The Croaker

Newsletter of the Tablelands Frog Club

Photo by Michael Anthony.

Common Nursery Frog

(Cophixalus ornatus)

August 2008

Tablelands Frog Club

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Opinions expressed in this Newsletter are not necessarily that of Tablelands Frog Club.

PUBLIC INFORMATION:

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TFC meetings/nights and field trips/outings are held monthly. See schedule for dates, speakers and locations. Annual membership fees are:

$15.00 Adults
$15.00 Family
$ 5.00 Junior/Associate

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Editorial bullrush!

Hello and welcome to the August 2008 edition of The Croaker. This edition is dedicated to our children, as they are our future. But first, let me start by saying that humans are not removed from wildlife. Animals are a large part of our lives. I'll take a short quote from an article by Myers & Saunders (2002) in the book *Children & Nature: Psychological, Sociocultural & Evolutionary Investigations*, to explain this…

"*Animals are a compelling part of the human experience of the natural world. We can see evidence for this in the preponderance of animal images and metaphors in human mythology, folktales, art, creation stories, and other products of the mind, across many cultures. Indeed, one could argue that every segment of the natural world – plants, weather, landforms, water, and so on – offers something surpassing and singular to the lives of people. But with animals, we believe we have a special case, a part of nature that is a potent and enduring part of our very development. Most important, we argue that animals provide a bridge to caring about the natural world.*

One of the reasons animals are so fascinating to us is that they are highly responsive and offer many dynamic opportunities for interaction. We are social creatures, and animals appeal to our propensity to interact socially. As millions of pet owners and other animal fans can testify, animals provide intriguing and gratifying challenges that expand our abilities to understand them… many analysts suggest that nature (including animals) matters to us only as we socially construct its symbolic meanings. Thus it can seem as if the meaning of nature boils down to nothing more than what our culture makes it out to be…"

As we are part of nature and culture, developing a community spirit amongst members is important. We can reach out and influence people through our love of animals. We can contribute to saving the planet. It all starts with one person…you. It starts in the local community. It begins in childhood. For this reason, I have included several articles on children and nature. Finally, I will leave you with this thought…

"*As a child's social abilities develop, he or she perceives an animal as another being with subjective experience of its own… animals are a integral reference points for the child's sense of self, and thus they are likely to be objects of human care.*"

Darren Green

Our Story

The Tablelands Frog Club was formed in January 1995 in Yungaburra by a group of people who were aware of diminishing numbers of frogs in all areas and who were keen to learn more about the species in general. From the outset guidance was available from experts in the field. Since that time public interest has been constant and the Club has grown rapidly. Frog enthusiasts have joined from as far afield as Adelaide in the south to Weipa in the north. The pooling of Club members' expertise in various related fields has helped the Club to become established and recognised within the community. Membership numbers reached 94 within the first year and are still increasing. On November 17, 1995, the Club became incorporated under the Queensland Associations Incorporation Act 1981. The Club now operates under appropriate rules.

What can I do as a member?

The Club needs all the support and enthusiasm you can provide to help us to achieve a better understanding of these much overlooked animals. Some of the rare species are facing extinction at this very moment. We need assistance to address the many problems which threaten the livelihood of these vulnerable creatures by improving our knowledge of their habits and habitat, by enhancing their environment and by educating our children and the public at large on these issues.

Education: The Club offers many opportunities for you to learn about frogs and in turn to educate others.

Research: Grant applications are made by the Club as an incorporated body and research is led by social scientists who provide you with the opportunity to participate in this work. The Club maintains an information database on frog distribution and invites your input.

Protection of frog environment and breeding: The Club provides guidance and knowledge on how to protect and create friendly frog environments and how to set up a breeding programme for common species in your garden.

Our Aims

To study frogs: The Club meets once a month with professional guest speakers and relevant videos. Members are encouraged to participate in general discussion and to introduce items of interest. Members recordings of frog distribution and animal husbandry are collated on a database for research purposes. The Club conducts workshops and field trips with professional guidance. The Croaker, the Club's newsletter, contains scientific information, contributions from both adult and junior members and general business matters of the Club.

To conserve and encourage the preservation of frogs: The Club has a Code of Conduct and abides by the Nature Conservation Act 1992, runs public awareness campaigns through the media, displays static educational material, encourages a `Frog Friendly' environment and guides members on breeding programmes of common species in gardens and urban parks.

From the president's lilypad

Hi everyone

There has been virtually nil activity for the frog club of late, no meetings, no field trips and no displays.

We look forward to Kelvin Marshall's Borneo presentation by on the 22nd August and the field trip to Granite Gorge on the 23rd. Hopefully we will see some frogs at Granite Gorge, even though it is not the best time for finding frogs, this area has a great walking track through the granite country and down into the creek and there will be sure to be plenty of interest. During the early evening the Mareeba Rock Wallabies are easily viewed. It is quite a hotspot for snakes, with 11 species recorded from 3 Cape York Herpetological Society field trips during the 90s.

We won't be having the frog festival this year either, looks like this might become a thing of the past due to lack of interest. We still have the option of having a stall at the Garden Expo at Malanda in September if we can get any volunteers.

Before the Wet Season starts this year we are planning to have presentations from the EPA to outline the regulations concerning the collection of tadpoles and keeping of frogs, so we all know where we stand on this issue; there will be one on the Tablelands and also one in Cairns.

There will be a raffle at the upcoming meeting – we have one club cap left and we will also raffle one of our polo shirts (stocks of these are running low so we only have XL size left) so bring some change, plus we will have all our merchandise available. Get in early for your Christmas presents!

Hoppy Frogging

Michael Anthony

http://www.tablelandfrogclub.com

Destination Borneo

22 August 2008

Borneo is home to some of the world's most spectacular and diverse wildlife. Renowned Cairns wildlife photographer, Kelvin Marshall, will be presenting a dazzling slide show on the flora and fauna of Borneo at the Edge Hill Environment Centre, Edge Hill State School. They say a picture is worth a thousand words. In the case of Kelvin's visually stunning images, words are not enough.

Come along and discover the beauty of moths, dragonflies, and other insects, spiders, mammals, birds, snakes, lizards and frogs. No doubt you will go home in awe of Borneo, and take with you a powerful message. Kelvin's presentation will encourage discussion, questions and answers, and maybe a few tips on wildlife photography.

As always, supper will be provided after the meeting. Meeting starts at 7.00pm.

Common Nursery Frog
(Cophixalus ornatus)

This frog was originally described as Austrochaperina ornata by Fry in 1912 from a locality “21 miles west of Cairns”. The holotype is in the Australian Museum.
In 1916 specimens of this same species were described as Phyrnixalus reginae by Andersson, as part of Dr E. Mjoberg’s Swedish Scientific Expedition to Australia 1910-1913. The specimens were from Malanda and Cedar Creek, and are now lodged in the British Museum of Natural history, Rijksmuseum van Natuurlijke Historie, Lieden, Holland and Museum of Comparative Zoology, Harvard University, Massachusetts, U.S.A.The genus Austrochaperina has since been resurrected for the former Sphenophyrne genus of microhylid frogs.
Ornate Nursery Frogs occur in rainforests and adjacent wet schlerophyll forests of the Wet Tropics.

They are the most common microhylid frog of the Wet Tropics and can regularly be heard calling in their preferred habitats over much of the year, most often during the wet season but also at most other times of year, except during prolonged dry periods. They are found from sea level up to 1520 metres.
This species of frog, like most other microhylids, shelter by day beneath ground debris such as rocks and logs. They are most active on the forest floor, where they feed on small forest invertebrates. Males spend much of their time calling, climbing to higher vantage points such as tree trunks, leaves and branches, shrubs, leafy vines, rocks road cuttings or epiphytes. One specimen was found calling on a walking track sign in Wooronooran National Park. They may climb up to approximately 2 metres above the ground. The call is a short single bleat of about 0.5 second duration.
The frogs have large toe discs, almost triangular in shape, which enables them to climb effectively.
Ornate Nursery Frogs walk rather than hop when active on the ground.
Microhylid frogs are very difficult to distinguish from one another, however their calls are quite distinct from each other in most cases. On Mt Lewis there are many species and there are a number of species with similar calls.
During rain there may be numerous species audible. At Wooroonooran National Park on a rainy evening, four species can be commonly heard.
Ornate Nursery Frogs have extremely variable colours and patterns, even within one small area. The pattern usually consists of contrasting patches of grey, tan or black, but may also be only the one colour or some specimens have a bold dorsal stripe. They are normally pale below with little pattern. The pattern appears most bold when found on the ground or under shelter. Male frogs found calling out in the open at night appear to lose their bold patterns and can be very pale.
As in most species of frog, females are generally larger than males. Females grow to a maximum of about 300m, males to a maximum of 27mm.
Nursery Frogs are so named for their breeding habits. Females lay eggs in a “nest” prepared for the eggs by the male, which may be under rocks or other ground litter. Males fertilise the eggs and then guard the nest, which may contain numerous clutches of eggs. He spends much of the time actually sitting over the eggs, coming out to call to attract further females and presumably to eat. It appears that the presence of the male frog may decrease fungal infection of the eggs – it is believed that the male frog exudes a substance that assists with this process.
There can be up to 11 eggs per clutch; each egg measures up to about 4.3mm in diameter. The male guards the eggs during development, the tadpoles develop into tiny frogs wholly within the eggs and do not require water, as do most frog species.
AUTHOR: Michael Anthony.

