

JULY 2008

\$5.99 US \$7.99 CAN

Nature Friend

Helping Children Explore the Wonders of God's Creation

Volume 26 • Issue 7



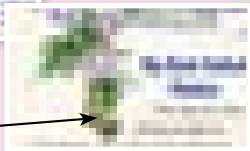
SCAVENGER HUNT

In this issue are hidden six butterflies. You can see here what they look like; however, where they are hidden they may be any size and any color. So get your binoculars (or magnifying glass) and start searching. See if you can collect all six butterflies.

I See It! from June



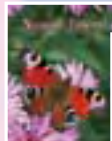
page 7
lily pad



page 11
frog

Invisibles.....	3
Our Mourning Dove Family	4
Pictures and Poems.....	6
Interesting Facts for the Curious	7
Wondernose	8
Could You Find a Koala?.....	10
The Mailbox.....	11
Nature Trails.....	11
Confusing Creatures.....	12
<i>In the Beginning</i>	
<i>God Created Yellow-breasted Chats..</i>	14
You Can Draw— <i>A Koala</i>	16
<i>A Wood Duck—from March</i>	
You Can Draw	18
Daisy Coloring.....	19
Who Am I?	19
Where is the Milky Way?.....	20
Creation Close-Ups	22
Crab Legs and Lunch.....	24
Caption This.....	25
Plant Reactions	26

FRONT COVER:
This peacock butterfly is found in Europe, Asia, and Northern Africa.



Nature Friend

I have a question for you. How many shark teeth do you suppose are riding the ocean currents? We just got back from a quick trip across the state of Virginia. For an hour or two, we searched four hundred feet of the Potomac River shore looking for shark teeth.

Our friends were familiar with finding shark teeth, but for our family this was a new experience. A lady had been searching prior to the arrival of our group, and she had a nice collection of teeth. While she found some by straining sand through a screen, most were picked up from the sand like small sea shells.

Before too long, our friend Sarah found a nice tooth.

“Okay, I just don’t have the knack for seeing them—my eyes aren’t trained to pick them out,” I thought to myself. Imagine my surprise when I found one almost right in front of where the lady had been working the sand. How could she have missed it?

As we prepared to leave, we gathered to admire the various teeth we had found. Darren had the largest one. He also had another fun experience; he saw one coming in with a wave and grabbed it before it hit the sand.

In all, we picked up twenty-two shark teeth. This was immediately after someone else had carefully searched the area. Considering the small stretch of beach and our short stay, how many teeth must there be in the ocean?

I did a little research and learned that sharks have new teeth growing all the time, shedding old teeth as often as once a week. One shark may shed as many as 1,800 teeth per year, and tens of thousands in a lifetime. Shedding teeth begins even before birth...how fascinating it is to learn about God’s wonderful creation!



BACK COVER:
“Do I look like Daniel ‘Coone’ yet?”
—Samuel Strunk, Kempton, PA

Kevin Shank

Kevin Shank

Can you find five small objects
hidden in this big picture?

INVISIBLES



Sunglasses



Pail



Umbrella



Sea shell



Worm



Fishing net



Sunscreen



Shovel



Sun



Starfish



Fish



Boat



Published monthly and copyrighted © 2008 by Dogwood Ridge Outdoors.
 Nature Friend 2008-2009 #002 updates the principles of the original Friend of Land,
 High Character Family Standards, 21st Century Character Education and a new model of Character
 Accountability of staff members.
 Address all correspondence to: Nature Friend, 4371 Woodloch Lane, Dayton, VA 22021.
 Telephone: (703) 714-9674 or fax: 2-mail: editor@dogwoodridgeoutdoors.com website:
 www.dogwoodridgeoutdoors.com or www.naturefriendmagazine.com

Subscription Rates: U.S.A. \$16.00 (2 years);
 Canada and Mexico \$47.00 (2 yrs.);
 International \$60.00 (2 yrs.);
 Outside U.S.A. \$100.00 (2 yrs.) \$120.00 (3 yrs.)
 "I Don't See Children" is a program for giving gift subscriptions to a teacher.
 For every 100 gift subscriptions you purchase a 100% tree is lost. It is not a reward and
 subscriptions are not for profit but to fund up other great programs.
 Send names, phone numbers, Email & ZIP, to: Canada, VA/Outings.
 Board members - a whole new to you future - what a privilege. Call for
 pricing.

Manuscripts, articles, or photographs must include 3000-4000 words or more. Publisher
 reserves the right to edit or reject any material. The Nature Friend Code of Ethics
 and Character Standards are available for \$5 per year.
 Nature Friend 2009 (Vol 19) is published monthly by Dogwood Ridge Outdoors.
 Periodicals postage paid at Dayton, VA 22021, and additional offices. The Nature Friend
 will not forward any requests unless you guarantee forwarding postage with your
 first year order. But there are no pre-approval costs or guarantee forwarding,
 magazine subscriptions may be purchased in bulk orders. Postmaster: send address
 changes to: Nature Friend, 4371 Woodloch Lane, Dayton, VA 22021. Volume 19, Issue 1,
 February, March & September. March 2009 contains: Nature Friend, Volume 19, Issue 1,
 Just Doing Things (Issue 1908).

Our Mourning Dove Family

by Diane Stout

Early in the spring, a flock of doves migrating north passed over the Stout Family Farm, where they stopped to feast in the cornfield, picking up scattered grain. Mourning doves feed almost exclusively on seeds, including corn and wheat, which are abundant on the farm.



© V. Ann Johnston, 14, Ft. Wayne, IN



© V. Ann Johnston / istockphoto.com

are also numerous on the farm. After eating seeds, they swallow a bit of fine gravel, which aids in digestion.

Later, at least twenty doves stopped by the farmhouse to rest on the deck railing. One male dove claimed territory with his plaintive call, prancing around, cooing and billing, with his neck feathers all ruffled. He

and his mate selected a nesting site in a blue spruce tree.

