

African Wormwood: A Traditional Medicine

by Caitlyn Meagher



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Foliage of African wormwood at Spitskop, near Bronkhorstspuit

People around the world have used plants to help cure illnesses for thousands of years. Researchers have begun studying these plants to understand their effectiveness. A popular medicinal plant is African wormwood, or *Artemisia afra*. It is named after Artemis, the Greek goddess of hunting. "Afra" means "from Africa" in Latin. African wormwood is native to the African continent.

African wormwood grows in many different conditions, including in the Cederberg mountains of South Africa and beside streams as far north as Ethiopia. This species is now also grown in gardens all over the world. African wormwood grows in thick, bushy clumps. Smaller side branches shoot off from the main stem. Its leaves are finely divided, similar to a fern. The undersides of its dark green leaves have tiny white hairs that give the plant a gray color. From March to May, this plant blooms small light yellow flowers.

What are some uses of African wormwood? African wormwood lets off a strong, sweet smell when cut. This plant's natural bitter taste and strong smell repels many insects. So some people plant it in

their garden near their vegetables to repel fleas, flies and moths.

African wormwood does more than keep away annoying pests, though. People from many different African communities, especially in southern Africa, use African wormwood as a medicinal plant. African wormwood is said to help cure coughs, colds, fevers, headaches, stomach aches and more. When a person has one of these illnesses, some people drink a bitter tea made with the leaves of the plant and sweeten it with honey or sugar. Others apply wormwood lotions to help with joint pain. People even insert fresh wormwood leaves into their nostrils to clear blocked nasal passages. Additionally, the leaves can be placed in socks to get rid of sweaty feet. The possibilities are almost endless!

Even though this plant has been used as medicine for many years, more research is needed to determine if this plant is as effective as people think. But its impact in certain African communities is undeniable.

The Doum Palm of the Sahara Desert

by Caitlyn Meagher



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a doum palm tree in Senegal

Different species of palm trees grow all across the world in tropical climates. However, some palm trees thrive in the desert. The doum palm tree is a desert plant native to northern and western Africa and the Arabian peninsula. It grows in the Sahara, a large desert in North Africa that spans multiple countries. It also grows in countries such as Senegal, Kenya, Sudan, and Tanzania.

The doum palm has adaptations that enable it to survive in desert climates. Although it mainly grows in areas with groundwater, it can still flourish in places without much rain. One of the doum palm's adaptations that make this possible is its trunk. Its trunk stores water for long periods of time, supporting the tree in times of drought. Another adaptation is the tree's wide leaves, called fronds. The doum palm's fronds are large, which allows it to take in large amounts of desert sunshine. Like all plant leaves, these fronds convert the energy from sunlight into sugars through the process of photosynthesis. Then, the palm uses these sugars for energy.



Bishnu Sarangi from Pixabay

an example of fruit from a palm tree

Different parts of the doum palm tree offer many uses to people who live near them. Some people use the palm fronds to make baskets, mats, and brooms. Other people weave the leaves together to create thatched roofs. The wood trunk of the palm is used for constructing houses and furniture. Even the roots are used to create fishing nets and ropes. The whole tree itself helps people too-by providing much-needed shade to people living in desert areas.

The doum palm also produces oval red-orange fruits that taste like gingerbread. These fruits are quite popular in some countries, like Nigeria. The Hausa, the largest ethnic group in Nigeria, call the fruit *goruba*. Many Nigerians eat the dried fruit as a healthy snack. This fruit is high in antioxidants and minerals. The tough outer skin of the fruit, called the *rind*, is used to make molasses and cake. People often make drinks from the fruit of the doum palm, too. These fresh and dried fruits are sold in many local markets across Northern Africa.

The doum palm offers food, shade, shelter and more to those living in dry, desert areas. It is one useful plant!

The Monkey Orange: Much More than a Fruit

by Caitlyn Meagher

Monkey oranges are fruits native to Central and South Africa. These versatile fruits come from the monkey orange tree. This fruit tree can grow in many different conditions, including in desert and tropical climates. The tree's ability to grow even in harsh environments makes it a great source of nutrients for people in these areas.

The monkey orange tree grows in Central and South Africa. It grows up to 24 feet high, and is usually covered in sharp spines. These spines help keep animals and insects from eating the tree's fruit. The leaves of the monkey orange tree are round or heart-shaped. The fruit is round, and about the size of a grapefruit. As monkey oranges ripen from September to December, their skin turns from light green to warm yellow. The fruit's skin is thick and hard, almost like a shell. But inside that hard shell, the flesh of the fruit is light brown or orange and jelly-like. The monkey fruit's sweet and sour taste make it a popular fruit in the areas where it grows. Plus, it is rich in Vitamin C, Vitamin B and other nutrients. The fruit can be eaten raw or dried. It can also be made into jams or juice. (The seeds of the monkey fruit, though, can't be eaten. They're poisonous!)



Damien Farrell on Wikimedia

a monkey orange fruit

Thanks to the monkey fruit's hard shell, the fruit can last a while without rotting. People take advantage of this useful quality. For example, the Basarwa, an indigenous hunter-gather group mainly

located in Botswana, preserve monkey oranges in a unique way. Some Basarwa pick the unripe green fruits and bury them in the sand. There, they stay hidden from wild animals, and can ripen slowly over several months.

Monkey orange trees and fruits can be used in many ways, beyond just as food. For instance, the leaves of the monkey orange tree are natural insecticides. People crush the leaves and soak them in water. Then, they strain the leaves from the water and spray the liquid on vegetables to keep insects away. Farmers also plant these spiny trees around the borders of their farms to keep wild animals and insects out of those areas. Some people use the dried outer shell of the monkey orange to create parts for musical instruments, such as the marimba. Plus, the wood of the tree is often used for construction and to make strong tool handles.