From Frogs Australia...

Family: Microhylidae
Common name: Ornate Nurseryfrog; Ornate Frog
Scientific name: *Cophixalus ornatus*
Description: This frog has a range of different colour patterns. The background colour can range from fawn, brown, red-brown to dark brown. A faint bar runs along the sides of the snout and a short black stripe extends behind each eye. There is sometimes a dark bar between the eyes and a dark W-shaped marking over the shoulders. Above each back leg there is often a dark spot with a light edge. The back is usually covered in dark flecks. In some individuals there is a narrow pale stripe that runs down the spine which joins with pale lines from the back legs, over the anus. Many variations of the colour pattern are found including a grey or brown background, with pale and dark flecks and a pale stripe down the spine. The skin on the back is smooth with a few tubercles (lumps) and skin folds. The belly is smooth. The toes and fingers have large pads and no webbing.
Size: 25 mm
Habitat:This frog lives in rainforests. It is usually found under leaf litter during the day, but by night calls from low shrubs and trees.Call: A fast “wik wik wik” sound.
Call: A short “beep” sound lasting approximately half a second.
Breeding: Males usually call two metres above the ground, on warm wet nights.
Eggs: Around 10 to 20 large eggs are laid on the ground in strings. The male has been observed guarding the eggs.
Tadpoles: Spend their entire time in the egg capsules and feed off the yolk. They emerge from the eggs as fully developed tiny frogs.
Similar species: This frog can be distinguished from other species of Cophixalus by its finger and toe pads, call and body size.

Six legged wonders

Pair of Mastigapha sp adults.

Nymph of Mastigapha, note middle leg lost to predator? This is the nymph of the two adults in image above.

Another species of Mastigapha, female nymph, Sword like protuberance from rear end is ovipositor used by females to deposit their eggs in crevices or soil.

Nymph of new Genus.

Caedicia nymph, ant mimic.

Interesting Katydids of North Queensland

This is the first in a series of short articles looking at insects of Nth Qld, many are common but rarely seen and many still remain undescribed. As we all know one of the favourite foods of all Frogs and Cane Toads unfortunately is insects. Frogs have a great variety of insect food available to them and much of what they would like to eat is poorly documented. Likewise, for the insects they don't like to eat. So with this first article lets look at some of the types of insects that are around during the time of writing. Although not the most prolific time of year for insects there are always some around whether it be flies, ants, grasshoppers, cockroaches or Katydids.

Tettigoniidae commonly known as Katydids generally appear during the warmer months of the year but at this time some early emerging nymphs can be seen feeding on a variety of native and exotic plants around us. Preferring new growth to eat some have evolved to mimic other insects or the plants themselves to help deter predation, at this vulnerable stage of development some have assumed camouflage colours shapes and patterns to blend in with their surroundings.

Katydids can be found from the Rainforests to the Outback, many eat foliage but some are predatory like the giant Listroscelidine of the outback. The degree of camouflage of Katydids really is amazing and rather than give their presence away they will sit motionless as a predator passes by, but if disturbed they will jump or fly away to avoid capture settling on a nearby bush and once again blending in.

To find out more about Katydids and other Orthopteroids a great book is Grasshopper Country by David Rentz. There are still many new species to be discovered and amongst my images I present here there are a couple of species to be formerly named.

AUTHOR & PHOTOS: Jack Hasenpusch.

Giant predatory Katydid Listrocelidine, Terpandrus woodgeri feeding on Corymbia blossom.

Another species of Caedicia nymph.

Research request

I have been studying and collecting Stick Insects for a number of years and would like to take the opportunity here to ask members of the TFC to help with our research. Together with my colleague Paul Brock, a Phasmid specialist from the UK, we have been documenting and describing many new species from Nth Qld and around Australia.

Stick insects can be very difficult to find at times and it requires many hours of night time searching by torch light to come across these cryptic creatures, at other times they can be found accidentally, for instance standing in long grass one can simply crawl up your leg. I have collected a couple of species like this.

Either way the more eyes looking, the faster our research can be advanced. So everyone can help. If you do see a stick insect please take a photo, you don't have to collect the specimen, you can email the picture to me and I promise to get back to you ASAP with an identification where possible.

Data is crucial, date pic was taken, location, name of photographer and name of species of foodplant insect was observed on if known.

Paul Brock and I have just completed a Field Guide to the Stick and Leaf Insects of Australia to be published later this year by CSIRO publishing.

Please send any pic`s to me at info@insectfarm.com.au

Thanks for your time,

Jack Hasenpusch

A box of Type spm`s we recently described and donated to Qld Museum. The pink winged species far right is a new Genus discovered in Kuranda by a young Naturalist Jiva Sztrakai. We have named this species in his honour Micropodacanthus sztrakai, only known by these two specimens. There is a new species I collected on Mt Lewis. Also a new species named 100 years after Dodd collected the first specimen in Kuranda and hadn`t been seen since till I collected these at my place. To date I have found 19 species of stick insects on my farm the most ever recorded for any one locality.

Caedicia nymph shedding skin.

Wildlife news...

Ancient Amphibians Evolved A Bite Before Migrating To Dry Land

ScienceDaily (Apr. 17, 2007) — Ancient aquatic amphibians developed the ability to feed on land before completing the transition to terrestrial life, researchers from Harvard University report this week in the Proceedings of the National Academy of Sciences. Their work is based on analysis of the skulls of the first amphibians, which arose 375 million years ago, and their fish ancestors. The shapes of the junctions between adjacent skull bones -- termed "sutures" -- in the tops of these fish and amphibian skulls reveal how these extinct animals captured prey, say authors Molly J. Markey and Charles R. Marshall.

"Based on experimental data obtained from living fish, we found that the shapes of sutures in the skull roof indicate whether a fish captures its prey by sucking it into the mouth -- like a goldfish -- or by biting on it directly, like a crocodile," says Markey, a postdoctoral researcher and lecturer in Harvard's Department of Earth and Planetary Sciences. "A biting or chewing motion would result in a faint pushing together of the frontal bones in the skull, while a sucking motion would pull those bones ever so slightly apart. By comparing the skull roofs of living fish to those of early amphibians and their fishy ancestors, we were able to determine whether the fossil species fed by suction or by biting."

Using this approach, Markey and Marshall found that in one key transitional species, the aquatic amphibian Acanthostega, the shapes of the junctions between adjacent skull bones are consistent with biting prey. This finding, the scientists say, suggests that the water-dwelling Acanthostega may have bitten on prey at or near the water's edge.

"Going from the aquatic realm to land involved a series of adaptations to facilitate changes in locomotion, respiration, reproduction, sensation, and feeding," Markey says. "In water, suction is an efficient method of feeding, but it does not work in the much less dense air environment. Early terrestrial inhabitants would thus have had to develop the means for chomping prey."

Markey and Marshall first measured the skull roof sutures, those areas where the bones of the skull roof meet, in the living fish Polypterus as it fed. They then analyzed the same cranial junctions in several fossils -- the early amphibian Acanthostega, its fishy ancestor Eusthenopteron, and the extinct terrestrial amphibian Phonerpeton -- to determine how these bones may have moved relative to each other during feeding. By analyzing the tiny forces that the sutures experienced during feeding, such as tension or compression, the researchers could determine how the skull roof likely deformed as the animals ate.

