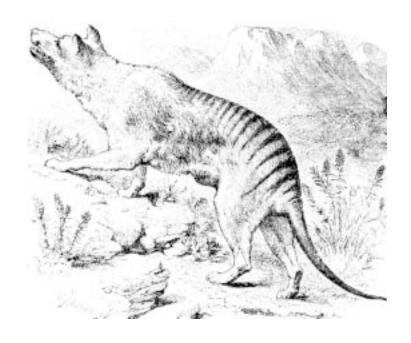
North American BioFortean Review



Doubt everything or believe everything: these are two equally convenient strategies. With either we dispense with the need for reflection.

—Henri Poincare

North American BioFortean Review

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From the Editors

Welcome to NABR #7. This issue presents a number of new reports along with a wide variety of older and rarely seen reprints.

We continue to solicit articles for future issues of NABR. If you would like to discuss a potential article with any of us, please feel free to email. We are interested in biological and cryptozoological mysteries worldwide, both historical and recent.

Chad Arment Brad LaGrange Craig Heinselman

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Letters to the Editors

Hello,

Just thought you'd like to know that the river monster story from the Ontario paper on page 32, "From the Past: Ontario Aquatic Creature," actually deals with events in Tennessee, not Canada.

Bell's Depot is now Bells, Tennessee, on the South Fork of the Forked Deer River. It's in Crockett County, but across the river is Haywood County. No place names in Ontario come close.

The original source was probably the Memphis paper.

— George Eberhart

Hello,

I have heard throughout my life of large black cats or panthers that live in the area. The area being Murray County in Northwest Georgia. Some of my friends living in the community of Ramhurst have told me about how they encountered some living on the land where they built their home years ago.

— Mark W.

"New and stirring things are belittled because if they are not belittled, the humiliating question arises, 'Why then are you not taking part in them?'"

- H. G. Wells

Review: The Hunt for the Buru

Authored by Ralph Izzard Reviewed by Craig Heinselman

Izzard, R. 2001. The Hunt for the Buru. Fresno, CA: Linden Publishing.

Ralph Izzard's long out-of-print book <u>The Hunt for the Buru</u> has at last been made available again thanks to Linden Publishing of Fresno, California. Izzard is perhaps best known for his work involving the Yeti of the Himalayas, but as this book shows he was much more than that. He was a writer that drew upon first hand experience achieved through sociological, psychological, ethnological and anthropological insight.

The Buru is a creature as yet inconclusively identified zoologically from a valley in Assam of Northern India. It was here in 1948 that Izzard partook in an expedition to that rugged area, an area where the inhabitants had little contact with outsiders and had only recently stopped their practices of headhunting. The Buru itself was described as a large reptile of nearly 20 feet that emitted a bellowing call. It has led some researchers, such as Bernard Heuvelmans, to speculate that if the Buru is no longer in the area, it may well have just recently become extinct, but based on other research a version may still exist in other Himalayan regional valleys today.

What makes Izzard's book stand out from many other adventure stories is that at its core the search for the Buru is but a side note. Granted it was the reason for the expedition, but not in the end the true gem to be found. Izzard instead discovered something he could share with his readers, a sense of wonder and amazement at the mystery of the culture in the area, the geography of the locale and the anxious and tiring search for answers.

The reader of this book is taken on a trip from the beginnings of an expedition as started from a simple letter to Charles Stoner, after a general conversation and then the preparation for the expedition itself. The historical basis for the Buru is likewise intrinsically displayed by full inclusion of references. One such notable inclusion is the manuscript on the Buru as a tradition sent to Izzard by Charles Stoner entitled A Traditional Account of the Survival Within Historic Times of a Large Aquatic Reptile in the Outer Himalayas of Assam that was authored by J.P. Mills and C.R.S. Stoner and submitted to the Anthropological Institute for publication. Inclusions such as these add to the basis for forming an expedition and as a way to introduce the Buru to the reader without taking it out of context. The context of the unknown, myth or reality!

Shortly thereafter the reader is swept into the search and immersed in the land and the people. Not only are the people of the area, such as the Daflas, represented in true form but their individual personalities are presented. This alone, if nothing else, makes the book a worthwhile and monumental read. You are shown their culture through first-hand observations and interactions and not dry and to-the-facts

anthropological text. This draws the reality of the situation to the forefront.

To share too much about the book would be a dreadful error, as it is the task of the reader to draw their own interpretation from it. But, as a classic and out-of-print for 50 years, it is the effort of any truly interested researcher to add this tome to their collection before it is gone once more.

Review: Photo Fakery

Authored by Dino A. Brugioni Reviewed by Chad Arment

Brugioni, Dino A. 1999. <u>Photo Fakery: The History and Techniques of Photographic Deception and Manipulation</u>. Dulles, VA: Brassey's.

This text was written by one of the founders of the CIA's National Photographic Interpretation Center. It includes a good historical overview of the use and misuse of photographs to promote agendas, create evidence, and cause confusion. While most of the illustrations given are naturally of a political or military nature, the techniques shown are often found in cryptozoological fakes as well.

Among the chapters is one that provides clues to determining whether a photograph is faked. Brugioni notes that experts have to consider shapes, sizes, tones, textures, patterns, shadows, locations, scale, and the association of objects within an image. With digital manipulation becoming increasingly easier, it is very important that researchers learn to recognize tell-tale signs of fakery, even in legitimate news sources.

Brugioni provides only a little space for "monster" pictures — his chapter "Communists, Ghosts, Monsters, and Aliens," is devoted almost entirely to political image manipulation. The only creature image he shows is a 1906 photo of a "sea serpent" displayed with a group of men on a beach at Ballard, Washington. The "sea serpent" is obviously a carved tree trunk. He does provide a brief note on the 1983 Shenandoah National Park unicorn hoax, and on a 1930's Wisconsin "hodag" photo which was created from the hides of a dog and horse along with the horns of a cow. (Unfortunately, the "hodag" photo itself is not illustrated.)

At times, the jumping from one topic to another makes this book seem uneven, and there is a distinct emphasis on political fakes, but overall this book illustrates a very good reason why we should very carefully evaluate new cryptozoological images.

Review: In Search of Ogopogo — Sacred Creature of the Okanagan Waters

Authored by Arlene Gaal Reviewed by Craig Heinselman

Gaal, A. 2001. <u>In Search of Ogopogo</u>. Blaine, WA: Hancock House Publishers.

Arlene Gaal presents a detailed analysis of the unknown aquatic animals of Okanagan Lake that have not had such a treatment since John Kirk's In the Domain of the Lake Monsters (Key Porter Books, Toronto, 1998). Gaal, the author of two previous books on Ogopogo, the name of the reported creature from Okanagan Lake in British Columbia, being Beneath the Depths and Ogopogo — The True Story of the Okanagan Lake Million Dollar Monster (Valley Review Publishing, 1976 and Hancock House, Publishers, Blaine, 1986, respectively), once again shows a talent for chronicling the history and reports of the lake in regards to its large inhabitants.

Though handled by others over the years, such as the booklet by William Marks entitled I Saw Ogopogo (Peachland-Okanagan Review adjunct issue, November 18, 1971) and Mary Moon's book Ogopogo (JJ Douglas, Vaqncouver, 1977) it is the more recent treatments of the subject that have provided invaluable resources for the researcher interested in this cryptozoological mystery. Gaal, with a journalistic background and stylized to-the-facts effort does not hesitate to show the real and the unreal in the subject. Coupled with her background of hands-on research, consulting and good attitude, the reader of In Search of Ogopogo is shown the essential information and not the overblown extrapolations of some books as to what such a creature may be.

The reader is brought through the evidence that amounts to photographs, video images and witness descriptions (words and drawings). Each is given its place and needed analysis by Gaal depending on the importance of the footage, picture or report in context to the book. One cannot expect all reports to be included, as the size of the book would surpass the general public's needs. Gaal has written the book indeed for all audiences, the general reader and the harder researcher, and as such a compromise from some detail and analysis is needed.

Some of these compromises come in the lack of references to where information comes from. Examples of this are shown throughout the chapter on Other Known Unidentified Swimming Animals, wherein the newspaper articles do not necessarily clearly state a source and/or date (one can surmise a time frame granted from the accompanying text), likewise a quote from a witness to a creature in Lake Utopia does not state the source of the newspaper nor even the time frame of the event. All in all this makes it rather difficult to back track and use Gaal's book as a springboard to other research, difficult but not impossible if one wishes to peruse that venue. The lack of an index and bibliography add to the difficulty of using the book as a reference work as well.

That said, the good of the book far outways the drawbacks. One can excuse such out of place inclusions, such as a Sacramento River Levy report of a snake-like creature on page 72, that may well be pertinent in a different location of the book. Even the confusion of dates being thrown left and right can be overbearing at times. But the end result is a pleasant book to read. The film analysis shows a very serious attempt to establish video and film documentation and behavior extrapolations of the creatures, from which future research can be done to perhaps narrow time frame and search areas. And the inclusion of many stills and actual images mentioned in the text make for a nice comparison from the written word to visual interpretation.

Hard work is the key in Gaal's book. The chronicling of the unknown is too often left to the regurgitating and extrapolation of other people's work leaving them with little credit in the end. Gaal goes beyond that—she shows the effort and integrity lost in many hurried and "spit-out" books. Her time as a coordinator for various international expeditions and spur of the moment ("off-the-cuff") answers to a phone call of a sighting show her excitement and continual wonder (and at times perhaps exhaustion) from the work at hand.

Enjoy Gaal's book for what it is and go beyond its shortcomings. One can, and does, come away with the feeling of wonder and exhilaration of what if. Next time you pass a large body of water or see the ocean, ask yourself that question. What if? And then let yourself become transfixed in the answer......

From the Past: The Sea Serpent

Two Gentlemen Saw It at Tintagel on Thursday

Mr. Edward S. Dodgson, of Jesus College, Oxford, who is staying at Clifton House, Tintagel, sends us the following communication, dated Thursday last:—

"At 11:45 a.m. to-day I was seated with the Rev. T. C. Davies, M.A. of the Queen's College, Oxford, chaplain of an almshouse at Sheffield, who is now staying in this hotel, on the edge of the cliffs of the cove known as Gulla Stem, at Tintagel, when he called my attention to a black object that was moving at a distance of about 200 yards, very rapidly along the calm surface of the sea towards Tintagel Hotel. In about a minute it had disappeared behind the cliff that bounds the cove on the west. It was a sea serpent, at least 20 feet long, holding its large head, with apparently some kind of a crest or mane upon it, aloft. Unfortunately, we had no telescope with us, still less a kodak, wherewith to take its likeness. We are told that no such beast is known to have been seen here. I have, however, seen a large, yellow and green snake swimming quite close to me in the sea at Corunna, in the north-west of Spain, and smaller ones like it in Spanish rivers. This fact may be worth recording as a contribution to the natural history of North Cornwall."

Source: Western Morning News, September 14, 1907.

The Monster of the Madidi

Authored by Simon Chapman Reviewed by Craig Heinselman

Chapman, S. 2001. The Monster of the Madidi. London: Aurum Press.

Remember the story of Gilligan and his fellow castaways on the television show <u>Gilligan's Island</u>? That show plays in the background of this intriguing book by Simon Chapman. Not the comic sense of the show, but the endless errors and mistakes. This is not to make light of Chapman's book, but rather to show that humor and irony can be played in a serious manner. Gilligan kept returning to the island, Chapman at least was able to survive his expedition and leave the jungle.

Chapman, a physics teacher (and who looks a little like the Professor on <u>Gilligan's Island</u>), is at the core an explorer of the forest. He has a fondness of the Bolivian rainforest, and within it the people, animals and mysteries that lie. In this quest, joined by the eccentric Julian and fisherman Charlie, Chapman is out to find an answer to a question. That question, was there a primate as yet unknown to science living in the Bolivian forests, one that is reminiscent of the famous picture of the so-called De Loys' Ape? Granted, Francis de Loys was in Venezuela when he encountered the 'apes' that attacked his party, a controversy that resounds still to this day, and Chapman was in Bolivia. But, therein is the same mystery, were the stories of the Mono Rey that of an unknown primate?

That is the basis for his expedition, but not at the heart of the book itself. The reader instead of being drawn into the Mono Rey and De Loys' Ape mystery, or a rehashing of stories, is introduced into the troubles of heading an expedition and the natural world around Chapman. In a very fluent and articulate manner, with little overemphasis, Chapman shows the reader the jungle, the air, the trees and his companions both met along the way and brought with him. That is the true treasure, an anthropological, biological and sociological examination of the rainforest. Akin, if you will, to the work Ralph Izzard did during his Buru expedition in the mid-part of the twentieth century in the Himalayas. It is these rare excerpts from a foreign land that are the real finds of the Bolivian rainforest.

But, Cryptozoology buffs be not shunned. Chapman does mix in a mingling of information that is tantalizing. For example, and as Karl Shuker also mentioned in his "Alien Zoo" column in <u>Fortean Times</u> (Number 148), mention is made of possible physical or captive specimens of the animal. In Chapman's own words:

"The Mono Rey had shaggy, black or brown fur. Until recently, someone in Rurrenabaque had the skin of one that had been shot. A gringo scientist bought it and took it back home for DNA analysis. No results were ever reported so it may just have turned out to have belonged to a spectacled bear, which also lives in the high Andean cloud forests. Of course, it was a distinct possibility that the Mono Rey was just this, but I was inclined to doubt it as everyone

insisted that it was truly a monkey. Its arms were longer than its legs, they said. Besides, it swung in trees and sometimes made leaps of five metres or more. Bears could never do that, people laughed.

Additionally, there was also a rather intriguing rumour that Santa Cruz zoo in eastern Bolivia had a live Mono Rey for a while, but it died. This last point I was never able to authenticate."

A very interesting piece of information there, but far from substantiated. Other curious inclusions are perhaps certain etymological forms of the word Mono Rev itself, or Mono Grande as some researches have also used. Much like the confusion of terminology used with Indonesian mystery primates, the South American ones are no different. For example, there is the Mono Oso or monkey bear and Mono Wiche, all of which refer in all likelihood to known animals such as the spectacled bear and kinkajou (respectively in that order). But of more troublesome terminology is that of the Ucamari, described as being a monkey that walks bipedally, a meter and a half tall with shaggy fur. At first sight, or description, this sounds like the basic idea of the De Loys' Ape or Mono Rey, however the locals also tie the Ucamari to the Mono Oso that probably refers to the spectacled bear. A circle that has no end, each word meaning an animal, but specifics are unknown. For as Chapman learned, if it lives in the trees or is found in the trees, then it is a monkey. If it eats ants, then it is a bear. A confusing use of words for the uninitiated. In the end Chapman didn't find any hard evidence of the creature he sought, he encounters many obstacles and finds a group of large 'spider monkeys' (perhaps a known form, perhaps not; it is unclear as no pictures or specimen was taken). But what he finds instead is a rekindling of his love for the rainforest and all that lies within.

So do not be disappointed at not reading of the Mono Rey not being found, or of no mystery being explained. It is not the answer to be found in the book. It is but the stepping stone into the jungles of Bolivia.

From the Past: A Hideous Sea Serpent

Capt. W. S. Green, keeper of the life-saving station at Long Branch, reports to the general superintendent of the life-saving service, under date of November 24th, that five of his crew, who were fishing in the ocean a few days previous, saw a hideous sea serpent a short distance from their boats. The crew tell the following story: "The monster was fully ninety to one hundred feet long, and thirty feet wide. We did not see his entire length. There were two blow holes, about nine feet long and two feet wide, about twenty feet from the end of his nose. The body was black, the head was short, and near the nose were two stubby horns." It was also seen from the station. It made its appearance on the survace at intervals of ten minutes. Capt. Green closes his report with the remark, "This is the truth."

Source: The News, Frederick, MD; Dec. 8, 1883; p. 1.

Tiger Tales

Authored by Col Bailey Reviewed by Craig Heinselman

Bailey, C. 2001. <u>Tiger Tales</u>. Sydney: HarperCollins Publishers Pty Limited.

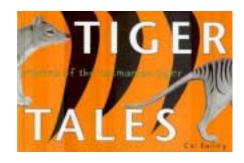
Col Bailey's first book is an interesting collection of tales of the Tasmanian Tiger (*Thylacinus cynocephalus* or thylacine to some). Taken and enlarged from his journalistic work in the *Tiger Tales* column of the <u>Derwent Valley Gazette</u>, the more than 30 entries offer the reader a humorous and exciting view of the possible survival of this presumably extinct marsupial from Tasmania and Australia.