On top of these many uses, monkey oranges can support African communities in various ways. Recently, people have begun studying the impact that growing more indigenous plants like the monkey orange tree could have on African communities. For instance, the trees provide a great source of shade in hot environments. They can also protect the land against erosion, helping preserve fertile soil for farmers' crops. Monkey orange trees can also grow without much rain. So if droughts occur, causing the failure of crops, these trees could offer a great source of nutrients in the future. By adding them to more gardens, crop fields, and parks, people in Central and South Africa would have access to this nutritional fruit to get through difficult food shortages. Selling these fruits could also be a great source of income for people living in Zimbabwe, Botswana, Tanzania and Kenya. From nutrients, to insecticide, to tools, to income, monkey orange trees can provide much more than just fruit!

Teff, the Ancient Grain of Ethiopia

by Caitlyn Meagher



teff grass

Ethiopia, a country in East Africa, has mountains, valleys, flatlands and forests. Its geographic diversity makes it a perfect place for many different types of plants to flourish. One of Ethiopia's most popular plants is teff. Teff is an ancient grass that has been grown for over 6,000 years in Ethiopia. Farmers harvest the seeds of this grass to eat. Teff's harvested seeds help feed millions of people per year in Ethiopia and across the world.

Teff grows in rainy and dry conditions. This grass can withstand drought because it has a massive shallow root system. Shallow roots absorb moisture from rainfall quickly. But teff is a sturdy plant that even thrives in flooded soils. It also reproduces quickly. These characteristics make it a wonderful plant to cultivate in many different climates.

Once the grass has grown, farmers harvest the teff seeds. A teff seed is smaller than a poppy seed and can be white, brown or red. Teff seeds are incredibly nutritious. The seeds have fiber, lysine, calcium, iron and other important nutrients. Teff is the smallest grain in the world and seeds can easily get lost in the harvesting process. In fact, the name teff most likely comes from the Amharic word "teffa," meaning "lost." (Amharic is one of the two main languages spoken in Ethiopia.) Harvesting teff requires lots of time and effort. Once the teff seeds are harvested, they can be turned into flour and other food staples.



Rachel Kramer Bussel on Wikimedia

injera with various stews

One food item made from teff is injera. Injera is a large flatbread made from fermented teff flour and water. Many Ethiopians eat injera with other food items, including "wot," a stew often made with lentils, meats and spices. Injera has a slightly sour taste that works well as a base for other dishes. To enjoy this dish, people break off a piece of the spongy, thin injera to scoop up the stew or other vegetables. It is easy to make, healthy, and delicious.

Injera is a popular item in Ethiopian homes and restaurants across the world. When you eat injera, you know you are getting a lot of nutrients in every bite, thanks to the teff seed!

The Dark Purple Flowers at the Edge of Extinction

by Caitlyn Meagher



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the freylinia visseri flower

People often talk about the importance of saving endangered animal species from extinction. However, there are fewer conversations about saving plant species from the same fate. Maintaining plant diversity can help keep complex ecosystems in balance. Diverse plants support diverse animal life. Plus, plants can also prevent erosion. Plants' root systems help hold soil together and keep it from getting washed away by rain or floods. This, too, is important for ecosystems and environments. Unfortunately, a recent report found that one in five plant species across the world are at risk of extinction. Additionally, another report found that about one in three of the plants on the African continent are threatened by extinction. The Freylinia visseri, a plant native to South Africa, is one plant that is very close to being gone forever.

Freylinia visseri is a shrub that grows well in sandy, coastal areas. It can reach up to nine feet tall and grows well in a lot of direct sunlight. From September to November, this plant produces dark purple, tubular flowers. Its flowers attract sunbirds, small colorful birds with curved beaks. These sunbirds help pollinate the plant. Even though this plant is easy to grow and can survive in coastal

environments, it has been on the brink of extinction almost since its discovery.

Floors Visser, a man living in a coastal fishing village in South Africa, discovered this pretty plant. He collected this flowering plant in 1947. He sent a sample to a professor who studied plant species to help him identify the species. The professor realized Visser's plant was a newly discovered species of Freylinia. In 1954, an owner of a wheat farm in Visser's area expanded his farm, destroying most of these plants. Visser realized how rare these plants were. So he decided to plant four of them in his own garden. Two of the plants in his garden survived and grew into large shrubs. Years later, other researchers began searching for this species where it had originally been discovered. They could not find this plant even after searching the entire area described by Visser. At the time, they thought the only two remaining shrubs were the ones in Visser's garden! Later on, a small population of these plants were discovered in another area in South Africa. However, had it not been for Visser's actions, this plant would most likely be extinct. Freylinia visseri was named after Floors Visser to acknowledge his part in saving this species.

Now, some new landlords in this area in South Africa have made efforts to save this species. They have fenced off certain parts of their land to allow this plant to flourish. Other conservation efforts have been made to rescue this species. The Botanical Society's search and rescue team planted 20 of these plants at its original site. However, Freylinia visseri remains on the Critically Endangered list in South Africa.

The Nutritious Num Num

by Caitlyn Meagher

The num num is a beautiful and useful plant native to South Africa. In the Zulu language, a language spoken by more than nine million people mostly in South Africa, this plant is called amatungulu. It can be found in Southern Africa and all along the Eastern coast of Africa, including in countries like Mozambique and Kenya.



cultivar413 on Wikimedia

num num fruits

The num num is a sturdy plant that grows well in coastal areas. This plant can handle salt air and strong winds, making it a perfect plant to grow near sand dunes or coastal forests. The num num can grow without much rain. The plant does not do well in cold or freezing environments, though. It has shiny, green leaves and white, star-shaped flowers. At night, the flowers produce a sweet smell. Butterflies and honeybees feed off the nectar in the flowers, pollinating the plants.

