
WE SHALL USE
THE GREEN'S
POWER LIKE
A BATTERY!

CRASH!
CLANK!
WHITTTT!

NOW GREEN,
I WILL HARNES
YOUR OWN POWER
TO DESTROY THE
ENVIRONMENT YOU'VE
WORKED SO HARD
TO PROTECT!
HEH, HEH, HEH!!

POLL-U-TOR!!

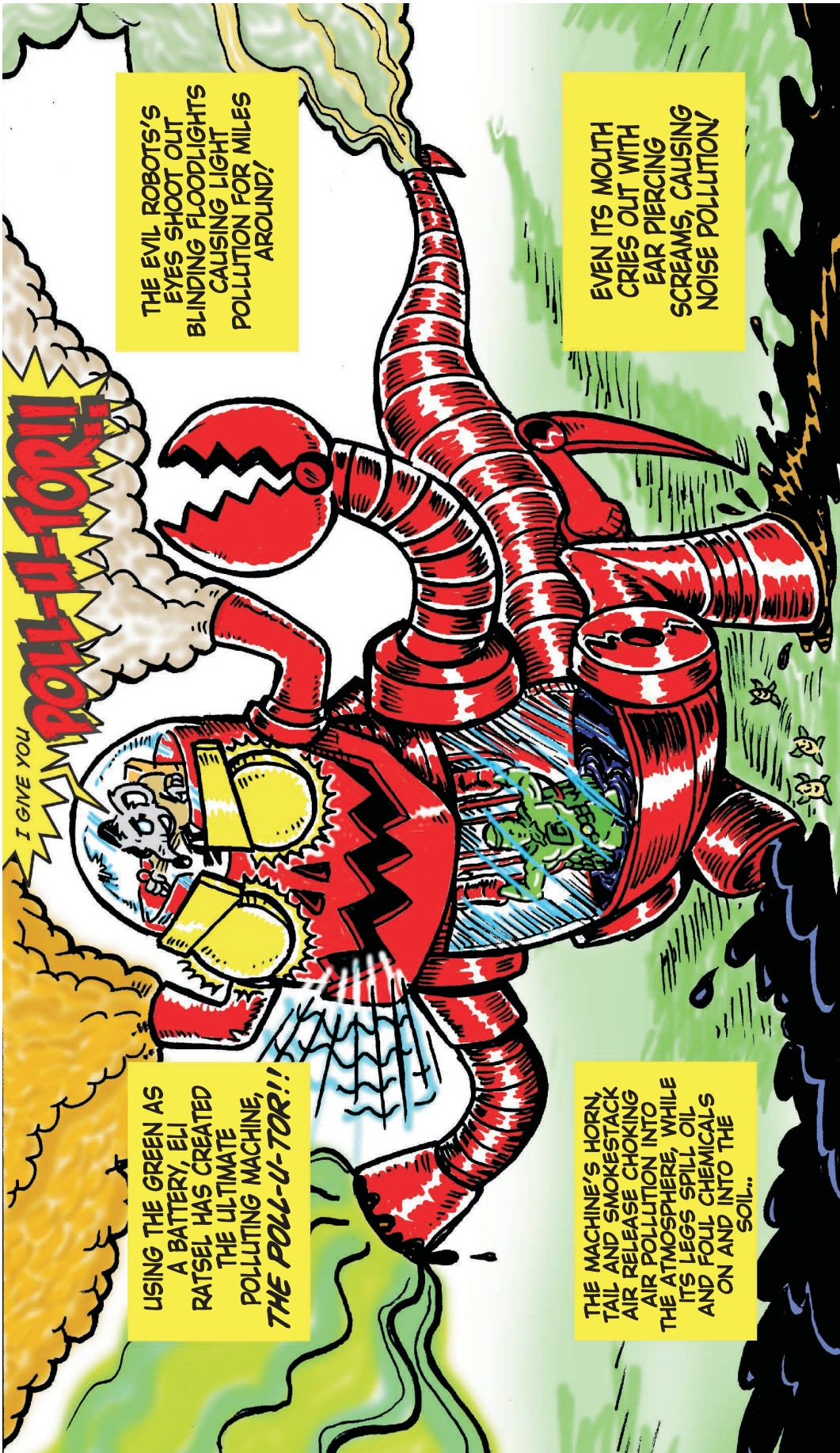
I GIVE YOU

USING THE GREEN AS
A BATTERY, ELI
RATSEL HAS CREATED
THE ULTIMATE
POLLUTING MACHINE,
THE POLL-U-TOR!!

THE EVIL ROBOTS'S
EYES SHOOT OUT
BLINDING FLOODLIGHTS
CAUSING LIGHT
POLLUTION FOR MILES
AROUND!

THE MACHINE'S HORN,
TAIL AND SMOKESTACK
AIR RELEASE CHOKING
AIR POLLUTION INTO
THE ATMOSPHERE, WHILE
ITS LEGS SPILL OIL
AND FOUL CHEMICALS
ON AND INTO THE
SOIL..

EVEN ITS MOUTH
CRIES OUT WITH
EAR PIERCING
SCREAMS, CAUSING
NOISE POLLUTION!



AIR POLLUTION CAN BE A MIX OF BOTH SOLID AND GAS SUBSTANCE THAT IS INTRODUCED INTO THE AIR THAT HAS HARMFUL OR POISONOUS EFFECTS.