Bailey readily admits that the stories within cannot be authenticated and that a story had to be wound around some to allow for an even flow. But, at the core of the book, the potential survival and interaction between the Tasmanian Tiger and humans to current day is viewed.

One is taken through the memories of old trappers and bush-beaters of Tasmania as chronicled by Bailey through interviews, bibliographic research and first hand field research. From trapped tigers that rummaged for food, to nursing mothers and ironic deaths tied to mans best friend, we are enriched in the lives of the characters fleshed out by Bailey.

Photographs are shown throughout the book of the landscape of Tasmania, famous images of tigers, and rare little-seen images of tigers. All are incorporated to allow for a general feel of the animal. Though mostly of a Tasmanian angle, the reports of Australian survival reports of tigers are incorporated as well at the latter part of the book.

The Tasmanian tiger may be gone, but as long as stories circulate and tug at our imaginations at the possibilities of survival, we are left to wonder. Bailey's book may not be hard science nor swaying of the mind, but it is a refreshing break to read and enjoy a taste of Oceania.



News Notes

Edited by Craig Heinselman

News Notes: Two Rediscovered Plants from South Africa

Dr. Paul Smith and his team from the Royal Botanical Gardens in the United Kingdom reported recently the discovery of two plants thought extinct since the 1960s. Working with people from South Africa's National Botanical Institute, the teams found nearly 1000 specimens of *Dioscorea elephantipes*. The *D. elephantipes* is a form of wild yam and was located with the aid of a local Shepard. Unfortunately no seeds were found of the plant, so monitoring of the area is to be done. 1954 was the last time this plant was found in the Northern Cape region. The second plant found was *Cylindrophyllum hallii* a type of daisy last seen in 1960. Only 219 of the *C. hallii* were found, but the team was able to collect seeds for the RGB seedbank in West Sussex, England. Continued searches are undergoing to locate additional plants thought to be lost so as to have their seeds collected for preservation purposes.

Sources:

Kirby, Alex. Seed Search Finds Vanished Plants. BBC News, May 16, 2001

News Notes: Yarra Pygmy Perch

A smallish 8cm fish has been located in the Murray River of Australia during a study of the declining ecosystem of the river system. The fish found was a form of the known Yarra Pygmy Perch, however these fish are not known to be in the area it was found within, rather they are located further south. Further research is needed in order to see whether the fish is a new species altogether or a regional sub-species. Although the water system is still in need of a large cleanup action, the finding of this fish does hint at a recovering ecosystem.

Sources:

Dodds, Kieran. New Fish for Troubled Waters. BBC News, April 3, 2001

News Notes: Proper Classification Now Can be Done on Glyphis Sharks

According to the Australian Broadcasting Corporation, new specimens of the rare *Glyphis* sharks have been found in the Top End's Kakadu National Park and the Adelaide River. They have been identified as being from *Glyphis* species A and *Glyphis*

species C. Although not new species, they are specimens that will allow for a proper classification of the sharks. The *Glyphis* sharks are some of the most mysterious sharks in the world. They live in rivers, but little is actually known about them, even as to exact locations where they live.

To date there are five known kinds:

Glyphis gangeticus, the Ganges river shark from India

Glyphis glyphis, the Speartooth shark from New Guinea

Glyphis species A, the Bizant river shark from Australia

Glyphis species B, the Borneo river shark from Indonesia

Glyphis species C, the New Guinea river shark thought to be only in New Guinea

Of these species, some are known only from preserved specimens and have rarely if ever been seen or captured. Even their exact taxonomic placement is unknown, as some feel that *Glyphis* species C may be the same as *Glyphi glyphis*. Extended research is till needed to solve the mystery of the river sharks.

Sources:

Glyphis n.sp. A Shark Once Feared Extinct is Rediscovered! IUCN Press Release. January 7, 1998.

River Shark Discovered in Sabah. Shark News 9, Newsletter of the IUCN Shark Specialist Group. June 1997.

New Species of Spear-Tooth Shark Found in Top End. <u>Australian Broadcasting Corporation</u>. July 2, 2001.

E-Mail post by Ben S. Roesch to Cryptozoology E-Mail List, July 3, 2001.

News Notes: Seismotectonic Origins of the Monster of Loch Ness

Luigi Piccardi of the Centro di Studio dellí Appennino e delle Catene Perimediterranee in Italy has recently presented a paper, at the GSA Earth System Process Global Meeting on June 27, 2001, that outlines a possible explanation for some reports of the Loch Ness Monster in Scotland's Loch Ness. Piccardi has previously done work on mythological ties to seismic activity in the Eastern Mediterranean. These same legendary ties to earthquakes or tremors may in fact, Piccardi postulates, be the case for the Loch Ness Monster. Relying on original 7th century descriptions of the arrival of the monster from Latin descriptions such as the terms *cum ingenti fremitu* meaning "with strong shaking" and *tremefacta* meaning "shaking herself." Further connections are made by Piccardi as to the origin of the monster being tied to the Greek mythology of hippocampus.

The Loch does sit over a fault line called the Great Glen Fault, and there have been earthquakes, such as the one in September of 1901. Additionally the fault could

act a funnel for seismic activity such as in 1755 when a Lisbon quake created an echo affect and a smallish 'tidal wave' in the Loch. However, others are not so quick to side with Piccardi, such as some members of the British Geological Survey that state the Great Glen Fault is far from active and not a source of earthquakes any more than the smaller fault lines running throughout the countryside.

Granted earthquakes and other geological activities could create surface disruptions. The point of argument though for many researchers into the Loch Ness phenomenon is how can the explanation of seismic activity be the cause for all of the over 3000 reported sightings of Nessie? Further study would need to be done in order to come to a more substantial answer!

Sources:

Piccardi, Luigi. *Seismotectonic Origins of the Monster of Loch Ness.* Abstract paper of a presentation given at the GSA Earth System Processes-Global Meeting. June 27, 2001. Highfield, Roger. *Is the Real Nessie Just a Case of the Shakes?* The Telegraph (U.K.), June 27, 2001.

Loch Ness Monster Could be 'Earthquake' Bubbles. Ananova Ltd. June 27, 2001. Loch Ness Earthquake Theory Dismissed. Ananova Ltd. June 28, 2001.

From the Past: A Snake in Ireland

The enclosed letter to the editor of the Irish *Daily Express* may excite speculation as to how the snake got where it was found. The fact is worthy of record, at any rate, that a snake has been caught in Ireland. What would St. Patrick say?

"Sir,—My gardener this morning killed a large snake in the garden here, measuring five feet long by three inches in circumference. It has a black back, with light yellow belly. I do not know what species it belongs to, but have preserved it in spirits. Is it not very rare to find such in Ireland?—Your obedient Servant, "Francis Wm. Greene. "Kilranalagh, Baltinglass, Co. Wicklow, Sept. 11."

I have not seen it, but my correspondent Lady M. has it in her possession, and remarks that its head is very small and its nose pointed; it is quite five feet long black, and the colour of ashes underneath. It appears by a letter from Mr. Greene, "that a gentleman brought two Indian snakes to Ballinrodan, both of which escaped six or seven years ago; one of them was found half eaten by a pig shortly afterwards, and this might be the other, though how it lived through the winters I do not know."

It would be interesting to ascertain whence the snake came and how it found its way to the proscribed island.

London, Sept. 28 J. Fayrer

From: Nature 12 (Oct. 7, 1875): 495.

Search For Cougars In The East

Todd Lester

For decades people have been divided on the actual existence of cougars in the east. Hundreds of people have claimed to have seen this great American cat roaming our forest, while wildlife officials have remained skeptical and based their stance on a lack of hard evidence

The Eastern Cougar Foundation (ECF) was formed in 1999 as a non-profit organization dedicated to scientific documentation of cougars in the east and advocacy for their protection. The goals of the ECF are to scientifically document the existence of wild, reproducing cougars in the east, to assure official protection for all such cougars and to build acceptance of wild cougars in the rural east through educational outreach.

Since our search for the truth began, we have recorded over 1,000 alleged cougar sighting reports. However, the scientific community dismisses them as misidentifications. The question that they consistently ask is: "Where's the hard evidence?"

Confirmed physical evidence of cougars in several areas of the east is beginning to accumulate. We have documented twelve items of field evidence that have been confirmed by biologists. These cases involved live animals, a dead body or body part, four cases of scats, three cases of tracks and two videos.

The presence of at least a few individuals living wild in the east is now acknowledged by the U.S. Fish and Wildlife Service. Possible sources of these animals include remnant natives, escaped or released captives and colonizers from known populations in other regions of North America.

Here is a brief look at this incontrovertible evidence:

Illinois: In July of 2000, a large male cougar was struck and killed by a train in Randolph County, Illinois, near the Mississippi River and the Shawnee National Forest. It had all its claws intact and stomach contents were 100% white tail deer.

Kentucky: In June 1997, a female cougar kitten was struck and killed on Kentucky Highway 850 in Western Floyd County. All of its claws were sharp and intact. The guy who ran over the kitten told the Kentucky Dept. of Fish & Wildlife that the kitten was following a larger one and another small one. Probably it's mother and littermate. This case indicated reproduction.

West Virginia: In April 1976, a large male cougar was shot and killed in Pocahontas County, WV, after it had killed a farmer's sheep. Two days later, a female cougar was captured alive in the same county and believed to be pregnant. WV DNR destroyed all paperwork on these two cougars, which leaves a lot of unanswered questions.

Also in 1996, ECF President, Todd Lester, made a plaster cast of a track in Wyoming County that was confirmed by Dr. Lee Fitzhugh, a cougar specialist in California.

Missouri: Department of Conservation officials have confirmed five cougar reports in their state. These included actual specimens on videos.

Florida: For the first time since beginning field work on the Florida Panther Project 20 years ago, 3 radio collared panthers have crossed the Caloosahatchee River and have navigated through some intense human development.

Ontario: Scat found in 1999 northeast of Kenora was analyzed by the Alberta Natural Resources Service and determined to be cougar.

New Brunswick: In the 1990's, scat was collected and analyzed by the Canadian Museum of Nature in Ottawa. It contained foot and leg hairs of a cougar, presumed to have been ingested during self-grooming.

Vermont: In 1994 near Craftsbury, VT, scat was collected after a report was received of 3 cougars traveling together. U.S. Fish & Wildlife Service Forensics Lab in Oregon analyzed the scat and determined it to be cougar. This case also indicates reproduction.

Massachusetts: In 1997, a scat found in the Quabbin Reservoir was collected and sent to the Wildlife Conservation Society for testing. It was confirmed to be cougar.

Maryland: Home video was shown many times on MD Public TV, as well as biologist meetings.

North Carolina: A video and a track were confirmed to be cougar by Dr. Donald Linzey, a prominent Virginia biologist and ECF board member.

Maine: In 1994 in northwestern ME, two game wardens investigated a report of three cougars near the St. John's River. They found tracks which were officially reported as cougar.

Virginia: In 1990 in southwestern VA, Don Linzey collected photos of cast tracks that he confirmed. This is 140 air miles from a Russell County, VA, incident in 1997 in which 25 goats were killed and alleged to be by a cougar (not confirmed), and where VA Game & Fish personnel reported two separate cougar sightings, one of which included a kitten.

The next biggest task will be to prove the existence of one, or a few breeding populations. We are currently identifying areas that could support a breeding population

and will begin field searches as well as monitoring in the near future.

There is adequate habitat in many areas of the east and an abundance of prey species, including white tail deer. Cougars were an important part of our native biodiversity and we strongly feel they should be allowed to fill their niche in the east.

Hopefully through our educational outreach program, we will be able to influence residents into a tolerant acceptance of cougars in the rural east.

For additional information or to report cougars, please contact:

Eastern Cougar Foundation

P.O. Box 91

North Spring, WV 24869

304-664-3812

Or visit our website at: http://www.geocities.com/rainforest/vines/1318

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Update on the Jongari

Malcolm Smith

Just a while ago I was reading the on-line version of Crypto, vol 3, no 2, and the news item on page 4, "Jongari or Jingara" caught my eye, because I had interviewed the two witnesses by phone three months after the sightings. Here, then, is the full story.

Gayndah is a town of 3000 situated on the Burnett River in southeast Queensland, Australia at 25° 35 S, 151° 39 E. The first sighting occurred about 2 weeks prior to Christmas 1999, and the witness was 67 year old orchardist, Allan H Bucholz. For the previous 10 years or so he had been running a 5 acre orange orchard just on the other side of the river from Gayndah. The countryside in the general vicinity is almost wholly orchards and farms. His own property reaches to the river, where there is a steep bank 60 to 100 feet high. He was on his tractor right on top of this bank about 11 am that day when he saw it.

The animal appeared only 15 yards away, and about a yard from one of the orange trees. A few seconds later it passed out of sight behind another tree, but in that time he could see that it was not a dog or a wallaby. Indeed, he first thought it might be a wallaby, but it did not hop. Instead, it walked on its hind legs like a human being—or rather, a penguin, for its legs were short. It was only about 3 feet high, and covered with hair about 2 inches long, and black (but not real black) in colour. He saw it side on, and although he could not remember the ears, he did note that it had a longish, pointed snout like a wallaby's. However, there was definitely no long wallaby tail. In fact, he did not notice any tail at all. (And, I might add, when a wallaby is not hopping, it walks in a hunched, quadrupedal manner.)

He told no-one about the incident except his wife and his sister, Shirley Humphreys, who had lived on an orchard a mile away. For several nights she had experienced items going missing from the packing shed. A container of biscuits had been taken outside, opened, and eaten. Eggs were removed from a carton. A pig brand disappeared. Water melons had been taken 50 yards into the cover of the fruit trees and eaten. It does not, of course, follow that the same animal was responsible. She had also found footprints in wet soil, somewhat like a dog's, but much bigger and longer. Then, two days after her brother, she had a sighting herself. As she was present at the time of the interview, I questioned her as well.

The orchard where she had lived for the part 33 years was also surrounded by other orchards, but nearby, along the river, there was some very dense vine forest. However, at her site it was clear, and next to the river bank is a large area of sand. It was just on dusk, but with visibility still quite good, that she went out to switch on the irrigation, and happened to look down towards the sand patch. The animal was waddling or "ambling" across the sand about 70 yards away, and disappeared into some thick bushes.

She saw it side on. It was about 3 feet high, and covered with dark brown or black hair about 2 inches long. It was the image of a bear in shape, but was walking bipedally on short legs. When pressed, she said that it had little arms—reaching perhaps to the waist. She could not say whether the face was long like a bear's or flat like an ape's.

Aftermath: Mrs. Humphreys asked the Gayndah Council to bring in dog traps. They didn't, but the Council ranger brought it up at a Council meeting, and that was how the news broke. Then, a colourful character called Tim The Yowie Man (he had changed his name by deed poll) got into the act, offering a reward.

The Council, or the press, then did what they normally do in such cases. They asked a local part-Aborigine, who can be relied upon to dredge up tribal traditions for something that appears to answer the description. In this case, a Mr. Sam Hill declared that it was a "jongari." This is the local name for the little hairy men, which play the same role in Aboriginal folklore as elves and goblins do in Europe, and about which the average white Australian knows absolutely nothing. According to Mr Hill: "My great-uncle was a doctor in this area and he used to have a jongari working with him ... They're mischievous buggers and, like all races, there are good and bad ones." (The Sunday Mail, Brisbane, Feb 13, 2000). One is reminded of the Scottish tales of boggards who work around the farm at night.

The story then got confused with the tale of the Binjour Bear. Apparently, about six months before, some people on the near side of the river had complained to the ranger about a bear looking into their window. Then, a Mr. Hubert Darlington (I also interviewed him) told how, about 1956, he and his father had seen a bear on the road at twilight time on the Binjour Plateau. It walked on all fours, but when the car stopped, it rose up momentarily on its hind legs, and stood 4 or 5 feet high. He was definite that it was a small brown bear, as he had seen in zoos and circuses. He also mentioned a rumour about an accident with a circus van—a story which one hears throughout the continent to explain unknown animals. Australia seems to have an incredible number of circus accidents.

Identification: Needless to say, Australia has neither bears nor primates. Mr. Darlington's animal could, conceivably, have been a wombat, though they are not supposed to live in that area, or act in such a fashion. As for the jongari, I hesitate to make any identification. It does not even sound like a young yowie. It might be pertinent to note, however, that Gayndah is little more than 40 miles from Kilkivan, where a hairy, 3 foot high biped was seen by the roadside in 1979—only this time it was called a "janjurrie," another term for the hairy goblins.

