



Hope Floats but National Pride Flies

by Larry Gfeller

There are few birds that instill a sense of awe and wonder as the bald eagle. They are, of course, birds of prey; raptors, violent in their perfection. To realize this creature's wildness, all you have to do is study its eyes. Piercing, intense and feral—as if it may go to flames at any moment. With its powerfully built body, immaculate plumage and bright yellow hooked beak and talons, this winged gladiator is guaranteed to turn heads wherever it is encountered.

Petra Harrison, a local wildlife photographer, has been consumed with the desire to locate a nesting pair. “My husband’s birthday present to me was a trip to Canyon of the Eagles because he knew how badly I wanted to see eagles,” she said. Unfortunately, that trip was not fruitful; however, casual discussions with a co-worker from Smithville uncovered an eagles’ nest in the nearby countryside—Petra was ecstatic! She has since been fortunate enough to be allowed to document the coming of age of a new generation of eagles. All the photos used in this article are from her time with the family.



Petra’s obsession is not unique. The mere physical appearance of our national symbol can easily evoke a lump in the throat or force you to blink back a tear. Remember the stirring eagle demonstrations with the great bird swooping through a football stadium onto the waiting arm of his trainer as the national anthem reverberates in the background? It’s enough to make an old soldier bawl! This kind of cachet causes directors and Hollywood sound editors to step in and alter reality for the sake of drama. We’ve all seen those scenes on TV where the bald eagle screams and screeches across the sky before swooping to catch a fish. It’s a piercing, wild and otherworldly sound. The only problem is, bald eagles don’t make that sound—they emit a sort of giggle or a high-pitched squeaking sound. The screams we hear eagles make on TV are usually the dubbed-in cry of the more impressive sounding red-tailed hawk.

The bald eagle has not always been loved and it has suffered mightily at the hand of man over the centuries.

Early homesteaders often considered bald eagles dangerous predators of livestock (generally untrue) and shot them on sight. American Indians prized them for their feathers. Benjamin Franklin argued against selecting the bald eagle as our national bird, disparaging it as a “bird of bad moral character. He does not get his living honestly.” Later, it took us many years to realize that the pesticide DDT was destroying the eagle population (and other species). They had to be protected from extinction by the Endangered Species Act.

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Hope Floats, cont.

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Recovery efforts have been successful and the bird was removed from the Endangered Species list in June 2007.

So where does this bad moral character come from? A bald eagle is not very picky about its eating habits. It will eat dead stuff, steal food from other birds (like an osprey) or kill its own prey—whatever it takes to keep its stomach full. Fishing mammals (even people sometimes) can also lose prey to bald eagle piracy. The bald eagle's diet is primarily fish but it will also chow down on the likes of gulls, ducks, rabbits, muskrats, snakes, crabs, and frogs/toads. They'll even scavenge in dumpsters or feed on waste from fish processing plants. This is one apex predator that will eat almost anything.

On a more admirable note, bald eagles are faithful mates and practice a tight family life. The norm is for a nesting pair to mate for life, made more impressive by the fact that bald eagles usually pair up between 4-5 years old and live a long life. Recently, a wild eagle in Henrietta, New York, died at the record age of 38. They usually build their nest together, even though it is the female who's in charge of final amenities. She carries more weight figuratively and literally, as female eagles are about 25 percent larger than their mates, a trait common to many birds of prey. These nests are intricately engineered and carefully built, averaging 2-4 feet deep and 4-5 feet wide. An eagle's nest in St. Petersburg, FL earned the Guinness World Record for the largest bird's nest. It weighed over two tons!



Momma eagle lays her first egg 5-10 days after mating and the clutch of 1-3 eggs is incubated for about 35 days. Once feathered, youngsters start out with brown and white feathers, with a black beak and brown eyes. Immature bald eagles go through 4 or 5 years of complicated plumage patterns before they develop the characteristic color combination of their parents. In their second year, for instance, they have white bellies. They gradually change; the beak turns from black to yellow, the eyes from brown to pale yellow, body feathers from mottled to dark brown, and head and tail feathers from mottled to solid white—the kind of white that hurts your eyes when the sun hits it. Life is tenuous for the newborns, but that doesn't

last long. Young bald eagles spend the first several years of their lives in nomadic exploration of vast territories and can fly hundreds of miles a day.