In warm climates, num num plants produce red fruits from March to October. Num num fruits are oval-shaped and smaller than a ping-pong ball. The seeds inside the fruit are soft and edible. When cut, these fruits release a white, sticky milk. Monkeys and birds love to enjoy their sweet fruity flesh. But animals and fruit pickers beware! The thorns on the plant stems can be quite sharp! Once picked off the thorny stem, people eat these fruits raw or make pies, jams, jellies, and sauces.

These fruits offer more than just a tasty snack. Num num fruits are rich in Vitamin C, calcium, magnesium and phosphorus. These nutrients help strengthen bones and boost a person's immune system to keep them healthy. The num num plant also has medicinal uses. Indigenous people from South Africa also use the roots to treat toothaches.

Num num fruits are nutritious sources of food. Researchers have studied the positive impact growing more num num plants and other native edible plants could have on certain African communities. Currently, some people in these local communities rely on a very small number of food species (including wheat and corn) to get their nutrients. Many of these foods are not as nutritious as the num num fruit. Growing more num num plants and other native plants could promote food diversity in these communities. Some scholars hope that communities will learn more about the num num plant's benefits and bring more of these nutritious and delicious fruits into their diets.

Homo Sapiens

by Jesse Kohn



It was about four months after I graduated from college that I finally got a job working at the zoo. The pay wasn't bad: all the chicken nuggets I could stomach and my own room in the cage where they kept the human beings.

I've always been a little nervous starting anything new, but I remember that first day being particularly unnerving, waiting for the zoo to open. I asked Joseph, who had been there for years, if there was anything I could help set up. He told me just to relax, maybe go down the slide a few times.

"Nothing like the slide to clear your mind," he said.

Emily and Cindy were waiting in line to go down the slide.

"You look a little green," Emily said.

"First day," I replied.

"First day, huh?" said Cindy. "I remember my first day. I spent the whole day hiding in the laundry closet."

"Listen," said Emily. "There's nothing to be nervous about. We just do our thing, and the people come and watch and sometimes ask us to do a trick."

When I got to the top of the ladder, a blow horn resounded through the park announcing that the gates were opening. My heart did a somersault, and I slid down the slide.

Sure, the job had little to do with what I had studied in college, but after having spent four months looking for work, I was desperate. It wasn't so bad at the zoo, either. I liked our habitat. It reminded me a lot of home. The part of our habitat that faced the visitors was kind of like a backyard. Behind the backyard was the fake house where we each had our own little room; we could always go nap there when we got tired. There was a pond-sized bathtub we were encouraged to swim in, and there was always music playing in case we felt like dancing.

Rainy days were best because there weren't many visitors. The zookeepers had hired a wonderful bunch of human beings, and it was a pleasure getting to know them all. It turned out every single one of them had something special they could do-Joseph composed music, Emily wrote poetry, Cindy read Tarot cards-but even more impressive than what they could do, was who they all were. Sometimes I wondered if the zookeepers-or even the wide-eyed and fascinated visitors-had any idea just how special we all

were.

On sunny days, the visitors crammed around our cage and hollered and cooed at us. Our trainers entered every hour and had us perform tricks in exchange for chunks of cookie dough, which, of course, none of us could refuse. My tricks usually had to do with dancing. One of our trainers spotted me dancing one evening and realized quickly that I had formidable moves. Of course the visitors ate it up. Many nights I'd go to sleep with my toes painfully calloused from fancy footwork and my limbs aching from my shaking legs. Joseph did mostly magic tricks, and Emily rode her bicycle in circles.

Once I recited a poem I'd memorized in French, but by the time I'd reached the third stanza, no one was listening.

On the third Sunday of every month, our trainers would leash us up and take us for a leisurely walk about the park. Without the glass between us and them, the visitors were much more respectful. They even seemed a little frightened.

One time a little girl dropped her doll, and Cindy picked it up and handed it to her. Her father suddenly pulled her away from Cindy.

"Don't touch it, Amanda!" he shouted. "That's a wild animal!"

Cindy was so angry the trainer had to wrestle the girl's doll away from her.

But working in the zoo had its perks, too. And eventually I'd been there so long that many of visitors started to remember me.

"It's Jesse!" the children would shout. "Do the dance! Dance for us!" And they'd dance with me on the other side of the glass.

There was even an old woman who came now and then and asked me to recite French poetry to her.

One time I slipped out of the cage late at night and sneaked into the "Oceans of the World" exhibit. The lights were out, but glowing jellyfish illuminated the walkways. I followed those drifting pillows of light through tunnels of artificial coral, past walls of water flashing with silver schools of tuna, and the circular tank with the circling sharks. Finally, I found what I was looking for: an immense cylindrical tank in the very center of the exhibit. In the dark, I could just barely read the plaque: *ARCHITEUTHIS, Giant Squid*. It was murky in the tank, and I stared at that black abyss for a long time, seeing only my own reflection trying to peer in through the glass. And I started thinking about who I was and about the other human beings, and I thought about what we were all doing in that zoo. And then, all at once, I realized that I had been looking into the eye of the squid. And in a flash of twisting tentacles and a cloud of ink even darker than the water, it disappeared into the shadows.

"And who are you really?" I whispered, staring into the tank.

Se Ri Pak, Champion Golfer

by Caitlyn Meagher



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Se Ri Pak in 2009

Se Ri Pak wasn't always a golfer. Growing up in South Korea, her sport of choice was track and field. But at age 14, her father recognized her talent and strength, and began to train her in golf, instead. Within several years, she became a successful pro-golfer.

Pak's dedication to golf separated her from most players. Her motto was practice, practice, practice. Every day, Pak ran up and down the 15 flights of stairs in her apartment building in South Korea. There was even a time she ran down the stairs backwards! One of the key components in golf is strong legs. Having strong legs gives golfers stability and power. Pak was determined to become the best golfer possible, and her training reflected those goals.