Living fish exhibit an incredible array of tooth and jaw shapes, suggesting that, ironically, direct analysis of fossil jaws would be a less precise means of determining the feeding methods of extinct species, Markey says. "Analysis of the sutures of the early amphibian species Acanthostega revealed that, while it had many adaptations to an aquatic lifestyle, it was more likely a biter than a sucker," Markey says. "The analysis suggests that amphibians evolved a bite before emerging onto land as fully terrestrial animals."

SOURCE: Harvard University (2007, April 17). Ancient Amphibians Evolved A Bite Before Migrating To Dry Land. ScienceDaily. Retrieved April 22, 2008, from http://www.sciencedaily.com /releases/2007/04/070416193322.htm

PHOTO: Charles Marshall admires the skull of a Phonerpeton, one of the first creatures to evolve teeth, which allowed animals to catch prey on land. The skull is about 275 million years old. (Credit: Jon Chase/Harvard News Office)

Ancient Amphibian: Debate Over Origin Of Frogs And Salamanders Settled With Discovery Of Missing Link

ScienceDaily (May 21, 2008) — The description of an ancient amphibian that millions of years ago swam in quiet pools and caught mayflies on the surrounding land in Texas has set to rest one of the greatest current controversies in vertebrate evolution. The discovery was made by a research team led by scientists at the University of Calgary. The examination and detailed description of the fossil, Gerobatrachus hottoni (meaning Hotton's elder frog), proves the previously disputed fact that some modern amphibians, frogs and salamanders evolved from one ancient amphibian group called temnospondyls. The discovery is described for the first time in the journal Nature. "The dispute arose because of a lack of transitional forms. This fossil seals the gap," says Jason Anderson, assistant professor, University of Calgary Faculty of Veterinary Medicine and lead scientist in the study.

The Gerobatrachus fossil provides a much fuller understanding of the origin and evolution of modern amphibians. The skull, backbone and teeth of Gerobatrachus have a mixture of frog and salamander features--the fossil has two fused bones in the ankle, which is normally only seen in salamanders, and a very large tympanic ear (ear drum). It also has a lightly built and wide skull similar to that of a frog. Its backbone is exactly intermediate in number between the modern frogs and salamanders and more primitive amphibians. The new fossil also addresses a controversy over molecular clock estimates, or the general time salamanders and frogs evolved into two distinct groups. "With this new data our best estimate indicates that frogs and salamanders separated from each other sometime between 240 and 275 million years ago, much more recently than previous molecular data had suggested," says Robert Reisz, professor, University of Toronto Mississauga and second author on the paper.

Gerobatrachus was originally discovered in Texas in 1995 by a field party from the Smithsonian Institution that included the late Nicholas Hotton, for whom the fossil is named. It remained unstudied until it was "rediscovered" by Anderson's team. It took countless hours of work on the small, extremely delicate fossil to remove the overlying layers of rock and uncover the bones to reveal the anatomy of the spectacular looking skeleton. "It is bittersweet to learn about frog origins in this Year of the Frog, dedicated to informing the public about the current global amphibian decline," continues Anderson. "Hopefully we won't ever learn about their extinction."

SOURCE: University of Calgary (2008, May 21). Ancient Amphibian: Debate Over Origin Of Frogs And Salamanders Settled With Discovery Of Missing Link. ScienceDaily. Retrieved May 26, 2008, from http://www.sciencedaily.com /releases/2008/05/080521131541.htm

PHOTO: An Early Permian landscape, with Gerobatrachus hottoni lunging at the mayfly Protoreisma between stands of Calamites and under a fallen Walchia conifer. (Credit: Michael Skrepnick)

Q. Why did the frog go to the hospital?
A. He needed a "hopperation" !

Q. What's red and green and goes 175 miles an hour?
A. A frog in a blender.
Q. What do you get if you add milk?
A. Frog nog!
Q. What happens if you drink frog nog?
A. You Croak!

Wildlife news...

Female Concave-eared Frogs Draw Mates With Ultrasonic Calls

ScienceDaily (May 12, 2008) — Most female frogs don't call; most lack or have only rudimentary vocal cords. A typical female selects a mate from a chorus of males and then --silently -- signals her beau. But the female concave-eared torrent frog, Odorrana tormota, has a more direct method of declaring her interest: She emits a high-pitched chirp that to the human ear sounds like that of a bird. This is one of several unusual frog-related findings reported recently in the journal Nature. O. tormota lives in a noisy environment on the brushy edge of streams in the Huangshan Hot Springs, in central China, where waterfalls and rushing water provide a steady din. The frog has a recessed eardrum, said Albert Feng, a professor of molecular and integrative physiology at the University of Illinois and team leader on the new study. "In the world we know of only two species -- the other one in southeast Asia -- that have the concave ear," Feng said. "The others all have eardrums on the body surface."

Earlier studies, conducted by Feng, Jun-Xian Shen at the Institute of Biophysics at the Chinese Academy of Sciences and Peter Narins at the University of California, Los Angeles, found that O. tormota males emit -- and respond to -- unusual chirping calls from other males. These calls are audible, but also have energy in the ultrasonic range. The recessed ear structure protects an eardrum that is 1/30 the thickness of that of a normal frog, allowing it to detect very high frequency sounds. The unusual ear structure and the high-pitched calls are likely an evolutionary adaptation to the noisy environment, Feng said. The waterfalls and streams produce a steady racket predominantly in a lower frequency range than that used by the frogs. Laboratory experiments showed that the frogs could hear most of the audible and ultrasonic frequencies emitted by other O. tormota frogs. The only other animals known to use ultrasonic communication are bats, dolphins, whales and some insects.

The calls are quite complex. A single O. tormota frog broadcasts its message over several frequencies at once, at harmonic intervals, like a chord strummed simultaneously on several strings. The new analysis, conducted by Shen, Feng and Narins, found that female O. tormota frogs also emit a call that spans audible and ultrasonic frequencies. The team has not observed females vocalizing in the wild (these frogs are nocturnal and can leap up to 30 times their body length), but in laboratory settings the females emitted calls only when they were carrying eggs. Male O. tormota frogs exposed to recorded female calls were quite responsive, usually chirping within a small fraction of a second. "The frog's response is instantaneous -- right after the stimulus," Feng said.

In the laboratory, the males usually chirped and then leapt directly at the source of the female call. Their ability to home in on the sound call was astonishingly precise, Feng said. A typical male could leap toward the sound with an accuracy of over 99 percent. "This is just unheard of in the frog kingdom," he said. Only elephants, humans, barn owls and dolphins are known to detect sound with similar precision. The small distance between the frog's ears (about one centimeter) makes its ability to localize the sound that much more impressive, Feng said. How the female picks a mate in the wild is still unknown, however. "We have a lot of work to do to figure out whether she directs the signal to one male or whether she lets a bunch of males come and compete, or whether there is any kind of dueting session during which she then decides: 'OK, You're my guy. Hop on my back and I'll take you to the creek!'" Feng said.

These studies likely have implications for human health. Earlier research into the mechanics of frog hearing and directional hearing helped Feng and his colleagues at the U. of I.'s Beckman Institute for Advanced Science and Technology design an "intelligent" hearing aid that boosts sound signals of interest embedded in other sounds in the immediate environment of the listener.

SOURCE: University of Illinois at Urbana-Champaign (2008, May 12). Female Concave-eared Frogs Draw Mates With Ultrasonic Calls. ScienceDaily. Retrieved May 14, 2008, from http://www.sciencedaily.com /releases/2008/05/080511190843.htm

PHOTO: O. tormota lives in a noisy environment on the brushy edge of streams in the Huangshan Hot Springs, in central China, where waterfalls and rushing water provide a constant din. (Credit: Photo courtesy of Albert Feng)

Amphibians Respond Behaviorally To Impact Of Clear Cutting

ScienceDaily (Mar. 14, 2008) — The number of amphibians drastically decreases in forest areas that are clearcut, according to previous studies. A University of Missouri researcher, however, has found that some animals may not be dying. Instead, the Mizzou biologist said some animals may be moving away (possibly to return later) or retreating underground. The finding could have major implications for both the timber industry and the survival of amphibians. "Everyone jumped to the conclusion that the frogs and salamanders were dying after a clearcut had occurred," said Ray Semlitsch, professor of biological sciences in the MU College of Arts and Science. "Anecdotal data accumulated through the years indicated there were potentially three things amphibians could do: stay and die, retreat underground or evacuate the site. We have never been sure of how they respond to strong habitat changes, especially behaviorally."