Bald eagles are masters of their environments. Although they have powerful wings, much of their time aloft is spent cruising the thermals and searching for food. Their eyesight is notably sharp and their field of vision is much wider than ours. Not only can they see ultraviolet light, but they can also see with their eyes closed! Yep, besides the usual pair of eyelids, eagles have a see-through eyelid called a nictitating membrane. They can close this membrane to protect their eyes while their main eyelids remain open—it helps moisten and clean their eyes. So the expression “eagle eye” is right on.



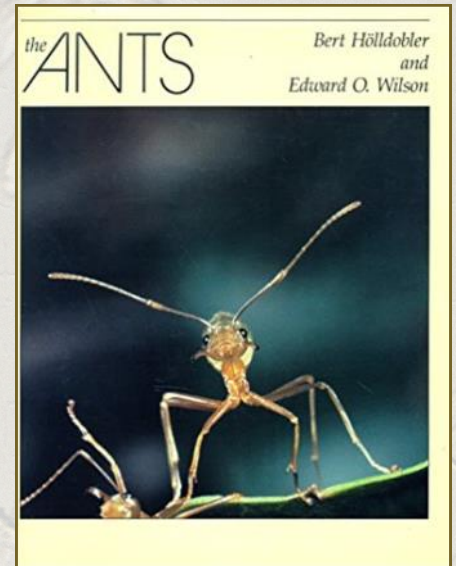
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Brooks on Books - Ants

by Bill Brooks (with book from Nicholas Cowey)

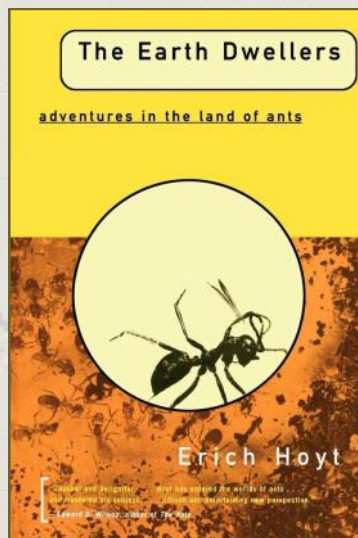
“The Ants’ . . . is not a book one casually purchases and reads cover to cover.” ~Edward O. Wilson

Seldom is there one book that covers a subject so completely it will keep any budding myrmecologist happy. The book, appropriately called “The Ants” by Bert Holldobler and Edward O. Wilson (c. 1990), is 732 pages long, won a Pulitzer Prize for non-fiction and costs (new) on Amazon \$132.46. This is Edward Wilson’s opus. It covers ant anatomy, physiology, social organization, ecology and natural history. All 292 living genera are described and many of the 8,800 known species are mentioned. Dr. Holldobler from the Institute of Zoology at the University of Wurzburg collaborates with Dr. Wilson, the Curator of Entomology at Harvard. Included are taxonomic keys to the species and chapters on altruism, kin recognition, communication, division of labor, symbiosis, and a final chapter on collecting, culturing, and observing ants.



If you think you don’t need such a giant scientific tome, then perhaps the 224 page book, “Journey to the Ants, A Story of Scientific Exploration” by Bert Holldobler and Edward O. Wilson (c. 1994) is more your speed. It is a condensed version of “The Ants” with less technical language. It is sort of a “best of the best” parts of “The Ants” with many of the same great photos and illustrations.

Other popular books on ants in general I’d recommend include “Earth Dwellers, Adventures in the World of Ants” by Eric Hoyt (c. 1996). It includes wonderful line drawings by Ruth Pollitt.