At the age of 19, Pak left her home in South Korea to pursue her dream of playing with the best golfers in the world. She came to the United States, where she was the only Korean player in the women's league. Her incredible first season inspired many other Korean people to play golf.

In 1998, Pak won four events. They include the LPGA Championship and the US Women's Open, two

of the largest golf tournaments in the world. She was the youngest woman to have ever won the US Women's Open. This tournament held a number of nail-biting moments for Pak. At one point, she hit the ball close to a water feature on the course. She had to stand knee-deep in water in order to putt the ball close to the hole. But she was able to make the shot! On top of that, Pak had to play 20 holes to break a tie with another player - two more holes than a typical game of golf. It was the longest tournament ever in professional women's golf, but she won it!

Since 1998, Se Ri Pak won 21 events. In 2003, she competed in a men's professional event on the Korean Tour. She finished tenth, becoming the first woman to qualify for a men's event since 1945. In 2007, she was inducted into the World Golf Hall of Fame. She was only 29 years old, making her the youngest player to ever be inducted.

Over the course of her record-breaking career, Se Ri Pak has become a national hero in her home country. There are even children's books written about her! And perhaps most importantly, she has inspired thousands of Korean people, especially Korean women, to begin playing golf. She says, "I've given them the confidence to come out here. I think of them as my sisters."

Olympic Legend, Jackie Joyner-Kersey

by Caitlyn Meagher



Jackie Joyner-Kersey at the 1988 US Olympic Trials

Jackie Joyner-Kersey was no regular track and field athlete. She had an extremely impressive athletic record! In fact, she was named the Greatest Female Athlete of the 20th Century by *Sports Illustrated for Women*. Born on March 3, 1962, Joyner-Kersey grew up to be one of the greatest track and field athletes of all time.

Joyner-Kersey's success story started early. As a teen, Joyner-Kersey won many track, basketball, and volleyball championships. She went to the University of California, Los Angeles, to pursue her athletic goals, and at age 19 began training for the Olympics.

She worked to be the best in the seven-part track and field event called the heptathlon. The heptathlon tests many skills that include running, throwing, and jumping. Athletes earn points for each event, and the player with the most combined points wins the heptathlon. One of Joyner-Kersey's specialties was the long jump. The long jump combines speed, strength, and skill. A long jump athlete runs up to a line called the foul line and then leaps as far as possible into a sand pit. The athlete who leaps the farthest wins, but the athlete must jump before running past the foul line.

Jackie Joyner-Kersey experienced many successes at the Olympics. At her first Olympic Games, in 1984, she won a silver medal in the heptathlon. She was just warming up, it seemed. At her second Olympic games, in 1988, Joyner-Kersey broke the world record in the heptathlon by earning 7,291 points. At the same Olympics, she became the first American woman to win a gold medal in the long jump. In 1992, she broke another record by winning two Olympic heptathlons in a row, and gained a bronze medal in the long jump. In 1996, at the Olympic games in Atlanta, Georgia, Joyner-Kersey took home yet another bronze medal in the long jump. This was the last Olympics she competed in.

Decades have passed since Jackie Joyner-Kersey set the world record in the heptathlon at her second Olympic Games. Many athletes have competed in heptathlons, but no other athlete has beaten her heptathlon record.

While Jackie Joyner-Kersey was training and competing in the Olympics, she also created her own foundation to encourage children to play sports and contribute to their own communities. Since her last Olympic games, she has continued in using her athletic fame to inspire and change her community. Joyner-Kersey has dedicated her life after competing in track and field to supporting important causes. She has helped provide resources for children to reach their academic and athletic goals. She also has helped provide resources to many families. One of these resources is internet access. More than four million Americans have gained internet access because of her help. Joyner-Kersey also goes around the United States to speak about the importance of children's education, racial equality, and women's rights.

The Serena Slam

by Caitlyn Meagher



Serena Williams's serve is considered one of the best in tennis.

You have probably heard the name Serena Williams, and you might know that she is a famous tennis player. But what is it that sets her apart? Plenty! She has been ranked Number 1 in the world many times. She has also won many Olympic gold medals and more important tournaments than you could count on all your fingers and toes. Many people consider her one of the most influential tennis players in the world.

Williams, who picked up a racket at the age of three, grew up playing tennis with her older sister Venus. Coached by both their mother and father, the Williams sisters were homeschooled. They both had a talent for the sport. Both sisters had incredible athletic ability and used this power on the court. Venus and Serena supported each other constantly, whether they were playing as partners or competing against each other.

In 1995, Serena began playing tennis professionally, a year after her sister did the same. A few years later, in the finals of the 1999 US Open, Serena beat the top player in women's tennis at the time. This was Serena's first Grand Slam title. What is a Grand Slam? In professional tennis, the Grand Slam tournaments are the four big tournaments that take place in the same order each year: the

Australian Open, the French Open, Wimbledon in England, and the US Open. Also known as the Majors, they are the most prestigious events in pro tennis. Serena's first Grand Slam win kicked off a long string of successes. From 1999 to 2018, Williams won a total of 23 Grand Slam singles titles on her own, plus numerous doubles tournaments with a tennis partner. From 2002 to 2003, she completed her first "Serena Slam," meaning that she won all four Grand Slams in a row. She held all four Grand Slam titles at the same time, but not within the same calendar year. Only a handful of tennis players have accomplished this achievement.

In addition to winning Grand Slam tournaments, she also has won gold at the Olympics. She has three Olympic gold medals for doubles tennis, tournaments she played with her sister as a partner. On top of those wins, she took home a gold medal for singles tennis at the 2012 Olympics in London.