Semlitsch and his graduate students at MU found, during a period of two years, that significantly more salamanders and frogs evacuated clearcut treatments than entered, although the researchers cannot say what portion also may have died or retreated underground. Documenting this evacuation response is important because animals are potentially available later for re-colonization once the forest begins to grow back. The results of the study present two primary implications for timber management that would benefit amphibians. First, timber harvesters producing clear cuts that are small (within a six-acre area) may improve the chances of amphibians being able to move out of the area until sufficient reforestation occurs. Second, if harvesters leave coarse woody debris (everything over two inches in diameter) on the ground, it will contribute to the amphibians' survival by creating food, maintaining moisture and providing shelter.

Semlitsch said amphibians are potential bio-indicators of ecosystem health and are the most threatened vertebrate type globally, with one-third, or 1,896 species, currently at risk of extinction. Studies done in the past indicate harvesting forest is particularly detrimental. Amphibians are very sensitive to water loss, heat and changes in temperature. They have no natural barrier to water loss. Semlitsch found that amphibians may be able to react to changes in their environment in an effort to alleviate risk in ways previously undocumented. Semlitsch said one of his goals is trying to maintain ecosystem health and function and developing principles to help species persist. "I am trying to develop general principles to help us manage our natural resources without exploiting them to a point where ecosystems begin to fall apart," he said. "I am not against cutting trees, but let's do it in a way that's responsible and will maintain forests and the timber industry, as well as amphibians, for generations to come."

SOURCE: University of Missouri-Columbia (2008, March 14). Amphibians Respond Behaviorally To Impact Of Clear Cutting. ScienceDaily. Retrieved March 16, 2008, from http://www.sciencedaily.com /releases/2008/03/080311093341.htm

PHOTO: The Ringed Salamander (Ambystoma annulatum) is a species unique to the Ozarks. (Credit: Photo by Bill Peterman)

Q. What is the thirstiest frog in the world?
A. The one who drinks Canada Dry!

Q. What do ya call a frog's favorite soda?
A. Croaka-Cola!

Q. Why did the frog say meow?
A. He was learning a foreign language.

Wildlife news...

When Threatened, A Few African Frogs Can Morph Toes Into Claws

ScienceDaily (June 25, 2008) — Biologists at Harvard University have determined that some African frogs carry concealed weapons: When threatened, these species puncture their own skin with sharp bones in their toes, using the bones as claws capable of wounding predators. The unusual defense mechanism is described by Harvard's David C. Blackburn, James Hanken, and Farish A. Jenkins, Jr., in a forthcoming issue of the journal Biology Letters. "It's surprising enough to find a frog with claws," says Blackburn, a doctoral student in Harvard's Department of Organismic and Evolutionary Biology. "The fact that those claws work by cutting through the skin of the frogs' feet is even more astonishing. These are the only vertebrate claws known to pierce their way to functionality." "Most vertebrates do a much better job of keeping their skeletons inside," he adds.

Blackburn first became aware of the clawed frogs while conducting fieldwork in the central African nation of Cameroon. When he picked up one of the hulking fist-sized frogs, it flailed its hind legs violently, scratching him and drawing blood. Back in the U.S., Blackburn examined museum specimens of 63 African frog species. He noticed that in 11 species -- all in the genera Astylosternus, Trichobatracus, and Scotobleps and all native to central Africa -- the bones at the ends of the toes were pointed and hooked, with smaller, free-floating bones at their tips. Eventually he determined that these small nodules at the tips of the frogs' feet were connected to the rest of the toe by a collagen-rich sheath. "These nodules are also closely connected to the surrounding skin by dense networks of collagen," Blackburn says. "It appears they hold the skin in place relative to these claw-like bones, such that when the frog flexes a certain muscle in the foot, the sharp bone separates from the nodule and bursts through the skin."

This claw-like structure is no conventional claw, though: It is pure bone, free of the keratin sheath that normally surrounds vertebrate claws. And unlike a claw that retracts into a specialized structure in an animal's foot, as in cats, the site where the frogs' foot bones emerge appears to be covered with ordinary skin. While these frogs were mentioned in the scientific literature on a few occasions from 1900 to 1925, they are generally little-known in the U.S., appearing in few museum collections. Even the handful of researchers who wrote about them a century ago often misinterpreted the piercing of the skin as damage incurred during preservation of specimens.

The frogs are widely roasted and eaten in Cameroon, where hunters -- evidently well aware of the risk of injury -- go to great lengths to avoid handling them when alive. "Cameroonian hunters will use long spears or machetes to avoid touching these frogs," Blackburn says. "Some have even reported shooting the frogs."

Of more than 5,500 known frog species, Blackburn and his colleagues found just 11 with claws, and speculate there may be another couple of similarly equipped species. Blackburn plans to study live specimens of the African frogs to determine whether retraction of the foot bones back into the body is an active or a passive process, and how the damaged skin regenerates after the claws are deployed. "We suspect, since the frog does suffer a fairly traumatic wound, that they probably use these claws infrequently, and only when threatened," Blackburn says.

SOURCE: Harvard University (2008, June 25). When Threatened, A Few African Frogs Can Morph Toes Into Claws. ScienceDaily. Retrieved July 1, 2008, from http://www.sciencedaily.com /releases/2008/06/080623125003.htm

PHOTO: Close-up of the foot of a living Trichobatrachus robustus showing the white bony claws protruding from the tips of the toes. (Credit: David C. Blackburn)

Lessons From Snakes: The Better Part Of Valor

ScienceDaily (Sep. 22, 2004) — Biology Ph.D. student Joel Johnson and co-author Eric Roth, University of Oklahoma, found that when test snakes were confronted with danger their first reaction was to retreat. Smaller snakes, although just as likely to flee or strike as larger snakes, were more likely to issue warnings. But, over all, test snakes of all sizes were more likely to exercise the better part of valor: they ran away. Rather, slithered. "Our results show a gradual decrease in response to a predatory encounter with an increase in body size," said Johnson.

Johnson and Roth collected 46 variable-sized western cottonmouths in Texas and cared for them in the laboratory for months before testing. Using a metal snake tong with a welding gloved fitted to the end, researchers nudged the snakes' faces. As the snakes responded, researchers documented seven common antipredator behaviors - escape, defensive posture, tail vibrations, musk release, mouth gapes, strikes and bites. After testing, the snakes were released to the wild where they were captured. "We found that antipredator behavior varied with body size," said Johnson. "The bigger the snake, there was less defensive response and fleeing became more common."

Were the bigger snakes older and wiser? Perhaps. "Younger snakes may exhibit an elevated defense response," said Johnson. "Assuming the younger snakes were less experienced, older snakes may have been better able to evaluate the risk and respond accordingly."

SOURCE: University Of South Florida (2004, September 22). Lessons From Snakes: The Better Part Of Valor. ScienceDaily. Retrieved April 22, 2008, from http://www.sciencedaily.com /releases/2004/09/040922074919.htm

PHOTO: Cottonmouth. (Photo courtesy of University Of South Florida)

Relocation Of Endangered Chinese Turtle May Save Species

ScienceDaily (May 23, 2008) — There are only four specimens of the Yangtze giant softshell turtle left on Earth--one in the wild and three in captivity. In order to save this species from extinction, conservation partners from the Wildlife Conservation Society (WCS) and the Turtle Survival Alliance (TSA), working in conjunction with partners from two Chinese zoos and the China Zoo Society, recently paired two of them. A still reproductive, more than 80-year-old, female, living in China's Changsha Zoo has been introduced to the only known male in China, a more than 100-year-old living more than 600 miles away at the Suzhou Zoo.

On Monday, May 5, turtle biologists, veterinarians, and zoo staff from partner organizations convened at the Changsha Zoo to collect and transport the female to the Suzhou Zoo where she joined her new mate to potentially save their entire species. The move was coordinated to coincide with the female's reproductive cycle. "This is a story of hope for a species truly on the brink," said Colin Poole, Director of the Wildlife Conservation Society's Asia Programs. "We are extremely grateful to our conservation partners both in China and here in the U.S. who made this historic move possible. Now that the turtles are together, we are optimistic that they will successfully breed." "I hate to call this a desperation move, but it really was. With only one female known worldwide, and given that we have lost three captive specimens over the past two years, what choice did we have" The risks related to moving her were certainly there, but doing nothing was much riskier," said Rick Hudson, TSA co-chair and Fort Worth Zoo conservation biologist.