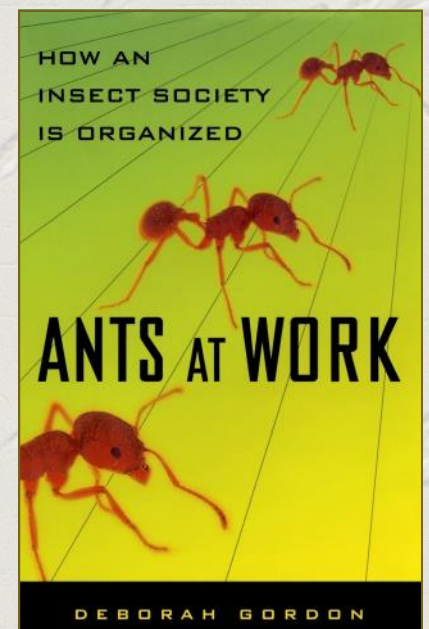
“Adventures Among Ants, A Global Safari With a Cast of Trillions” by Mark W. Moffett (c. 2010) covers six unique ant families from around the world: the Marauder ants, African Army Ant, Weaver Ant, Amazon Ant, Leafcutter Ant, and the Argentine Ant. Each has its own chapter. Mark Moffett has been called “the Indiana Jones of entomology” and “the Jane Goodall of ants.” Compliments like this tell you he is well respected and well traveled. His book is a great overview of ants all around the world.

“Ants at Work, How An Insect Society is Organized” by Deborah Gordon (c. 1999) is another great read. Gordon summarizes and generalizes the 17 years of research she did on the Harvester Ant in Arizona. The first sentence in the Introduction explains the premise of this book: “The basic mystery about ant colonies is that there is no management.” The queen is not

in charge. Dr. Gordon studied at Stanford, Duke, Harvard, and Oxford. She is now an Associate Professor at Oxford.

“The Lives of Ants” by Laurent Keller and Elisabeth Gordon is another good and well-written reference on the subject. The English translation was copyrighted in 2009.

There are also several great books written about one specific ant family. Of special interest to people in Bastrop County is “The Leaf Cutter Ants, Civilization by Instinct” by Bert Holldobler and Edward O. Wilson (c. 2011).



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What's Blooming?

by Liz Pullman & Judy Turner

With autumn extremely slow in arriving, some of us have been able to continue going outside and finding plants in bloom. These flowers seem to be extending their blooming season into September and October and even into November. As we continue our McKinney Roughs biocensus twice a month, we are seeing many plants that seem to be taking advantage of the unseasonable warmth. Rainfall from a hurricane gave us some much needed wetness and conditions are excellent for finding such gems as this bright pink flower, which we discovered in generous numbers in an open meadow. We were totally without a guess as to its identity. On closer examination we managed to find a seed pod and YES! it is a legume. We had the Family (*Fabaceae*), but the plant was not in any of the manuals and ID guides we normally use—a bit out of their range. In defeat, we finally sent a photo by email to Bill Carr who immediately gave us the name *Galactia marginalis* (aka margined milkpea or edible milk pea) and he commented that this is the first time he has seen it so far this year. Bill was the person to ask for an ID since he collected the Bastrop County specimen in the southeast corner of Bastrop State Park in 2014 and he noted it as “rare.” There are only 27 Texas records of this plant and seven are by Bill Carr.



Milk pea (*Galactia marginalis*)

Another nice surprise from the same trailside was small numbers of Ladies Tresses Orchids. An orchid of any kind is newsworthy and this one proved to be exceptionally so. We had found Slender Ladies Tresses (*Spiranthes lacera* (var. *gracilis*)). Research shows there are a few records for Bastrop County but interestingly, most of the Texas records note that the exact location is suppressed. We believe we can label it “rare.”



Slender Ladies Tresses (*Spiranthes lacera* (var. *gracilis*))

In the same area we found plants of Drummond's St. John's-wort or Nits and Lice—*Hypericum drummondii* with its five yellow whirl-a-gig petals and miniature leaves. Not showy, but with a long bloom period.

One member of the Aster Family always makes a big “late show.” The tall Maximilian's Sunflowers (*Helianthus maximilliani*) create colorful clumps of yellow. By simply walking along the gravelly roads, we found amazing numbers of bracted Sida (*Sida ciliaris*) along the shoulders and on the central hump of these roads. (With such a display, it seems appropriate to rename the flower The Roadsida.)