Like all doves, the male's wings made a fluttery, whistling sound as he flew about gathering small twigs to build the nest. In

After the doves filled their crops, they flew away to digest their meal while resting. The crop permits the dove to gather and store food rapidly, minimizing the time they are exposed to predators like owls, squirrels, and cats, which

selecting material, the male was very careful and tested sticks by shaking them vigorously. As he handed his graceful mate the twigs, she built a nest of flimsy construction.

The female dove laid two small white eggs. The male incubated the eggs during the day, and the female incubated them during the night. While one was taking care of the nestlings, the other one took time to feast on seeds and get a drink of water from the creek on the farm. Unlike most other species of birds, it did not need to lift its head after each sip of water.

The doves were devoted parents and very rarely left the nest unattended. This is common among mourning doves, with one exception. The dove will leave the nest and abandon eggs or nestlings if threatened by a predator or human. If that happens, they will usually nest again.

Approximately two weeks after the eggs were laid, the babies—called squabs—were hatched. Both parents fed the squabs crop milk. Crop milk is a secretion from the lining of the dove's crop and is fed by regurgitation. Each nestling dove inserted its bill into the corner of the parent's mouth and swallowed the crop milk or seeds that its parent disgorged. The parent fed both nestlings simultaneously, with one on each side. If the parent dove had a third



© Laura Hook, 14 Ft. Wayne, IN

nestling, the food would be limited. There would not be enough food for a third nestling after the first two finished. The smallest nestling would not have a good chance of surviving.

After the first few days, the parents began to introduce a small proportion of small seeds, softened by holding in the crop. By the end of the second week, the babies were being fed entirely with softened adult food.

At this time, the squabs began to get their flight feathers. They stayed near the nest to be fed for a couple more weeks before leaving their parents and flying off on their own.

As the offspring left the nest, their parents formed a strong bond which will keep them together throughout the winter. Once their offspring were on their own, the doves flew south to spend the cold months in a warmer climate. Typically, they will return in the spring to the same area – which for this pair might be the Stout Family Farm. ◀

pictures & poems



Bethany J Weiler, 10
Seneca Falls, NY



Joshua S Smith, 18
Lewiston, ID



Mabel Hoover, 12
Penn Yan, NY

A Forest Walk

Let's take a walk in the forest now—
A walk in the woods so grand,
Examining what the Lord hath made
And now holds in His great hand.

The singing birds "make a joyful noise"
To their great Creator – God.
The trees sway back in the gentle breeze;
Around us the bushes nod.

The tiny ants crawling all around
Do their mighty Maker praise;
Without a king they can work as one
By following God's best ways.

God's world should give us an awe for Him
Who made all the creatures grand;
And we should praise Him for all He's done
As we live on this, His land.

Darvin K. Sensenig, 14
N. Andros Island, Bahamas

Nature's Joys

As I skip happily down the road,
I see a great big-bellied toad.
He jumps into the brush
As if he's in quite a rush!
And as I scan my eyes through the field,
I see an otter cross without yield.
I see some deer that jump with fright,
And I laugh a laugh of pure delight!
I see a fish jump in the air
Which gives the horses quite a scare.
I give them apples to quiet them down,
And then I hear a great loud sound!
I quickly turn around in a rush,
And a great blue heron walks out of the brush.
It senses me and flies away,
And out walks a coon with some of its prey.
As I walk on in the beautiful day,
I think I'll just sit down and pray.
I thank God for a beautiful day outside,
And I get on my horse for a wonderful ride!

Sydney Simao, 8
Poulsbo, WA



Brianna White, 9
Toledo, OH



Janae Hurst, 4
Denver, PA



Anna Brueggemann, 10
Independence, KY

I like the rainbow. God made the rainbow.

Grace Turowski, 15
Athens, WI

Want to have your picture or poem published in Nature Friend? Use black ink, dark pencil, colored pencils, or paints on **clean, unlined paper**, and do not fold drawing. Send to Pictures and Poems, 4253 Woodcock Lane, Dayton, VA 22821, or e-mail to picturesandpoems@naturefriendmagazine.com. Include your name and address. If you want your work returned (whether we use it or not), please include a self-addressed, stamped envelope. Space is limited, so it is not possible to publish every submission.



Matthew Schrock,
Cuba, IL



Crystal Kauffman, 9
Denver, PA


INTERESTING facts for the CURIOUS




- 1 How much does a baby blue whale weigh?
 - 150 lb. – see #7
 - 26-40 lb. – see #19
 - 6,000 lb. – see #21
- 2 You're mistaken this time. Return to #24.
- 3 Wrong. Trot back to #5.
- 4 If at first you don't succeed, try, try again. Take another look at #16.
- 5 How many "warts" does a warthog have?
 - 200 – see #3
 - 4 to 6 – see #14
 - 50 – see #20
- 6 Now you've got it! Did you find this quiz hard? I hope you enjoyed it! Goodbye!
- 7 You're wrong – return to #1.
- 8 Absolutely right! A hippopotamus has red (or pink) perspiration. Aren't we glad we don't? Hop to #5.
- 9 No. Race back to #16.
- 10 What color is a hippo's perspiration?
 - Clear – see #29
 - Red – see #8
 - Yellow – see #15
- 11 Good for you! A giant saguaro cactus may have 50 arms. They can also be 50 feet tall. Imagine! Swoop to #13.
- 12 Take a stroll to #13 and guess again please.
- 13 How tall can a giraffe become?
 - 7 feet – see #12
 - 20 feet – see #6
 - 25 feet – see #23
 - 11 feet – see #17
- 14 Good job this time! Warthogs have three pairs of warts, right on their noses! Let's count our blessings as we scurry to #16.
- 15 Incorrect. Splash back to #10.
- 16 What's the fastest mammal in North America?
 - Wolf – see #9
 - Pronghorn antelope – see #25
 - Cheetah – see #4
- 17 Don't give up, even if you're wrong. Gallop back to #13 once more.
- 18 Retrace your leaps to #26.
- 19 Guess again please.
- 20 Having a hard time? You're wrong again! Whiz back to #5.
- 21 Right. It seems unbelievable, but they can weigh 150 tons once they're grown! Go to #24.
- 22 I'm sorry. Back to #24.
- 23 False. Try #13 again.
- 24 How many hearts does an earthworm have?
 - 10 – see #27
 - 1 – see #2
 - None – see #22
 - 25 – see #30
- 25 Ah, you have it! The pronghorn can run 60 miles per hour. Next is #26.
- 26 How many arms can a saguaro cactus have?
 - 3 – see #18
 - 21 – see #28
 - 50 – see #11
- 27 Exactly! Ten hearts to one earthworm. Head for #10.
- 28 Having a tough time? Well, back up to #26 and think harder.
- 29 Plod back to #10, and guess again.
- 30 Incorrect. Crawl back to #24.