Listed at the top of the World Conservation Union's Red List, the Yangtze giant softshell turtle is the most critically endangered turtle in the world. Its status in the wild has long been recognized as grim, but extinction risk now is believed higher than ever. Much of its demise has been attributed to pollution, over-harvesting for Asian food markets and habitat alteration. Biologists saw no other alternative but to save the species by any means necessary. Still, the risks were high--relocating an animal this age can be highly stressful for it and research shows that breeding attempts by males can become aggressive. However, since the female has arrived safely and is settling well into her new habitat at the Suzhou Zoo, biologists are optimistic for breeding success.

The Bronx Zoo-based WCS and the Fort Worth Zoo-based TSA coordinated the critically

Wildlife news...

important move; TSA provided much of the funding, animal reproduction and technical expertise while WCS provided veterinary and logistical support and coordination with wildlife partners in China and New York. Other project partners include Ocean Park and Kadoorie Farm and Botanic Garden, both in Hong Kong.
SOURCE: Wildlife Conservation Society (2008, May 23). Relocation Of Endangered Chinese Turtle May Save Species. ScienceDaily. Retrieved May 26, 2008, from http://www.sciencedaily.com /releases/2008/05/080521154206.htm

Invasion Of Gigantic Burmese Pythons In South Florida Appears To Be Rapidly Expanding

ScienceDaily (May 22, 2008) — The invasion of gigantic Burmese pythons in South Florida appears to be rapidly expanding, according to a new report from a University of Florida researcher who's been chasing the snakes since 2005. Associate professor Frank Mazzotti of UF's Institute of Food and Agricultural Sciences has published a new fact sheet outlining updated python statistics and methods being used to find and eliminate the snakes. The new document follows the February release of a U. S. Geological Survey climate map that showed — based solely on climate, not habitat — pythons could potentially survive across the lower third of the United States. Though Mazzotti's findings may make some nervous, he said the information should be reassuring. Knowing the extent of a problem makes it much easier to solve, he said. "All of this is good. We've defined the problem, and science is really coming to the aid of management efforts," he said. He stresses that humans are far more likely to be hurt by animals that don't typically induce fear, such as hitting a deer with one's car or being bitten by a dog, than by the nonvenomous snakes. But now, solving the problem must become a priority, Mazzotti said. "People might argue the ultimate boundaries, but there's no part of this state that you can point at and say that pythons couldn't live here," he said. "We really need to be addressing the spread of these pythons. They're capable of surviving anywhere in Florida, they're capable of incredible movement — and in a relatively short period."

Pythons are likely to colonize anywhere alligators live, he said — including North Florida, Georgia and Louisiana. So far, most of the snakes have been found in Everglades National Park, but they've moved beyond its borders, too: as far north as Manatee County. The Burmese python, native to Burma in Southeast Asia, is one of the world's largest snake species. The largest found in the Everglades was 16 feet long and 152 pounds. Mazzotti said there are a few places where eradication of the snakes might be possible, such as the Florida Keys. "We need to do something so that five years from now, we're not looking at an exponentially bigger population in those areas because we didn't go in and get the first ones before they started breeding," he said. In most places, he said, the best strategy is likely a larger, focused effort to contain and reduce the population by tracking, capturing and euthanizing the reptiles. "As soon as you know they're breeding, eradication gets to be out of the question," he said. "Females may store sperm, so they can produce fertile clutches for years. And a 100-something pound snake can easily be producing 60, 80 eggs a year." State rules that went into effect this year should help, including a $100 annual permit to own "reptiles of concern," and a mandatory microchip, he said. But it's imperative that more be done to educate people about the problem of turning loose non-native species, he said.

Other highlights from Mazzotti's fact sheet:

From 2002-2005, 201 pythons were captured or found dead in and around Everglades National Park. In 2006-2007, the number more than doubled, to 418. Everglades wildlife biologist Skip Snow has estimated the population at more than 30,000.

Since May 2006, trackers have found seven pregnant female snakes and one nest of eggs; one recently captured python had 85 developing eggs.

Autopsied pythons found in Key Largo contained the remains of the endangered Key Largo woodrat. Other species on the pythons' prey menu include rabbit, gray squirrel, fox squirrel, domestic cats, raccoons, bobcats, white-tailed deer, limpkin, white ibis and the American alligator.

Not only are pythons fantastic swimmers, they can cover a lot of ground, as well. Two pythons with surgically implanted radio transmitters were found to have traveled 35 miles and 43 miles. Trackers stepped in and caught the male, concerned that it was too close to homes near a Miccosukee Indian Reservation.
SOURCE: University of Florida (2008, May 22). Invasion Of Gigantic Burmese Pythons In South Florida Appears To Be Rapidly Expanding. ScienceDaily. Retrieved May 26, 2008, from http://www.sciencedaily.com /releases/2008/05/080520131750.htm
PHOTO: The invasion of gigantic Burmese pythons in South Florida appears to be rapidly expanding. (Credit: iStockphoto/Holly Kuchera)

Q. Why did the gag-writer turn green?
A. Cause the gag-writer was sick of writing frog jokes!

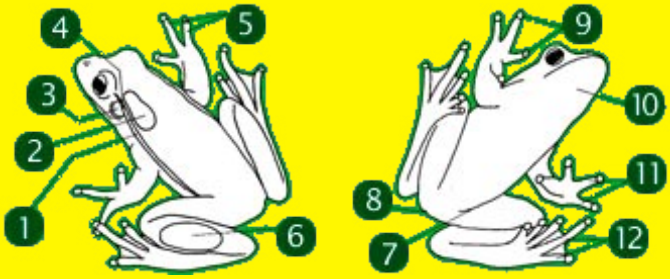
Q. What does a bankrupt frog say?
A. "Baroke, baroke, baroke."

Q. Why did the frog go to the bank with a gun?
A. He wanted to robbit.

Question

We all think of marsupials as animals that give birth to an underdeveloped joey that attaches itself to a teat inside a pouch, or remnant pouch. How well do you know your marsupials? I pose a question about marsupials to you…
What marsupial DOES NOT have a pouch?
Have a think about it. If the question is too difficult, turn to page 10 for the answer.

Parts of a frog



1. Dorsolateral fold
2. Parotoid gland
3. Tympanum
4. Supratympanic ridge
5. Fingers without webbing
6. Tibial gland
7. Groin (between leg & body)
8. Cloaca
9. Pads or discs
10. Vocal sac
11. Fingers
12. Toes webbed

SOURCE: http://frogs.org.au/frogs/glossary.html

Wildlife news...

Far North Quoll Seekers Network

The Far Northern Quoll Seekers Network (FNQSN) was officially launched with a Quoll Discovery Night on 13 June 2008 in Cairns. Mark Culleton from the Atherton Birds of Prey brought "Macka" – a live Spotted Tailed Quoll - to the launch which was attended by 40 people.

FNQSN seeks to promote awareness of quolls and to undertake monitoring of quoll populations to assist in securing the species long term survival. The FNQSN provides information to the public, media, schools, tourist operators and local communities on what quolls are, where they can be found, threats to their survival and what can be done by landowners and the public to prevent these animals from having the same fate at the Thylacine (Tasmanian tiger).

The Spotted-tailed Quoll (see photo below) is the largest species (about the size of a large possum) and it has been estimated that there are less than 600 left in the upland rainforest of North Queensland. Spotted-tailed Quolls are generally found in rainforest above 900m and have been recorded from the Koombooloomba/ Tully Falls Area to the Mt Windsor Tableland in the Wet Tropics (including Mt Carbine Tableland, Daintree/Cape Tribulation, Bellenden Ker/Bartle Frere and Lamb Range).

The Northern Quoll (see photo below) is the smallest of the quoll species (about the size of a small bandicoot) and has experienced significant declines across its former range. The Northern Quoll is found in similar areas to Spotted-tailed Quolls but also lives in drier savannah woodland areas on the slopes of the Great Dividing Range including Mareeba, Mt Molloy and Cooktown.

Human activities, including land-clearing, the spread of introduced animals and climate change now threatens the survival of quolls. North Queensland is home to two of Australia's four species of quolls.

Quolls are distinguished from other mammals by spots on their bodies. Quolls breed in the winter months and so are more active during this period. They are seen more often by the public from June – August, particularly on roads. We are asking anyone that spots a quoll (pardon the pun) to contact FNQSN. If you see a quoll, please record as much detail as you can about the sighting including the location, time of day, weather conditions, if the quoll has spots on its tail or not (Northern Quolls don't have spots on their tails), the approximate size of the animal, what it was doing and report your sighting to Wildlife Preservation Society of Queensland email at wpsq@wildlife.org.au or contact Glenn on 0417729509.