ONE WAY TO HELP REDUCE AIR POLLUTION IS MANAGING THE WAY YOU TRAVEL, USING PUBLIC TRANSPORTATION, CARPOOLING, BIKING OR WALKING TO DESTINATIONS WHENEVER POSSIBLE.

WHAT IS AIR POLLUTION?



LIGHT POLLUTION IS THE BRIGHTENING OF THE NIGHT SKY CAUSED BY STREET LIGHTS AND OTHER MAN MADE SOURCES THAT BLOCKS OUT THE STARS AND DISRUPTS ANIMALS THAT ARE ACTIVE AT NIGHT.

YOU CAN HELP REDUCE YOUR CONTRIBUTION TO LIGHT POLLUTION BY TURNING OFF LIGHTS WHEN NOT IN USE OR USING MOTION DETECTING LIGHTS.



WHAT IS LIGHT POLLUTION?



WATER AND SOIL POLLUTION IS ANY BUILDUP OF WASTE THAT CHANGES THE QUALITY OF THE WATER AND SOIL TO WHERE THEY ARE NO LONGER USABLE



YOU CAN HELP REDUCE WATER AND SOIL POLLUTION BY PROPERLY USING FERTILIZERS AND PESTICIDES ON YOUR LAWN, BEING CAREFUL ABOUT LEAKING MOTOR OIL AND BY TAKING HAZARDOUS CHEMICALS TO A PROPER COLLECTION AREA.

WHAT IS SOIL & WATER POLLUTION?



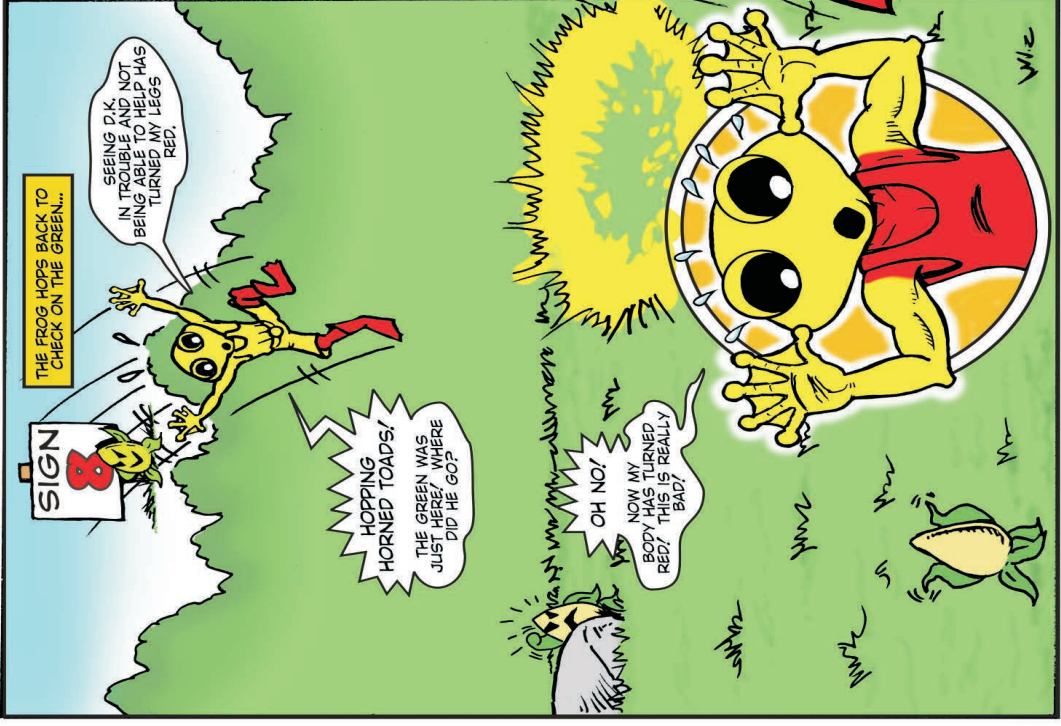
NOISE POLLUTION IS ANY EXCESSIVE OR BOTHERSOME MAN-MADE SOUND THAT CAN LEAD TO HEALTH AND ENVIRONMENTAL ISSUES.

NOT ONLY CAN IT KEEP YOU UP AT NIGHT WHEN YOU'RE TRYING TO SLEEP (AFFECTING ENERGY LEVELS) BUT LOUD NOISES OFTEN GET IN THE WAY OF ANIMAL CALLS AND BOTHERS ANIMALS THAT RELY ON THEIR SENSE OF HEARING TO SURVIVE.



WHAT IS NOISE POLLUTION?



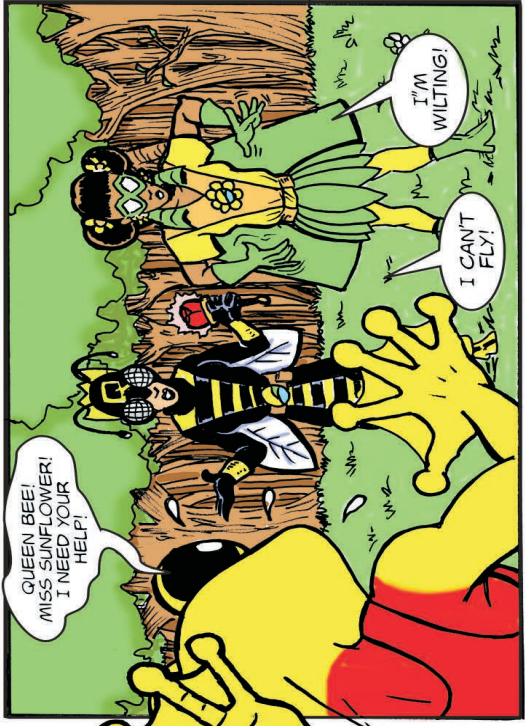


THE FROG HOPS BACK TO CHECK ON THE GREEN...

