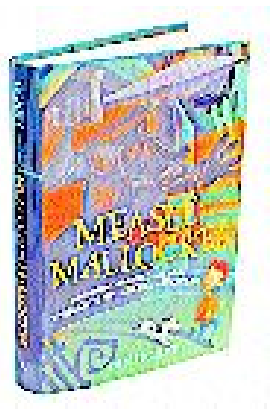
sneakers

BOOKSHELF



A Measle you'll want to catch

The Washington Post

"Measle and the Mallockee," by Ian Ogilvy; Grades 4-7; HarperCollins ($15.99)

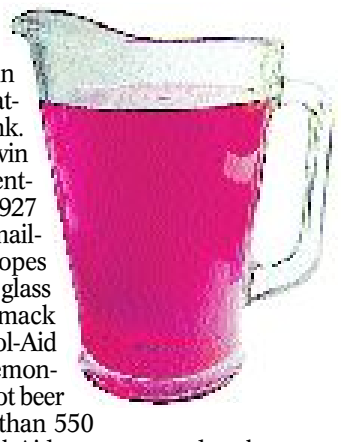
What's a mallockee, you might ask? Before you get your answer, you need to know what a wrathmonk is and what a dragondon is. Those answers are in the first two books of the clever Measle series, which is about an ordinary son of most extraordinary parents who finds himself in unimaginable situations.

This book has Measle in a castle with his baby sister, his dog and a wrathmonk. (No, we're not going to tell you what a wrathmonk is. You really must read the books!) But as exciting as Measle's escapades are – getting lost in a castle with moving walls and being chased by cows that come out of a painting – what really makes this book work are the characters. Just their names are enough to make you chuckle: Gobbin Good, Justin Bucket, Mr. Ignatius Niggle and Mumps. (OK, Mumps isn't a new character; it's what Mr. Ignatius Niggle calls Measle, but you get the idea.)

THIS WEEK IN HISTORY

Kool-Aid invented

The Washington Post



Today is the final day of Kool-Aid Days, a three-day festival in Hastings, Neb., celebrating the powdered drink. Hastings residents Edwin and Kitty Perkins invented Kool-Aid around 1927 to cut costs for their mail-order business: Envelopes of powder replaced glass bottles of Fruit Smack syrup. The original Kool-Aid flavors were cherry, lemon-lime, grape, orange, root beer and raspberry. More than 550 million gallons of Kool-Aid are consumed each year. Oh, yeah!

FUN FACTS

Dog days corner

The Washington Post

*Since it's the dog days of summer (the period when the sun and **Sirius**, the dog star, are aligned at sunrise as seen from Earth). That's a good excuse to write about some famous dogs:*

■ **Seaman**, a Newfoundland, accompanied Meriwether Lewis and William Clark on their 1804-06 exploration of the West. The dog is frequently mentioned in their journals – hunting squirrels and deer, chasing buffalo, and tangling with a beaver that, Lewis wrote, "bit him through the hind leg and cut the artery." Seaman survived that fight, but it's unclear if he completed the expedition.

■ **Balto** gained worldwide fame in 1925 when he led a team of sled dogs the final 53 miles into Nome, Alaska, with medicine needed to save the town's children from a deadly disease. Although Balto gets much of the credit, some 150 dogs took part in the six-day relay. They traveled about 1,000 miles in blizzard conditions. The trip led to the creation of the Iditarod sled-dog race.

■ **Fala** was a Scottish terrier who was given as a puppy to President Franklin D. Roosevelt. The two were pals from then on. Fala had his meals in the president's study and slept in a chair at the foot of Roosevelt's bed. Fala was a part of history, too. During one very important meeting during World War II, officials gathered quietly in FDR's study. The only sound heard was Fala, snoring blissfully.

■ **Kurt** was a member of the war dog platoons that served in the Pacific in 1943-45. These Marine dogs were feared and hated by the enemy and are credited with saving many American lives. Kurt and his handler, Private First Class Allen Jacobson, were wounded at the Battle of Guam in 1944. Kurt died of his wounds. A statue of the Doberman pinscher is at the entrance to the War Dog Cemetery on Guam.

How do seedless plants grow?

By RICK WEISS
The Washington Post

Think of seedless watermelons as the mules of the plant kingdom.

Mules are what you get when a male donkey mates with a female horse. Mules are born sterile, which means they cannot make babies when they grow up. The only way to make more mules is to start over with a donkey and a horse.

Seedless watermelons work the same way. They are the offspring of two different kinds of watermelon plants. These watermelons are as healthy as a mule, not to mention sweet and delicious. But, like mules, they can't make more of themselves. The farmer or gardener must start from scratch each year.