Along a few trails there is an abundance of bright orange Chisos Mountain False Indian Mallow (How do you like that “common” name?)—*Allowissadula holosericea*. This plant has no records in any herbarium for Bastrop County, but there are many from adjacent Travis County.

Whether this floracious-ness is the effect of a much warmer than usual “fall” or simply a lucky influx of rain at the right time, the Biocensations have benefitted from the combination.

Before starting this issue's Latin lessons, it must be noted that you should already know the translations for two of the plants—*Hypericum drummondii* and *Sida ciliaris* - from previous articles. The most convoluted of the others is the *Allowissadula holosericea*. *Allo* is from Greek meaning “different” and *Wissadula* is an old genus name that means “always.” *Holosericea* refers to “wooly or silky.” So, we have a “different” genus *Wissadula* (“always”) that is “wooly or silky.” Another common name for this species is Velvet-leaf Mallow, which I find more descriptive than Chisos Mountain False Indian Mallow.

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Blooming, cont.

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The other Latin to English translations are simpler. *Galactia* is from Greek meaning "milk." *Marginalis* indicates "distinct or differing margins." *Helianthus* is Latin for "sun flower." *Maximilliani* is named for Prince Maximillian of Wied-Neuwied, a German explorer and naturalist, who is not to be confused with the Maximillian who was Emperor of Mexico for about four years.

Last, but not least is the orchid. *Spiranthes* refers to "a twisted stalk," *lacera* means "torn," and *gracilis* is "slender."

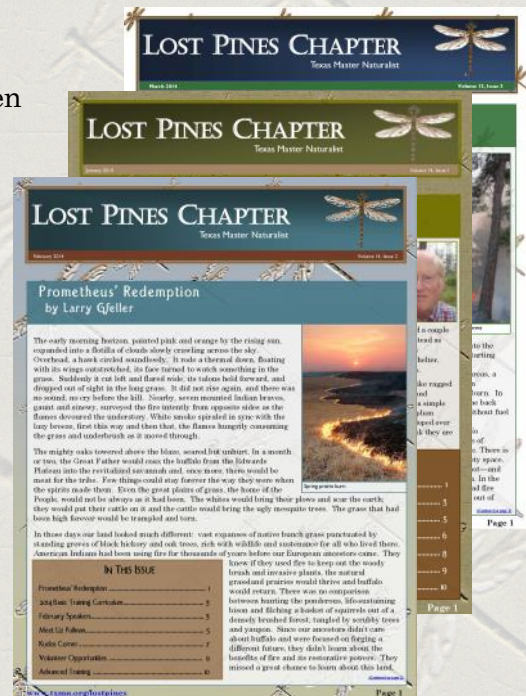


Passing the Reins by Roxanne Hernandez

This issue marks the end of four years that I have been editing and publishing and LPMN newsletter. In January of 2014, the first issue I published, the newsletter included articles, many of which were written by Larry Gfeller, a listing of volunteer and advanced training opportunities, and what was to become a regular feature, "Meet..." (Fill in the blank with an LPMN member). The February issue added profiles of Basic Training presenters. In March of that year, the issue published Liz Pullman's first *What's Blooming?*, Bill Brooks' first *Brooks on Books*, and the first *Snippets*, all of which would become regular features. Starting in May, we changed from a monthly publication to bi-monthly. We've been publishing bi-monthly ever since.

Bill, Liz (and later with Judy Turner), and Larry have been regular contributors since almost the beginning. The *Snippets* element started with me finding items of interest, and eventually evolved into *Bill's Snippets*. Bill never has a shortage of interesting tidbits to share. I personally don't know of a more voracious reader than Bill! I'm thankful to Larry, Liz, Bill and other authors who have both educated and entertained me.

The publication has evolved over the years, and it will continue to evolve. I've enjoyed creating this newsletter over the last several years, and now it's time for a change. Beginning with 2018, the LPMN newsletter will have a new editor/publisher—Alysa Joaquin. I don't know what she has in mind for future issues, but I'm sure that we will continue to be educated and entertained. To borrow a line from Bill, "Read on and enjoy!"