by Frieda Brubacker, 15
Rich Hill, MO

In Pennsylvania Dutch (a language spoken by many of our readers) the term “gvvnanaws” (wondernose) is used to describe someone who is curious about everything around him. **WONDERNOSE** asks lots of questions to satisfy his or her curiosity. After all, that’s a good way to learn, isn’t it?



WONDERNOSE



by Rebecca Martin

Wildlife Wondernose Question #71

What animal can **travel** for many miles through the **air**, even though it has **no wings**?

A You certainly look mystified, **WONDERNOSE**. You’ve heard of flying squirrels and flying fish that can travel for quite a distance through the air without wings. But many miles? That’s a different story.

One fact that helps to keep our mystery animal airborne is that it is very small. But even the tiniest insect will eventually fall to the ground if it doesn’t have something to aid in keeping it aloft. Our little mystery creature travels by a method called “ballooning.” (Some have called it parachuting, too, but I feel ballooning is a better word.) Now are you imagining some little mouse or grasshopper clinging for dear life to a balloon as it wafts out over the ocean? It’s not quite like that – though I’m told that sailors up to two hundred miles from land have seen these airy fellows sailing above the waves!

Let’s begin at the beginning of our mystery animal’s life. The mother lays a large number of pearly white



eggs and encloses them in a silken sack, sort of like a cocoon. No, **WONDERNOSE**, our animal is not an insect, though in size it’s not bigger than one.

To continue with the life story, this silky bag or cocoon is usually constructed in the fall. After she has laid the eggs, the mother dies. The eggs are left alone

to hatch in late winter. Since the weather is still cold, the babies stay inside their sack for awhile. And since they have no other food, 🕷️ **WONDERNOSE**, I'm afraid these babies tend to eat each other to survive.

As they develop, the babies grow too large for their skins, which don't grow with them. So every now and then the babies molt. I guess you know what that means, 🕷️ **WONDERNOSE**—to molt is to form a new skin and shed the old one.

At last spring arrives. The surviving babies tear a hole in the side of their home, and one by one they crawl outside. They must find homes for themselves where they will repeat the cycle of building an egg case and laying eggs by fall.

This is when the traveling comes in. The baby will climb to the top of some tall object like a fence post, tilt its abdomen in the air, and allow the wind to pull tiny strands of silk out of a body part called a spinneret—

I knew you would guess it now, 🕷️ **WONDERNOSE**. Of course our mystery animal is a spider, and the species I've chosen to describe is the common garden spider, though others have similar habits. Maybe you had a hard time guessing because you forgot that spiders aren't insects. But surely you've been taught that, among other differences, spiders have eight legs while insects often have only six.

Getting back to our spiderlings' aerial act, the wind catches those silky strands, lifts the spiderling into the air, and wafts it along like a balloon on a string! You wonder how they know when to land, 🕷️ **WONDERNOSE**? I don't even know if they have any say in where they land. They're probably at the mercy of the wind.

Since they're called garden spiders, we're going to assume that a certain spiderling lands in your garden on a blackberry bush. Here it will proceed to spin a web that is a marvelous feat of engineering. First it puts up a basic line called a bridge. From this it suspends foundation lines; and, beginning from the center of this space, the spider spins out threads like the spokes of a wheel radiating from the hub.



Before I tell you more, 🕷️ **WONDERNOSE**, I should explain that a spider spins two kinds of threads – dry ones and sticky ones. In fact, all spiders have at least three kinds of glands that each produce a different type of silk; some spiders produce five kinds. Each type of silk has its own function.

Returning to our garden spider's web, you'll remember that it was putting up spokes with dry silk. Next it coils a strand of dry silk throughout these spokes to hold them together. Then it adds a sticky thread, also coiled throughout, and removes the dry thread again.

At last it is ready to catch food! You know the rest, 🕷️ **WONDERNOSE**. You have watched a fly getting caught in one of these crafty traps. Often a web will be damaged by the time a spider has had its supper. It will either repair the web or build a new one.

Guess how long it takes the garden spider to engineer a new web? Only one hour! ◀

Could You Find a KOALA?

by Michelle Beidler



If you were to visit eastern Australia, how easily might you find a koala in the wild? Several things could make this a challenge. First of all, koala numbers have been seriously depleted by hunters over-harvesting them for their thick soft fur. Once almost extinct, they are now protected by law, and efforts are being made to increase their population.

During the day, koalas are hard to spot as they sleep curled in forks and clinging to limbs of eucalyptus trees. Their brown, white, and gray coats blend right in with the background.

At night koalas are active, swinging from tree to tree, stripping off tough, oily eucalyptus leaves. Stuffing them in their mouths, they chew and chew and chew. Although eucalyptus leaves are deadly to many animals, God has provided the system of the koala with a special bacteria to safely process the chemicals in the leaves. By the end of the day, the average koala will have eaten 2 ½ lbs of leaves.

Koalas spend most of their lives in trees, seldom coming to the ground even for water. In fact, the name “koala” comes from an Aborigine word meaning “does not drink.” Koalas usually obtain needed moisture from the leaves they eat. During some seasons of the year, the eucalyptus leaf is two-thirds water.