Something to think about...

Susan Strauss, in her 1996 book The Passionate Fact: Storytelling in Natural History & Cultural Interpretation, tells us that the average American citizen watches 26 hours of television a week. If knowledge comes through direct experience, imagine how limited their true knowledge is. Furthermore, living experience with the natural world is an increasingly rare commodity in a society that is more often bathed in virtual reality than actual reality. [DG]

A passing thought...

According to a well known naturalist *today's youth spend their summers in air conditioned malls or playing sports on urban fi elds…as a result, kids have few opportunities to acquaint themselves with nature, to develop their naturalist intelligence and make sense of the world of plants and animals*. With the decline in Field Naturalists Club memberships, the opportunities to share and learn may also be in decline. Without infl uence from others, or the ramblings in the bush as children, where are the future naturalists coming from? What is the role of the naturalist in today's culture, and in what direction should they be heading? Time may tell. [DG]

Website of interest

Australian Nature Live is more than just snakes. It covers a wide range of subjects including natural history, and environmental and social issues. It includes many short stories about Australia's biological heritage like keystone species, cassowaries, feral animals and sensible pets for Australia. The website covers Genetically Engineered (GM) crops and food. There is also a section on rare farm breeds, and rare seeds and plants. The site provides a link to the animated classic The Meatrix, an animal version of the movie The Matrix. Some issues may offend readers, but the reality of whale hunting, bear cruelty, dog torture, child soldiers, ocean plunders, RSPCA controversies, to name a few, need to be addressed. Other links show flags of the world, dictionaries, thesaurus and other interesting reference sites. You can view Australian Nature Live at: http://www.snakeshow.net/

Q. How deep can a frog go?
A. Knee-deep Knee-deep!

Beetle breathing

Do you know how insects breathe? I always believed they had a network of tubes through which air supply diffused in and out of their bodies. The tubes end in small openings in the exoskeleton, called spiracles. Now it seems that the process of breathing is not so passive afterall. Recently, LaTrobe University hosted a seminar on the uses of the new synchrotron, which is about to be opened in Melbourne. One amazing application is a closer look at the inside of insects while they are alive (not sure how long they would remain alive though). The seminar speaker mentioned the very short film clip of a beetle breathing, produced in a synchroton. This was published some years ago, but I had not seen it. Look at the website belowand click on the link movie.

http://www.sciencemag.org/feature/data/bioimaging/bug.html

AUTHOR: Dr. Sabine Wilkens

SOURCE: May 2007, Whirrakee 28(4):5.

More beetle breathing

Earlier this year, in a report in the 24 January 2003 issue of Science, Westneat et al. showed that insects like this wood beetle breathe by rapid cycles of tracheal compression and expansion, in a mechanism remarkably similar to lung ventilation. Their unprecedented look inside living, breathing insects (including a movie [1.6 MB] showing the inflation and compression of these tiny structures) was made possible by use of a synchrotron - a large, circular particle accelerator that can generate x-rays one billion times as intense as conventional x-rays. Synchrotron x-ray imaging should prove valuable for probing the structures and functions of other living systems in never-before-seen detail.

SOURCE: http://www.sciencemag.org/feature/data/bioimaging/bug.html

Beetle breathing research

Insects are known to exchange respiratory gases in their system of tracheal tubes by using either diffusion or changes in internal pressure that are produced through body motion or hemolymph circulation. However, the inability to see inside living insects has limited our understanding of their respiration mechanisms. We used a synchrotron beam to obtain x-ray videos of living, breathing insects. Beetles, crickets, and ants exhibited rapid cycles of tracheal compression and expansion in the head and thorax. Body movements and hemolymph circulation cannot account for these cycles; therefore, our observations demonstrate a previously unknown mechanism of respiration in insects analogous to the inflation and deflation of vertebrate lungs.

SOURCE: Westneat, M.W., Betz, O., Blob, R.W., Fezzaa, K., Cooper, W.J. & Lee, W.K. (2003) Tracheal Respiration in Insects Visualized with Synchrotron X-ray Imaging, Science 299(5606):558-560.

Answer to Page 9 Question...

The answer to the question posed on page 9, what marsupial does not have a pouch, certainly created a little thought and possibly much debate. The question, we regret to say, was actually a trick question…the answer is the males do not have a pouch! Sorry about that.

Wildlife news...

Children saving wildlife...

In his book *The Human Relationship With Nature*, Peter Kahn (2001) describes time spent at his 670 acres of mountain meadows and forests in California, USA...

"One afternoon a hummingbird flew into our cabin. Upon seeing the bird, my four year old daughter, Zoe, followed it, and I followed her, with a plastic container in my hand. I trapped the bird against a window, walked outside, and let it go. "Be well and live free," I said.

An hour later, I see a butterfly trapped inside. I cup it in my hands and walk onto the porch to find Zoe. When she sees my with my cupped hands she immediately cups hers, and walks up to me. She knows what is happening, as we have done this before on her request. Very gently I transfer the butterfly into her hands. She holds it cupped like that for ten seconds and then opens her hands. The butterfly stays put. Zoe stands poised, quiet, looking at the butterfly in her hands. A minute later the butterfly flies off. Zoe says, "Be well and live free."

Later that afternoon Zoes sees a bee drowning in the water. She says "Dad, quick, get me something to save the bee." I find a lid to a container and give it to her and she dips it in the water. Zoe then positions the lid in different ways until the bee is able to climb on board, and then she sets the lid down on the porch. We both watch the bee. It tries to fly, but cannot. "Dad, it's probably so tired." A few minutes later the bee flies away.

Birds, butterflies, and bees die all the time in nature, and we see our share of such death. I also recognise that from an ecological standpoint it is not necessarily good or even warranted that we save any of them. But as a parent, one seeking to educate his child, I see something else going on during our 'animal rescues.'"

The above account reminded me of another story, this time the story is not a real event, but a well-known parable…

One day I came across a young boy on the beach. He was throwing starfish into the sea. With every crashing wave, it stranded another five starfish on the sandy beach. The boy picked up more starfish and through them into the sea. After a few minutes I approached the boy.

"What are you doing?" I asked.

"I'm saving starfish" he replied.

"But there are thousands of starfish washed up onto the beach, what does it matter?"

With that the boy picked up another starfish and threw it into the sea. He retorted, "It matters to that one."

In the book *Children & Nature: Psychological, Sociocultural & Evolutionary Investigations*, Peter Kahn (2002) Looks at environmental generational amnesia. People take the natural environment they encounter during childhood as the norm against which they measure environmental degradation later in their life. With each ensuing generation, the amount of environmental degradation increases, but each generation takes that degraded condition as the non-degraded condition, as the normal experience. The upside of environmental generational amnesia is that each generation starts afresh, unencumbered mentally by the environmental misdeeds of previous generations. The downside is enormous. As we lose daily, intimate positive affiliations with nature and accept negative experiences (such as pollution) as the norm, we suffer physically and psychologically and hardly know it. Since the problem of environmental generational amnesia has its genesis in childhood, I suggest that childhood is a good place to start solving the problem. We need to engage children in environmental education to maximise their exploration of and interaction with the nature that still exists within their world; bugs, pets, plants, trees, wind, rain soil, sunshine…

Kellert (2002), in *Children & Nature: Psychological, Sociocultural & Evolutionary Investigations*, explains that simply stated the loss of neighbourhood species endangers our experience of nature. Direct, personal contact with living things affects us in vital ways that vicarious experience can never replace. He believes that one of the greatest causes of the ecological crisis is the state of personal alienation from nature, which many people live. We lack a widespread sense of intimacy with the living world. The extinction of experience implies a cycle of disaffection that can have disastrous consequences. As cities and metastasising suburbs forsake their natural diversity, and their citizens grow more removed from personal contact with nature, awareness and appreciation retreat. So it goes, the extinction of experience sucking life from the land, the intimacy from our connections.

Various dimensions of contemporary environmental degradation and decline, like extensive habitat destruction, species loss, environmental contamination, natural resource depletion, urban sprawl, and human population growth, all point toward substantially fewer opportunities for most children, especially in densely populated areas, to have contact with high-quality natural environments.

Involve your children with TFC so that they may learn and hopefullly become future naturalists.