Newsletter Deadline

Submission deadline for the next issue is December 22, 2017. We welcome relevant contributions, photos, announcements, or other material relating to the mission of the Texas Master Naturalist program, particularly those pertaining to our local area. Submissions may be edited for clarity, grammar, spelling, and space requirements. Please send information to the editor at joaquack@gmail.com.

Hope Floats, cont.

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Bald eagles are unique to North America; they live near bodies of water in Canada and Alaska and in scattered locations throughout the lower 48 states and Mexico. Bald eagle numbers in the U.S. were estimated to be between 300,000-500,000 in the 1700s. Numbers were once as low as 500 nesting pairs in the lower 48 states. Bald eagle numbers have rebounded since. Partners in Flight estimates the global breeding population at 250,000, with 88 percent spending some part of the year in the U.S., 31 percent in Canada, and 8 percent in Mexico. They prefer tall, mature trees that afford a wide view of their surroundings. In winter, eagles can also be seen in dry, open uplands if there's access to open water for fishing. Some bald eagles migrate and some don't. Many in Canada migrate to escape the frigid winters while others, like some in New England and Canada's Maritime provinces, stick around all year. It seems to depend on how old the eagle is and how much food is available.



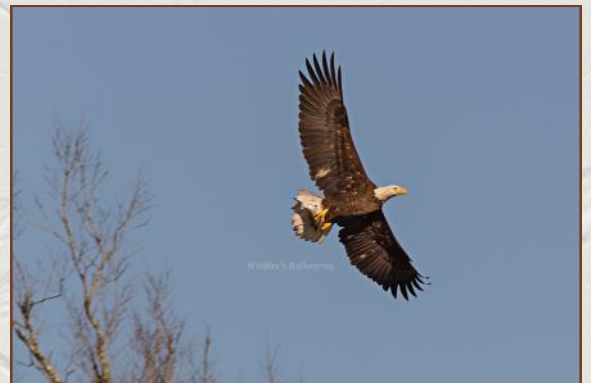
The genus name (*Haliaeetus*) derives from Latin to mean “sea eagle.” Bald eagles come from the same family that includes hawks, kites and old-world vultures. Though it may be North American, the bald eagle has close relatives found throughout the world—and most of them inspire the same sense of power and mastery of their environments. One relative, the African fish eagle, is the national symbol of Zambia and is also found on the South Sudanese, Malawian and Namibian coats of arms.



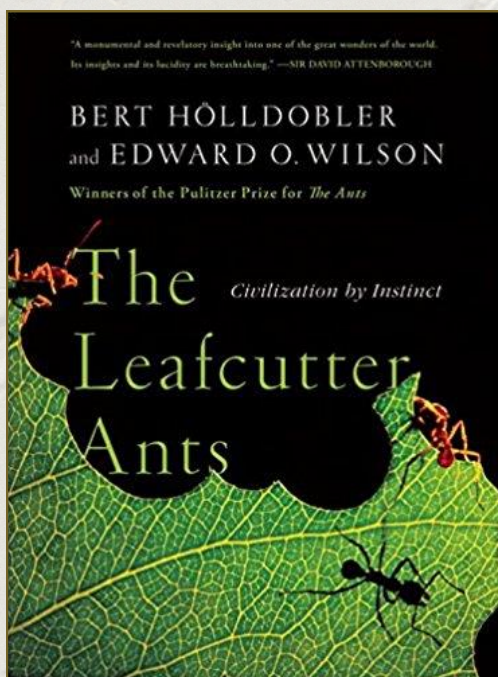
Bald eagles are bright birds. Not only do they work well together with their mates but they also occasionally hunt cooperatively with their pals—one flushing prey toward another. They are actually quite social. Bald eagles have been seen playing with plastic bottles and other objects used as toys. One observer even watched six bald eagles passing sticks to each other in midair. When flying, a bald eagle very rarely flaps its wings but soars instead, holding its wings almost completely flat. And what strength those wings have . . . sometimes, an eagle will swoop down and grab an especially heavy fish, then paddle it to shore with its huge wings to eat the catch on shore. As acrobats, bald eagles are among the best. “Talon clasping” or a “cartwheel display” is a relatively common behavior, where two eagles

clasp each other's talons in midair and spin downward, letting go only when they've almost reached the ground. This is believed to be a courtship ritual as well as a territorial battle, depending on circumstances.