SEEING D.K. IN TROUBLE AND NOT BEING ABLE TO HELP HAS TURNED MY LEGS RED.

HOPPING HORNNED TOADS!
THE GREEN WAS JUST HERE... WHERE DID HE GO?

OH NO!
NOW MY BODY HAS TURNED RED! THIS IS REALLY BAD!



QUEEN BEE! MISS SUNFLOWER! I NEED YOUR HELP!

I CAN'T FLY!

I'M WILTING!



...AND MY ARM JUST TURNED RED!

WHAT IS HAPPENING?!

CONTINUED NEXT PANEL...

SIGN
9

QUEEN BEE

THE AIR IS SO POLLUTED THAT I CAN'T FLY OR BREATHE PROPERLY!

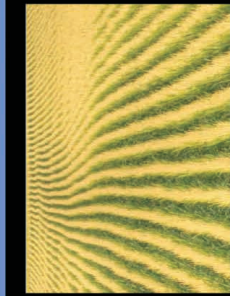
I'M STARVING BECAUSE THERE ARE NO FLOWERS BLOOMING!



Take Action!

USE PESTICIDES AND FERTILIZERS WISELY..

PLANT A VARIETY OF NATIVE PLANTS THAT WILL SUPPORT LOCAL WILDLIFE.



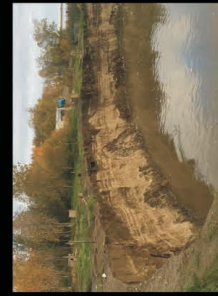
MONOCULTURE

A MONOCULTURE IS AN AREA THAT CONTAINS ONLY ONE TYPE OF PLANT. THIS IS BAD FOR OUR POLLINATORS, SINCE THIS ONE TYPE OF PLANT FLOWERS ALL AT ONCE, AND DOESN'T PROVIDE FOOD THROUGHOUT THE ENTIRE SEASON.



DIVERSITY

A HEALTHY HABITAT HAS MANY TYPES OF PLANTS THAT FLOWER AT MANY DIFFERENT TIMES OF THE YEAR. THIS HELPS OUR POLLINATORS BY PROVIDING A CONSTANT FOOD SOURCE OVER THE ENTIRE SEASON, AND NOT JUST AT ONE TIME!



EROSION

EROSION IS THE UNWANTED MOVEMENT OF SOIL DUE TO WIND, WATER, OR FLUMAN ACTIVITY. IT CAN CAUSE POLLUTANTS TO LEACH INTO OUR RIVERS AND STREAMS AND REDUCE NUTRIENT LEVELS IN OUR FARM FIELDS.



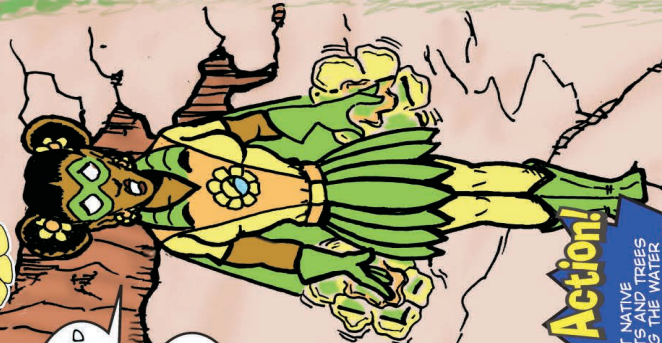
STABILIZATION

STABILIZATION IS WHERE PLANTS HOLD SOIL IN PLACE, SO THAT IT IS NOT AFFECTED BY WIND AND WATER. PLANTS HOLD SOIL BY DEVELOPING STRONG ROOTS THAT ANCHOR THE SOIL IN PLACE. THIS HELPS KEEP OUR STREAMS AND RIVERS CLEAR AND HEALTHY AND OUR FARM FIELDS RICH IN NUTRIENTS.

MISS SUNFLOWER

I'M WILTING BECAUSE THE SOIL IS BEING WASHED AWAY, AND I CAN'T FIND NUTRIENTS.

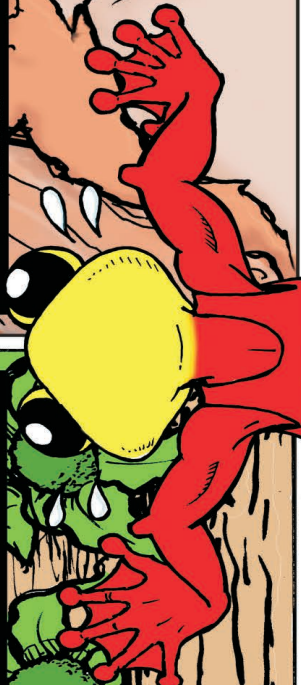
THE SOIL POLLUTION IS SO GREAT THAT IT'S BEYOND MY POWERS!