(Compiled and written by Darren Green).

Friends...

This story is about a tree and a boy who are friends. I came across this story in The Human Relationship With Nature, by Peter Kahn (2001), however I believe it originated in Shel Silverstein's (1964) The Giving Tree. There is a message for us all as Peter Kahn so aptly alludes to. Here is the story…

"This storey is about a tree and a boy who are friends. When the boy is little, he climbs up her trunk, and swings from her branches, and eats her apples. Together they play hide-and-go-seek. As he grows up, the boy begins to request material assistance from the tree. He asks for her apples to sell for some money. She says she is happy to give. He asks her for all of her branches to make a home for him and his family. She says she is happy to give. When he wants to travel to a distant land, he asks her for her trunk to build a canoe. Again, the tree gives. At the end of the story, the boy – now a man – comes back old and tired. He needs something, but the tree replies she has nothing to offer him except a stump. The old man replies that is all he needs now, and sits down."

Kahn continues with his interpretation of the story…

"It is a sad story. Yet it highlights, albeit in somewhat anthropomorphic [human-centred] terms, the reciprocity and intimacy that is possible with nature; and that while nature gives and gives, it can give too much, and perish, if we keep asking. And we, as humans, have kept asking." [DG]

Eden in a vacant lot

Can you remember a particular place where you made early contact with the land as a boy or girl; a place you went repeatedly to play, explore, sulk, or think; a small, particular corner of the landscape where you went to make forts, catch creatures, and mess about with water and plants. Picture that place in your mind and think about it for a moment. Commonly, the special spots are water courses, such as creeks, canals, ravines, and ponds; a big tree, clump of brush, or hollow; parks, especially undeveloped ones; and old fields, pastures and meadows. They share qualities of nearness, wilderness, secretiveness, and possibility. How many of you can return to your special place and find it substantially intact? Can our children experience these special places like we did in our youth? These severed connections with nature can be rewoven by maintaining natural habitats for children. Nothing is less wasted than ground where the human hand has held back and the minds of boys and girls can engage with plants and animals and dirt, nothing more sacred than land that is yet raw and ripe with surprise.

SOURCE: Pyle, R.M. (2002) Eden in a Vacant Lot: Special Places, Species, & Kids in the Neighborhood of Life, in Kahn, P.H. Jr. & Kellert, S.R. (eds) Children & Nature: Psychological, Sociocultural & Evolutionary Investigations, Massachusetts USA: The MIT Press.

Q. What do stylish frogs wear?
A. Jumpsuits!

Q. What has more lives that a cat?
A. A frog that goes croak every night.

Q. Why did the motorcycle rider buy a pet frog?
A. To pick the flies out from between his teeth!

Memberships

Wai Awarau	Atherton	Val Bonner-Burrows	Oxley
Mandy Lindsay	Atherton	Ian Wilesmith	Redbank Plains
Bevan Pritchard	Atherton	Andrea James	Redlynch
Phillip Bennett	Atherton	Murray Wellington	Speewah
Jim Buckley	Bentley Park	Wendy & Phillip Grimm	St Ives NSW
Dominic Chaplin	Bungalow	Darren & Jo Green	Trinity Beach
Robyn King	Broadbeach	Michael Anthony	Whitfield
Judy Catchpole	Chambers Flat	Maria Destro	Whitfield
Keith Martin	Clifton Beach	Shaun Cook	Whitfield
Charles Annicelli	Connecticut, USA	Eleanor Duignan	Whitfield
Dan Vermilya	Connecticut, USA	Michael Willcox	Whitfield
Michael Cermak	Earlville	Martin Cohen	Yorkeys Knob
John Booy	Gordonvale	Alan Gillanders	Yungaburra
Grant Turner	Innisfail	Neville Simpson	Yungaburra
Val Speedie	Innot Hot Springs	Claudine Grandjean	Yungaburra
Rosy Maccarone	Kuranda	Sian Moore & Scott Radcliffe	Yungaburra
Cathy Retter	Kuranda	Chris Tsilemanis	Yungaburra
James & Margaret Sweetzer	Malanda	Liz,Lionel & Sandy Carroll	Yungaburra
Merv Robson	Malanda	Garrie Douglas	Yungaburra
Inga Lorenz	Malanda	Lee Curtis	Yungaburra
Beryl Davidson	Malanda	Alastair & Amanda Freeman	Yungaburra
Marney Fichera	Mooroobool	Gaby Schierenbeck	
Michael & Sharon Williams	Newport, Vic		
Ray & June Crook	North Cairns		

Q. What happened to the cat and frog when they got run over?
A. The cat had nine lives, the frog just croaked.

World's Oldest Living Tree - 9550 years old - Discovered In Sweden

ScienceDaily (Apr. 16, 2008) — The world's oldest recorded tree is a 9,550 year old spruce in the Dalarna province of Sweden. The spruce tree has shown to be a tenacious survivor that has endured by growing between erect trees and smaller bushes in pace with the dramatic climate changes over time. For many years the spruce tree has been regarded as a relative newcomer in the Swedish mountain region. "Our results have shown the complete opposite, that the spruce is one of the oldest known trees in the mountain range," says Leif Kullman, Professor of Physical Geography at Umeå University.

A fascinating discovery was made under the crown of a spruce in Fulu Mountain in Dalarna. Scientists found four "generations" of spruce remains in the form of cones and wood produced from the highest grounds. The discovery showed trees of 375, 5,660, 9,000 and 9,550 years old and everything displayed clear signs that they have the same genetic makeup as the trees above them. Since spruce trees can multiply with root penetrating braches, they can produce exact copies, or clones.

The tree now growing above the finding place and the wood pieces dating 9,550 years have the same genetic material. The actual has been tested by carbon-14 dating at a laboratory in Miami, Florida, USA.

Previously, pine trees in North America have been cited as the oldest at 4,000 to 5,000 years old. In the Swedish mountains, from Lapland in the North to Dalarna in the South, scientists have found a cluster of around 20 spruces that are over 8,000 years old.

Although summers have been colder over the past 10,000 years, these trees have survived harsh weather conditions due to their ability to push out another trunk as the other one died. "The average increase in temperature during the summers over the past hundred years has risen one degree in the mountain areas," explains Leif Kullman. Therefore, we can now see that these spruces have begun to straighten themselves out. There is also evidence that spruces are the species that can best give us insight about climate change.

The ability of spruces to survive harsh conditions also presents other questions for researchers. Have the spruces actually migrated here during the Ice Age as seeds from the east 1,000 kilometres over the inland ice that that then covered Scandinavia? Do they really originate from the east, as taught in schools? "My research indicates that spruces have spent winters in places west or southwest of Norway where the climate was not as harsh in order to later quickly spread northerly along the ice-free coastal strip," says Leif Kullman. "In some way they have also successfully found their way to the Swedish mountains."

SOURCE: Umeå University (2008, April 16). World's Oldest Living Tree -- 9550 years old -- Discovered In Sweden. ScienceDaily. Retrieved April 22, 2008, from http://www.sciencedaily.com /releases/2008/04/080416104320.htm

PHOTO: This 9,550 year old spruce has been discovered in Dalarna, Sweden. A favourable climate has produced an upright trunk since the beginning of the 1940s. (Credit: Leif Kullman)

Last child in the woods

Louv, R. (2005) *Last Child in the Woods: Saving Our Children From Nature Deficit Disorder*, Algonquin Books, ISBN: 1565123913.
Review by Colleen Marie O'Brien, Department of Anthropology at the University of Georgia, in *Ecological and Environmental Anthropology* 2(1):33.

Like many other children growing up in the suburban United States during the 1970s, my childhood memories include swinging from tree limbs, tromping through the woods, and constructing tree forts in the far stretches of our neighborhood. But what happens when an entire generation of children grows up without such memories? Richard Louv, a *New York Times* journalist and founder of Connect for Kids, an internet-based child advocacy organization, explores this question in *Last Child in the Woods: Saving Our Children From Nature Deficit Disorder*.

According to Louv, children today are more adept at naming cartoon characters than native species and overwhelmingly prefer indoor to outdoor play. Louv describes the physical, emotional, and cognitive effects of children's disconnect from the natural world as "nature deficit disorder". Although this is neither a medical term nor condition, Louv supports his theory with narratives drawn from his own childhood in Nebraska and from some of today's foremost child development researchers and environmental writers. Louv also reaches beyond anecdotal evidence by providing recent research to support his claims.