"Curiouser and curiouser," said Alice.

Some Little Known Cougar Sightings in New Hampshire

Kelvin McNeil

New Hampshire has had a rich history of sightings of large felines popularly known as the Eastern Cougar. But, aside from some well publicized sightings, such as the early 1999 report of a videotaping of an animal in Lincoln, New Hampshire, by Maureen Clark, many have remained localized and relatively unknown. The core of this essay are these reports that received little or no publicity outside the state, or even within the state for that matter. As much of the information was taken from New Hampshire Fish and Game files by Craig Heinselman of Francestown, New Hampshire and has not had a complete verification done as of yet, the actual authenticity of the reports may be a question of concern. Likewise where permission has not been given to use the witnesses real names, initials will be used to differentiate the reports.

The last official killing of a cougar in New Hampshire was of one in the town of Lee in 1853. No confirmation since has come forth that substantiates unequivocally the presence of these powerful and beautiful felines. However the actual date of "extinction" is not presented as hard fact, rather a generalized late 19th century time frame. Perhaps part of that generalization has to do with reports that came out of the state after 1853, such as the reported killing of a cat in 1885 in the White Mountains by William Holman of Maine or the reported roving pair of cats in the 1920s that traversed the area between Cambridge, New Hampshire, and Maine. The lack of hard evidence such as confirmed tracks, hair samples, feces or road kill has prevented the authenticity of the cougar to be acknowledged by state officials.

Neighboring states and Canadian provinces meanwhile have had recent confirmations of cougars in recent times. In 1992, for example, in New Brunswick, Canada, a biologist named Rod Cumberland collected feces that was analyzed at the Canadian Museum of Nature in Ottawa, Canada, and contained hair from a cougar. Outside Craftsbury, Vermont, in 1994 feces was collected by the Vermont Fish and Game Department and was later confirmed to contain cougar hair after being tested at the United States Fish and Wildlife Services Forensics Lab in Ashland, Oregon. In 1997 feces found in the Quahbin Reservoir area in Massachusetts was genetically identified as coming from a cougar by two separate testers, George Amato of the Wildlife Conservation Society and Melanie Culver of the VA Tech Fisheries and Wildlife. Likewise confirmation of tracks has been made in 1994 in Northwestern Maine by game wardens. The Vermont and Maine cases lead credence to a breeding population, as sightings before the evidence was collected was of an adult and at least one juvenile. Even throwing out the case of confirmed tracks, we are left with positive hair confirmation from feces collected from Vermont, Massachusetts and New Brunswick.

After several years of trying, Craig Heinselman of Francestown, New Hampshire, was allowed to look over the files of the New Hampshire Fish and Game Department.

These files pertained to cougar sightings within the state, and are handled by a Fur Bearer biologist named Eric Orff. Housed in the regional 3 building in Durham, New Hampshire, the files are much less than what Heinselman was led to believe. Orff had previously stated that records of cougars had been kept by the state since the 1940s, and a map showing reports from 1953 to 1999 strongly suggested a more complete file. Sadly this was not the case, however the information in the files was mostly new and unpublicized data. A few come from regional newspapers the rest departmental e-mails and sighting reports.

A few cases of note from these files:

7/18/1998

In Bridgewater near Newfound Lake a tan colored animal was reported chasing down a deer in an apple orchard. A cry of the animal was heard that sounded very similar to a cougar cry. Field work in the area showed the animal had to be at least 3 feet tall (the grass it ran through was 2 1/2 feet tall) and left a path at least 2 feet wide. No tracks could be found due to the soil and no deer carcass was found.

9/3/1999

G. B. reports seeing an animal on Route 3 as she headed out of Lancaster. The animal was light tan, the size of a Doberman dog with a long tail.

8/18/2000

S. C. reports seeing a large light brown animal 2 1/2 feet in height with a tail to the ground in the town of Littleton. Face was described as short/round with no protruding snout.

9/18/2000

A group of people report seeing a tan animal of around 2 feet in height with a tail 1/2 the length of the body sitting on a rock in the backyard flower garden in Laconia. The face was described as squared and chiseled with no visible spots on the body.

10/7/2000

According to the Coos County <u>Democrat</u> of October 11, 2000, Dr. John Jackson reported seeing a dark tan animal nearly 100 pounds in estimated weight that strongly resembled a cougar. Other residents of the area of North Road in Jefferson have likewise reported seeing an animal resembling a cougar in the vicinity. Jan Hewitt reported finding cougar like tracks in her driveway the morning after Dr. Jackson's sighting. She also reports seeing a tawny colored and black colored cougar in the area, the last time in June 2000.

10/8/2000

J. H. reports that his 19 year old daughter saw and golden colored feline as big as a Labrador dog with a long tail crossing the road in

three strides. The sighting occurred in Hanover, and another driver also saw the animal.

10/9/2000

M. J. reports seeing a German Shepard size tan colored animal on the Milford/Brookline border. The tail was reported to be 12-14 inches long and the animal had shorter legs than a German Shepard, but a definite feline face.

11/20/2000

T. D. reports seeing a light brown animal of 35-40 inches in height with a 3 foot tail and roundish head as it crossed route 106 near a Red Roof Inn.

2/15/2001

Craig Brown of Amherst reports to Craig Heinselman that he had seen possible cougar tracks on three occasions in the town of Mont Vernon in old quarry areas. No pictures where taken and the last track was seen in mid-2000.

3/7/2001

M. A. reported seeing a feline larger than a German Shepard with a long tail between mile marker 95 and 96 on Interstate 93. The animal was tannish in color.

As can be seen from these few reports, selected out of 40 or more on file, the description of a tawny creature strongly resembling a cougar have been made of recent in the state. Though as to their actual authenticity as cougars, that remains to be seen. In the meantime continued research is needed within the state to find harder evidence. From a map supplied by Eric Orff that was compiled by a student at a nearby college as part of a project, it appears that the best search areas are in the central portion of the state in the counties of Hillsborough, Merrimack, Chesire, Sullivan and Grafton. Though these are areas of high populations in the state, wherein the northern portion of New Hampshire that has fewer residents shows fewer reports. This may be but a factor of population vs. reports. Logic dictates though that if confirmation of cougar came from Vermont and New Brunswick, then it would seem sensible to focus efforts nearer those areas that border Vermont and Canada as well as Maine.

Continual research is needed. If anyone has any information regarding cougars in New Hampshire please let me know by way of Craig Heinselman, at cheinselman@conknet.com as I do not have an e-mail address or Internet connections. Likewise efforts to contact witnesses of these reports is being followed up on now by Craig Heinselman.

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From the Past: Stalking the Sea Serpent Monster Dramatically Surprised off Westward Ho!

An attempt has been made to photograph the sea serpent. This puts to rest any doubts about his having really arrived, decorously dressed in seaweed, as all self-respecting sea serpents should be. But now come the disquieting question: How many of him are there?

He was last heard of as having put to flight a considerable portion of the British fleet of the Lowestoft coast, or, as the lady witness of the event put it, "at the moment I saw the sea serpent the battleships were disappearing in the opposite direction."

Now the sea serpent has been surprised of the Devon coast, near Westward Ho! The gentleman who enjoyed the rare experience of stalking a sea serpent unawares was Mr. William I. Cook, of Alexandra House, Instow, and his description of the awful monster at Westward Ho! tallies in many respects with that given by Miss Rider Haggard of the awful monster at Lowestoft.

Mr. Cook was boating with some ladies, and saw ahead what appeared to be a reef of rocks; on approaching nearer the voyagers took it for a mass of floating seaweed; on approaching nearer still "we found that the thing was alive."

Mr. Cook tried to photograph it, but his terrified boatman at once pulled for shore. This is in gratifying contrast with the callous conduct of Lowestoft's longshoremen, who, as already recorded, persisted in leaning against their spanker booms, and talking of the sea serpent in tones of derision.

Mr. Cook continues: "The thing then stretched itself out in an undulating coil, lashing the water." After lashing the water it made of towards Clovelly at a fair pace, leaving a wake of foam. For several days there had been no mention of Clovelly in the world's news. In view of the above facts this silence becomes ominous.

Clovelly is a small place; what stand could the marine hamlet make against a monster sixty to eighty feet long, with a body as thick as a thirty gallon cask, with black fins running along the whole of the back, and with scales. This is Mr. Cook's description.

But to the fate of Clovelly is added another problem. Is this awful monster seen by Mr. Cook the same awful monster seen by Miss Rider Haggard? Are there two? Or was the Devon sea serpent merely the other end of Lowestoft's visitor? In short was the sea serpent shaking its head at Lowestoft and wagging its tail at Westward Ho!?

Source: Standard, July 1, 1912

Three New Pennsylvania Thunderbird Reports

Craig Heinselman

Pennsylvania has had a rich history of reports of large unidentified avian creatures, dubbed by many as Thunderbirds. To the list of Pennsylvanian reports can now be added three more tentative ones. They come from the northwestern portion of the state, wherein most of the other Pennsylvania reports appear to emulate from the more mountainous region of the central to eastern portion of the state — in particular the Black Forest.

On June 13, 2001, a resident of the town of Greenville, Pennsylvania, reported seeing a large bird the size of a small airplane from his living room. Greenville is a small town that lies near the border of Ohio about half-way between Erie and Pittsburgh. The witness, Ray (please note, the witness' actual name is not used as he has asked for anonymity) upon further inquiry during a phone interview on June 15, 2001, was able to flesh out the report. Ray described the bird as fully feathered, dark brown or black in color. The back of the wings was a grayish-black. The body was not bulky and the overall appearance was not like that of any bird he had ever seen. As the house lies near Little Shedango Stream and the house overlooks a small pond and woodlands, Ray is an amateur birder, and is extremely familiar with the birds and other wildlife in the area including bald eagles, vultures and herons.

Ray stated that the bird flew in from the south at a distance of 200-300 yards from the window and landed on a large tree beside the small pond. As it flew in he saw a shadow first and thought it was an ultra-light aircraft that are used in the area by some neighbors. The bird landed and remained on the tree for 15-20 minutes, and then took off again to the south. Ray estimated that the wingspan was equivalent to some of the ultra-lights he has seen in the area, around 15 feet in wingspan and upwards of 5 feet in body size.

During the interview, Ray made a passing mention as well of a neighbor who, although not familiar with the wildlife of the area, reported to his wife about a large bird she had seen on June 14, 2001. The bird was described as "the biggest bird I ever saw" and bigger than a stork. Again the bird was a blackish color.

The third report comes from July 6, 2001, out of Erie County Memorial Gardens Cemetery in Erie, Pennsylvania. Erie, is approximately 60-65 miles from Greenville, the site of the two June 2001 sightings. This July report comes from a far away source, a letter printed in the UK based magazine Fortean Times. Although corroboration from the witness has yet to be made and more details of the report discovered, the basic description is similar to the Greenville sightings and suggests the same type of bird was seen. Robin Swope, the witness, reported a large bird flying out from near a mausoleum as she cut the grass. It flew by some high tension wires and was estimated to be 15-17 feet in wingspan. The color was described as:

"It was dark grey with little or no neck, and a circle of black under its head. Its beak was very thin and long, about a foot in length"

These reports can be added to the other reports from Pennsylvania now of a bird that does not match any other known bird of the area in size or description. The reports do sound akin to a report of a large condor, but no condors are known from the area. Particularly striking is the report by Robin Swopes that describes a circle of black under the bird's head, which although it does not match the whitish markings on condors, does suggest a similar banding. The question regardless still remains, what did these three witness see? Was it the same type of bird, or different forms? Known or Unknown? Follow-up research is planned for September 2001 while the author is in Pennsylvania for a few days.

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From the Past: The Gold Ants

The "Gold Ants" of Herodotus.—In the *Athenæum* of May 19th, p. 687, is this statement from Froebel's *Travels in Central America*:—

"That certain species of ants in New Mexico construct their nests exclusively of small stones, of the same material, chosen by the insects from the various components of the sand of the steppes and deserts. In one part of the Colorado Desert their heaps were formed of small fragments of crystalized feldspar; and in another, imperfect crystals of red transparent garnets were the materials of which the ant-hills were built, and any quantity of them might there be obtained."

This corroborates an observation in vol. ii. of Humboldt's *Cosmos* (I made no note of the page):

"In struck me to see that in the basaltic districts of the Mexican highlands, the ants bring together heaps of shining grains of hyalite, which I was able to collect out of their hillocks."

Does not this elucidate the gold-collecting ants of Herodotus, and rescue a fact from the domain of fiction?—*Notes and Queries*.

F. C. B.

From: The Living Age, vol. 66, issue 848 (September 1, 1860).

Giant Armadillos in Florida?

Brad LaGrange

[Ed. Note — This is an ongoing investigation. The witness requested anonymity, and will only be referred to as Jane. Florida was once home to giant seven-foot-long Pleistocene armadillos (*Holmesina septentionalis*), but these would be more likely an exotic introduction of a large South American species (*Priodontes maximus*).]

JANE: "I will write up my sighting for you as best I can — it happened about 30 years ago, so unfortunately I can't provide a lot of details after all this time. I don't think I saw the animals clearly enough to do a good sketch. I didn't make a big deal of it at the time, as there were lots of wild creatures that visited our yard back then and we didn't think too much of it. (We took more notice of the 6-foot-long snake who decided to take a sunbath on our driveway, LOL.) Later on I realized it was a pretty unusual experience. Anyway, here goes:

"I was around 15 years old. We lived in a residential neighborhood in a small town in Florida (Tampa Bay area) and our block was surrounded by woods and New construction was going on to create more blocks of old orange groves. houses near ours at this time. As I recall, it was hot out, but not yet summer maybe late spring. We didn't have air conditioning so I had a hard time sleeping and woke up often at night. It was late at night, I was hot and tired and trying to get to sleep, and something outside was keeping me awake. I recall I heard "rooting," "grunting," and "snuffling" type sounds outside my window. I thought maybe a dog was digging outside, so I went out onto the screen porch to check and first saw a few large bodies digging around in the shrubbery around our porch — they definately weren't dogs. I took a closer look and realized they were really large armadillos (maybe 4-5 feet long including their tails). It was dark and they had their heads down digging, but in the moonlight I could see their ears sticking up, their "armored" backs, and their tails. To me they just looked like the small armadillos I had seen, only bigger — couldn't tell you about the number of plates on their backs, etc.

"They did not seem afraid of me at all, just kept on digging. We had seen the regular small armadillos around from time to time but never any that big, not even close. I watched them a few minutes then went back to sleep (they pretty much ignored me, just kept digging around in the dirt around the bushes). They came back a number of times over a period of a couple weeks or so, my mom and sisters saw them too (my mom said she saw them mating one night) but we all just considered them a big nuisance for digging up the shrubs. I wish now that I had taken a picture of them, since apparently they are considered to be extinct in Florida."

BRAD: "Couple of questions. How many were in the pack of creatures on average would you say?"

JANE: "As I recall, two or three at a time would show up. Sometimes two would be in the shrubs mating, other times three would all be digging and rooting around together."

BRAD: "Did they all appear to be of the same size?"

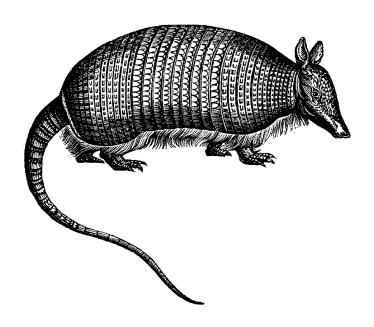
JANE: "Pretty close to each other in size, some were a little bit smaller."

BRAD: "Any evidence of pups present?"

JANE: "Don't think so, none were significantly smaller than the others and all acted pretty independent, I guess... no smaller one trailing along after a bigger one or anything. Unless some of the "regular" armadillos we saw around the neighborhood were their pups? But we would see these small armadillos out and about by themselves late at night, not in the company of any other armadillos — would baby armadillos be roaming around by themselves?"

BRAD: "And just to be absolutely sure, you are certain these were not hogs?"

JANE: "I am absolutely sure they were not hogs. I saw them from a few feet away, looking through the screen of our porch. It was dark but I could clearly make out the shape of an armadillo. We never saw any wild hogs around our place, only armadillos, possums, bats, and lots and lots of snakes. To tell you the truth, I didn't even know Florida HAD any wild hogs until hearing about it from someone who hunts them! But these clearly were not a hog of any kind. I saw their longish narrow ears, rounded backs, and tails."