2017 is the second year that Petra Harrison has followed her eagle family. She has been given special access to the land where the nest exists by the landowner, to observe and photograph. He knows Petra is careful not to divulge the location to the gawking public and that she respects both the property and the birds' privacy. She goes on to say, “This last year a storm blew the nest tree down so they had to relocate. Fortunately, they moved close by, so we are still together.”



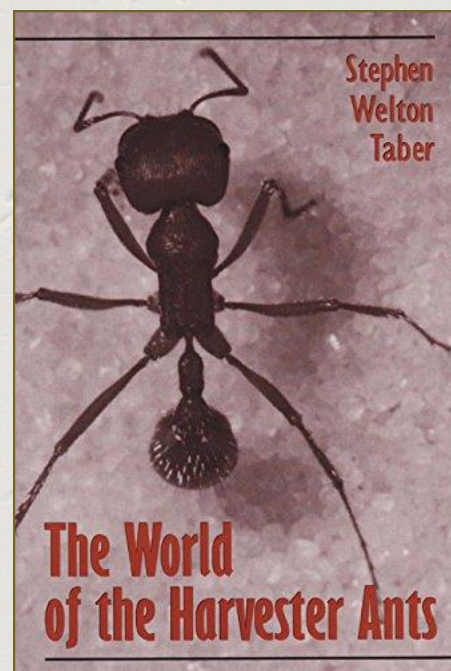
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A sentence in chapter 8, titled “The Ant-Fungus Mutualism,” piqued my interest. “To date, only a few studies have examined the possibility of communication between the fungus and their host ants.” Surely there is some. This publication is also peppered with great photographs.

“The Great Red Monster begins in earnest to crush and slay every one that comes in range of his death-dealing jaws.” ~Gideon Lincecum, “Speaking of the Red Harvester Ant”

“The World of the Harvester Ants” by Stephen Welton Taber (c. 1998) is a book about a species of ant that is of great interest to me. Harvester ants make up 80% of the diet of the adult Texas Horned Lizard. I’ve heard harvester ants called wagon wheel ants to describe the way they clear the area around their burrow and make foraging trails that lead out from the central hole.



“Fire Ants,” also by Stephen Welton Taber (c. 2000), is of interest to everyone in the south. Dr. Welton also authored “Insects of the Lost Pines” with Scott B. Fleenor (c. 2003). I met these fellows at a book signing for their insect book on September 18, 2003, at the refectory in Bastrop State Park. A year later Scott Fleenor, who was studying at the University of Texas in Austin, gave a wonderful program on fungi for the now defunct Lost Pines Native Plant Society.

Read on, enjoy, and watch your step!

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Bill's Snippets

INTERNATIONAL SPACE STATION

The International Space Station (ISS) has been occupied nonstop since Nov. 2, 2000. More than 200 people from 18 nations have visited the station.

SAIL ON

A knot, which is one nautical mile per hour, is 1.15 miles per hour.

RARE MONKEY SPOTTED

The Vanzolini bald-faced saki, a monkey last seen alive about 80 years ago, has been spotted in the western Amazon in Brazil. Researchers filmed the shaggy-haired monkey with golden arms and legs in a section of the Amazon near the Peruvian border that hasn't been explored much.



OUT OF BREATH?

A person breathes 2 pounds of oxygen a day ("The Hidden Life of Trees" by Peter Wohlleben, pg. 224).

SLURPING..

Water and nutrients in a tree can move from the roots up the trunk at a rate of 1 inch every 3 seconds ("The Hidden Life of Trees" by Peter Wohlleben, pg. 231).

ALIEN WORMS

"You may not realize that in the Upper Midwest, there have not been any native earthworms since at least before the last Ice Age. All earthworms found there are non-native invaders."



WHAT DO YOU CALL A BEE SPECIALIST?