So how did Serena Williams manage to pull off all those wins? She dominates the court with her strength and agility. Her serve is considered one of the best serves in women's tennis history. She serves with power and places the ball with accuracy, making it difficult for her competitors to hit the ball back to her. She often hits many aces during tennis matches. An ace occurs when a player serves the ball into the correct area of the opponent's court and the opponent is unable to touch the ball, let alone return it. At Wimbledon in 2012, Williams not only won the tournament, but she broke the tournament's record when she served 102 aces throughout her matches in the tournament!

Williams also uses her mental strength and resilience to win tennis matches. In numerous tournaments throughout her career, Williams has made incredible comebacks. In the 2012 US Open Final, she was trailing her opponent towards the end of the game. She was two points away from losing the whole match. But Williams did not give up. She managed to make a comeback and win, taking home the championship! Her comebacks in high-pressure tournaments illustrate her remarkable focus and determination.

Serena Williams continues to play professional tennis and also runs her own businesses. In 2015, she became the first Black female athlete to have a picture by herself on the cover of *Vogue*. She has also created her own charitable organization that provides educational opportunities for underprivileged youth around the world. Serena Williams reminds young people that they can accomplish their dreams through hard work and dedication.

The Dinka Dunker

by Caitlyn Meagher



Born and raised in Sudan, Manute Bol was passionate about helping people in his home country, even donating most of the money he earned from his time in the NBA.

You could say that Manute Bol was made for basketball. At about seven and a half feet tall, his head was only about two feet from the hoop, and he could easily rest his hands on the rim! People called him the "Dinka Dunker," a name that combines his Sudanese tribe and his ability to stand on his toes and dunk the ball into the 10-foot hoop. Before he gained fame for his basketball skills, though, Bol was just a regular kid from a village in Sudan.

Manute Bol grew up in a small village and tended to his family's cattle. He was a member of the Sudanese ethnic group the Dinka. Bol's father gave him the name Manute, which means "special blessing" in a Dinka dialect. The Dinka are among the tallest populations in the world.

At age 15, Bol began playing basketball. A US college coach discovered him when Bol was playing in Khartoum, the capital of Sudan. Bol came to the United States not knowing how to speak English, but he studied hard. Within three short years, he was drafted to play basketball for the Washington Bullets, in Washington, D.C. The team is now known as the Washington Wizards. After three seasons with the Washington Bullets, he moved to the Golden State Warriors, then played for the Philadelphia

76ers, and eventually finished his career with the Golden State Warriors.

Maybe you are guessing that he really racked up the points on the courts. Actually, that wasn't the case—he was known instead for his defensive game. When he spread out his arms, his wingspan measured a whopping eight feet, six inches from fingertip to fingertip. His wingspan helped him block almost any shot that came his way. Bol used his tremendous height and quick reflexes to become a great defensive basketball player, and he is the only player in NBA history to have more blocked shots than points scored. But his skills also went beyond basketball. He became a political activist and created many programs that helped people in Sudan.

Bol always had a passion for helping his home country of Sudan. While he was playing basketball in the US, Sudan was experiencing its second civil war. Bol donated most of his NBA money to support Sudanese people who were suffering. When his NBA career ended in 1995, Bol created the Ring True Foundation. This foundation provides medicine, food, and housing to the Sudanese people. He returned home many times to campaign for peace in Sudan. He also raised money to build schools in southern Sudan. Manute Bol died in 2010, but his legacy of charity and generosity lives on.

The Swim of a Lifetime

by Caitlyn Meagher



Gage Skidmore (CC BY-SA 2.0)

Diana Nyad speaking at a conference in 2016

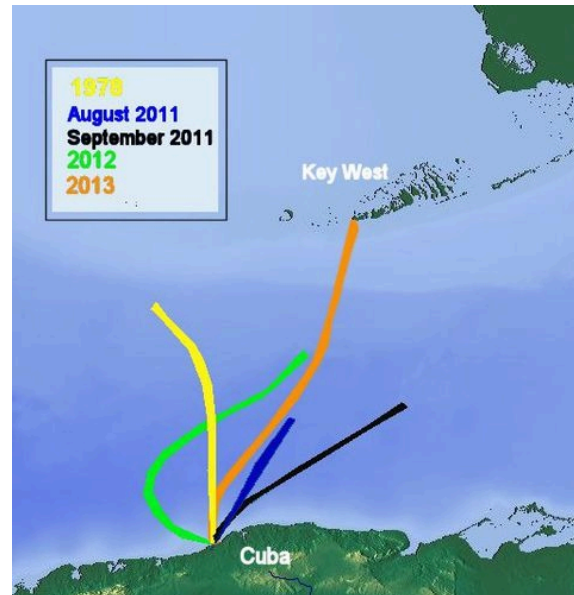
Diana Nyad liked to try the impossible. When she was in fifth grade, she decided she wanted to be a great athlete. She spent her young life in Florida waking up at 4:30 a.m. to swim for two hours. She would then run for an hour during lunchtime and swim again after school. Years later, she spent her days training to be a great marathon swimmer. Marathon swimmers swim long distances in open water. Water currents, wind, and waves are all obstacles that marathon swimmers deal with during long swims. When she reached her twenties, Nyad began completing long-distance swims that few people had attempted before her.

In 1975, Diana Nyad decided to swim around the island of Manhattan. After eight hours of non-stop swimming, she was pulled out of the water before she could achieve her goal. She had gotten a virus from the unclean water and had to recover for 10 days. But that didn't stop her. She tried again and made it around Manhattan in 7 hours and 57 minutes, breaking the record by nearly an hour.

This accomplishment was the first of many long-distance swims for Nyad. She made headlines by swimming from the Bahamian island of Bimini to Florida without a shark cage (an underwater cage that protects swimmers from sharks). She swam 102 miles in 27.5 hours, setting a world record. When she was 29 years old, she attempted to swim from Florida to Cuba, but was unable to make it, due to high waves that threw her against her shark cage. In 2010, after three decades away from marathon swimming, Diana Nyad began training again. She wanted to be the first person to swim from Cuba to Florida non-stop without a shark cage.