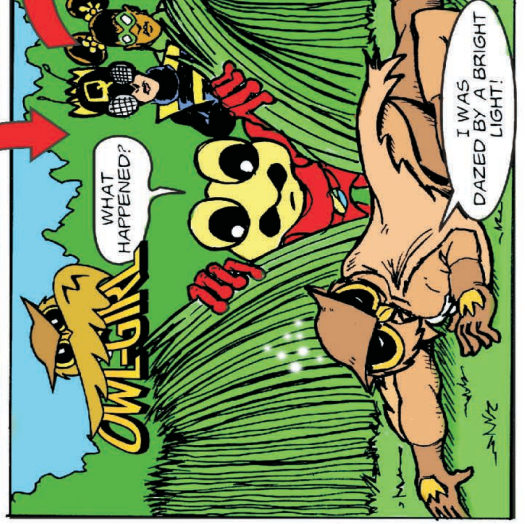


Take Action!

PLANT NATIVE PLANTS AND TREES ALONG RIVER BANKS AND RUN-OFF AREAS.

USE PLANTS LIKE SUNFLOWERS TO HELP REMOVE HEAVY METALS THROUGH THE PROCESS OF PHYTOREMEDIATION.

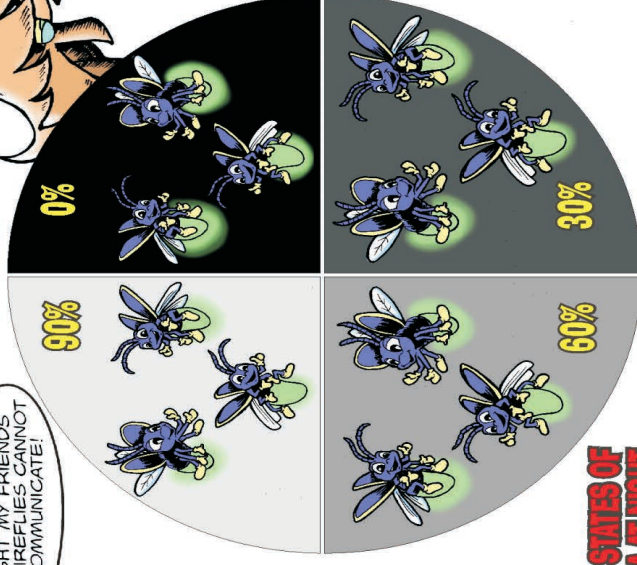




WHAT IS LIGHT POLLUTION?

LIGHT POLLUTION IS MAN-MADE LIGHT THAT DISRUPTS NOCTURNAL CYCLES.

WHEN IT'S TOO BRIGHT MY FRIENDS THE FIREFLIES CANNOT COMMUNICATE!