On the rare occasions the koala comes down from his tree, he scuttles along the ground, swaying awkwardly, but fast enough to elude a pursuing dog.

The furry koala looks like he would fit right in with a teddy bear collection. In fact, he is sometimes referred to as “koala bear.” But in reality, koalas are in the marsupial family and closely related to the kangaroo.

The newborn koala is very small and is blind, hairless, and earless. At one week, the baby koala is about the size of a jelly bean. Like the kangaroo, this baby is called a joey. How does this tiny creature find his way to the pouch on his mother’s belly? It can only be an instinct provided by our God who created all things good.

For the first several months the joey nestles in his mother’s pouch. Finally he ventures out to spend the next six months riding through the treetops clinging to his mother’s back. At the age of 4 years old, the koala is fully mature and can range in size from 2 to 3 feet tall.

Did you ever see a koala? You might think, as cute as they are, they would be found in most zoos. However, outside Australia, few zoos are able to host koalas. Can you guess why not? Answer on page 11. ◀





The Mailbox

Dear Nature Friend,

I know that honeybees usually die when they sting, but I was just thinking, why don't wasps die when they sting? It seems like they should, since they are both flying and stinging insects.

Haley Dasen
Rogers, AR

Dear Haley,

Honeybees have a barbed stinger that causes it to remain in the skin

Do you have a nature experience you want to share, a question you'd like to ask, or a thought you want to share about something in *Nature Friend*? We want to hear from you! Write to: The Mailbox, 4253 Woodcock Lane, Dayton, VA 22821, or e-mail mailbox@naturefriendmagazine.com.

after stinging a person or mammal. When it pulls out of the abdomen of the honeybee, the injury to the bee causes it to die. However, the bee does not lose its stinger after stinging another insect.

The stinger of a wasp is smooth, so it is not pulled from the body of the wasp; therefore, the wasp does not die after stinging.

—Nature Friend

Dear Nature Friend,

I really enjoy your magazine. I have a problem. Flickers keep pecking holes in the side of our house. No matter how many times we chase them away, they always come back. There are ten holes in the wall. What can I do about it? If anyone can give me some advice, that would be nice. Please write to: John S. Jacobs, 93 Meadow Dr, Blanchard, ID 83804. Thank you.

Dear Nature Friend,

A few weeks ago, my sister went to get something out of my parents' room when she saw a Coopers Hawk outside eating a bird. She called us, and we watched him pull off all of the

feathers. It was so fascinating to watch him eat the whole bird! After he flew away, we went outside and there was just a pile of feathers on the ground. It was a wonderful experience getting to see one of God's wonderful creations in action.

Brianna Starks
Indianapolis, IN



© Scott Linshead

ANSWERS

Answer to Why there are few Koalas in zoos on page 10: Koalas eat only eucalyptus leaves, and most zoos are unable to obtain enough leaves.
Answer to Who Am I on page 19: Nile Crocodile



© John Bell / istockphoto.com

J U L Y Nature Trails

Do you like tarantulas? I sure do! In July, I try to find them! I enjoy holding them and feeling their "hair." Tarantulas are big, hairy brown spiders, commonly found walking around on hot July days in search of their favorite food—grasshoppers! The scientific name for the tarantula is *theraphosidae*. They are capable of biting, but are not harmful to man. They are in the family of the European wolf spiders.

Olivia Anz, 15
Tryon, OK



© Don Konz / iStockphoto.com



© Carlos Santa Maria / iStockphoto.com

apart. The major difference is in their snouts. An alligator's snout is rounded at the end, while a crocodile's snout is pointed. Is the reptile giving you a toothy grin? It's probably a crocodile. A

Can you tell a frog from a toad? What's the difference between a rabbit and a hare? How about an alligator and a crocodile? Can you tell them apart? Some animals are so similar to each other that people get them mixed up. Here are some hints to help you.

Frogs and toads are often mistaken for each other. While toads are members of the large frog order *Anura*, within this group the name "toad" is given to those that typically have dry, warty skin. Frogs, on the other hand, usually have smooth, moist skin, and can leap great distances—some kinds even climb trees. Toads stay near the ground. They can hop, but are more clumsy than frogs.

Alligators and crocodiles are harder to tell

crocodile's front fangs fit outside of its lips, so you can see teeth even when the croc has its mouth closed. An alligator's teeth are hidden when it shuts its mouth. You're more likely to find an alligator in the Southeastern United States, while crocodiles are more common in Central America, Africa, and Asia.

Lizards and salamanders are another difficult pair. Start by looking at their skin. A lizard has skin like a snake's—dry and scaly. A salamander's skin is smooth like a frog's. Lizards have claws on

Confusing CREATURES!

by Jessica Van Dessel

the ends of their toes, while salamanders do not. Many species of lizards live in the desert; they don't mind hot, dry climates with bright sunlight. But salamanders prefer to stay in dark, damp places. Rabbits and hares are very hard to tell apart. To a scientist, the difference between them is that baby rabbits are born with closed eyes and no fur, while newborn hares have a full coat of fur and open eyes. To tell the adults apart, check the size of their ears. Hares have longer ears and longer hind feet. Rabbits are smaller all over. Rabbits like to have their homes underground. They will dig themselves a burrow, or move into one left by badgers or groundhogs. While



many rabbits nest underground, the cottontail rabbit makes its nest in a small depression above ground. Hares make simple nests in the grass.

How about butterflies and moths? Both of these insects are caterpillars first, go through a pupa stage, then emerge with wings, so what's the difference? Well, to start with, butterflies are usually more colorful. Their wings are covered with intricate patterns in many colors and shades of blue, black, yellow, white, orange, or brown. A moth's wings are much plainer. Butterflies tend to fly during the

day, while most moths come out toward dusk and at night. Watch the insect as it rests on a flower or on your window screen. The wings of a moth will lie flat, while a butterfly will often fold its wings upright over its body. Also observe the antennae – are they long and slender, with knobs at the end? If so, it is probably a butterfly. If they appear short and fuzzy, it is likely a moth.