Swimming from Cuba to Florida required a lot of planning. This swim would take three or four days to complete. She would be swimming 110 miles. Nyad began brainstorming ways to make her swim

possible. She spoke with meteorologists about winds and currents. Even a slight change in winds could cause her to go off-course. She thought of ways to avoid shark attacks and jellyfish stings. She trained her body to get used to cold water for long periods of time. She swam 12 or 14 hours a day and eventually worked her way up to swimming 24 hours non-stop. Her first attempts to swim this route after 2010 failed, due to many different factors. In one instance, Nyad got stung multiple times by a box jellyfish, one of the most dangerous venomous marine creatures. Another time, Diana suffered an asthma attack that lasted for hours.



Froggerlaura (CC BY 3.0)

Diana Nyad's fifth attempt at swimming from Cuba to Florida was a success.

After the failed attempts over the years, Nyad began her fifth try in 2013. On the second night of the swim, there was a storm. Nyad had to stop swimming and tread water for two hours, making her very cold. She continued on, however. There was a strong ocean current that helped her along, so even with the rough seas, she made good time. Just before sunset on the third day, Diana Nyad reached Key West, Florida. She was 64 years old when she completed this swim. Exhausted and stumbling, Nyad managed to say to her fans on the shore, "You're never too old to chase your dream."

Jim Abbott on the Mound

by Caitlyn Meagher



Jim Abbott congratulating a child athlete with a disability on a good game

Jim Abbott used skill, dedication, and ingenuity to become a great baseball pitcher. He was born without a right hand, but this disability did not stop him from becoming a celebrated athlete and champion.

Abbott was born in Flint, Michigan, on September 19, 1967. From an early age, Abbott loved sports. All of the kids in his neighborhood played baseball, and he decided he wanted to join them. He just had to figure out a way to catch and throw a ball with only one hand. Abbott spent hours throwing a rubber ball at a wall and catching it with the same hand. Over time, he moved closer and closer to the wall, throwing and catching more and more quickly. This helped him develop incredible hand-eye coordination, a necessity for any great baseball pitcher. He also developed a technique to quickly put on his glove after pitching so that he could catch the ball. In a move later called the "Abbott Switch," he would balance the glove on his right wrist where his arm ended and rapidly switch the glove to his left hand. Still, some coaches did not believe in his talent. They did not think he could make it as a professional baseball player. He would soon prove them wrong.

While playing baseball at the University of Michigan, Abbott became more confident in his remarkable baseball abilities. He participated in the Pan American Games, a major summer sporting event where non-professional athletes compete. At the Games, Abbott pitched for Team USA. The team won silver, with Cuba winning the championship. Several weeks later, Abbott and Team USA played against Cuba again. This time they played in Cuba. Team USA beat Cuba, and Abbott became the first American pitcher in 25 years to beat the Cuban team in Cuba! He also ended up pitching for the US Olympic Team, and the team won first place in the tournament. After this Olympic victory, he decided to try to make it in the Major Leagues.

Jim Abbott joined the California Angels and became one of their pitchers. Many of his opponents would try and bunt the ball to him. Bunting a ball means hitting it softly without swinging at it, so the pitcher has to quickly throw the ball to the bases. His opponents thought he would not be fast enough to take his glove off and throw the ball with his one hand. He proved them wrong many times! His many years of practice paid off.

Abbott experienced many ups and downs during his Major League Baseball career. During some baseball seasons, Abbott lost almost as many games as he won. Like many athletes, Abbott experienced both big successes and big failures. But he continues to be an inspiration to many baseball fans and those with disabilities, even off the field. Since the end of his Major League career, Jim Abbott has devoted his time to working with children with disabilities, and he speaks throughout the United States about his experiences as an athlete with a disability.

At the Office

by W.M. Akers



"Wait here, sweetheart," said Albert's mother, "and I'll be done in a minute. Just hang out and have some fun." With that, she was gone.

There was a lot wrong with those two sentences. For one thing, Albert was too old for his mother to be calling him "sweetheart," especially in public. For another, he knew it would take a lot longer than a minute for his mom to take care of the work she had to finish that night. It would take more than fifteen minutes. It could take as long as sixty or seventy of them. But most importantly, there was simply no way he would have fun. Not for sixty minutes. Not alone in mom's office.

It was after six o'clock, and the whole building was empty, save for the security guard on the first floor. The floor where Mom worked was a long expanse of cubicles—tiny rooms with no ceilings, no doors, and walls made out of something that looked like carpet. It wasn't a stretch to say that Albert felt like a mouse in a maze. The difference was that a mouse gets cheese once it makes it way through the maze. Albert didn't have anything to look forward to but homework.

A few years earlier, he had relished these late-night trips to his mom's office. The empty cubicles were like tiny forts, with crevices he could squeeze himself into while he read or drew pictures. He could recline in people's chairs, pretend to talk on their phones, and leave silly notes on sticky paper for Mom's coworkers. The empty office was a sprawling gray kingdom, and he was the king.

But those days were long gone. Now, Albert looked at the cubicles and just saw cubicles. The chairs were just chairs; the phones were phones. And the empty hallways, lit by flickering fluorescent light, were far from being secret passages. If he was honest with himself—and this was a hard thing to admit—the quiet office made him a little bit scared.

It didn't help that he could hear a monster.

Again, this was something Albert was too old for. He knew there were no monsters in the office, just as there were no ghosts, zombies, or mad scientists. And yet-what else could be making that sound?

It came from far off. A deep-throated *whoosh*, mixed with an occasional grinding noise. He couldn't help picturing some kind of ogre, with a big, round body and stubby little legs and a mouth the size of his mom's compact car.

"And one eye," he said to himself.