Our societal view of nature has moved from utilitarian to romantic and now to a hyper-intellectualized perception of plants and animals based in science rather than myth or religion. Louv describes this as the "third frontier," characterized by a separation from our food origins and a replacement of wildness with synthetic nature in suburban developments. Fear of litigation, strangers, traffic, and wilderness have all led to a generalized social anxiety, exacerbating the absence of unstructured activities in children's lives. According to Louv, children's disconnect from nature is evident in the spiking increase in childhood obesity, attention deficit disorder, and depression. Using Howard Gardner's theory of multiple intelligences, Louv presents numerous studies contending that nature play stimulates creativity, wisdom, and wonder. Even failures that occur during the process of constructing a tree fort teach children a deeper understanding of "how things work". While Louv falls short of exploring cultural or urban / rural differences in nature contact, he nonetheless outlines a convincing argument for increasing children's unstructured learning and play environments. The last section of the book, devoted to the "fourth frontier," is a bit slow, yet he succeeds in leaving the reader with a relatively optimistic view of the opportunities for change which include urban wildland revitalization and "greening" school areas.

Louv is not the first person to write about the effect of nature exposure on the human psyche. *Last Child in the Woods* builds on literature dating back to Henry David Thoreau and Aldo Leopold. Indeed, the founding fathers of our protected lands, Theodore Roosevelt and John Muir recognized the need to preserve wilderness for future generations. Louv's work also complements that of more contemporary nature writers, such as David Orr, Robert Michael Pyle, and Gary Nabhan, who have written about children's extinction of experience in the natural world. Louv's unique contribution is his synthesis of our changing cultural ideologies with this generation's growing disconnect from nature. *Last Child in the Woods* represents an intersection between environmental education, eco-psychology, child development, and American culture studies that may promote a new dialogue between researchers and practitioners. Louv successfully weaves processes of American culture change together with some of the foremost problems facing today's children, resulting in a poignant and honest look at the future of human-environment relationships in the next century.

Storytelling is one of the oldest, if not the oldest method of communicating ideas and images, and making sense of the world (Herman & Childs 2003; Kaufman 2003; Larkin 1997; Mello 2001; Sunwolf 2004a & b). Brotchie (2003) describes the basic function of storytelling as learning by inquiry. According to Strauss (1996), stories create relationships, translate information into images and excite our imagination. The storyteller engages the audience so that questions are raised in the audience's mind and subsequently answered by them through the telling of the story. Often, a person arrives at the same conclusion to the story, irrespective to the origin of their culture, due to the universal human emotional response sharing similar qualities (Roberts 2004). Bruner (1986, cited in Mello 2001) points out that storytelling is part of how humans express their individual private experience of understanding into a public form.

According to Pastorelli (2001 & 2003) stories provide an opportunity to enrich interpretive commentaries through their potential to arouse the imagination, involve the affective domains, provide touching insights into the lives of people, create vivid and sensory experiences, and to add a sense of mystique and magic. All these intrinsic qualities are what make stories fascinating and memorable.

According to Cots (2003), deliberate exaggeration for effect, referred to as a hyperbole, by the storyteller is a common technique to make a point. Inaccurate stories are often told about snakes, and with each telling the tale becomes slightly exaggerated. Typically a four foot snake becomes a six footer and, as a result of ignorance, we have snakes in plague proportions during the months of spring. Snake stories are often glamorised, with snake-bite stories making top story in the media. When people tell stories of large brown snakes, typically referred to as 'king browns,' they tend to be talking about the eastern brown snake (*Psuedonaja textiles*). Snake tales are usually anecdotal and without evidence to verify the story. The following is an account of a story told to me by Neville O'Brien. On this occasion, Neville supplied a photograph as evidence. [References available upon request] AUTHOR: Darren Green

We lived on the property "Willowbank" near Tennyson, just west of Rochester in north-central Victoria (Australia). Swagman often came through the area in search of a place to stay and work. One year, when I was young, a six-foot (1.8m) tall swagman by the name of "Horace" wandered in. Horace, whose real name was Alec McBean, worked around the farm in return for a place to stay, here he lived with us until he passed away some years later.

In 1944, our neighbour Harry Jasper came to our house carrying a hessian bag. In a self-satisfied voice he said "You've heard of the one who got away, well this is the one that didn't." With that Harry up-ended the bag, spilling the limp contents onto the ground. The freshly killed brown snake invoked excitement in my young mind, a feeling that was to be replaced with pity in later years. You see, in those days we didn't have the snakebite cures and antidotes that are now readily available, so you killed them. Harry said the snake lived in a hollow stump at the base of an old tree, and the entrance was well worn from many a seasons use.

My father went back inside the house and fetched his camera. I was only four years old at the time, my sister Maureen was three, but I can still remember the magnificent beast like it was yesterday. Horace picked up the snake by the tail and raised it above his head; it must have been at least seven foot (2.1m) long as its head still touched the ground. We stood each side of Horace and posed for my father while he took the photo. Every now and then I tell the story of the seven foot brown snake, the sceptics soon believe my words when I produce the photo as proof.

Waiter... Waiter... Do you have frog legs?"
"No!... I always walk this way!"

"Waiter... Waiter... Do you have frog legs?"
"Yes Sir!"
"Then hop on over to the kitchen and get me a peanutbutter and jelly sandwich!"

Meetings 2008 - 2009

Friday 22nd August – 7.00 pm at the Edge Hill Environment Centre - Kelvin Marshall, one of Cairns best photographers with a great collection of photos from a recent trip to Borneo

Friday 31st October – 7.00 pm Yungaburra CWA Hall – Jean Horton from the Environmental Protection Authority will outline the regulations concerning the collection & keeping of tadpoles & frogs in Queensland

Friday 7th November – venue TBA Cairns – Laura Worth from the Environmental Protection Authority will outline the regulations concerning the collection & keeping of tadpoles & frogs in Queensland

January TBA – We hope to have Dr Martin Cohen again, this time in Yungaburra

February TBA – Cairns – watch this space!!!

March TBA – ANNUAL GENERAL MEETING - Yungaburra

Field trips 2008 - 2009

Saturday 23rd August 2008
Granite Gorge (population of brown White-lipped Treefrogs)

Saturday 25th October 2008
Davies Creek Falls (Waterfall Frogs)

Saturday 8th November 2008
Koolmoon Creek (weekend – rainforest trek)

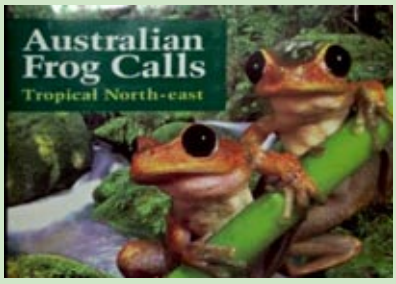
Saturday 6th December 2008
Daintree (weekend)

Saturday 31st January 2009
Yarrabah Rd Gordonvale (frogs in the canefields)

Saturday tba February 2009
Mareeba Wetlands (dry country frogs)

NOTE: Please contact Michael Anthony on 0427367888 for details of field trips

TFC Merchandise



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Mail Bag 71
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http://www.tablelandfrogclub.com

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☑ **Membership type**

☐ $15.00 Adult membership ☐ $15.00 Family membership ☐ $5.00 Junior/Associate

Surname(s): _____ **Given name(s):** _____

Address: _____

_____ **P/Code** _____

Postal: _____

_____ **P/Code** _____

Phone (h)_____ (w) _____ (m)_____

E-mail Address (for newsletters and updates) _____

Occupation: _____

The Tablelands Frog Club Incorporated is incorporated under the Associations Incorporation Act.

TFC OFFICE USE ONLY

Membership paid:	$ _____	**Paid by:**	☐ Cash, ☐ Money Order, ☐ Cheque
Receipt number:	# _____	**Date issued:**	_____/_____/_____
Membership number:	# _____	**Date entered:**	_____/_____/_____

Tablelands Frog Club
Mail Bag 71
YUNGABURRA QLD 4879

MEMBERSHIP TAX RECEIPT

Membership paid:	$ _____	**Paid by:**	☐ Cash, ☐ Money Order, ☐ Cheque
Receipt number:	# _____	**Date issued:**	_____/_____/_____
Membership number:	# _____	**Signed:**	_____

Please Post Membership Application to: Mail Bag 71, Yungaburra QLD 4872

The Croaker

Newsletter of Tablelands Frog Club

August 2008

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