Our final pair is the tortoise and the terrapin. Yes, both are turtles, but many people use the name "tortoise" for the species of turtles that live only on land. Tortoises have stubby feet, with short claws for digging, and they don't mind living in dry places. In fact, many tortoises live in the desert areas of the Southwest United States. The name "terrapin" is used for the turtles that live in fresh water or coastal streams and marshes. They have flatter shells than tortoises, and their feet may be webbed. Terrapins eat small crabs and snails along with water plants. Tortoises are strictly plant eaters. Still not sure which is which? Just call them all "turtles," and

you'll be okay!

God designed each of His creatures to be unique. Even these look-alike animals have special features that set them apart from each other. The next time you see a frog or a toad, or a



butterfly or a moth, remember the care God took with each one. ◀

IN THE BEGINNING...

by Naomi Myers

One summer day, while recuperating from an operation, I was resting on a quilt in our backyard. The yard joined a brushy woodland in the foothills of western Virginia's Allegheny Mountains. Suddenly I heard a medley of birdsong. Looking up, I saw a beautiful warbler-type bird fling itself into the

air as if to say, "See me?"

The bird was a yellow-breasted chat, the largest of the wood warblers. The chat is about 7 ½ inches long when fully grown. It has a thick, dark-colored, slightly-curved bill and white broken rings around its eyes, making it look a little as though it's wearing glasses. Its throat and breast are a bright yellow, its head and back a dark olive green. The female yellow-breasted chat is a bit smaller than the male, and her colors are not quite as bright.

The chat behaves and sounds more like a member of the mockingbird family than one of the wood warblers. In fact, sometimes it is called

"THOU hast created all things, and for THY pleasure they are and were created." REVELATION 4:11





© Tim Vidrine

a “yellow mockingbird.” Its song is a mixture of cackles, whistles, mews, squawks, tweets, cheets, and sometimes a beautiful warble. It has even been known to make a noise like a car horn! It mimics other birds, and sometimes its noises seem to come from several directions at once.

Although the chat is usually secretive, hiding in dense thickets, sometimes when it sings it flies from one bush to another, its legs dangling and wings flopping loosely. It may jerk its tail up and down

and twist its head.

The chat is found from southern Canada south as far as central Mexico, at the edges of woods, in dense thickets and brambles, and in low, wet places near ponds, streams, or swamps. Although most of these birds migrate to Central America for the winter, some stay in the United States, even as far north as New England.

Its cup-like nest is made of dead leaves, bark, grass, and weeds, but is lined with fine grass. It is hardly ever built higher than three feet from the ground. A clutch usually has four eggs, but there may be three or five. The eggs are white or light cream, with lavender or rust spots.

Chats eat mostly insects such as grasshoppers, ants, beetles, wasps, and tent caterpillars. They are also fond of berries such as

strawberries and blackberries.

In winter, some chats will come to protected bird feeders near a house and will eat a variety of foods, including peanut butter, bananas, grapes, cornbread, and doughnuts.

I hope you will be able to see a yellow-breasted chat sometime. I no longer live in the Allegheny foothills, and I’ve seen that beautiful bird only once. ◀

...GOD

created

Yellow-breasted Chats

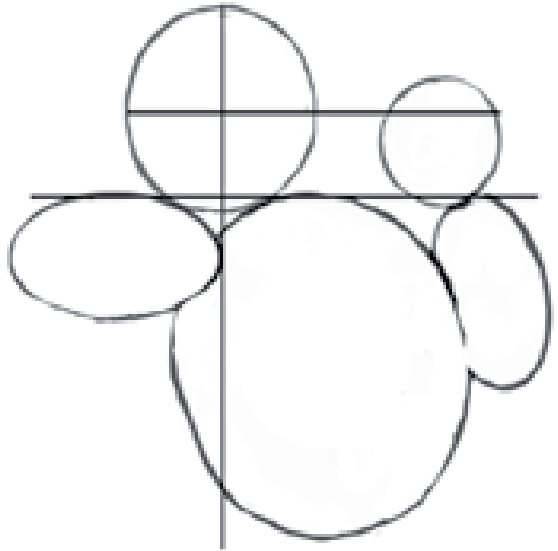
YOU CAN DRAW ... a Koala

by Michelle Beidler

YOU WILL NEED:

- ✓ paper
- ✓ kneaded eraser
- ✓ 4B pencil, 2B pencil, or mechanical pencil
- ✓ paper stump for blending

When drawing a complex picture, it is helpful to start with basic shapes. For instance, this illustration starts with a circle for the mother koala's head. This circle is divided into quarters with lines extending beyond the circle. This helps locate ovals for other main shapes.



To avoid smearing your drawing, rest your hand on a sheet of paper as you work. After your drawing is complete, it can be sprayed with fixative.

The lightness or darkness of a tone is known as value. I used a mechanical pencil to make this value scale, but then went over the darkest areas with my soft lead 4B pencil.

Want us to consider your drawing for publication? Send your completed drawing on clean, unlined paper, and do not fold. On the back write your name, age, and address. Send to You Can Draw a Koala, 4253 Woodcock Lane, Dayton, Virginia 22821. If you would like it returned, you must include a self-addressed, stamped envelope.

You may e-mail scanned art as a high-resolution jpeg attachment, 3 inches and 300 d.p.i. Send to youcandraw@naturefriendmagazine.com. Label art with name, age, address, and then crop excessive margins. Name file: koala-child's name-age

While we appreciate all the hundreds of submissions we get, we can print only a few of them. Selections are made from all age groups and not based on quality alone.



Coarse strokes made with a 4B pencil. Use this for the tree trunk.



Shorter strokes made with a mechanical pencil for the fur.



Use parallel even strokes for the shiny eucalyptus leaves. Blend from dark to light with your paper stump.



Long sweeping strokes for long hair on the ears. For darkest areas, use short, scribbly strokes. Then with your kneaded eraser, lift out the lightest areas.