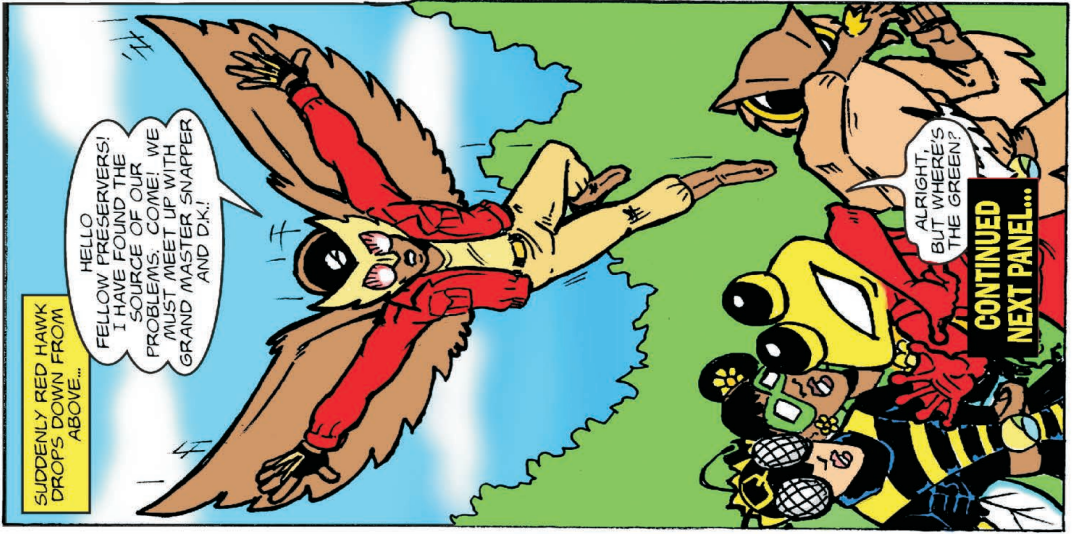


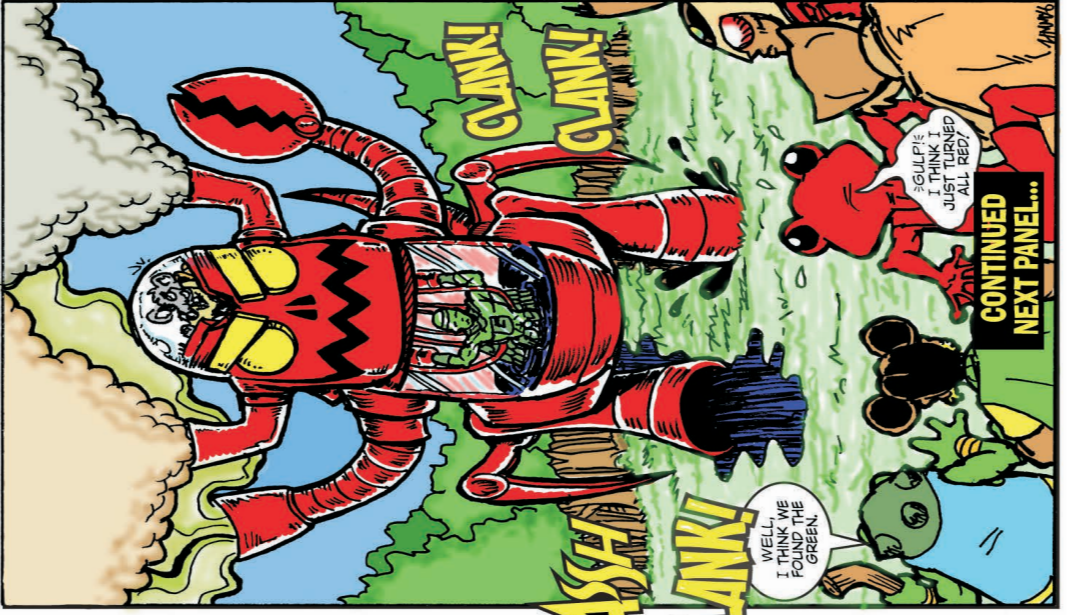
UNITED STATES OF AMERICA AT NIGHT

THESE BRIGHTER AREAS ARE OUR CITIES. MORE PEOPLE LIVE HERE, SO MORE LIGHTS ARE LEFT ON ALL NIGHT.

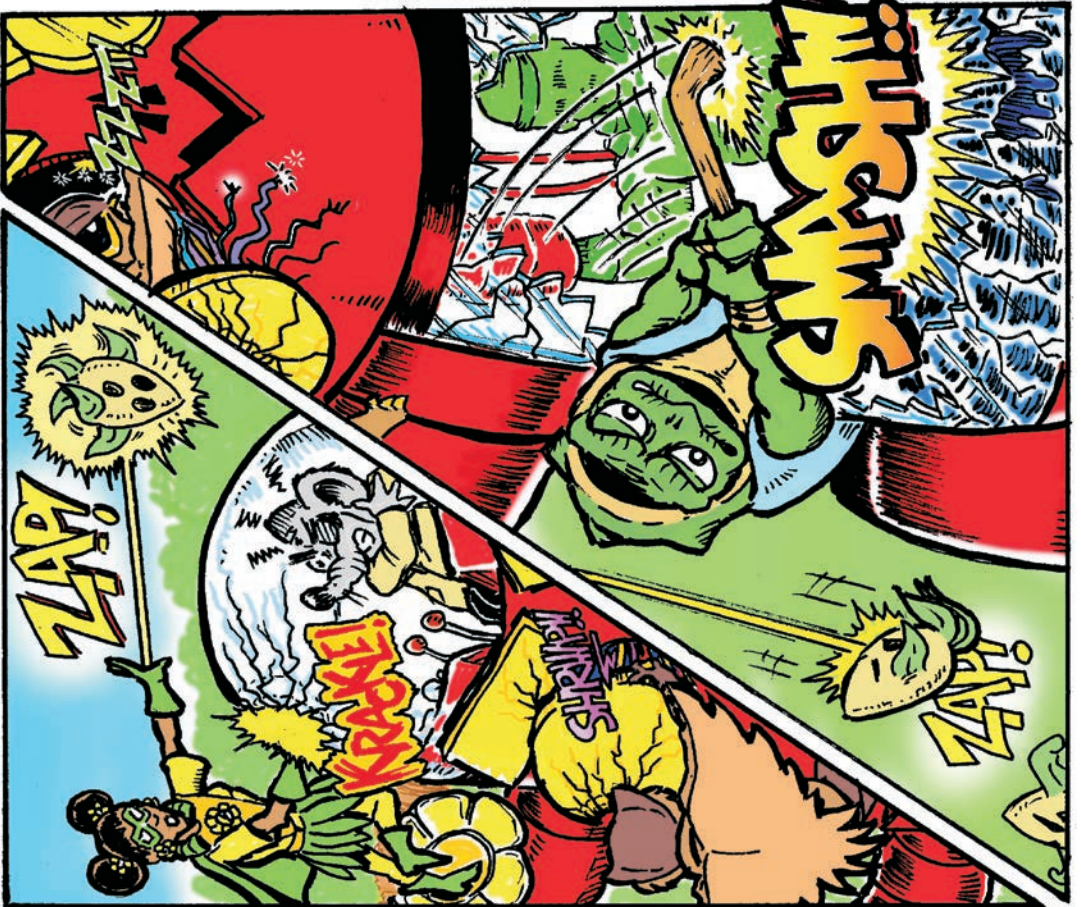
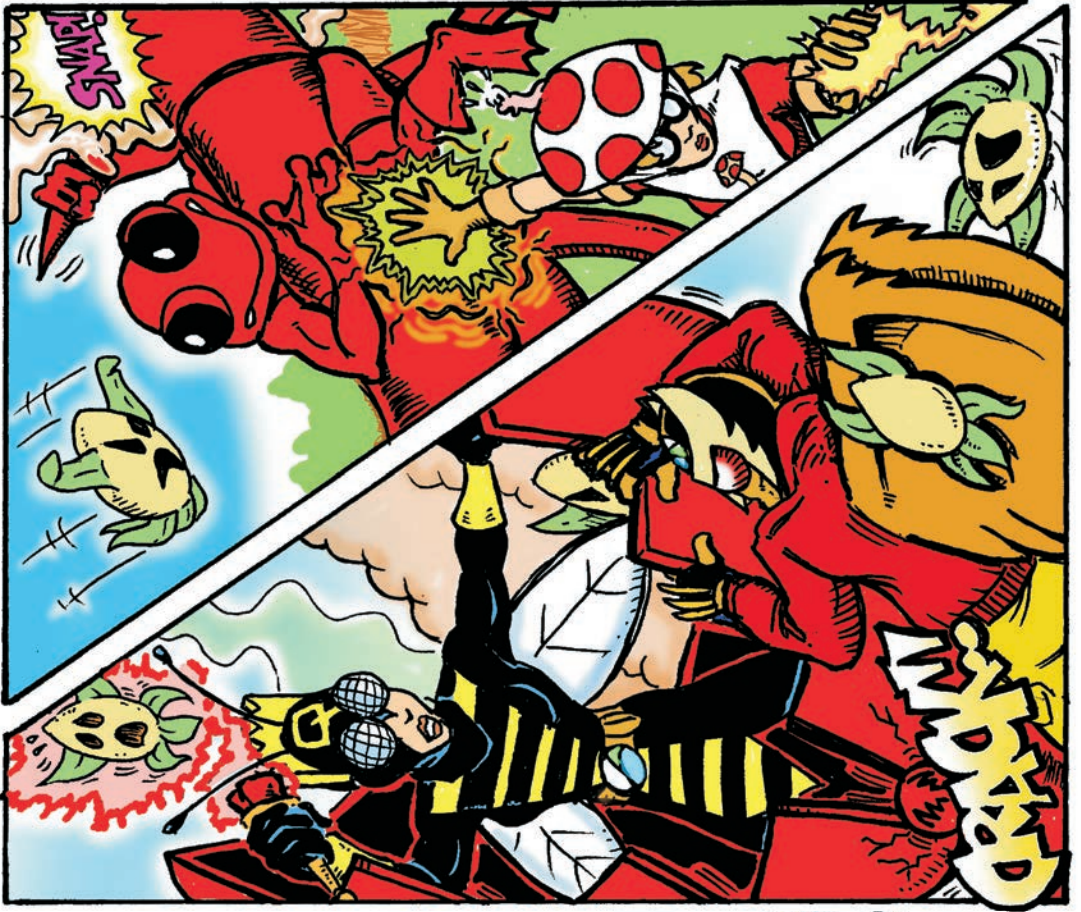
YOU CAN HELP REDUCE LIGHT POLLUTION BY TURNING OFF YOUR LIGHTS OUTSIDE AT NIGHT, INVESTING IN MOTION DETECTOR LIGHTS AND, MOST IMPORTANTLY, SHARING WHAT YOU KNOW ABOUT LIGHT POLLUTION WITH YOUR FRIENDS.