CZ Conversations: Giant Spiders

Edited by Chad Arment

Just in time for Halloween, here are a couple of reports of oversized arachnids taken with permission from a recent discussion on a cryptozoology email list. Giant spiders are controversial cryptids due to certain theories bandied about concerning the upper limits of extant terrestrial arthropods, but all the same, they are fascinating tales.

Explorer Bill Gibbons collected the following from Ms. Margaret M. Lloyd, who related to him a story of her parents' run-in with a hairy arachnid.

"Mr. and Mrs. R. K. Loyd were on a motoring 'honeymoon' in the Belgian Congo in 1938 when they spotted a large object crossing the jungle trail ahead of them. At first they took it to be a large jungle cat or a sizeable monkey walking on all fours. As they drew closer, the creature turned out to be a gigantic spider! Mrs. Lloyd let out a piercing scream while her husband attempted to pull his camera from out of its case. Unfortunately, his hands were shaking so much from the excitment of the encounter that he missed his chance completely. The spider continued on its way into the jungle at the same steady pace, seemingly unfazed by the wheezing Ford convertable that almost ran it over. According to the Lloyds, the creature was quite enoromous — with legs close to three feet in length! Mr. Lloyd, a qualified draughtsman (architect) believed that the spider was perhaps a giant tarantula, or some similar hairy ground dwelling spider. To their dying day, the Lloyds never forgot their encounter."

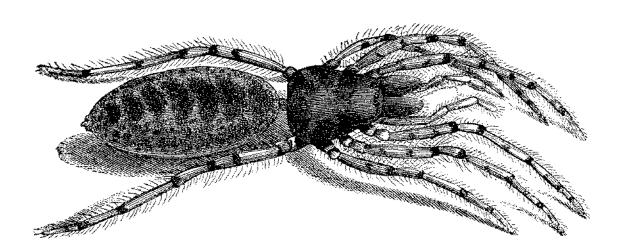
Australian cryptid investigator Peter Hynes provides the next tale:

"By coincidence the subject of giant spiders in PNG came up the other day. I was talking to the mother of one of Debbie's friends and she told the following tale.

"In World War II her father was in the Australian Army fighting the Japanese on the Kokoda Trail in Papua New Guinea. The Kokoda Trail crosses the Owen Stanley Ranges, from memory, so we're talking about the central highlands, I guess. Anyway, one day he had to take himself off into the scrub in answer to a call of nature. While thus engaged he noticed he was crouched down next to a very large cobweb — not the

classic "fishing-net" sort but the fine, snow-white cottony stuff that spread all over the ground and tree trunk, etc. His eye followed it one way and then the other — seems it was very extensive, like 10 to 15 feet either way. Then he noticed the spider itself, only a foot or so away from his face. It was a real horror — the body (thorax and abdomen), he described as the 'size of a small dog or puppy,' it was coloured jet black, the legs were thick and hairy but not as long as the classic 'dinner plate tarantula' type spider that owes its size to the spread of its legs. This thing had more body bulk than spread. Needless to say he backed out of there <u>very</u> slowly and carefully."

The largest known spider appears to have been the South American fossil *Megarachne*, with a body length of approximately 16 inches, and a leg-spread of about 20 inches. At present, we have no physical evidence that any living species reaches near this size or larger, but new (and often undescribed) spiders are imported every year in the pet trade. Perhaps one day we'll see an insect zoo with such an arachnid titan?



Century-Old Mystery Rises From the Shadows

John A. Lutz and Linda A. Lutz

Eastern Puma Research Network P.O. Box 3562 Baltimore, Maryland 21214

From the bayous of the Mississippi River Delta to the maple sugar forests of New England, one mystery has persisted in the annals of wildlife history for almost a century.

Has the mysterious, cunning "shadow of the forest" followed in the paw-prints of other wildlife? Over the last few decades, the carnivorous bear, wolf and coyote have reappeared in states that had not seen their species in generations. Moose began trekking southward out of the eastern Canadian wilderness as far south as Pennsylvania's endless Allegheny Mountains. Other long forgotten species, the beaver, fisher, porcupine and armadillo have returned to their former haunts.

Why is it then so unfathomable to believe the sly, sure, adaptable and secretive "Ghost of the Forest," has also returned to their ancestral lands?

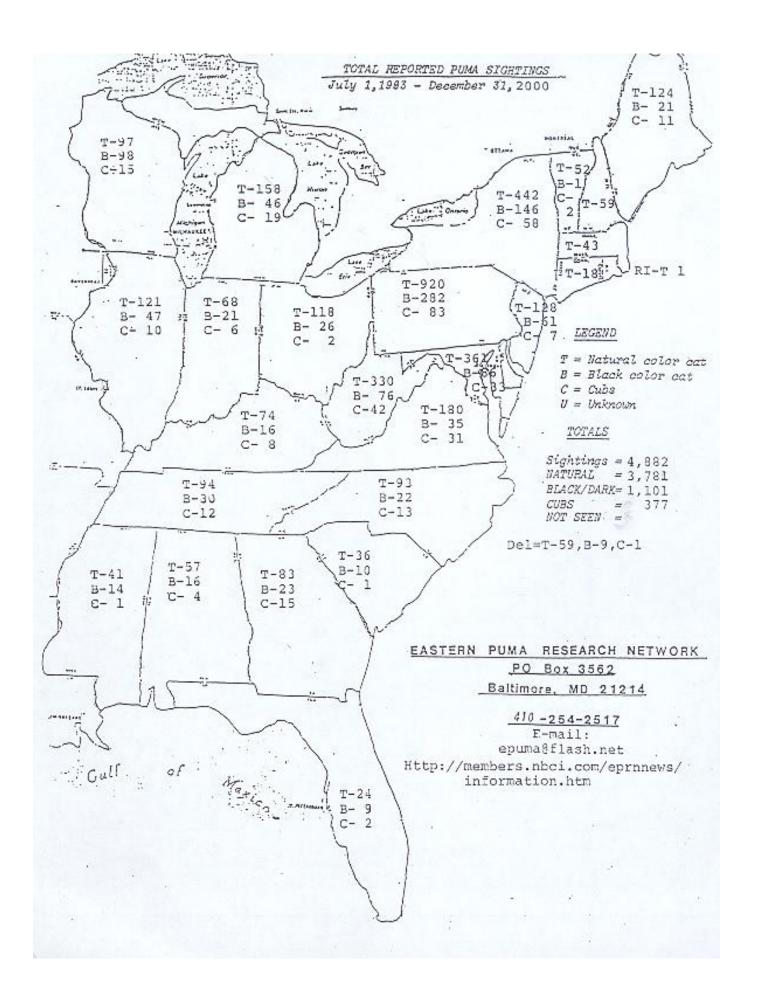
When making field searches during the mid-1960s, personnel that eventually would become major players in the mystery began to wonder what their evidence pointed towards. 16 years later, these players would become the core members of a special wildlife study group, The Eastern Puma Research Network (EPRN). By the early 1980s, EPRN was fully operational with the late Dr. Robert Pennington Smith, and Anthropologist/Biologist and this writer, a radio-news reported at its helm.

Both had an unquenchable thirst for truth and facts. The original evidence they had collected over the previous 16 (+) years consisted of strains of hair and plaster casts of tracks. The best was yet to come.

Pursuing their hunches and gut feelings that an elusive "Cat of the Shadows" was on the prowl in the central Maryland woods, they sought out the help of the late Dr. Ted Roth, then assistant director of the Baltimore Zoo and a feline authority. Once Ted Roth confirmed the evidence, the hunt was on—and what a hunt it was to become.

During the early years of the 1960s, the mere mention of any word associated with Puma or Black Panther brought scorn and ridicule. Not only from the news media, but relatives and friends. Few people fully understood that such a large mysterious Cat of one Color, weighing well over 120 pounds at full maturity, could be prowling their residential developments. These urban areas had been woods only a few years and in some cases months before.

The lack of researcher experience in field studies dealing with knowledge of the big cats also had its drawbacks. The next problem they faced was that very few avenues existed in which to express and prove their theories or display their evidence.



Those now retired, and in some cases deceased, Maryland law enforcement offices and field researchers began an odyssey that would lead them on a circular route straight into the heart of the strangest wildlife mystery of the 20th century.

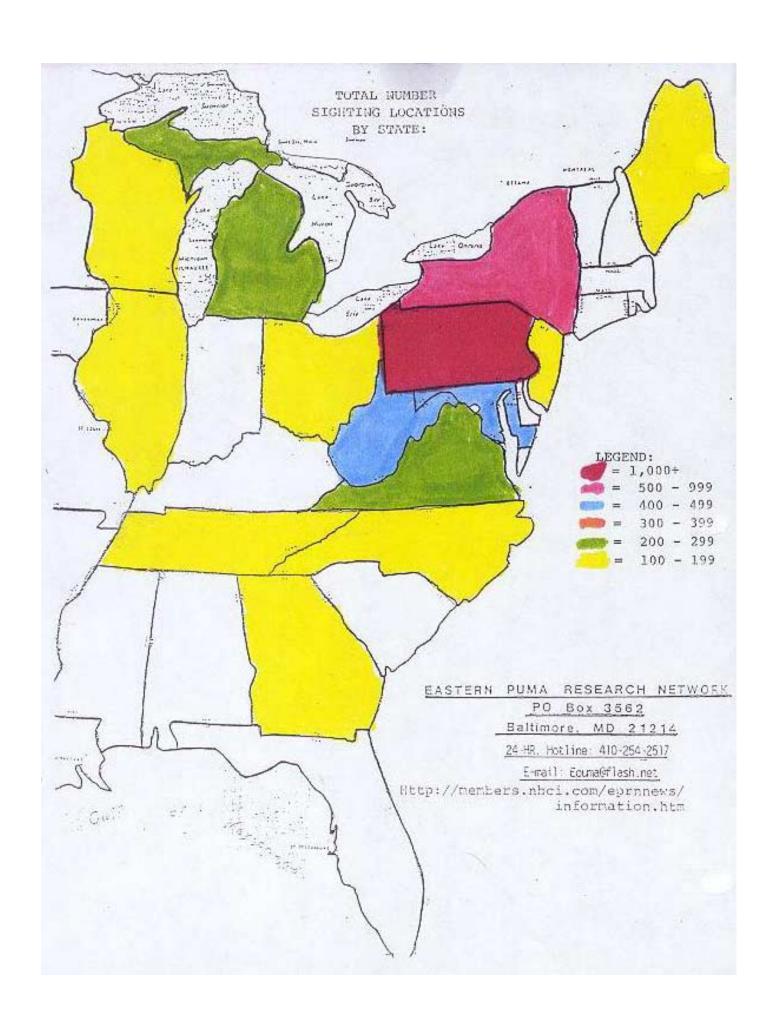
Eastern Puma Books

Books were relatively non-existent on this subject during the early era. In fact very few articles written over the last 40 years deal exclusively with the eastern puma.

The majority of all printed material, in or out of print, are based on behavior, habits and characteristics of the puma's western cousin: the larger and more aggressive Rocky Mountain cougars. These cats have been extensively covered in the media during the past few years due to their attacks on people wandering close to their offspring or the animals being hungry. The latest population estimates place the western cougars in excess of 15,000 individuals.

The four full-length books written, and based on the eastern puma are highly recommended for anyone interested in the mystery.

- 1) The Eastern Panther: A Question of Survival by the late Bruce S. Wright was published in 1972. A Canadian biologist who conducted hundreds of independent searches to find evidence of this long forgotten feline. His colleagues who considered it a waste of time to conduct "hunts" for a mammal that the mainstream scientific community considered "extinct" ridiculed him. Then one day while driving to a sighting, he observed a "wild puma" crossing the road ahead in the wilderness of eastern Canada. His books were always written with the highest degree of honesty and integrity. The books have been out of print for the last 20 years, but may be found on dusty shelves of some old book stores.
- 2) The Eastern Panther: Mystery Cat of the Appalachians was published in 1998. Gerry Parker, a Canadian ecologist and biologist authored this book that exclusively deals with recent "Eastern Forest Cat" sightings. It discusses detailed history on the puma's legacy of persecution, its great debate in wildlife circles, and its push to the edge of extinction only to bounce back in the face of extreme hardships. The book is available by writing: 23 Marshview Drive, Sackville, New Brunswick, Canada E4L 3B2, it may also be found in some U.S. and Canadian bookstores as well as on some Internet bookstores like Amazon.com.
- 3) <u>The Ghostwalker</u> was written and published in 1984 by R.D. Lawrence, another Canadian who tells it like it is with facts and figures that wildlife officials wish were kept "under the rug." It is also out of print, but may be found in some bookstores and libraries.
- 4) <u>Panthers of the Coastal Plain</u> was written in 1994 by retired wildlife biologist Charles Humphreys of Wilmington, North Carolina. The book deals exclusively with sightings of both tawny pumas and black panthers within 50 miles (or so) of the Carolina coastlines. The author spent a considerable amount of time in the field



following up on the cases in his search for the truth.

For anyone honestly interested in the eastern cougar mystery, the above books are a must for your personal library; forget the others, read the above four.

Historical Accounts

The native eastern puma's historical home range traditionally has been between the Mississippi River and Atlantic Ocean and from Eastern Canada to the southernmost North Carolina/Tennessee borders.

From this imaginary line south and westward to the Gulf of Mexico belongs the southern subspecies, *Puma concolor coryi* or the legendary Florida Panther. A small colony of this subspecies split off from the primary band and moved northwestward into the rugged Ozark Mountains in the late 1800s when few humans inhabited the land.

Although Florida wildlife officials would like people to believe they are centralized in the Everglades, that is not the case. The late Frank Weed, who studied the Florida Panther and Eastern Puma, in excess of 50 years, had documented evidence that supported well over 200 cats spread out over the entire state of Florida.

As with the other big cat's secretive nature, the surviving Eastern Pumas are rarely seen. There lies the reason for a lack of historical accounts. Thus the claims of wildlife officials overshadowed past sightings. Most Americans, reading news media accounts, believe the survival of these large cats was nothing more than "Phantom Sightings of Other Animals."

But sightings of the big cats have persisted. Ones that cannot be easily explained and especially the ones having reliable people as witnesses, who have included such notables as:

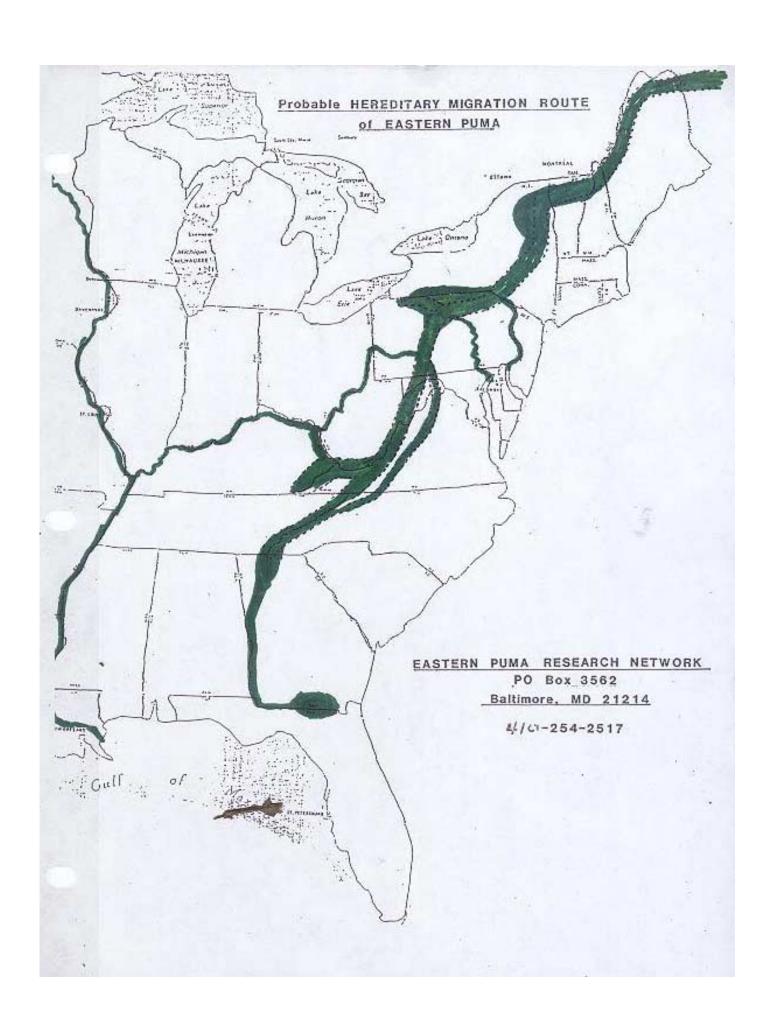
Dr. Bruce S. Wright saw what was believed to be a wild cougar along a dark, rural road in eastern New Brunswick. It gave this exceptionally gifted researcher the will to continue his research against the advice of his colleagues.