Definitely just one eye.

It was probably standing guard in front of the elevator, clomping back and forth to make sure that Albert and his mom never escaped the office. They could take the stairs, sure, but the monster probably had friends in there-vampire bats with pointy little teeth, or gnomes who would hang upside down from the stairs and throw rocks at your head. And then they'd jump down on you and pull on your hair and-

"Little gnomes?" said Albert, interrupting his own train of thought. "Are you nuts?"

He needed to get a grip, and soon. The noise was getting closer.

He stood on the chair of the cubicle where he had been hiding. The cubicle walls stretched into the darkness. He climbed back down, not sure if he should hide, do some homework, or go searching for the noise. A rumble in his stomach made his decision for him. He couldn't sit still-he was hungry.

Sneaking one foot in front of the other, Albert crept down the line of cubicles, his heart in his throat. And just as he was nearing the corner at the end of the hallway-the corner that turned into the darkest part of the office-the *whoosh* stopped. Albert flattened himself against a filing cabinet. If there was a monster, it had gone silent.

He ducked under a desk, palms sweaty and heart racing. What had started as a sort of game had turned into real fear. He closed his eyes for what could have been a few seconds, or maybe ten minutes. He could hear his heart beating in his ears. He was too hungry to stay here all night. His stomach wouldn't let him. Finally, he peered out from under the desk. There was nothing there. Albert stood, his legs sore, and began walking again. And then he heard the sound coming from behind him.

"That's it!" he shouted. "This is unfair. You're sneaking around, and I don't like it. Just come and face me."

The sound stopped.

"Yeah! I know you're out there. Just step into the light and face me like a grown-up monster. I'm not scared."

He heard a little cough.

"Hello? Is there someone there?"

The monster was a woman.

"Yeah. My name is Albert. My mom works here!"

The monster stepped into the light: a middle-aged woman with a graying ponytail, wearing a sandy-colored uniform. "I work here, too," she said. "My name is Karen. Did you say something about a monster?"

"I was just goofing off."

"Maybe this was what you heard?" She reached into the shadows and pulled out a crazy-looking machine, with a long handle and big furry wheels. "It's a floor buffer. It polishes the floors."

"Oh. I figured that's what the sound was."

"Where's your mom?"

"In her office doing work."

"You bored?"

"Kinda."

"Hungry?" Albert nodded. Karen jerked her head, as if to say: "Come with me." So Albert did. They walked down the half-lit hallways, still creepy even though he was no longer alone, until they came to a big heavy door. Karen pulled out a huge ring of keys and unlocked the door. Inside was a kitchen. She took one key off her ring and handed it to him. "This'll unlock the cabinets," she said. "Eat up, kid."

Karen left, and Albert opened the cabinets. Inside were all kinds of snacks: peanut butter crackers, jelly beans, apples, and cereal. He gorged himself, making a feast out of the office food. It was still dark in the hallway, but he found that it was impossible to be frightened and full at the same time.

What's This? Seeing in all Directions

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.



Photo Courtesy of D.Blackwood/USGS

Sea scallops may seem like they're in their own little world - but these shellfish are keeping a close eye on the world around them. Up to 100 eyes, that is! The scallop's mantle - the thin body part that sticks out of the shell - is ringed with up to 100 tiny eyes.

Like our eyes, each one has a retina and lens to detect and focus light. Scallops can see in all directions, helping them guard against predators and scout places for food and safety.

What's This? Speaking with Scent

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.



Photo by Eframgoldberg (CC BY-SA 3.0 license)

Animals rely on their sense of smell for many reasons - to find food, avoid danger, and find their way. Some, like the **orchid bee**, use scents to communicate.

When male orchid bees sip nectar from flowers, they collect fragrant ingredients and store them in pockets in their back legs. This mixture becomes a custom "perfume" that the bee spreads to attract females in a mating display.

At the same time, the bee collects and spreads the flower's pollen. Specific species of orchids produce scents that attract specific orchid bees.

What's This? Sawfish

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.

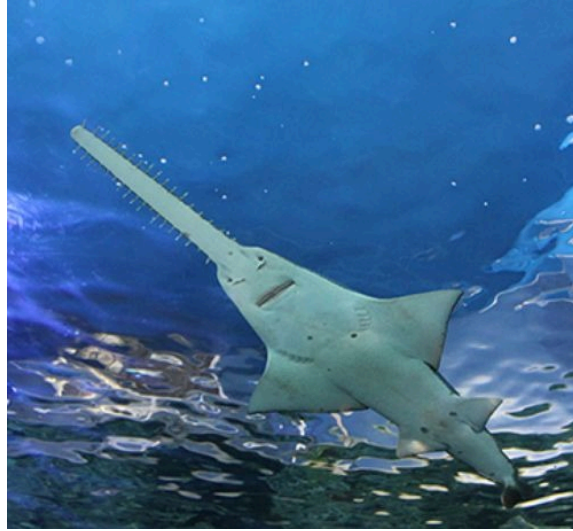


Photo by Holiday Point (CC BY-NC-SA 2.0 license)

This is the snout of a sawfish!

It's easy to see how this fish got its name: its long, flat, snout is rimmed with sharp points, like the end of a chain saw.

But this "blade" does more than cut - it also helps the **sawfish** track prey in murky waters. Its snout is covered with tiny sensors that detect electric fields produced by the fish's prey. As the sawfish swims, it waves its snout, scanning the water for shifts in electricity.

This ability, called electroreception, is found in a few other marine animals like electric eels and hammerhead sharks.



The body of a sawfish may look like a fish, but its long, flat snout sets it apart. Rimmed with razor-sharp points, this "saw" is a dangerous weapon for hunting prey and defending from predators. It can also be used to dig in sand looking for shellfish to eat. The sawfish's snout is covered with special sensory organs that detect electric signals produced by other animals. This ability, called electroreception, is like a "sixth sense" that helps the sawfish track prey, even in dark, muddy rivers and lagoons.