To ensure you have enough contrast in your drawing, compare it with your value scale. You should have some areas as dark as the right end of your scale, with gradations all the way up to white.

The Koala drawings will be featured in the November issue. Please return your drawing by August 15.



To show the thick fur, scribble in this pattern, and then fill in with lighter strokes.



Bright white highlights bring the eyes to life.

YOU CAN DRAW a Wood Duck FROM MARCH



A. I. Robinson, 10
Ringgold, GA



Kaylee McCaslin, 6
Yatesboro, PA



Jacobus Sordby, 9
Hudson, WI



Aisha Hasegawa, 11
Duvall, WA



Anna M. Haas, 8
West Edmeston, NY



Naomi Wignerbach, 8
Tremont, IL



Andrew Detweiler, 11



John G. Fisher, 13
Fountain City, IN



Kedy Freeston, 11
Abburn, VA



Beckett Millhouse, 7
Purcellville, VA



Taryn Perry, 8
Stacy City, IA



Beth Ann Horst, 10
Carlisle, PA



Madison Abell, 11
Lake Worth, FL



Micah Warner, 14
Milwaukee, WI



Jacob Ryan, 11
Clinton, KY



Stephen M. Coleman, 14
Frisco, TX



Levi Lemm, 3
Eureka, IL



Chrysnie Semerig, 11
Chengde, China



Kacey Wright, 9
Isperming, MI



Caitlin Whitehead, 9
Traverse City, MI



Marybeth Kong, 13
Monroe, ID



Chantelle Van Den Elzen, 4
Spring, WI



Erla Shirk, 15
Holland, KY



Hosanna Wardell, 13
West Haven, UT



Noah Tieszen, 7
Victoria, BC



Spencer Gich, 11
Ludnow, ON



Kerra Ferguson, 15
Broken Arrow, OK



Stephen Poynter, 14
Eau Claire, WI

Daisy Coloring

by Joanne Linden

Daisies are the happy white flowers of spring and summer that grow in our fields and roadsides like white polka dots swaying in the wind. They grow one to two feet tall, and their strong, slender stems make them perfect for braiding daisy chains. But wouldn't it be fun to have daisies of different colors? With a little effort, you can.



Materials

- ▶ Three tall water glasses
- ▶ Red, yellow, and blue food coloring
- ▶ Water
- ▶ Fresh-cut daisies (from the field or the flower shop)
- ▶ An old shirt or apron to protect your clothes
- ▶ Old newspapers to cover the table
- ▶ Rubber gloves to protect your hands from staining

Dyeing Daisies

1. Fill each glass $\frac{1}{3}$ full of water.
2. Add food coloring, one color to each glass, making a strong solution.
3. Put a few fresh daisies in each glass.
4. Let them sit in the solution for several hours—overnight is best.
5. (The longer the daisies stay in the solution, the darker color they get.)

The daisy stems act like a straw, drinking up the colored water and turning the white flowers to pink, light yellow, and blue. The colored liquid moves from the glasses up through the stem to reach the flowers.

Experiment to see how many different colors of daisies you can make by mixing different food colors together. (e.g., red and blue make purple.)

© VM / iStockphoto.com

WHO am I?

I lay eggs that are only two to three inches long. I can grow to 20 feet in length and weigh over 1,500 pounds, though I am usually around 16 feet long, weighing 500 pounds. I am found in Africa south of the Sahara, along the River Nile, and in Madagascar. I eat mammals, reptiles, birds, fish, and even insects. Who am I?

Justin Phillips, 8
Santa Clarita, CA

Nature Friend

Share with a friend

877-434-0765



www.naturefriendmagazine.com

"I want good literature for my grandchildren." —T.N.

The Heavens Declare
GOD'S GLORY

WHERE IS THE
MILKY WAY?

by Lester E. Showalter

How many stars can you see? That depends on two very important considerations: the weather and your location. If it is cloudy, you cannot see any stars. But even on a very clear night, the number of stars you can see depends on where you are. If you are far from city and night lights, you can see about 2,000 stars at any one time. If you are near a city, your sky has much

“light pollution” from many buildings, signs, and street lights. People in the city can see only the very brightest stars even on a clear night. For example, they could see the stars of Orion, but probably not the stars of Cancer.

If light pollution hinders your view of the glory of God in the heavens, perhaps your family would consider traveling an hour from towns and cities to see the stars in their splendor. Be sure to take along binoculars, or a telescope, if you have one. These summer nights make for comfortable

2008

12 issues per year
 — \$34 1 year - USA — \$46 1 year - Can/Mex
 — \$64 2 years - USA — \$58 1 year - Foreign

“Cheer the Children” is a program to send gift subscriptions to hospitals. Give 4 and yours is free.
 — \$136 for 4 Cheer, plus 1 free year to this address

Subscription Name _____ Please print
 Address _____
 City, State, Zip _____

A gift of *Nature Friend Magazine* will bring enjoyment to children and grandchildren each month of the year. Consider also your church, school, and regional libraries.

See testimonials, sample issues, and order at
www.naturefriendmagazine.com
 Tel. 540-421-3068 or 877-434-0765
 Fax 540-867-9516

Nature Friend Magazine, 4253 Woodcock Lane, Dayton, VA 22821

Please place in envelope with payment. Thank you.

_____ This is a gift *

* Name of gift giver _____

Address _____

City, State, Zip _____

Phone Number (_____) _____

Check # _____ Credit card exp. / _____

Visa or Mastercard _____

3-digit code on back _____ Street or POB # _____ Zip code _____
 (Credit card billing info)

Nature Friend Subscriptions
 4253 Woodcock Lane
 Dayton, VA 22821

To order:

call 877-434-0765, or mail a check to Nature Friend, 4253 Woodcock Lane, Dayton, VA 22821. Price for set, with shipping, is \$15. Extra for foreign addresses.

stargazing, though wintertime gives the clearest skies.