Henry Shoemaker, an early 20th century historian who reviewed the early names of the Pennsylvania big cats and saw an "Allegheny Lion" in a region known as the "Black Moshannon."

Robert F. Gentry, professor of veterinary science at Penn State University, who had his opportunity to see a puma crossing a country road at 10 a.m. in northern Lycoming County, Pennsylvania.

John J. Christian, biology professor at the University of New York in Binghamton, who heard a cougar screaming near his home in Wayne County, Pennsylvania.

Glen P. Barlow, a retired Smithsonian mammalogist, on his way home to Frederick County's Eylers Valley, observed a large tan puma as it romped in a nearby field.



Over the years, people ranging from each of the above to dedicated "Hobbyists," to those from all walks of life, have contributed to the "Ghost Cat" sightings.

In June 1994, at the Eastern Cougar Conference held at Gannon University, Dr. Jay Tischendorf of the American Ecological Research Institute made this claim:

"To talk intelligently about the eastern puma, one must know their past and appreciate their long history of evidence: from their so-called extinction right up to the present day."

When evaluating the cat's existence, the puma itself must be considered. They are most capable of any feat, yet solitary, sly, silent, secretive, sure in their natural setting and above all else, based on factual evidence, they are the most adaptable land mammal in the new world.

This brings another problem to the forefront. That being, too many people who had little or no knowledge of the subject have become instant "experts" on an issue that takes years if not decades to grasp. Yet, many so-called experts have spent little time researching, while trying to understand the big cats habits, characteristics and behavior traits.

Cougar Counters and Keepers

Despite official wildlife agencies claims of little if any interest in the big cats, some state agencies, including ones in the vicinity of major tourist areas, maintain personnel who "keep track of cougar/panther reports."

New Hampshire has had a "keeper" of mountain lion sightings since at least 1980. Wildlife biologist Eric P. Orff, the keeper of the reports, claims to posses sightings going back into the 1940s, however quoting from a letter: "in all accounts over the last 60 years, scientific proof in the form of road kills, hair, or identifiable tracks have eluded detection."

Virginia's Skyline Drive/Shenandoah National Park boasted a cougar keeper in the late 1990s. That led biologist Chip Harvey to create a massive database. Listing over 300 actual events, some dating back to the parks beginning in the early 1940s. Several reports included documentation, but it was too much for the National Park service to handle. So they dropped the idea of a cougar counter, and all of Chip Harvey's work went for naught.

Iron County on Michigan's upper peninsula boasts a volunteer cougar counter. Ed Klima assisted by Ed Erickson III, a retired news reporter, have maintained sighting records across the north tier for 15 years. Documented evidence has been collected, plaster casts, photographs and one dead cougar that was struck and killed by a car in early 2000.

This indicates many activities are underway behind the scenes by various agencies.

Early News Media Writers

The mainstream news media jumped into the fray, basing their articles on the claims of the fearful and ignorant wildlife officials. Thus began the "Dark Ages" of research on the mammal commonly called cougar, mountain lion, puma or black panther.

Contrary to the mainstream news media beliefs, along came such notables as the late Herbert Havenel Sass, a noted free-lance reporter and <u>Saturday Evening Post</u> writer/researcher from western Pennsylvania.

In 1953, Sass claimed "The most dramatic development of the past 50 years in the field of American wildlife and natural history has been the reappearance of the puma into the Eastern U.S." That claim shocked the wildlife community. As an early radio news commentator and newspaper reporter, when writing his nature column entitled, "Woods & Water," he asked his readers who had documented sightings of big cats to write to him.

The request led to hundreds of letters from people in all professions relating their experiences from various regions of the eastern and breadbasket states.

Then early Canadian environmentalist, turned news reporter, Clarence DeBoot followed in Sass' footsteps. Asking his listeners for the same information, and in a repeat performance, hundreds of reports were received. Of which he followed many up on in person.

Wildlife Community Split

From those few original strains of hair and plaster casts found in Maryland forests and apple orchards in the mid-1960s, emerged a mystery of such staggering proportions that amazement lingers today. The educational and wildlife community continues to stagger in disbelief as to the large proportion of sightings being reported today. What a difference 75 (+) years make. In place of only a few isolated sightings, hundred are reported annually to independent researchers who have established collection centers around the eastern half of the United States.

There is as much, if not more controversy today, then existed 50 years ago. With the scientific wildlife community split down the middle. Some wildlife officials continue to believe the "true" native puma has gone the way of the "Thunderbird or Dusky Sparrow."

One well-known New York research biologist claimed in 1993 that "Eastern cougar reports are produced in the ignorance of people who put their imaginations to little use. They are found in the bottoms of emptied beer glasses or local bars and in the tall tales of old-folks with nothing better to do than scare the kids of today."

Yet, other wildlife science experts, such as a noted Tennessee University wildlife professor firmly believe, "Where there's smoke, there must be a little fire."

Loss of Habitat?

The puma, "Lord of the Forest," "Ghost Cat of the Americas." One of the Earth's most secretive and mysterious land mammals.

150 years ago, on the land mass we call the continental United States, some 17 subspecies once roamed. With the influx of the white man, the puma shrank back into the virgin forests nearly as fast as his fellow wood dwellers, the Native Americas.

While living up to its Native American name, the "Ghost Cat" leaves little evidence of its visit. Since few state and federal wildlife officials take sightings seriously, it is believed that much evidence of its presence is overlooked. If someone is convinced beforehand of "an objects none existence, then how can evidence of its non-existence be found?"

Many wildlife officials continue to harp on the fact of "Loss of Suitable Habitat and Prey," for the big cats demise. But, if one looks at the facts from another angle, here are those facts then.

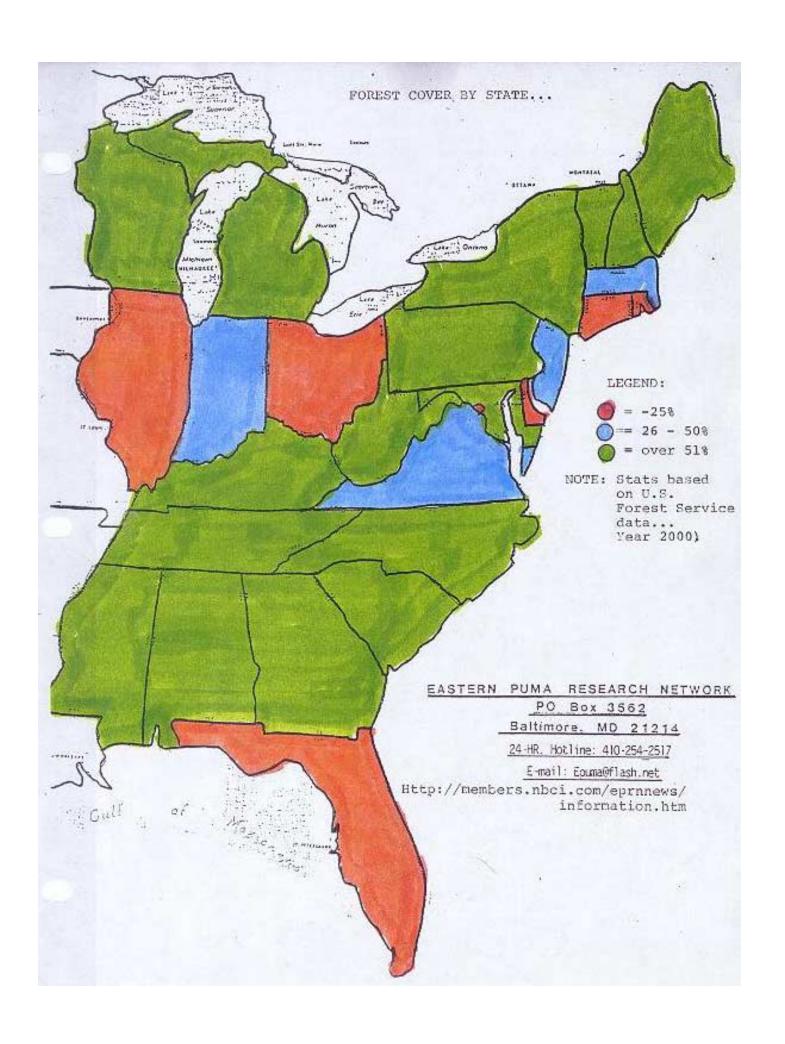
Of the 26 states east of the Mississippi River, the land mass comprises an area approximately 855,000 square miles. Within this region resides some 150 million inhabitants or 65% of the United States human population. If anyone travels 50 miles from most of the large eastern metropolitan cities, they will find themselves on the edge of one of the numerous national or state forests.

The forests include Jefferson and Washington in the Virginias, the Catskills and Adirondacks in New York, Green and White Mountains of Vermont and New Hampshire, Daniel Boone in Kentucky, West Virginia's Monongahela and the Allegheny and infamous Black Forest of northern Pennsylvania. The Appalachian Mountain chain and trail runs along the forested ridge-tops from Georgia to northern Maine. Puma and Black Panther sightings continue to haunt these states of the Appalachian chain.

If this landmass of 60 million acres of forests and woodlands, equivalent to approximately 94,000 square miles, was placed in one concentrated area, it would be the equivalent size of the states of New York, Pennsylvania and Maryland combined!

Lets put this data into another perspective. Pennsylvania is one of the most densely populated industrial states in the nation with over 11 million people, yet 43 of its 67 counties are listed as being more than 50% forest covered.

In 1992, the Cumberland, Maryland Times-News ran an article entitled, <u>Bringing Back the Eastern Wilderness</u>. It acknowledges a disturbing fact, the virgin forests of eastern America were all but destroyed at the turn of the 20th century as a result of massive deforestation. Then due to the abandonment of thousands of early farms and homesteads and through the efforts of early conservationists, new forests and woodlands are rapidly taking shape across all of the eastern United States. The article also claims, the majority of forest restoration has been through the efforts of private foresters with little assistance from the federal wilderness program. Whose official stance is the "continuance of clear-cutting of thousands of acres of woodland around the U.S." Which can lead to massive wildfires that continue to ravage our western states today.



Loss of Prey?

Wildlife officials have been quick to claim "Lack of Adequate Prey," yet with the re-growth of forests comes the resurgence of deer herds that once ranged throughout the east and northeast. The famous whitetail deer, once hunted to near extinction has made an extraordinary comeback. In the late 1960s, students at several eastern universities received grants from the U. S. Wildlife Service to conduct studies on the whitetail. Their conclusions were: "Over the last decade, a whitetail deer explosion has occurred resulting in far more deer in the eastern states today, then in the era of the white man's arrival to the new world in the late 1600s."

Now lets regroup and rethink these wildlife positions:

1) With the return of the eastern forests—

Along with

2) The burgeoning whitetail deer herd—

What other large predator is more likely to join in for an eating frenzy, than the returning puma?

Could these not be signaling factors that the eastern puma is on the comeback trail? Or should the question be, "Did the big cats ever leave?" Yet officials are quick to claim "Lack of Natural Habitat and Lack of Food." The Eastern Puma Research Network doesn't believe the overall facts come close to substantiating this claim of the officials.

Native American Puma Traditions

The forefathers of the Native Americans had the highest respect for the puma, an ancient Aztec word for "greatness." Indian nations continue to have "Puma" and/or "Cougar" clans which intertwine with their names for the cat: "Ghost of the Forest," "Cat of the Great Spirit," "The Forest Shadow."

The Algonquian, Iroquois, Cree, Ojibway, and Delaware people established beliefs with particular wind points that were represented by the bear, moose, fawn and cougar. Bear represented the North wind, moose represented the East wind, fawn represented the South wind, and the cougar represented the West wind.

According to Algonquian legends, wildcats were once common to eastern North America, including the cat called "Loup-Cervier." In the Great Lakes, the Ojibway and Cree told of the "Michipichoux," who held dominion over lake and river rapids. This large, long-tailed cat, included the lynx, leopard and puma. All of whom live "under" or "near" the water. Cree legends also tell of a "Water Tiger" named "Wi

Katca" in eastern North America. It is curious how the Native Americans associated the puma with water. The tribes also had respect for where the puma concealed their special dens, which is ignored by the mainstream wildlife community today.

According to writings by Iron Thunderhorse, it is beyond question that the native eastern puma has made a comeback. Native Americans hold them in the highest honors. When not on the prowl, the "Ghost" is extremely difficult to find. They were considered very sacred because many nations believed the puma to be of two worlds, and saw them as a great hunter who walks the night. With the puma there are no iron-clad answers, nor will "Boiler-Plate" government wildlife agencies resolve the mystery of these guardians of the natural world.

The Native Americas believed that where deer herds are plentiful, there will be pumas close at hand. Now if only independent researchers can make state and federal wildlife agencies understand this fact. There is no denying it, the native wild puma is back! The question now should be, "How Can We Best Protect Them?"

The Ogalala and Lakota Sioux considered the puma to be "an ancient guardian of the great spirit—that provided fearless protection against evil—a silent stalker with the ability to fade from sight—a solitary hunter who strikes like the lightening—a quality much desired by warriors riding into battle."

Much can be learned from the Native American facts, legends and traditions if only independent researchers and government agencies will stop, listen and put into practice some of these beliefs.

The "Black Panther"

The Native Americans feared the puma's black counterpart, the "Devil Cat" or "Phantom Devil," which by today's standards is called the "Black Panther." In the early pioneer days, the "Devil Cat" was believed to silently attack isolated villages and be capable of carrying off small and misbehaving children.

In early wildlife research days, few in the scientific fields believed in the "Black Panther's" survival. As to which species this mysterious cat belongs to is a hotly debated issue to this day. Some in the scientific community feel the large cats are leopards or jaguars which have moved northward from their homes in the Central American jungles. Others feel they are nothing more than either outright hoaxes, misidentifications or odd angle shadows of the sun's reflection.

In the western United States few "Black" cats are reported. However, on the East Coast that is not the case. Reports associated with the "Black Panther" craze have increased over the last 20 years to over 30% of all reports! Videotapes taken by eyewitnesses seem to substantiate the incidents and the existence of a large "Black Feline" in many eastern states, leaving wildlife officials in a difficult position to explain this color of mammal.

Demographics have also been considered in the black color mystery. When first

studied it was believed that black-phase jaguars, inhabitants of Central and South America's tropical rainforests, could have possibly moved further north than their home range.

However, add this mystery to the simmering pot. The state with one of the largest number of "Black Panther" sightings is Wisconsin, a northern state with extremely cold winter temperatures.

A Geological Mystery

Thus enters this geological mystery. During the last Ice Age, one area of what is now the United States, and particularly most of northern Wisconsin, was thought to be glacier free due to regional warm springs, similar to the hot springs in the vicinity of Yellowstone National Park. The area of northern Wisconsin over the past 200 years has produced a multitude of black fur-bearing animals, such as beavers, fox, rabbits, squirrels and wolves.

Could this region be the origin of the "Black Panther?"

If the answer is YES, it could explain why the large black cats seen in the northernmost states have become so accustomed to the colder overall climates of the eastern United States.