What's This? Seeing with Sound

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.



Photo by Lip Kee (CC BY-SA 2.0 license)

During the day, **swiftlets** hunt insects in the forests and fields across Southeast Asia. But at night, they nest inside pitch-black caves.

How do they fly in complete darkness? Like bats, these birds have the ability to echolocate - to "see" with sound. To find their way in the dark, they make two clicks and listen for the echo. They can tell how far away something is by how long it takes the sound to bounce back.

Other animals that can echolocate include dolphins, toothed whales, and shrews.

What's This? Life in the Dark

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.



Photo by J.McGuire/AmphibiaWeb/CalPhoos

If you've ever tried to find your way in complete darkness, then you know that without light, eyes are useless. And it makes no difference what color things are, since you can't see them. That's why most animals that spend their lives in the dark, like this **olm**, are blind.

This long, thin salamander swims in underground streams. It relies on other senses to find its way: it has a sharp sense of smell, keen hearing, and can even detect electricity from other animals. It can also sense pressure changes caused by other animals moving in the water. Food is scarce here, so olms are able to go without food for many years at a time.

What's This? Expert Ears

This text is provided courtesy of OLogy, the American Museum of Natural History's website for kids.



Photo by Mdf (CC BY-SA 3.0 license)

On a moonless night, an owl relies on its sharp hearing to track its prey. It can hear the faint rustling sounds of a mouse nibbling seeds or tunneling in the snow.

At first glance, you wouldn't think an owl has such excellent hearing; its ears are hidden under feathers on the sides of its head. In many species, like the boreal owl pictured, one ear sits higher than the other, so sounds arrive at each ear at a slightly different time and intensity. This helps the owl pinpoint where the sound is coming from, so it can hunt in complete darkness.

Jumping Bodies

by ReadWorks



This is the story of how I convinced my best friend I could jump bodies.

The first time it happened, I was sitting in Ms. Perry's sixth grade English class. We were reading a story about a man who had died but still believed he was alive. It was supposed to be a metaphor for something or other. Ms. Perry was going on and on about the differences between metaphors and similes and how to look for them in books, but I stopped paying attention the moment I heard her say, "The key to finding a metaphor is..."

It wasn't that I was incapable of focusing, but I had noticed a small crack in the window next to my desk. The crack ran the length of the window, and right in the center, it splintered into a giant spider's web of shattered glass. I was wondering how it had happened. We were on the fourth floor, and it seemed unlikely that any sixth or seventh grader could throw a rock that high and actually hit the window. After all, we weren't known for our athletic abilities at this school. I was thinking about all of the various possibilities -a bird, or maybe a freak accident-when suddenly I was staring at my classmates with my back against the chalkboard.

"I wonder if I left the stove on," I heard a small voice question from within my head. Then I saw a kitchen with a black and white tiled floor. I saw a hand reach out and switch the oven off. I didn't recognize the kitchen, and it certainly wasn't my hand. The fingernails were painted a dark cranberry color and the veins bulged out from underneath thin, brittle skin.

"Is everything alright, Ms. Perry?" I heard Charlotte ask. She was looking right at me. I felt cold and weak, like my knees might give.

Then, that was it. I was back in my body, sitting at my desk with a pencil in my hand. I was so surprised I almost fell out of my chair. Sammy, my best friend, nudged me. "Charles, you OK?" he whispered. "You look like you've seen a ghost."

"Yeah," I muttered. "I'm fine."

It didn't happen again for another two weeks. This time, I was in gym class. I was jogging around the track

talking to Sammy. I didn't particularly want to be running. It was cold outside. A flock of seagulls was overhead, squawking loudly. I watched them soar above us. Flying was something I always wanted to do.

And then, suddenly, I was looking down at a bunch of red-uniformed bodies running in a circle. And I was immensely hungry. All I could think about was food, and getting more of it.

And then, just as suddenly, I was back in my own body.

"Sammy," I said excitedly. "What just happened the past five minutes?"

"What do you mean?" he asked.

"I mean, did I do anything differently? Did I seem normal?"

He paused for a moment. "You were just really quiet. I thought you didn't want to talk to me."

"Sammy," I said, "I just became a seagull."

He looked at me like I was crazy. "Quit it, Charles. I'm sick of hearing you lie."

I admit it: in elementary school I had been known to stretch the truth. I didn't consider it lying, *per se*, just extreme exaggeration. But this was the truth. I had just watched my classmates running around the track like hamsters on a wheel. And two weeks ago, I had stared at them out of Ms. Perry's eyes.

I placed my hands on his shoulders. "Sammy, I'm serious."

He looked at me skeptically. "Then show me," he said. "Turn into a bird."

"It doesn't work like that," I said. "I don't know how to control it. It just happens. When I'm bored. Or something. I don't know why it happens."

He snickered. "Sure, Charles. Whatever." He walked away. This wasn't going to be easy.

The next day, I got on the bus and plopped down next to Sammy.

"Turn into any birds lately?" he teased gently. Sammy was a sweet kid, the type of kid who stuck up for other kids and didn't even mind if it meant he was going to get bullied.

I stared out the window. I wasn't in the mood to explain it to him. There was another crack in this window and I wondered how it had happened. All of the windows around me seemed to be splintering.

And then, suddenly, I felt it. I knew it was coming. I was going to jump bodies again. This time I was prepared. I grabbed Sammy's hand. "Ready?" I said into his surprised face.

"What are you talking..." Sammy muttered. He didn't finish his sentence, because then we were driving the bus. I could feel Sammy in the bus driver's head with me. I could sense his panic.

I watched our hands-that is, the bus driver's hands-holding the wheel. This was incredible.

And that's when things began to get really weird. We were stuck.