Assuming that tonight is very clear and you have little or no light pollution, the eastern sky will give a view of the Milky Way stretched out

from north to south. The longer you wait in the night, the higher and more clearly you will see the Milky Way. The Milky Way looks like a long, faint cloud among the stars. But the Milky Way is not a cloud; it is a huge strip of stars, so many and so faint that they blend together to make a milky area in the night sky.

One of the brightest areas of the Milky Way is in the constellation Cygnus, the swan. This star picture is commonly called the Northern Cross because there are four stars that form the upright of the cross and three stars that form the cross beam. At the top of the cross is the bright star Deneb, and at the bottom is Albireo, a double star. With 30-power or higher magnification, this is a very splendid double star, as one is golden and the other blue. These evenings the Northern Cross is lying on its side just above the eastern horizon.

Between the head and foot star of the cross is a very rich star field of the Milky Way. Even



7-power binoculars will make this area burst into hundreds of stars that you cannot see with the unaided eye.

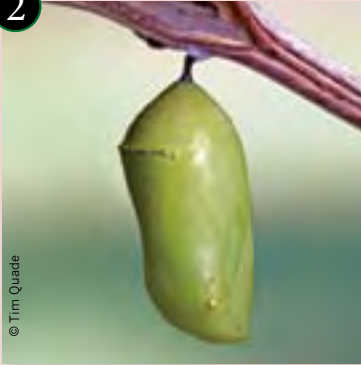
What is the Milky Way? The Milky Way is a huge family of stars spread out like a flat wheel and turning very slowly—so slowly that it does not appear to be turning at all. All the stars you can see are part of the Milky Way. We are living on a planet that is orbiting the Sun that is one of the stars in the Milky Way. As we view the Milky Way in the sky, we are looking out through the edge of the flat wheel. The Milky Way actually extends the entire way around the sky. The part of the Milky Way we can see in the winter lies between Gemini and Orion.

A big family of stars like the Milky Way is called a galaxy. There are millions of galaxies besides the Milky Way. In the September 2008 *Nature Friend* you will learn how to find another galaxy. ◀

1



2



3



Monarch Butterflies

As the monarch larva reaches maturity, it crawls away from its host milkweed plant, searching for a suitable perch. Once it has selected a spot, it weaves a silk mat from which to hang. When the mat is complete, the caterpillar grabs the silk with its rear legs and hangs upside down. The front part of its body curves up to form a “J” shape.

Hours later, a slight color change and a small amount of movement signal the forthcoming event. The skin splits as the caterpillar jerks from side to side. In a few seconds, what was the caterpillar falls

to the ground. What remains is an emerald green chrysalis that will serve as home for the next two weeks. Once tucked safely inside the chrysalis, the larva’s molecular structure is broken down and, in a true miracle of God, is reassembled again as a beautiful new creature.

About 24 hours before the monarch emerges, the chrysalis turns clear, exposing the unmistakably orange and black colors and patterns of our new butterfly. Two things are strikingly apparent as he frees himself from the chrysalis. The abdomen is abnormally swollen and the wings are small and shriveled. Immediately, excess body fluid is pumped



Worm-Eating Owl

Last night this bit of drama unfolded in the yard shortly after midnight. The fog was extremely thick after a day of rain. I saw through the window that the outside, motion-sensitive light had come



on. I looked out to see the two resident barred owls perched in the yard. One was perched atop a 4x4 post that holds a bluebird box; the other was perched about 5 feet off the ground in the cherry tree just outside the kitchen window. The one in the tree was closely examining the ground below it.

After sitting there for about

from the abdomen through veins into the wings. Watch, and you can see them expand right before your eyes. This is a critical time for the monarch; he must perform two tasks if he is to survive. First, he must expand and dry his wings. Secondly, he must unfurl and gain control of his proboscis or feeding tube. About an hour or so after the process began, he is ready to fly. Warmed and dried by the late summer sun, this fascinating little creature is off, looking for his first meal as a monarch butterfly.

As winter approaches, these delicate creatures must make their way thousands of miles south and west to wintering grounds in California and Mexico. The

monarchs make this amazing trek over prairies, rivers, expressways, and mountain ranges, arriving at a winter home they have never seen before. Here they will gather by the thousands, waiting for winter to loosen her grip. And with the onset of spring, this same brood will make its way north, populating areas of the United States along the way. As each new generation matures, the butterflies push their way farther and farther north. Several generations later, monarchs can be found as far north as Maine and parts of Canada. Then, in the fall of the year, the last brood is beckoned back to the wintering grounds and the cycle repeats itself all over again.

Jerry Dairymple



a minute, the owl dropped from the branch to the ground, grabbed a night crawler, and gulped it down. It sat there for a few seconds, then flew about four feet and pounced on another worm. This one was so long that the bird had to lean back a little to get it out of the ground. It then flew back to its perch with the night crawler dangling from its beak. Reaching up, it grasped the worm with its left foot and held it, while it rearranged its hold on the worm with its beak. Then with three quick jerks of its head, it gulped the night crawler down. This went on for a few minutes, with the owl getting five night crawlers, which was a bit surprising, considering that the thermometer read 36 degrees Fahrenheit.

Meanwhile, the other owl never left its perch on the post. It just occasionally turned its head to look

around. I don't think it had learned the art of night crawler grabbing.

After the feeding had gone on a short while, a rabbit shot suddenly out of the darkness from the front of the house. It was chased by one of the four gray foxes that hang around our yard. The rabbit passed within about 10 feet of the feeding owl's perch, startling the owl, then disappeared into the shadows. The owl lifted from the branch, circled around its mate, and disappeared into the fog at the edge of the yard. The mate never moved. It continued to sit there and watch as the fox stopped to smell around the bush the rabbit had passed. After a few minutes, the fox trotted off into the fog, and the one owl remained sitting on its perch.

Roger Mayhorn



Tucked into the center of a flower, our little hunter is all camouflaged for the hunt. She is watching the feeding ground of her prey, hoping for a juicy meal.