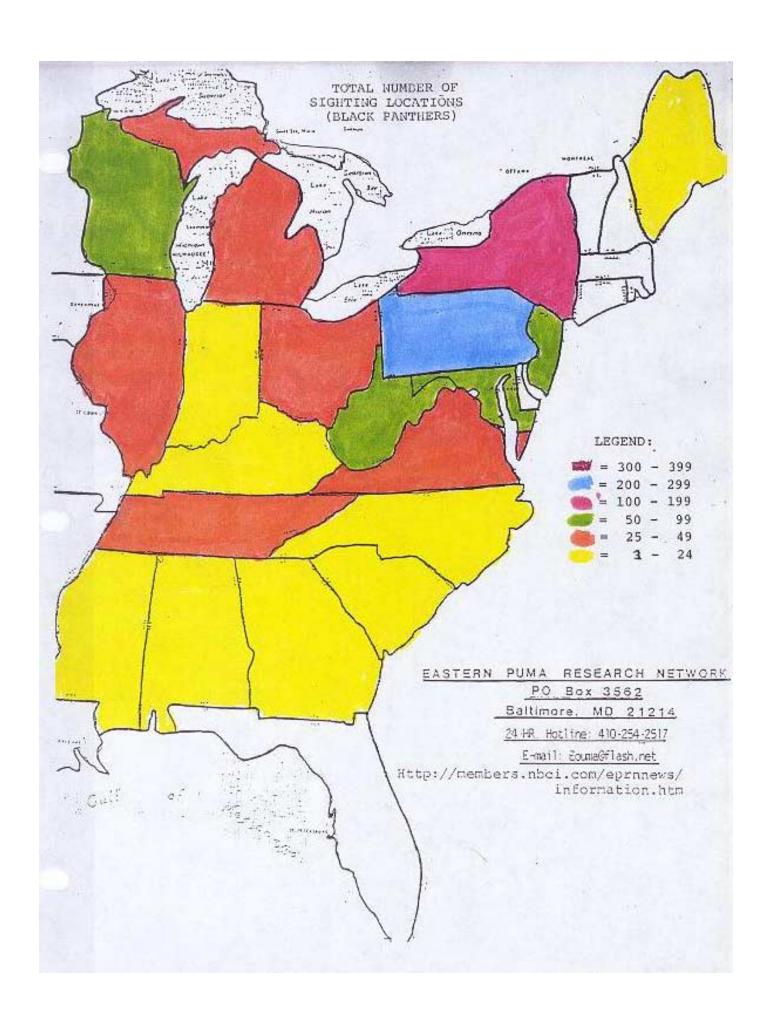
Unanswered Questions

Many questions continue to go unanswered.

- 1) How is it possible for a cat weighing well over 100 pounds to continue to elude wildlife scientists?
- 2) What do wildlife agencies known about the subject that is not being told to the general public?
- 3) Are these agencies conducting ongoing studies of one these mammals in the wild?
- 4) Why have thousands of taxpayers dollars been allotted to numerous higher educational schools in the eastern states to conduct studies on the return of the coyote, the wolf, the black bear, the bobcat, but NOT the native puma?

What Mammals Have Studies Snagged?

Within the last 12 months, studies were conducted in several eastern states which resulted in some 300 bobcat being tagged. Game officials in one state quickly noted, "No Cougars" were captured or tagged during their field projects. This raises yet



another question, "Would a 125 pound cougar be capable of fitting into a trap used for smaller-size animals, such as a bobcat, which rarely weighs over 25 pounds?"

On-Going Evidence

The latest information backed by data from ongoing and former studies more than substantiates the evidence. Thus proving the native puma never left the regions that its ancestors once prowled. They may have moved further back into the remaining wilderness since the eastern United States is losing upwards of 100,000 acres of forest and woodlands per year to urban sprawl. But they do continue to survive, and in some eastern states, evidence indicates a breeding population.

Early Studies

Back in the 1970s and 1980s researchers from several states undertook studies. Most were made possible though small natural science grants and consisted primarily of researching the libraries of higher educational schools. In some cases actual field studies were conducted.

The researchers, Helen McGinnis of Pennsylvania and Dr. Cathy Carter of Mississippi State Natural Science Museum, discovered then that most wildlife professionals on the whole tend to downplay sightings of the puma and especially the "Black Panther." They suspected that no wildlife agency basically likes the idea of having large predators they cannot control or have little knowledge of around. The cats would create new management headaches for them so "It's easier to bury their heads in the sand."

Current Statistics

Based on data collected by the Eastern puma Research Network, here are the most complete statistics as of January 2001 that shows the ranking of the top 10 states in sightings reports.

Tan Reports

State	Number of Reports	Rank
Pennsylvania	920	1st
New York	442	2nd
Maryland	361	3rd

West Virginia	330	4th
Virginia	180	5th
Michigan	158	6th
New Jersey	128	7th
Maine	124	8th
Illinois	121	9th
Ohio	118	10th

States with the highest number of "Black Panther" reports are equally divided between northern and southern regions. Therefore climatic weather changes do not appear to effect the habitat of this colored mammal.

Six of these states are in close proximity to the Appalachian Mountain range, giving them free access to the most densely wooded routes away from human population urban centers.

Black Reports

State	Number of Reports	Rank
Pennsylvania	282	1st
New York	146	2nd
Wisconsin	98	3rd
Maryland	86	4th
West Virginia	76	5th
New Jersey	61	6th
Illinois	47	7th
Michigan	46	8th
Virginia	35	9th
Tennessee	30	10th

States with the highest number of cub sightings, which indicate reproduction, is occurring. These cubs were seen, in most cases, accompanied by and adult. The top 5 states with the largest number of cubs are located in closest proximity again to the Appalachian Mountain range. States numbered 6th and 7th lay across the northern tier, closest to the Canadian border, where known colonies of cougars survive.

Could the cubs being spotted within these states be the offspring of those Canadian cats? Historical accounts place the traditional travel route of the large cats between eastern Canada and the southern terminal of the Appalachian Mountain range.

Georgia, the southern terminus of the Appalachian Mountains is impacted with thick forests and rugged, wild, remote bayous along the gulf coast. These could be breeding grounds.

Cub Reports*

State	Number of Reports	Rank
Pennsylvania	83	1st
New York	58	2nd
West Virginia	42	3rd
Maryland	33	4th
Virginia	31	5th
Michigan	19	6th
Wisconsin	15	7th
Georgia	15	7th

^{*}Over 375 cubs have been reported from a total of 22 states!

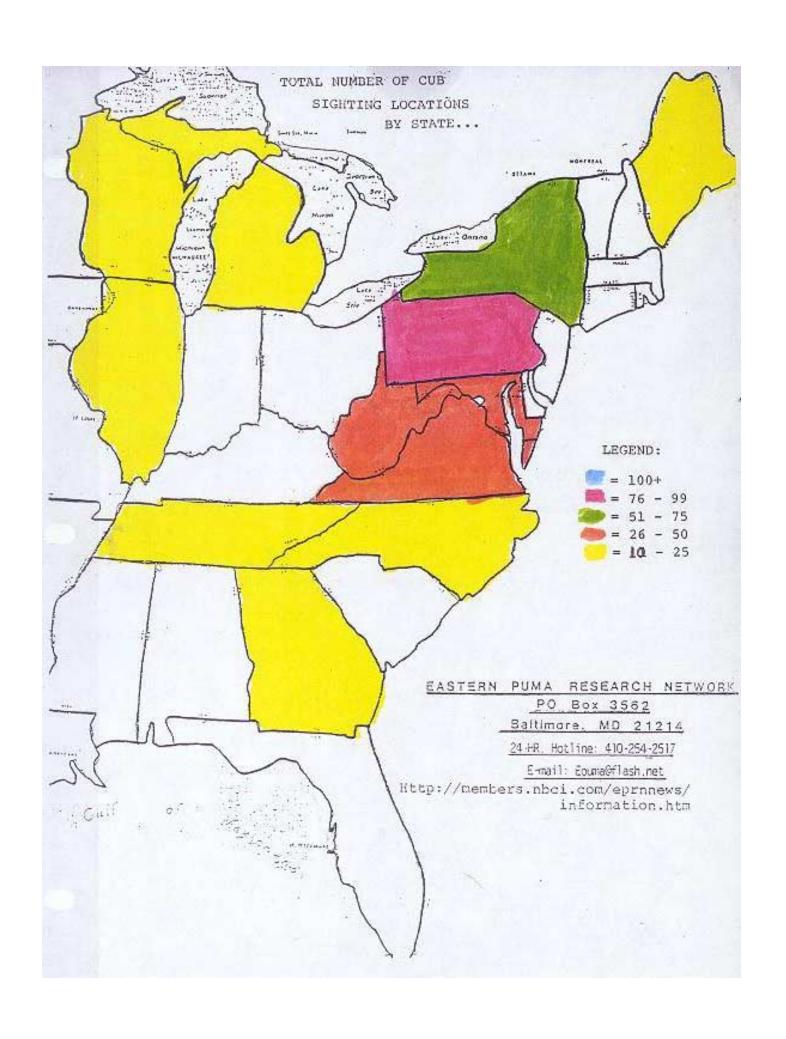
The most favorable months for observing the big cats are:

Winter (Dec/Jan/Feb)	16%
Spring (Mar/Apr/May)	35%
Summer (June/July/Aug)	18%
Autumn (Sept/Oct/Nov)	31%

Witness Reliability

Since many people, including the wildlife scientific community and news media alike, question the reliability of sightings, the Eastern Puma Research Network normally requests from a witness their occupation. It is not a requirement, just a curious question. Listed below are the results of those responses.

Housewives/Residents	18%
Hunters	16%
Law Enforcement	15%
Fishermen	14%
Foresters	13%
Wildlife Oriented	9%
Scientists	5%
Medical Field	4%
School Students	3%
Others	3%



Observed Puma Activity, 1983-2000

Loping/Running	25%
Sitting/Lying on Dirt Road	20%
Chasing Prey	16%
Crouching (Non-Threatening)	13%
Playing Like a Housecat (cub usual near)	10%
Watching Observer	9%
Lying. Swimming, Standing, Walking in Water	4%
Other Positions	3%

2001 Statistics

Special Note, the following statistics are based on data collected by the Eastern Puma Research Network in the first 8 months of 2001.

New York residents have reported some 137 sightings in 2001. 5 incidents were captured on either photographs or videotape. 3 are of a "black panther," 2 are of a tawny puma.

Within the last month, 1 cougar with 2 cubs was shot and killed by a homeowner in northeast Minnesota as it attempted to steal bedding from the homeowner's dog.

A cougar was also shot and killed by a hunter in central Georgia. This cat was known to have escaped from a wildlife center.

Additional videotapes have recently been received and are being analyzed by EPRN Biologists and Ecologists. They are from Pennsylvania (3), Missouri (1), Maryland (1) and Illinois (1).

The big cats have been reported from 22 of the 26 eastern states this year. Read the Eastern Puma Network News for further details.

About the Eastern Puma Research Network

The Eastern Puma Research Network, P.O. Box 3562, Baltimore, Maryland 21214, was the first not-for-profit, volunteer, member supported study group to begin investigations of the native eastern mountain lion in 1983. However, personnel have collected and undertaken field studies since 1965. In excess of 6300 sightings and 15,000 news related articles have been catalogued.

We publish the only regularly scheduled newsletter, <u>The Eastern Puma Network News</u> on the 25th of January, April, July and October. The January newsletter includes the previous year's statistical review. A year's subscription costs \$15.00.

The network established the first 24-hour hotline where sightings can be reported,

EASTERN PUMA RESEARCH NETWORK P.O. Box 3562 Baltimore, MD. 21214 410-254-2517

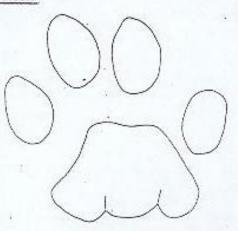
E-mail: epuma@flash.net

ANIMAL COMPARISON TRACKS



RIGHT FRONT PAW -BLACK BEAR

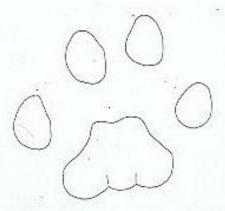




RIGHT FRONT PAW - PUMA



RIGHT HIND PAW - PUMA



RIGHT FRONT PAW - KITTEN

410-254-2517. E-mail reports to epuma@flash.net. Our Website is:

http://members.ncbi.com/eprnnews/information.htm

EPRN also publishes a flyer entitled <u>All You Need to Know About the Eastern Cougar</u>. It is free for the asking by sending a stamped, self-addressed envelope to the address above.

If you are aware of a sighting, have photographs/videotape of a large cat believed to be a cougar, mountain lion, puma or black panther or want information on becoming a member or active field researcher, please contact EPRN via letter, U.S. Postal Service, E-mail or telephone.

Professional wildlife biologists are always on standby to review evidence given to us.

From the Past: A Strange Ohio Beast The Cat Destroyer of Sciotoville

"The strange animal which for some time has proved a menace to the belated travellers, promenaders, and cats up at Sciotoville, Ohio, has evidently either exhausted the feline creation up there or concluded that food from another source would prove more relishable, for he has ruthlessly invaded the precincts of Portsmouth and commenced a war of extermination upon the city felines. The strange creature was seen by Dr. James P. Bing, a gentleman of great veracity, on the back porch of his residence, and the doctor relates a thrilling experience with his strange visitor. The doctor was awakened about 2:30 o'clock at night by his wife who protested that something was wrong about the premises, she having reached that conclusion by the furious barking of a dog in the yard between the porch and the alleyway. The doctor arose and parting the curtains of the window, was astonished to see a strange wild animal occupying the porch not four feet from him. The dog had the animal at bay, and while he seemed afraid to attack, it was evident that the other animal had no desire to force the fight. The electric light shone dimly through the yard, but still it was strong enough for the doctor to get a good look at his unknown visitor. It was of a dark brown color, and of a strange species, without doubt. The face was small and the nose pointed, somewhat like the head of a fox. It was too large for a catamount and too small for a panther, and unlike either in color. When it raised itself to a sitting posture, with nose erect, it seemed to be about three feet and a half feet high. The doctor on turning on the light in the room so it shone full upon the animal and dog, unfortunately caused the latter to withdraw, when the strange animal quickly disappeared in the direction of the hills to the east of the city. There is no doubt but that this is the identical beast that has been terrorizing the people of Sciotoville."

Source: The Equity (Bryson, Quebec), May 17, 1888. Discovered by C. Brevier.

Arkansas' "Black Panthers"

Robert Prevo

It seems that everywhere you look in North America there are "Black Panther" sightings occurring, and Arkansas is no exception.

I have recently taken on the task of trying to gather information about these elusive felids, which stealthily travel through our minds as well as our woods here in Arkansas. I have begun the tedious tasks of taking reports, doing field research in the areas where sightings occur and casting tracks (when tracks are to be found).

With the information I have gathered thus far, I am already noticing a profile beginning to appear. The description of the animal in each case seems to be repeating itself from every prior recorded sighting I have taken, which leads me to believe that there is a definite species responsible for the sightings occurring in Arkansas.

Here is the profile that has been built up so far:

A black, streamlined felid, which is approximately 24" high at the shoulder.

Has a main body length of approximately 3' long.

Has a tail, which is at least equal to the length of the body (if not longer). This gives it an overall body length of approximately 6'.

Has an oddly slender head, which adds to its streamlined look.

These animals have been repeatedly sighted near running water sources (streams, creeks, and rivers). Usually occurring in what are termed "river bottoms."

These animals have been sighted near or even raiding chicken pens.

On more than one occasion animals of this description have been spotted moving easily through trees.

When all this information is taken into consideration, I am led to one possibility. It appears that the culprit of these "Black Panther" sightings must be a form of the jaguarundi.

The jaguarundi is a small unspotted cat with a native distribution ranging from South America, north to the southern parts of Texas, and Arizona. It has a long slender body and tail accompanied by short legs. The jaguarundi is also known for both its aquatic abilities and its arboreal prowess.

The jaguarundi's prey includes rats, mice, rabbits, and birds (especially poultry). It is known to exist in three distinct colors: black, gray, and reddish.

I recently contacted the Florida Game & Fish Commission, asking them about the possibility of jaguarundi living in the Everglades. I was given some curious information on the subject. Although the jaguarundi is not considered to be a part of the natural fauna of the state, unverified sightings of the felids have occurred in the past, and this could be due to escaped animals from labs or the kennels of breeders in the exotic pet industry. Could this be a link to the "Black Panther" of Arkansas? Not likely, seeing as these felids were not introduced into the Florida area until the 1970s. This means that these animals would have to have traveled thousands of miles in a very short period of time, and purposefully forced themselves into a climate they are not commonly considered to be at home with.

Yet another answer might be that this animal was not a felid at all, but an otter. While the otter is native to the state and is considered to be quite abundant, it is not considered to be arboreal at all. The otter is quite adept to an aquatic lifestyle, and may account for some sightings of "Black Panthers" spotted in the water, however climbing trees is not quite fitting to its behavior. In at least this case, I would have to rule out the otter as a possible culprit of the "Black Panther" of Arkansas.

One of many "Black Panther" sightings that stands out in my mind is one that was relayed to me by a gentleman whom I work with on a daily basis. Although this sighting is several years old, it is one which best demonstrates my jaguarundi theory.

In the 1970s, while raccoon hunting in the Black River Bottoms at night, a group of hunting dogs treed a large cat. The dogs reportedly could not be made to bay, and so the cat was shot in order to get the dogs back under control. The following is a description of the cat.