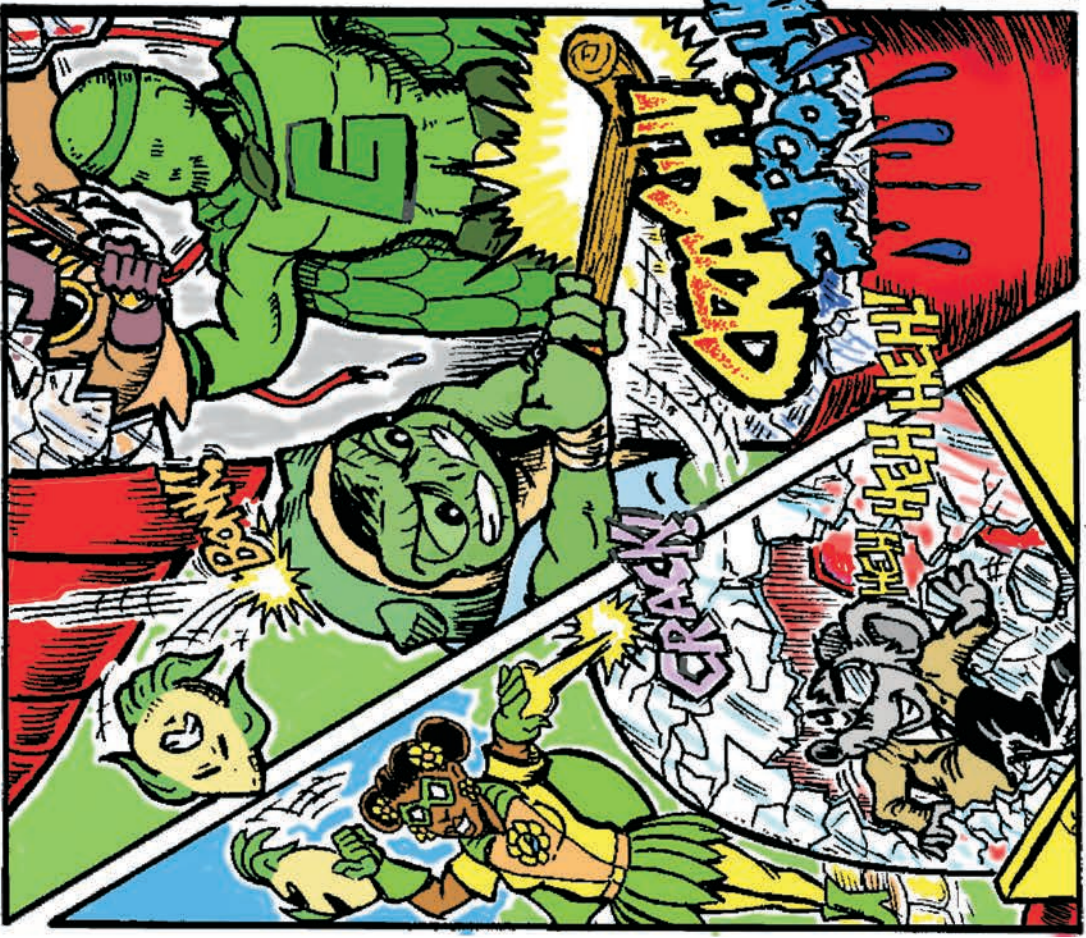
REMEMBER "KNOWLEDGE IS POWER!"









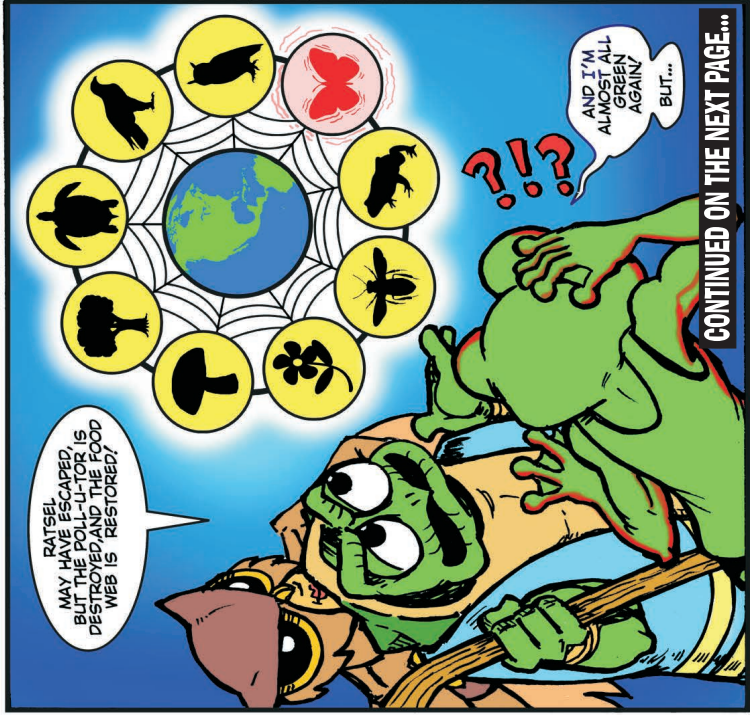


THE PRESERVERS MAKE SHORT WORK OF THE EVIL POLL-U-TOR!

HURRAY! WE SAVED THE GREEN!



BUT RATSEL GOT AWAY!



MAY HAVE ESCAPED, BUT THE POLL-U-TOR IS DESTROYED AND THE FOOD WEB IS RESTORED.

AND I'M ALMOST ALL GREEN AGAIN! BUT...

?!?

CONTINUED ON THE NEXT PAGE...

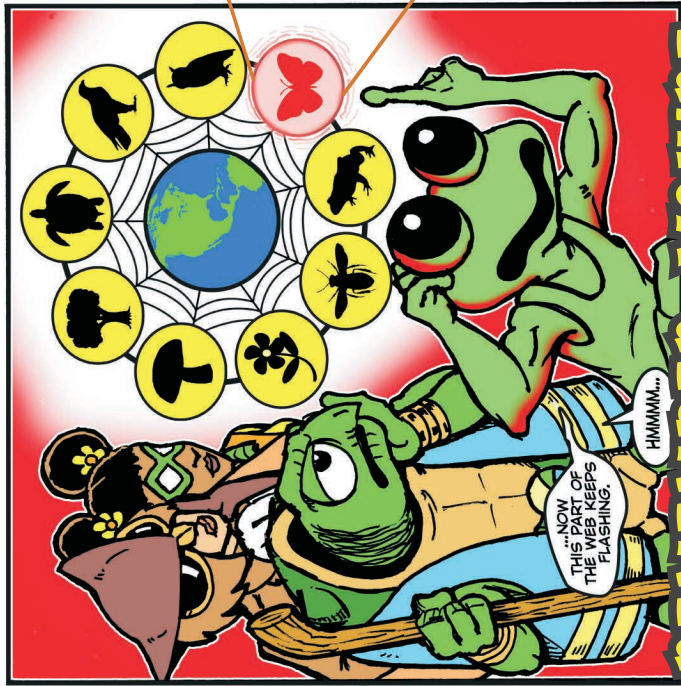
CURSE YOU PRESERVERS! I CAN ALWAYS MAKE ANOTHER POLL-U-TOR AND NEXT TIME I WILL SUCCEED!!



Get Involved!

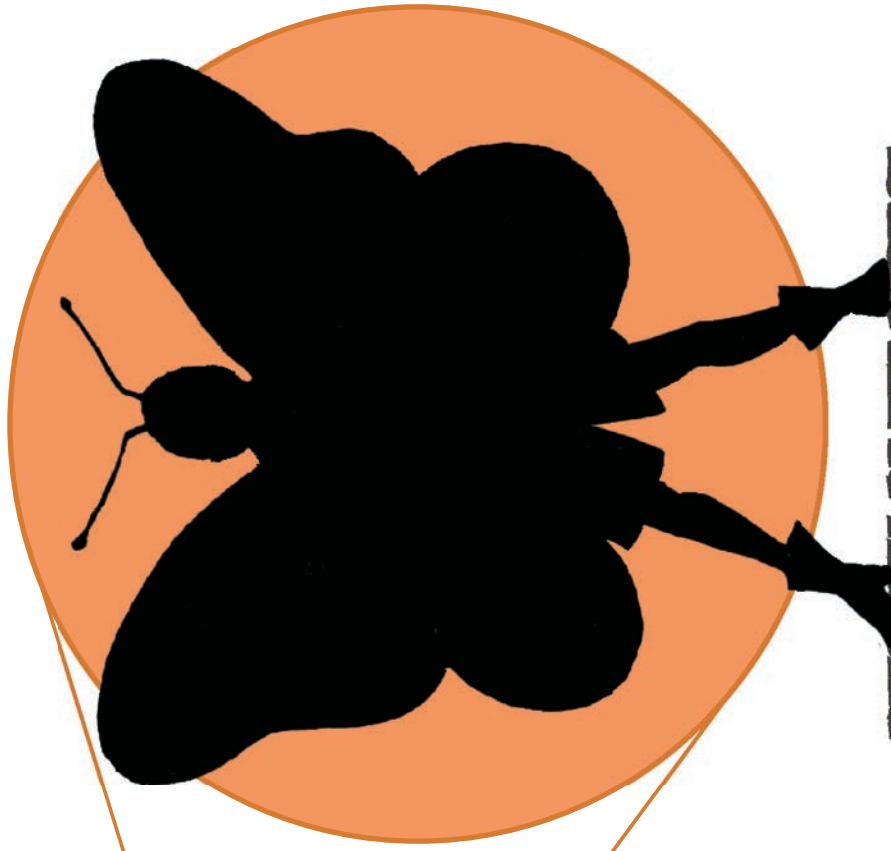
LOOK FOR EVENTS ON OUR WEBSITE EVENT CALENDAR AT

GENESEECOUNTYPARKS.ORG



**REMEMBER, YOU'RE
A PRESERVER TOO!**

**AND THEY NEED YOUR HELP
ON THEIR NEXT ADVENTURE!
BE HERE! SAME FOR-MAR
PARK! SAME FOR-MAR COMIC!**



**WHO WILL BE THE NEWEST
MEMBER OF THE PRESERVERS?**

BE SURE TO PICK UP A COPY OF THE PRESERVERS #3 TO FIND OUT!



NO WORRIES,
MY FRIENDS!
THERE WILL ALWAYS
BE OTHER
PLANS!



IN FACT,
I ALREADY HAVE
A NEW PLAN
STARTED!
LISTEN UP...!

**TO BE
CONTINUED...**



WE'RE
SORRY THE
POLL-U-TOR
AND YOUR PLANS
DIDN'T SUCCEED,
MR. RATSEL!

ELI RATSEL, HIS REPLICATORS AND
REPRESENTATIVES OF THE INVASIVE
SPECIES ALL MEET AT RATSEL'S
SECRET LAIR...

GOLF TOM



Nature is Under Attack!

New species have been introduced into ecosystems across the world causing havoc on our natives. **Invasive species** can out compete native plants and animals for resources and spread fast. And if invasive species were not enough, **pollution** can take on many forms leaving waves of destruction in its path. The Preservers need your help to fight these evil nature villains. To learn more about nature's villains solve the puzzles on these pages, then create the next Superhero to join the team!

Name That Invasive Species!

Search the comic book to identify these evil villains and tell how they harm our ecosystems.



Who am I?

 How do I do harm?



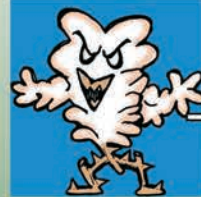
Who am I?

 How do I do harm?



Who am I?

 How do I do harm?



Who am I?

 How do I do harm?

Nature Villains Word Search

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

- PRESERVERS
- INVASIVE
- SPECIES
- POLLUTION
- AIR
- WATER
- LIGHT
- SOUND
- SOIL
- RATSEL
- POLL-U-TOR
- LONG-HORNED
- BEEBLE
- OAK WILT
- BLACK LOCUST
- GREEN



Mix and Match Pollution

Match the image of pollution to the type of pollution it is.



HELP!!!

We need you to help us create For-Mar's newest SUPERHERO to help fight Eli Ratsel and his evil friends!



We Need YOU!

Use blank sheet of paper if needed:
Submit superhero images to
nferguson@gcparks.org

GET AWAY. RIGHT AWAY. ANY DAY.

geneseecountyparks.org | 800.648.PARK



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.



GENESEE COUNTY PARKS
Get away. Right away.