© Sonia Fagnan / iStockphoto.com

Crab Legs & Lunch

by Kevin Shank

A honeybee is making her rounds, gathering nectar to carry back to the hive. Indeed, the honeybee is very busy. Not only is she gathering nectar, she is pollinating plants by carrying pollen



© iStockphoto.com

The bee is getting closer now, only one flower blossom away. The white crab spider is well camouflaged on the white flower blossom. Will the bee come to her blossom? Will she be able to capture it? The last one had gotten away; in fact, the last several.

Here comes the bee, right into the flower the crab spider has claimed as her own. It has

on her body as she travels. As she moves from plant to plant, this fertilizes them and enables the plants to bear fruit.

been her home for a few days, ever since the last flower blossom wilted away. Her once-yellow body has changed to white to match the color of

Caption This



© Les McGlasson / istockphoto.com

the blossoms she has been living in for the last two weeks. The advantage of this is now obvious as the unsuspecting bee comes right into her quarters. Not only is her camouflage helping her to get close to this bee, it has also hidden her from the predators that would have liked to eat her.

With a quick move, the spider grabs the honeybee with her crab-like front legs. The spiny legs hold tightly as a struggle ensues. The bee tries desperately to sting the spider. The silk tether attaching the spider to the flower keeps the bee from flying away with her. Soon a well-placed bite injects venom into the head of the bee, subduing it.

Not only does the venom kill the bee, it, along with digestive juices, helps to liquefy the internal tissues of the bee. While the spider often immediately begins to eat the prey, this bee will be consumed by her young. After all, if she doesn't provide adequate food to them, they will eat her. ◀



© Dogwood Ridge

“This might be nutty, but I’m hanging in here.”

We are wanting your captions for this photograph of a gray squirrel. The photograph will be used on the back of the November issue, along with our choice of a caption or captions.

We appreciate your following these rules for submissions:

Please submit a postcard, not in an envelope, addressed to: Caption This Squirrel, 4253 Woodcock Lane, Dayton, VA 22821, or e-mail to captionthis@naturefriendmagazine.com. Mention “Squirrel” in subject line. Include your name and address.

Reply by August 15, 2008.



PLANT Reactions

by Lyndon Martin

The oak tree in your yard looks pretty placid at first glance. It stands tall and strong, bowing only to the wind's gusty taunts. The violet on your windowsill cheers your room as it stares stoically through the glass, week after week.

Plants aren't as motionless as they look! Plants are living organisms and move in response to their surroundings, but they do it very slowly. A tropism is a plant's motion towards or away from some influence. Plants must respond to certain stimuli to live efficiently and safely.

Plant tropisms are controlled by small amounts of chemical messengers that the plant produces. These chemicals are called hormones. Hormones tell plant cells how to behave. The most common and influential hormones in plants are the auxins. Auxins control how plant cells grow in size. When auxins flood into a certain part of a plant, the cells in that area begin to grow longer and bigger. Auxins control tropisms.

Sunlight is a major influence affecting any green plant. Green plants use the sun's energy to produce their food.

Since the food-making process takes place in the leaves of the plant, the leaves must be oriented toward the light. If sunlight is shining on a plant from primarily one direction, the stems and leaf stems of

the plants respond by turning the leaves in that direction. This response is called phototropism.

How does it happen? When a plant is receiving plenty of light



© Matthew Cole / iStockphoto.com

from all directions, there is an equal amount of auxin in all the cells, so they grow at the same rate. When light strikes the plant from only one direction, the auxins move away from the cells on the well-lit side of the stems and flood into the cells on the dark side. Of course, these dark cells with their extra hormones grow quickly. Soon the dark side of the stem is a little longer than the lighted side, and the whole stem bends so its leaves face the light. In trees with hard stems, the individual leaf stems (petioles) carry out phototropism so that all the leaves are aligned to the sunlight. God created His plants to respond so that their leaves would get the maximum amount of sunlight to make food!

See it for yourself! Plant two fast-growing vegetable seeds in separate pots. When the plants are about 1 inch high, cover the one seed with a box. The uncovered plant will open leaves toward the light and flourish. The covered plant will grow a tall, pale stalk in an attempt to escape the darkness. If you leave it covered, it will die. If you cut a hole in a top corner of the box, the plant will grow frantically toward the light!

Cut a hole in one end of a long, narrow shoe box. Glue a cardboard partition to the side of the box about one-third of the way from its end. Glue a similar partition to the other side of the box one-third of the way from the box's other end. The partitions should only extend $\frac{3}{4}$ of the box's width. Plant a fast-growing seed in a small pot at the end opposite the hole. Keep an eye on the stem as it winds its way around the partitions to move its leaves to the light.

If you place a plant near a window, all its leaves will gradually turn to face the window. Periodically turn your window plants to a new position so they grow evenly.

Geotropism is a plant's response to gravity. Plant roots respond positively to the pull of gravity. Gravity makes the auxins move to the cells in the top of



the roots. These cells enlarge and bend the roots downward. Stems respond negatively to gravity. Gravity makes the auxins move to the cells in the bottom of the stems and enlarge them to bend the stems upward. Geotropism is important so roots reach for nutrients in the soil and anchor the plant, and so stems reach upward for sunlight.

You can verify geotropism by laying a small potted plant on its side. The stems will soon bend and grow upward. If you uncover the roots, you will discover they have turned downward.

Other tropisms include thigmotropism, a plant's response to touch. When an ivy tendril touches an object, it curls around the object to help the ivy plant climb. Hydrotropism occurs when a plant's roots grow toward water. ◀

"Ah! What a nice way to get across the lake."

John G. Sayers, "A Good Day to Go," 1876

"Let me see, where is the next boat with fish?"

Tony Salm, "The Netherlands," 1977

"Has anyone seen Lewis and Clark?"

Bobby Cleverton, "Franklin," 2011

"Which way is 'Coon'ecticut?"

Joe Carver, "A Good Day to Go," 1876

"...And I shall call it America!"

Harold Lloyd, "The American," 1926

"Got fish?"

John Vargas, "Napa," 2011