"It was a big black cat, with a long round body and an even longer tail. It hissed and growled at the dogs, scaring some of them off, but the rest wouldn't back down. It was a little bit bigger than a bobcat, but it had shorter legs. I knew what it was, it was a 'Black Panther.'

"I knew the dogs wouldn't back down, so I shot it three times just to kill it. It dropped from the tree, but then it took off running. The dogs chased after it and finally brought it down when they grabbed it by its entrails that were hanging out from one of its shot wounds.

"I ran the dogs off after they killed it, so I could get a good look at it. It was smaller than a cougar, but bigger than a bobcat. It had this long tail; I swear that tail was five or six foot long. It had a small head, and short legs, and smooth short fur all over its long body." In this case, the cat was left where it lay, and the raccoon hunt continued.

After questioning this gentleman further, I was able to get an estimated total length of nine feet. However, I must confess I personally find the length of the tail (six-foot) may have been exaggerated.

There is still one "fly in the ointment," so to say. The jaguarundi has a body length ranging between 3' to 4' 6" in total from tip of nose to tip of tail. Whereas, the "Black Panthers" measure out to approximately 6' on average.

This can easily be answered with a few possible answers.

- 1) People who are reporting these sightings are exaggerating on the size of these "Black Panthers," much as fishermen boast about "the one that got away."
- 2) We are dealing with either a new subspecies of jaguarundi, or this species is exhibiting a larger size due to living farther north than others of its own kind. This can also be observed in the cougar, which ranges from South America to North America, with the larger subspecies living in North America.

Whichever answer may be the case, we are left with one indisputable fact. People here in Arkansas are seeing something. Whatever that "something" is, I plan to get to the bottom of it.

"Round about the accredited and orderly facts of every science there ever floats a sort of dust-cloud of exceptional observations, of occurrences minute and irregular and seldom met with, which it always proves more easy to ignore than to attend to... Anyone will renovate his science who will steadily look after the irregular phenomena, and when science is renewed, its new formulas often have more of the voice of the exceptions in them than of what were supposed to be the rules."

— William James

Possible Cougar Photographed in Maryland

Chad Arment

In 1992-1993, I investigated a series of cougar sightings that occurred in Harford County, Maryland. The details for this and a few previous cases of cougar sightings in the county were written up for the <u>INFO Journal</u>. In this article, I noted that poorquality photographs had been taken of the 1992 feline. Reproduction at that point was not feasible, but I'm going to attempt to show the pictures here with enlargements.

The photographs were taken behind a residence on Taylor Road, in Street, MD, in August 1992, at about 7 am. The man who photographed it (witness names are kept confidential) stated that his wife had first seen the cat the month previous. "My sighting in 8-92 was a hot hazy morning. I quickly got my wife out of bed, and we both witnessed it. I took 2 pictures while he was just sitting. I think he must have seen or heard us and started to slowly walk away." The couple watched the animal sitting about 90-100 yards from the house for about twenty minutes before it walked away. They estimated the size to be about that of a German Shepherd.

The images show a feline (note the lack of a prominent snout) with the typical reddish-brown coloration and white underbelly of a cougar. The biggest problem with the pictures is the lack of scale; it is impossible to judge the size of the cat without knowing the height of the surrounding vegetation.

This cat was seen on several other occasions as it meandered east through Harford County. Another good report came from north of Bel Air, where in late October of that year, three adult witnesses watched a "75 to 100 lbs." cat walked past a housing development. Describing the cat's behavior, one noted that it "sat - waited - walked - sat - when cat got on black top road, rolled over scratching back - playful like cat." They estimated that they watched the cat for about 30 minutes. At one point, one of





the witnesses went inside his house and brought out his rifle. He had the cat in the rifle's scope, "but didn't shoot because it was peaceful." He called Natural Resources, who "at first didn't think I was serious." The witness later talked to a representative out of the Glendon office, but a large snow storm arrived not long after the sighting, which halted any further investigation.

Based on these and other reports from this group of sightings, I can only conclude that the cat in question was a released pet. The animal was unfazed and completely at ease in the close company of humans. From a genetic standpoint, this may be moot — if there is no real distinction between eastern and western "subspecies," and a cougar is a cougar, then I suppose released pets are no less "native" than the white-tail deer and other species which have been re-introduced into the eastern states over the last century.

Based on conversations with various exotic pet owners and wildlife officials, it appears that feral cougars are as likely to be released as "accidentally escaped." Because of their former native status, some pet owners apparently have few qualms about setting these animals free, despite the illegality and apparently in ignorance of the problems their pets face. (One similar series of cat reports, from 1994 in Greene, Highland and Clinton Counties, Ohio, is traceable back to a police officer who disappeared, leaving his pet tiger in the reluctant charge of his former employers. His pet cougar was also missing, and probably was the culprit in this group of incidents.)

The Harford County cougar in this instance was last seen traveling towards the wooded reserve of the Aberdeen Proving Grounds. Sporadic reports of cougars (including some with cubs), have come out of Harford, Baltimore and neighboring counties over the last century. (Baltimore Zoo officials confirmed the presence of one cat in Harford County in 1966 when casts of prints were made.) Most are probably due to released animals, but immediate dismissal by wildlife officials is certainly short-sighted.





Strange Creatures from Slavic Folklore

Marcus Scibanicus

[Editor's Note — This article is edited from correspondance to Chad Arment. Marcus has collected reports of unusual wildlife reports from various Slavic countries. Note the prevalance of folkloric elements seen around the world (i.e. blood-drinking, government-created "monsters," etc.). This region is not usually thought of as biologically diverse, but there truly are numerous (and often endemic) species of wildlife. Marcus has noted to me that some former sanctuaries in this region have been cut down and used as trash dumps. This article runs a little uneven due to translation difficulties, but should be of interest to individuals looking into the cryptozoology and folklore of Eastern Europe.]

Chagljevi

Those little beasts live on hills by the sea. I have documents from Montenegro from a friend who is also interested in cryptozoloogy. People are saying that *chagljevi* are small, dog-like beasts (almost like puppies), and you can see them only at night. Those beasts are afraid of men, and when you see them, they run away fast. It may be that the answer for *chagljevi* is a species of canine — *Canis aereus*, a jackal, which is smaller then the gray wolf (*Canis lupus*). This species is very skittish and active 70-80% by night. Maybe *chagljevi* aren't *C. aureus* at all, though, because nocturnal puppy-like beasts aren't a good description for *C. aureus*.

White Boar

I read about a white boar which is living in the mountains in Kosovo province near Presevo. It was different from the normal form of European boar, not just in color, but in morphology as well (shorter legs, etc.).

I also have a document about a different white boar killed near the town Visegrad. The distance is about 300-400 km from Presevo, and is in a mountain region.

White Wolf-like Animals

In 1999-2000 in one magazine I found an article and picture of a man and two strange pale, almost white-gray mammals. They seemed bigger than a wolf and with a rather dog-like head. The beasts were killed on a mountain. Those were wild animals but nobody knew which kind.

White Badger

A legend says a white badger (*Meles meles*) lives in the woods of the mountain Kopaonik.

Dog-like Animals

A man, Radomir Djurakic, told me that 5-6 years before (1994-1997) a pair (male and female) of strange animals were killed near the village Slatina. Those animals were drinking blood from chickens and domestic animals for some time. Those beasts were a little bigger then a pit bull dog. Form of animals was: short and strong legs, long snout, colour of skin was various (with different colors) and the beasts didn't have a tail. This is identical with a beast from Mala Kopasnica near Leskovac, but between Leskovac and Cacak are about 300 km and a number of big mountains. Is there a population of this beast? I think that it may be a wild unknown predator of the high mountains. Maybe a bombardment of the mountains activated them so they are now invading the lowlands.

Kosorush

I got a name of something which seems to scare local people. The name was *kosorush* — it is Serbian something (*rush*) with hair.

The "Squid" Sounds

On Carska bara (a big swamp which is under the protection of the state) was recorded one monster. One Bosnian refugee named Slaven reported it. Slaven, a retired sailor, thought he heard a squid-like noise (croaking). Slaven thought that it was a giant squid, and called it a "Kraken."

Slaven said that one night he went to the end of a big forest. It is a real jungle of European march trees. At the end of this forest was a very large zone of reeds. After that is open water, several meters deep. On that night he heard some splashing of something big in the water, but he didn't see anything because of the reeds. After several splashings he heard some bubbling, croaking, crinkling (at some points he says it was like a man who was drowning — bubbling sound under the lake). It sounded for some little time and then again he heard a big splash. After that, it started to splash like crazy, and it seemed like a smashing of a big number of tails. Then thousands of frogs started to croak (before that, not one frog was croaking), birds get mad. Then out of nowhere shots were heard. A man named Sima, who was responsible

for the lake, was shooting at the water. He didn't see it, so he shot all over the lake. He was very scared. Some thought that it was a big squid, especially Slaven who is a retired sailor. He is saying that this squid-like monster is appearing only by night and making a big noise. He also said that it is appearing not every day but in intervals of days.

There are some salt lakes in Vojvodina. One is just 30km from Carska bara. Carska bara is very large and who knows if it has some salt parts in it.

Winged Serpent

On one holy-day (I forget the name of it) in February-April one specimen of a winged snake appeared near a house in a mountainous part of Serbia.

Giant Snakes

I came upon a story about a giant snake on mountain Ovcar in Serbia. The story says that one man who can talk to animals was hunting snakes on the mountain for venom. When he was near a cave a giant snake, about 10m long, fled down the cliff. While running, the snake was crushing trees and rocks.

Second, when I was on mountain Ovcar with my two friends, we saw a watering place and rested there. While we were resting a woman with sheep came to the place to drink water. We asked her did she know of a giant snake in the hill, but answer was negative. Then we asked another grandmother who was passing but again got a negative answer. Then the woman who was asked first told us one event. Last year (2000) in spring-summer time, about 30 km south from Ovcar mountain a bus had to stop because a giant 10m snake was crossing the road. That happened near the town Ivanica.



Ovcar mountain near the town Cacak

Sounds from the "Jaruga"

Near the village Backi Brestovac are holes (better say big lake-like holes). In the village they are called "jaruga." Those holes are old, about 150-200 years. There are 5-6 of those holes in the area. They are full of water.

From one of them, which is nearest to the village (it is about 200m long and 1.5m deep) are made very strange, terrible and noisy sounds. People are afraid.

Those sounds are hard to describe, but they are compared to loud roaring or hooting. It is also compared to breathing (whatever). It is made by day and by night. I think that it is a kind of frog or some kind of owl (*Asio flammeus* perhaps, but I don't think that this is the answer to these sounds).

In Plavsko Jezero lake near Kosovo, from the deep water are heard some terrible and scary sounds. There is one theory, which is that underground water is making those sounds.

Cries from the Forests

My grandmother Janja Sciban told me that in Montenegro near the mountain village Brljevo near the mountain Djelacko zdrijelo in the period just before World War II, something in the woods was making loud, scary and strange sounds — the people took this as an omen that something bad would happen in the time which was coming.

My friend Marko Djurakic told me that in Montenegro on mountain Rumija hunters have heard some very strange sounds for some time. That is a very wild and big mountain, where because of many venomous snakes very few men visit.

Mass kills

This summer in province of Banat near villages Novi Knezevac, some nocturnal beast is killing sheep. The largest number of killed sheep in one night is 10 adult and several young sheep at the sheep-fold of Joce Nikolic. There are many other kills, but with smaller number of killed sheep. Those kills appeared in some other villages in the region — Banatskog Arandjelova, Sigetu, Podlokanju and Srpski Krstur. The beasts have killed adult male sheep up to 90kg! There is also another interesting thing — only young sheep are missing while adult sheep are killed and left dead in the sheep-fold. People are starting to think that it is somebody who steals young sheep, and by killing adult sheep trick local people into thinking that it is a beast.

But every one of those men who have sheep also have good dogs which are called "pulin." These are medium to large sized dogs, and very dangerous dogs which protect the sheep day and night.

When the beast attacks, those dogs are silent (that is a reason given for thinking that it is a man who is stealing young sheep). But, I have heard from my grandparents that when some beast attacked and killed their rabbits, the dog, a very good and aggresive dog, didn't bark or do anything at all — he was silent. That was a beast and I saw proof — the mark of teeth, footprints, etc.

I think that it is a beast because the "pulin" dogs are very good and aggresive dogs, which normally attack other dogs, wolves, foxes, martens, and especially strange people.





Claw marks from rabbit hutch attacked by unknown animal

I collected some documents that some beasts attacked a sheep-fold near the town Nish on village Cerja. In the summer a beast or beasts killed 29 sheep.

The local people never saw such mass killing, especially since wolves don't appear in summer months. Wolves appear in winter months, and then kill one or a few sheep in several days. In summer, wolves are in the mountains and there they have a lot of food — so I think that this is also something interesting.

A friend contacted me and told me that in the village Miokovci one beast was caught on April 8, 2001. There are four stories about what it was. One said that it was a mad dog ("German sheep-keeper"); one said that it was a hybrid of two dog races ("German sheep-keeper" and native race "sharplaninac"); one said that it was a wolf; and one said that it was a hybrid betwen wolf and jackal.

On May 9, 2001, I saw an article in one newspaper telling about a big dog the size of an immature cow or a small sheep. It is a hybrid between an German shepherd and a big native dog. When it was killed, it was full of blood. It seems that this beast was eating just the blood. For about 6 weeks it killed almost 200 sheep.

But this is not end of mysterious killings in the region, or the big town Cacak (which is in Serbia mountains). In November last year something started to kill sheep in a strange way. This was in the village Gornja Gorevnica. Some mammal killed sheep and drank its blood by making a hole in the neck of the sheep and through that drank its blood. The hole was 1 cm long.

This beast got through a hole in the roof and then killed all the sheep in the

sheep-fold. Then it climbed out like a cat and run away through the hole in the roof. People from the village said that the beast is in size betwen a wolf and fox. It drank all the blood from the sheep. If there was less then 3 sheep, this beast ate the heart and other organs. More then 150 hunters went to mountain Jelica and hunted for the beast. No trail of the beast was found — only one fox was killed. Natives said that they never saw this terrible style of killing.

Some believe that NATO dropped some monsters to destroy the animal industry of Serbia (sheeps, pigs, chicken, cattle, etc.).



A picture of killed dog which was killed in town Miokovci in spring 2001.

Belegish is a village near the river Danube near the town Stara Pazova in the province Srem. A creature for just two weeks killed more than two thousand chickens and a 40-70 pigs. It was never caught. It was in a newspaper article on July 5, 1999.

I don't know which animal can kill more than two thousand chickens and about 50 pigs in two weeks. I know that martens eat one chicken and then they rest for 3 days. Natives of Serbia are thinking that the *Martes martes*, or Serbian *kuna*, is responsable for the mass killing. They are saying that *kuna* is killing chickens, and such sized animals, but there are accounts when *kuna* attack a young cow. Was it all *kuna*?

The monster from Belegish struck again — a newspaper on February 2, 2001, noted there was an attack in the village Putinci about 2:30 AM. Something got into the sheep-fold. A dog sounded the alarm that the beast was in the village.

This monster attacked the sheep-fold of Stevana Bozica. In short time it killed 10 Merino sheep and one big Merino ram. It killed them like a surgeon. There was a hole behind the ear about 1 cm long. It drank the blood through those holes. That was in very short time. Then it ran away.

This village, Putinci, is just about 5-10 km from Belegish. The beast from Belegish was not caught, or ever seen. This was the first attack in that region this year.

One strange beast was killed by Mica Andjelkovic in the village Mala Kopashnica near the city Leskovac. It was a kind of mammal, the size of a cat. It had a long snout and short tail. This beast was killed as it was killing chickens. This beast made a lot of damage to local people's private animals. This beast killed hundreds of chickens, just drinking blood from them. The beast killed chickens with very accurate bite to the neck and drank the blood. This report was written in the newspaper "Dnevnik" on July 27, 2000.

Drekavac

In the town Kula, on April 4, 2001, at 01:30-02:00 AM, dogs woke up my grandparents. The dogs were very, very loud. Some terrible sounds were made from the beast. My grandparents have never heard sounds like that (my grandfather heard a lot of things, but never like this!). The roaring was very loud. The beast was on the other side of the river Veliki Backi kanal, so it didn't get to the side of town.

In the mountains of Serbia, a similar beast was heard 3 times in 3 different villages. It was called *drekavac*. I am almost certain that it was the *drekavac* heard near the village Kula.

I asked my grandmother what the sound was like. She said that it was like the loud black and white apes which are often seen on television in the rainforest. It is not identical with those apes' sounds, but they are similar. The sound is deeper and more terrible than the apes' sounds.