Melittology (from Greek μέλιττα, melitta, "bee"; and -λογία -logia) is a branch of entomology concerning the scientific study of bees. Melittology covers the species found in the clade *Anthophila* within the superfamily *Apoidea*, comprising more than 20,000 species, including bumblebees and honey bees. John L. Neff shepherds over the Central Texas Melittological Institute in Austin.

ANTARCTIC PENGUINS

There are 17 species of penguins. However, of the 17 different species, only two (Emperor and Adélie) make the Antarctic continent their true home, although others (Chinstrap, Gentoo and Macaroni) breed on the northern tip of the Antarctic Peninsula, where conditions are less harsh.



(Continued on page 9)

Snippets, cont.

(Continued from page 8)

ANOTHER ENVIRONMENTAL THREAT

Humans make 300 million pounds of plastic every year.

FUN SIRENIAN FACTS

From the book, “Florida Manatees: Biology, Behavior, and Conservation” by John E. Reynolds III.

The Sirenians—Manatees and Dugongs:

- Their mammary glands are in their front “armpits.”
- Manatees have prehensile lips.
- There are 4 living species of Manatees and one Dugong. The Steller’s sea cow (a dugong) was exterminated by 1768.
- The range of the dugong is larger than the other 4 species of manatees added together. The dugongs have heart shaped “tails” (flukes) and the manatees have rounded “tails.” (Tails have bones. Flukes don’t.)
- The Arc of the Covenant is supposed to be bound in dugong hide.



ICK...

One dead adult moose was found with over 100,000 ticks on it (National Geographic TV Channel, “Moose: Titans of the North, Sep. 25, 2017).

RUN!

What birds are the fastest runners?

- Africa’s Ostrich at 43 mph.
- Emu 30 mph.
- The road runner is just slower than the speed of the world’s fastest man—Usain Bolt at 28 mph.

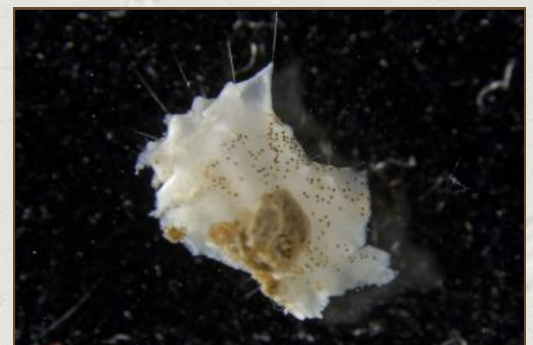


PLACEBO? NO, NOCEBO!

Patients may experience stronger side effects if they believe a medication is more expensive, according to a study of the nocebo effect, the opposite of the placebo effect, [published in Science](#).

NEED SPONGES?

Thirteen thousand feet deep, on the cold, dark desert of the Pacific Ocean seafloor, scientists have discovered new sponges living on rock nodules targeted for deep-sea mining. The tiny sponges, named *Plenaster craigi* partly for the multitude of stars that make up their backbones, belong in a genus of their own and are the most abundant organism found to date that live on the nodules.



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Snippets, cont.

(Continued from page 9)

GECKOS IN MYANMAR

The number of known species of geckos has just jumped upwards, with 15 new species being formally described this week. This is a big increase, as there are only around 1500 known species of these lizards, famed for the sticking power of their feet. The 19 species all live in a small area of Myanmar just 90 by 50 kilometres in size. "That's the really amazing thing about it," says Grismer. "They all come from such a small area."



SAVING THE VAQUITAS

We're holding our breath as wildlife officials in Mexico's Gulf of California launch a desperate effort today to save vaquitas, the world's smallest porpoise, from extinction. Fewer than 30 are left on Earth. The operation will use U.S. Navy-trained dolphins to try to find vaquitas, whose numbers have plunged *90 percent* in the past five years due to deaths in nets illegally set for totoaba, large fish that are also endangered. The plan is to secure vaquitas in ocean pens to protect them from those nets so they can breed.



ECOLOGICAL ARMAGEDDON

"The abundance of flying insects has plunged by three-quarters over the past 25 years, according to a new study that has shocked scientists."



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