Scientists doing experiments in Japan made the first seedless watermelons about 70 years ago. But in some ways, seedless watermelons are the fruit of 5,000 years of work. That's how long people have been growing – and gradually improving – watermelons as part of an age-old human effort to make better foods through the art and science of plant breeding.

Ancient watermelons were full of seeds. But with a water content of about 92 percent, watermelons were incredibly valuable to nomads in the North African and Middle Eastern deserts, where they were used as natural canteens. Some Egyptian pharaohs were buried with watermelons, snacks in the afterlife.

Regular watermelons have as many as 1,000 seeds per melon.

Even today, regular watermelons have as many as 1,000 seeds per melon. That's great if you're in the mood to do some spitting, but a hassle if you want to scarf down mouthfuls of sugary, ruby red fruit.

Scientists had another reason to get rid of the seeds: The softer tissue surrounding the seeds is the first to get mushy as a watermelon ages. A seedless watermelon, they reckoned correctly, would stay sweet and fresh longer.

It took Japanese scientists about 15 years of complex breeding experiments to come up with a melon that was truly seedless. They did it by crossing two varieties with very different numbers of chromosomes, which are the bundles of DNA inside cells. Today seedless varieties account for more than half of all watermelon sales in the United States. (Those little white things you see are the shrunken outer husks of the seeds that never grew, and are fine to eat.)

Seedless melons are generally sweeter than ordinary melons, in part because all that energy that would have gone into making seeds can instead go into making sugar.

Improvements keep coming. A new variety of seedless watermelon is as small as a softball – making it easy to pack in a lunch – and has a rind that, although very thin, is so strong that three 10-year-olds with very good balance could stand on one without breaking it.

Which, come to think of it, could be as much fun as spitting seeds.

GLOSSARY

Important words about plant breeding:

■ **DNA (short for deoxyribonucleic acid, pronounced de-OX-e-RI-bo-nu-clay-ic AS-id).** The basic strands of life. DNA carries coded information about what characteristics living things will pass on, in its unique ladder shape.

■ **Chromosomes (pronounced KROE-ma-somes).** Long, continuous pieces of DNA. They can contain hundreds of genes. Human cells have 23 pairs of chromosomes.

■ **Heredity (heh-RED-i-tee).** Passing on biological traits or characteristics from parents to offspring through genes.

■ **Gene (JEAN).** The basic unit of heredity. Traits, such as whether a watermelon has seeds, are determined by the information carried in genes.

WATERMELON FACTS

■ Watermelon's closest relatives are cucumbers, squash, pumpkins and gourds.

■ You can eat every part, even the seeds and rind.

■ More than 4 billion pounds are produced in the U.S. every year.

■ Scientifically speaking, watermelons are both fruits and vegetables. The plants themselves are vegetables, but the part you eat is the "fruiting body" (or reproductive organ) of that vegetable plant.

■ Japanese farmers also have produced square watermelons. They're easier to ship, but cost a lot.

Meet a plant breeder

The Washington Post

Kim Lewers used to play around in her yard, sprinkling dust-like particles of pollen from one flower onto another so new flowers with novel color combinations would pop up the next spring. She went on to get a graduate degree in plant breeding and today works as a research plant geneticist for the Department of Agriculture's Fruit Laboratory in Beltsville, Md.

Kim Lewers

"Plant breeding is the greatest thing!" she says. Of course, she adds, experiments don't always works. Sometimes you end up with a fruit or a flower that's worse than what you started with. "That's one of the fun things about it. You never know quite what you'll get."

Here's a tip Lewers learned from breeding fruit for better flavor: It's best to pick fruits around 4 p.m. "That's when the fruit is producing the most sugars," she says.

Making better plants: the science behind plant breeding

By RICK WEISS
The Washington Post

Kids tend to look like their moms and dads, and the same rule applies to plants.

The passing of traits from generation to generation is called heredity. And the field of science that focuses on the rules of heredity is genetics. For thousands of years, farmers and gardeners have taken advantage of the rules of heredity to create new plants with bigger and sweeter fruits and with greater resistance to disease, drought and insects. Scientists who do this are called plant breeders.

These scientists use pollen from the best male plants to fertilize the best female plants. They have brought us big, juicy ears of corn (varieties from several hundred years ago were about the size of your thumb) and blackberry bushes that don't have thorns.

In recent years, scientists have learned how to make new plant varieties even more efficiently by genetic engineering. They insert or delete pieces of DNA, the genetic material that is in a plant's chromosomes. Among their results: corn plants that make insect-killing chemicals in their leaves, so farmers don't have to spray them, and soybeans that will not die when farmers accidentally splash them with weed killers.

But those advances bring new concerns, too. Pollen from some of these plants has spread accidentally to nearby weeds, making those weeds stronger. Scientists are now developing ways to keep new plant traits from spreading accidentally.