In Serbia "*drekavac*" is a name given to something strange or which kills men and their animals, and also things which make scary and loud terrible sounds. There seems to be a "swamp *drekavac*" and a "land *drekavac*." Swamp *drekavac* can be virtually any bird, mammal, or frog which gives a strange cry. Land *drekavac* can be only a mammal because there is mammalian behavior and diet. One Croatian internet site states that in Slavic mythology, the *drekavac* is an "undead, non-baptised child." It has a "long, colorful and thin body." It appears in grave-yards and by streams and he "screams with various animal voices." [*Ed. Note*—This myth may be distinctive to Croatia, as Marcus did not hear anything like this from Serbia.]

During the 1990s one summer, in a moor or swamp near the village Bashaid appeared the *drekavac*. The sound which was made by the beast were very loud and scary. Local people were very scared, and some even left the village because of it. I got this info from one old man, Steva Doroslovacki, which told me that it was probably a kind of bird, but might be something else. The *drekavac* was only in the moor. The newspaper wrote about this several times.

On December 9, 1992, the newspaper "Vecernje novosti" published an article about

drekava. It said that along the Krvavicka river bank, natives found a corpse of a dead beast. The beast was something between a dog and fox with legs similar to a kangaroo. The natives said that it was a drekavac. The natives were scared and they said that the beast was a product from a NATO laboratory.

Some time during 1956-1958 in the swamp Djikina bara, near the village Srbobran, a *drekavac* appeared. On that year very scary and loud sound were heard in spring/summer. The sounds were made at night mostly, but also by day.

I have asked two people and this is what I get:

- 1. Mira Pavlic said the *drekavac* could be heard by night, but also rarely by day. She compares the sounds with peacocks. The sound were very loud.
- 2. Branka Sijacic told me that the *drekavac* was also named *bukavac*, which is the name of one species of heron which is a regular nester of reeds by marshes and rivers. This species is not *drekavac* but it did made strange sounds from the reeds, though not like the description of the *drekavac*'s sounds. She also said that people were so scared that they thought that it was a demon or devil and they were so scared that they didn't go to the swamp for some time.

This *drekavac* was never found or killed — it simply disappeared. Now Djikina bara is changed and is not like what it was at that time.

I gathered some documents about *drekavac* from my friend Nemanja Spasojevic. He got this info from a friend who read this in the newspaper "Revija 92." He told me that a *drekavac* has no fur, that it is all white and relatively smart. He also told me that in mythology, sometimes a *drekavac* jumps on your throat and then drags you to the river Morava where he kills you. If you kill the *drekavac* a curse will fall on your family for several generations. So local people are scared, but respect the *drekavac*.



The author in the field

[Editor's Note: One unusual side effect of the Kosovo conflict was an increased interest in the paranormal. There's an interesting commentary on this at:

http://www.motherjones.com/total_coverage/kosovo/paranormal.html

For investigators, care needs to be taken that reports from this region are coming from actual events and not from the various tabloid magazines that popped up to take advantage of the Serbian mindset.]

A Pink Invertebrate from Loch Ness

Chad Arment & Dee Golda

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Over the past couple years, Dee Golda has been collecting interesting images from the webcams (surface and underwater) of Loch Ness. She noticed the appearance of a pinkish invertebrate with purplish banding from the underwater camera at certain times of the year.

At present, the invertebrate species is unidentified, but appears to be insect larvae (caddisfly, perhaps) that is clinging onto the camera. Because this critter will certainly be seen by other Loch Ness enthusiasts, we're showing various images taken of the species. If any entomologists can provide an identification, we'd like to hear about it.









Dragon-Fly Storms

W. H. Hudson Reprinted from <u>The Naturalist in La Plata</u> (1892).

One of the most curious things I have encountered in my observations on animal life relates to a habit of the larger species of dragon-flies inhabiting the Pampas and Patagonia. Dragon-flies are abundant throughout the country wherever there is water. There are several species, all more or less brilliantly coloured. The kinds that excited my wonder, from their habits, are twice as large as the common widely distributed insects, being three inches to four inches in length, and as a rule they are sober-coloured, although there is one species—the largest among them—entirely of a brilliant scarlet. This kind is, however, exceedingly rare. All the different kinds (of the large dragon-flies) when travelling associate together, and occasionally, in a flight composed of countless thousands, one of these brilliant-hued individuals will catch the eye, appearing as conspicuous among the others as a poppy or scarlet geranium growing alone in an otherwise flowerless field. The most common species—and in some cases the entire flight seems to be composed of this kind only—is the Æschna bonariensis, Ramb., the prevailing colour of which is pale blue. But the really wonderful thing about them all alike is, that they appear only when flying before the south-west wind, called pampero—the wind that blows from the interior of the pampas. The pampero is a dry, cold wind, exceedingly violent. It bursts on the plains very suddenly, and usually lasts only a short time, sometimes not more than ten minutes; it comes irregularly, and at all seasons of the year, but is most frequent in the hot season, and after exceptionally sultry weather. It is in summer and autumn that the large dragon-flies appear; not with the wind, but—and this is the most curious part of the matter—in advance of it; and inasmuch as these insects are not seen in the country at other times, and frequently appear in seasons of prolonged drought, when all the marshes and watercourses for many hundreds of miles are dry, they must of course traverse immense distances, flying before the wind at a speed of seventy or eighty miles an hour. On some occasions they appear almost simultaneously with the wind, going by like a flash, and instantly disappearing from sight. You have scarcely time to see them before the wind strikes you. As a rule, however, they make their appearance from five to fifteen minutes before the wind strikes; and when they are in great numbers the air, to a height of ten or twelve feet above the surface of the ground, is all at once seen to be full of them, rushing past with extraordinary velocity in a north-easterly direction. In very oppressive weather, and when the swiftly advancing pampero brings no moving mountains of mingled cloud and dust, and is consequently not expected, the sudden apparition of the dragon-fly is a most welcome one, for then an immediate burst of cold wind is confidently looked for. In the expressive vernacular of the gauchos the large dragon-fly is called *hijo del pampero*—son of the south-west wind.

It is clear that these great and frequent dragonfly movements are not explicable on any current hypothesis regarding the annual migrations of birds, the occasional migrations of butterflies, or the migrations of some mammals, like the reindeer and buffalo of Arctic America, which, according to Rae and other observers, perform long journeys north and south at regular seasons, "from a sense of polarity." Neither this hypothetical sense in animals, nor "historical memory" will account for the dragon-fly storms, as the phenomenon of the pampas might be called, since the insects do not pass and repass between "breeding and subsistence areas," but all journey in a north-easterly direction; and of the countless millions flying like thistle-down before the great pampero wind, not one solitary traveller ever returns.

The cause of the flight is probably dynamical, affecting the insects with a sudden panic, and compelling them to rush away before the approaching tempest. The mystery is that they should fly from the wind before it reaches them, and yet travel in the same direction with it. When they pass over the level treeless country, not one insect lags behind, or permits the wind to overtake it; but, on arriving at a wood or large plantation they swarm into it, as if seeking shelter from some swift-pursuing enemy, and on such occasions they sometimes remain clinging to the trees while the wind spends its force. This is particularly the case when the wind blows up at a late hour of the day; then, on the following morning, the dragon-flies are seen clustering to the foliage in such numbers that many trees are covered with them, a large tree often appearing as if hung with curtains of some brown glistening material, too thick to show the green leaves beneath.

In Patagonia, where the phenomenon of dragonfly storms is also known, an Englishman residing at the Rio Negro related to me the following occurrence which he witnessed there. A race meeting was being held near the town of El Carmen, on a high exposed piece of ground, when, shortly before sunset, a violent pampero wind came up, laden with dense dust-clouds. A few moments before the storm broke, the air all at once became obscured with a prodigious cloud of dragon-flies. About a hundred men, most of them on horseback, were congregated on the course at the time, and the insects, instead of rushing by in their usual way, settled on the people in such quantities that men and horses were quickly covered with clinging masses of them. My informant said—and this agrees with my own observation—that he was greatly impressed by the appearance of terror shown by the insects; they clung to him as if for dear life, so that he had the greatest difficulty in ridding himself of them.

Weissenborn, in Loudon's *Magazine of Natural History* (N.S. vol. iii.), describes a great migration of dragon-flies which he witnessed in Germany in 1839, and also mentions a similar phenomenon occurring in 1816, and extending over a large portion of Europe. But in these cases the movement took place at the end of May, and the insects travelled due south; their migrations were therefore similar to those

of birds and butterflies, and were probably due to the same cause. I have been unable to find any mention of a phenomenon resembling the one with which we are so familiar on the pampas, and which, strangely enough, has not been recorded by any European naturalists who have travelled there.

From the Past: Wild Animals in a Fury The Train Carrying the Anglo-American Show Wrecked

Cincinnati, Ohio, Dec. 1—A train on the Little Miami railroad carrying the Anglo-American show to Detroit, where it goes into winter quarters, was wrecked at daylight yesterday morning two miles north of Xenia, and a lively time followed with the wild beasts. A hot box set a car loaded with tent fixtures on fire, and, the truck breaking loose, wrecked all the cars behind it. The train was slowing up, and the cars, while thrown from the track and piled together, were not badly broken up, which prevented the wild animals from being crushed or from escaping. Their cages were overturned, however, and the animals shaken up and thrown into a terrible fury. The light from the blazing car bewildered them, and their howls were heard by the farmers for two miles around. The train and show men, supposing the animals were all loose, scattered in all directions. The engineer and fireman uncoupled their engine and ran a safe distance up the track, carrying some of the frightened show men with them. When it was discovered that the animals were not in pursuit the men collected, and, revolvers in hand, proceeded cautiously back toward the wreck. It was some time before the animals were guieted, and the wreck was not removed until nearly noon. The story was carried to Xenia that the whole menagerie of animals had broken loose by the wreck and were coming that way, and much consternation ensued.

Source: <u>The News</u>, Frederick, MD; Dec. 3, 1883; p. 1. [*Ed. Note* — Hey, sometimes circus trains DID wreck!)

[&]quot;I know that most men, including those at ease with problems of the greatest complexity, can seldom accept even the simplest and most obvious truth if it be such as would oblige them to admit the falsity of conclusions which they have delighted in explaining to colleagues, which they have proudly taught to others, and which they have woven, thread by thread, into the fabric of their lives."

From the Past: The Cefn Reptile and the "Times"

The remarkable paragraph in the *Times* of the week before last relating to the discovery of "a huge beast of the lizard tribe," in a cave at Cefn near St. Asaph, implies a belief on the part of the editorial staff that such an addition to the British fauna was not impossible, and its wide circulation proves the astonishing credulity of the public:—

"In the Vale of Clwyd, at a distance of two miles from the cathedral city of St. Asaph, are situated the Cefn Caves. It had been rumoured of late that parties visiting this place had on several occasions seen some strange animal creeping in its dark recesses, and on Saturday visitors reported having had a good view of him, and stated it was a huge beast of the lizard tribe. On the Monday following Thomas Hughes from Rhyl, went to try to capture him. Armed with a stout stick he approached its reported lair, but not seeing it he decided to remain in ambush at the mouth of the cave, sheltered by a projecting ledge. After having thus waited an hour his patience was rewarded with success. He could hear in the far end a hum as of a hive of bees. The sound growing louder, and now apparently quite close, Hughes peeped round the ledge, and saw the monster within three yards of him. He (Hughes) sprang towards him and dexterously wielding his stick he dealt him a well-aimed blow upon the neck just behind the head, which caused him to stagger and reel. One more blow in the abdomen finished him. Hughes carried him home in triumph, and is now making a profit out of the affair by exhibiting him at Rhyl. The monster is of the lizard tribe, as mentioned above. Only that our country is destitute of those creatures we should have said it was a young crocodile. It measures from the nose to the end of its tail exactly 4ft. 7in., the tail being rather more than half that length. Its limbs measure 12in.; the front ones have five toes; and the hind ones four; it is web-footed. Above it is black and white beneath. Its coat is mailed, guite hard, and protruding in sharp corners and angles like the crocodile's. The head is low and flat, the mouth large and round at the end, measuring 7in. by 3in., the teeth are numerous, but small, and bear great resemblance to those of a large codfish. There is ample scope here for naturalists to investigate the how and wherefore this strange amphibian came to be discovered in the present epoch among the hills of North Wales."

Such is the vivid account of the capture given in the *Times* and reprinted in several local papers, and so far as I can judge by my letters, believed in by many simple-minded people. It is altogether a most impudent hoax. The man Hughes is a sweep, who purchased a reptile which happened to die in a travelling menagerie at St. Asaph, and exhibited it at Rhyl as having been caught in the Cefn Caves, until at last it became a public nuisance, and was committed to the earth. The story related in the *Times* was invented merely to make the exhibition lucrative to Hughes the sweep. Its wide circulation, which incidentally shows an astonishing ignorance of natural history, is the only excuse for my writing this letter.

W. Boyd Dawkins

From: Nature 3(Nov. 3, 1870): 7.

Fabulous Creatures of China

George Lanning

Reprint from Wild Life in China, or chats on Chinese birds and beasts. Shanghai: "The National Review" Office. 1911.

No account of actually existing life within the limits of the Chinese Empire could be complete which did not include fabulous animals of various kinds, beasts, birds, fishes, and reptiles, in which the Chinese believe quite as firmly as they do in most of those referred to in preceding pages. Western readers must not, in reading what is to follow, indulge too freely their hilarity, for they may well be reminded of their own credulity in times gone by, when dragons were known at Wantley and a unicorn became an equal supporter with the lion of British arms. Reading between the lines it will be seen that in some of the following descriptions there is an admixture of fact and fable. Taking the subject under the heads of beasts, birds, fishes, and reptiles, we come first to the beasts.

Priority ought surely to be given to the dragon, that being the symbol of Chinese nationalism. I think it quite possible that the dragon might have been the off-spring of fright, imagination, and bad drawing after an unexpected adventure with an alligator. Later on the imaginary animal acquired the power of rising into the air, and so became a flying dragon, a symbol of power, as well as of strength and wisdom. It is classed in China as one of the "four marvellous animals," the other three being the tortoise, the phœnix, and the unicorn. Such as follow, it will be noted, rank amongst those that are not marvellous but merely natural.

There is the Che-lin, for example, known to everybody acquainted with Chinese pictorial art and pottery. It belongs to the deer family, but later ages provided it with a cow's tail, the forehead of a wolf, and the hoof of a horse. When the Che-lin and the Phœnix walked abroad in the olden times, then were the days of prosperity. Before the times of Confucius even, this animal had become the symbol of national well-being.

Next we have the Ma-hwa. This is a creature of the monkey tribe, or rather of the apes. He is found in the western parts of the Empire, particularly in Szechwan. What he is specially noted for is his penchant for pretty women. Whenever one of these strays into his haunts, he carries her off, makes her his wife, and proceeds to lay siege to her affections in a way which argues knowledge. He loads her with jewelry and fine clothes, which he gets somehow or other by stealing, and in time the woman becomes so fond of him that she would not leave him if she could!

No less wonderful is the Jung, or gibbon, of Yangchow in the province of Kiangsu. (The exact whereabouts of several of these marvellous creatures is well known to everybody in China—except, of course those of the locality named.) The Jung is an extremely large and agile ape, a tyrant to his own species. He is described as having long yellowish-red hair, and is said to be of a cannibal turn of mind. Whenever he wants a meal the other monkeys are made to sit round him in a circle so that he may by means of pinching and poking find out which of them is the fattest. On the head of the selected he lays a stone. The rest are then free to scamper off, the victim only remaining and following its captor, who doubtless looks at it as the cook of the "Nancy Bell" looked at the sole survivor:—

"Come here," says he, with a proper pride, Which his smiling features tell, ""T will soothing be, if I let you see How extremely nice you'll smell!"

For the veracious natural history of the Celestial encyclopædia tells us that the monkey follows the Jung until they reach the nearest stream, into which the monkey plunges, washes himself carefully, pulls out all his hair, and then lies down to be eaten!

The Jih-kih is of the bovine family. There must also be a connexion between it and certain pigs in the more poverty, stricken districts of Ireland, where the people are so poor that they can afford to kill only half a pig at a time. Similarly with the Jih-kih, which belongs to the province of Kansu, and should be extremely useful to any Russian invaders who may come along, for this useful animal is able to provide its owner with one or two catties of meat *per diem*, which when cut away is completely replaced within twenty-four hours.

One more specimen completes my list of the four-footed beasts of fable. That is the Mak, or tapir. