



# RISING TIDE

## ARAPAIMA

How A **Monster Fish** Saved a Village



**PLUS  
MORE!**

TRY THIS  
ON PAGE 9

Photos, Articles  
& Activities!

**KIDS  
MAKING A  
DIFFERENCE!**  
PAGE 6 & 7



# **RISING TIDE**

THE MAGAZINE for YOUNG ANGLERS and CONSERVATIONISTS.

Coastal Conservation Association (CCA) is a non-profit marine resource conservation organization. It has been active in almost every national fisheries debate for decades and has been a driving force in state and federal fisheries management issues. With your continued support, CCA will continue to battle for the health and longevity of our coastal fisheries and for recreational anglers' interests in them.

**Editor and Designer** Heather Peterek

**Consulting Editors** Patrick Murray  
Ted Venker

This publication is sponsored by  
Shell Oil Company



## What's Inside:

### Jungle Fish

The story of how a monster fish, Indifly, Costa Sunglasses and fly fishing came together to save a village.

4

### The Texas Brigade Experience

An article by a kid, for kids.

6

### Kids Making a Difference

What some are doing to play an important role in creating and restoring our natural resources.

7

### Fun Stuff!

Word search, knot tying, origami and a building set any CCA member would love!

8

### Kids Fishin' Photos

Kids from all over the nation show off their trophies.

10

#### ON THE COVER >>

A giant arapaima being released back into the Amazon river basin in Guyana (South America) after being caught with a fly rod.



# KICK PLASTIC

HELP US  
PROTECT  
WHAT'S  
OUT THERE

## GET THE FACTS

We have a bad habit. Humans use 450 billion plastic drinking bottles a year, and far too many of them end up in our oceans. We at Costa know how important our oceans are, and as anglers, we're in a unique position to do something about it.

### HERE'S WHAT YOU SHOULD KNOW:

- The equivalent of a garbage truck of plastic is dumped into the ocean every minute.
- By 2050 there could be more plastic than fish in the ocean (by weight).
- Almost all the plastic ever produced is still around.
- One in four fish tested have plastic in them.

## SMALL CHANGES CAN MAKE A BIG IMPACT

- Stop Using Plastic Water Bottles
- Use Reusable Grocery Bags
- Buy In Bulk To Cut Down On Packaging
- Recycle Old Fishing Line



GET INVOLVED AT [costadelmar.com/kickplastic](http://costadelmar.com/kickplastic)

## SPREAD THE WORD

None of us wants to live in a plastic sea. Join us in the fight to Kick Plastic by spreading the word about the problem and teaming up to find solutions. You can learn more about what we're doing to Kick Plastic at [costadelmar.com](http://costadelmar.com).

### HERE'S HOW YOU CAN SHARE:

- Post about Kick Plastic to your social media accounts. We've collected images and facts that'll help spread the word at <http://bit.ly/kickplastic>.
- Be sure to tag your posts with #KickPlastic. We'll amplify your posts on our campaign page to help you reach more people.
- Watch and share the Kick Plastic video at <http://bit.ly/kickplasticvid> to help get the word out and protect our oceans.





# JUNGLE FISH

Deep within Guyana's rainforest lives an ancient freshwater fish, a giant fish, one of the largest in the world, a living fossil. The **arapaima** lives in the one of the most diverse ecosystems on earth - a giant among giants. Among jaguars, pythons, black caymans, golden frogs, over 1600 species of birds and 15% of the world's fresh water.

After generations of living together with the environment, the villagers of Guyana began poaching, overfishing and overhunting to survive. Extractive industries such as logging and mining also moved in and men began leaving their villages and families to seek work in the mines. With the men gone, the crops began to die, leaving what little money they made to buy food. Eventually the birds stopped singing and the fish stopped jumping.

But in a village named Rewa, the story changed. The elders had an idea to put an end to poaching and to celebrate their local ecosystems again in hopes that others would too. The village came together to build an **ecolodge** and slowly their steps to restore the natural resources took hold. Birds began to sing again, fish began to jump, but the tourists didn't follow.

Stories started to reach people in America from **Costa Sunglasses** and **Indify** about a Garden of Eden deep in Guyana's rainforest and about the people who made a leap of faith to protect their fish and wildlife. When these groups arrived, they found a giant fish lurking in the pristine environment. A monster fish. They saw every fisherman's dream - to catch the un-catchable.

**Costa** is on a mission to protect the world's waters by promoting sport fishing.

**Indify** is an organization that uses fly fishing as a tool for transforming the lives of indigenous people and protecting valued environments.

And an opportunity to help change the fate of Rewa.

The first problem was it was illegal to even try to travel there and fish. Two years, 27 organizations and 300 meetings later, the people from Costa and Indify received permission from the Guyanese government to catch and release fly fish for the arapaima - if it could even be done.

And so **Project Guyana** began. By single prop plane, boat, bus and boots they traveled deep into the Guyanese jungle. Two worlds came together on that trip. Over several days and countless broken fly rods, the villagers taught them about the arapaima - where they live, what they eat. And the people from Indify and Costa taught them how to tie a fly and how to cast. Together they proved that the arapaima could be caught.

The film **Jungle Fish** they made about the journey made its world premier in the village of Rewa and not long after the film launched with rave reviews, catching the attention of global organizations and sweeping the sportfishing community, inspiring dozens of anglers to travel to Rewa with a dream to catch the un-catchable.

Today, the **Rewa Ecolodge** is employing the majority of the village labor force and conserving the ecosystem for future generations.

The village decided to save a fish, and that fish is saving the village. **Learn more at [www.indify.org](http://www.indify.org).**



## WHAT IS AN ARAPAIMA?

The arapaima is a massive, air-breathing, freshwater fish native to the streams of the Amazon River basin. It breathes air, allowing it to survive in pools with low water levels or decaying vegetation. Though arapaimas can stay underwater for 10 to 20 minutes, they tend to remain near the water's surface, where they hunt and emerge often to breathe with a distinctive coughing noise.

**Size** | The arapaima is possibly the largest freshwater fish in the world, reaching up to 440 pounds and 10 feet in length. Sizes of 200 pounds and 7 to 8 feet in length are more common. **Native Habitat** | The arapaima is found in Brazil, Peru and Guyana. They live in the slow-moving and typically oxygen-deficient rivers of the Amazon River basin floodplain. **Food/Eating Habits** | In the wild, the arapaima eats mostly fish but is also known to eat fruits, seeds, insects, birds and mammals found on the surface of the water. In order to eat, they use a "gulper" feeding strategy: by opening their large mouths they create a vacuum that pulls in nearby food objects. Their tongues and sharp, bony teeth, combined with the teeth on the roof of their palates, allow them to debilitate and shred their prey. The arapaima can easily feed in low-oxygen areas where gill-breathing fish are forced to slow down. They can also use short bursts of speed to attack potential prey hitting the surface of the water. **Lifespan** | The arapaima can live for up to 20 years.



An **ecolodge** is a facility which is designed to cater to tourists who are interested in traveling in an ecologically-friendly way.

Typically, an ecolodge employs local people and it is often owned locally as well. The facility is built with local labor, using materials found in the region and is usually built in an environmentally-friendly way. Building materials may be recycled and the facility may be powered with alternative energy.

An ecolodge will have a positive environmental and community impact. For example, not only does Rewa Lodge in Guyana provide jobs to almost the entire village, money made from the lodge goes toward funding conservation efforts and protecting the local ecosystem.

## WHAT IS AN ECOLODGE?





AN ARTICLE BY KIDS. FOR KIDS.

## THE TEXAS BRIGADE EXPERIENCE

by Spence McNamara, Texas Brigades Cadet

**T**he Texas Brigades, a wildlife-focused leadership development program for high school youth (ages 13-17), has a mission "to educate and empower youths with leadership skills and knowledge in wildlife, fisheries, and land stewardship to become conservation ambassadors for a sustained natural resource legacy." There are six separate Brigade camps: Bobwhite Brigade, Buckskin Brigade, Bass Brigade, Waterfowl Brigade, Ranch Brigade, and Coastal Brigade. In July 2015 I was fortunate to be a participant in the 10th Battalion of the Bass Brigade and then last summer I was part of the 1st Battalion of the Coastal Brigade. The cadets had a saying in the camps - "the hardest week you'll ever love" - and that is the absolute truth. Whether you are 13 or 17, the cadets are treated like adults and they are expected to work and act like adults. We made a lot of new friends. And we had a lot of fun.

The two programs that I participated in provided me with a unique perspective on the stewardship of our natural resources. The emphasis of the Bass Brigades included discussions on how to manage our inland fisheries. We learned about watershed management, and how to sample fish populations by electroshocking. There are a couple of ways to electroshock fish so that when they come near the electricity, they are stunned just long enough to scoop the fish with a net and put it in a bucket for population sampling. We also conducted water quality tests on the nearby lake, and evaluated the results. We learned about aquatic plant species and their habitats. Every day during the camp, we would get a short presentation on an aquatic plant and were taught tons of information. By the end of the camp we could identify them outdoors, know whether they were invasive or not, and what their role in the ecosystem is. We also learned about fish biology and on the first day we had a lengthy anatomy activity in which we dissected fish and learned about their internals. We also learned about the different types of scales on a fish, and their fins.

The Coastal Brigade focused on the coastal ecosystem and much of our work and discussion at the camp examined just how interrelated and balanced everything in the coastal environment is. It was extremely interesting to learn how important oysters are to water quality. If oysters are overfished, eventually water quality will suffer, which then impacts fish populations, such as redfish, and birds. If oysters are depleted over an extended period of time, it is possible to destroy the coastal ecosystem. Since every fish, every plant, and every organism has a role to play in maintaining the balance of the ecosystem, the unintended consequences of one action, such as over-fishing oysters, can have significant and very long-lasting effects on the entire ecosystem. There are countless numbers of different aquatic species that need to be managed correctly in order for the ecosystem to be sustainable.

At both camps we had instruction from experts on spin, bait, and fly fishing as well as instruction on how to tie flies. There were fishing tournaments and friendly competitions for a number of very nice prizes that were donated by some great companies. It was a lot of fun to meet new people who share an interest in being outdoors and actively participate in fishing and hunting.

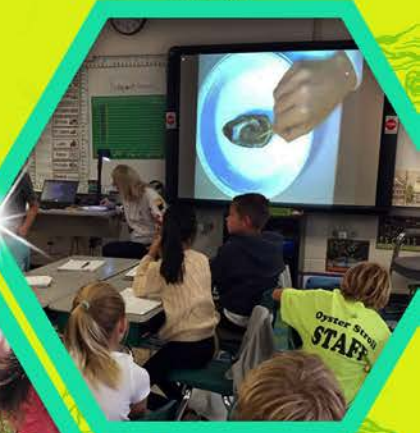
Each Brigade focuses on leadership, team-building, and communication skills which is important because we need people who not only understand the problems, but can also communicate, lead, and work with others in order to effectively balance the use of resources with proper stewardship. The Brigade program encourages conservation-minded youths to advocate for the proper care of local environments. As I learned at both camps, "anyone can count the seeds in an apple, but no one can count the apples in a seed." Every cadet that attends a Brigade camp has an infinite ability to positively influence how we use our natural resources.

# KIDS MAKING a Difference!

**IT WAS A BUSY 2017 FOR KIDS INVOLVED CCA MARYLAND'S LIVING REEF ACTION CAMPAIGN** - an educational and restoration campaign that offers a variety of opportunities for schools and kids to play a role in oyster restoration. Students from 4th grade through 12th grade across the state participated in a variety of conservation opportunities that allowed them to play an important role in creating and restoring our natural resources.

## **WHAT HAVE THESE KIDS HELPED THE LIVING REEF ACTION CAMPAIGN ACCOMPLISH SINCE 2015?**

- Completed more than \$250,000 in Chesapeake Bay habitat restoration projects
- Created more than 350 reef balls that are creating reef habitat for more than 600,000 juvenile oysters
- Recycled more than 300,000 oyster shells
- Have helped plant more than 3 million oysters through spat on shell restoration
- Engaged more than 1,000 students in building reef ball habitat for oyster restoration
- Received of the "Project of the Year" award from Carroll County's Environmental Advisory Council
- Received the "Outstanding Community Leadership" Award from the Maryland Recycling Network
- AND MORE! Visit [www.ccamd.org](http://www.ccamd.org) or [www.buildingconservation.org](http://www.buildingconservation.org) to learn more about what kids like you are doing to make a difference!



**BUILDING  
CONSERVATION  
TRUST**   
CCA's National Habitat Program





# word search

The **arapaima** live in the depths of the rainforest. Rainforests are some of the most diverse ecosystems on earth, home to thousands of species of marine and land animals. In this word search, find the various creatures the **arapaima** shares its habitat with. **Answers on page 11.**

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

ANACONDA  
ANTEATER  
ARMADILLO  
BEETLE  
BUTTERFLY  
CAIMAN

CAPUCHIN  
CAPYBARA  
CONDOR  
CURASSOW  
HOWLER MONKEY  
HUMMINGBIRD

JAGUAR  
LEAFCUTTER  
MACAW  
MANATEE  
MARMOSET  
OCELOT

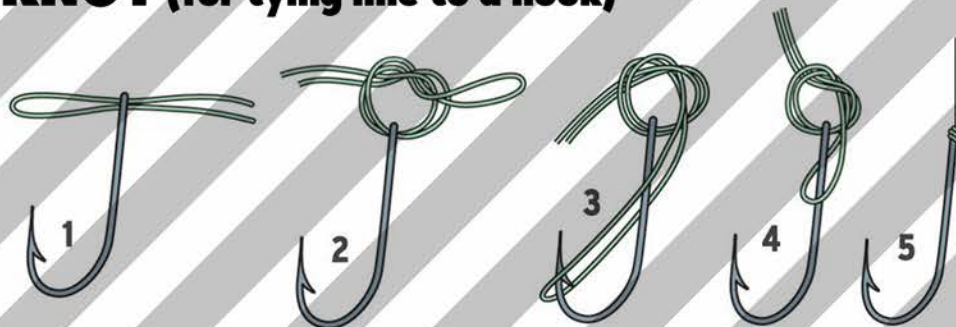
PECCARY  
PIRANHA  
PRAYING MANTIS  
RIVER DOLPHIN  
SLOTH  
TAPIR

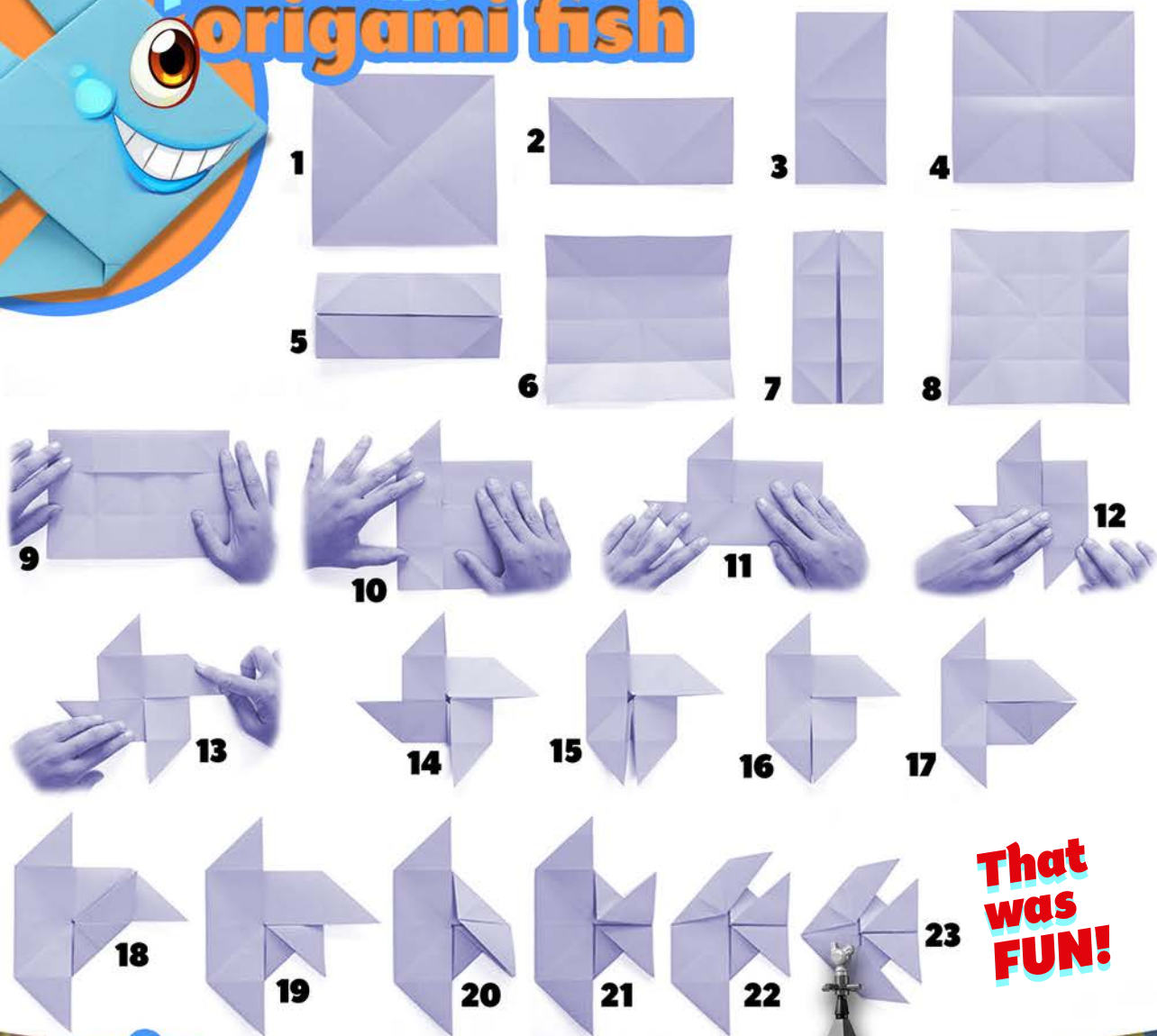


# knot to know

## PALOMAR KNOT (for tying line to a hook)

1. Double your line to make a loop, then push the loop through the eye of your hook.
2. Tie a loose overhand knot.
3. Pass the loop around the end of the hook.
4. Pull on the line to tighten.
5. Trim the loose end of the line if necessary.





**That  
was  
FUN!**

**LET'S  
PLAY!**

The perfect  
LEGO® set for any  
CCA member! This old  
fishing store owned by  
a guy named Anton has  
so many little details  
it's hard to count them  
all - four minifigures,  
fishing gear, seagulls, a  
cat, telescope, TNT, and  
more! It's a big set so  
it's a perfect project for  
mom and dad to join  
in too. We love this set  
because it's so realistic,  
fishing-themed and of  
course hours of fun to  
assemble!



# ANGLERS LIKE YOU! KIDS

# FISHIN'\*



Carleigh JD Julia

## DO YOU HAVE A GREAT CATCH THAT COULD MAKE OUR KIDS FISHIN' PAGE?

To submit photos, have your parents:

1. Email to [photos@joincca.org](mailto:photos@joincca.org) OR
2. Share on Facebook at [Facebook.com/CCANational](https://www.facebook.com/CCANational)

\* There are a lot of kids fishin' out there and while we try our best to get everyone's photo published, we cannot guarantee yours will be printed.

\* Any photo with a child (under 13) not wearing a life jacket on a boat cannot be published, as we want to portray safe boating examples to all our readers.



Cade



Zoe



Joey



Sam



**Thank you Shell!**

Because of the generous support of Shell Oil Company, the Rising Tide Youth Program will continue to thrive!



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


ANSWERS FROM PAGE 9



CONSERVATION & PROTECTION OF MARINE LIFE

6919 Portwest Drive, Suite 100 Houston, Texas 77024

NON PROFIT  
U.S. POSTAGE  
PAID  
HOUSTON, TEXAS  
PERMIT 2532



**YOU** are an important part of a conservation organization of more than 100,000 people who love and care about fishing and the health of marine life and habitat. That makes **YOU**...a pretty cool kid.

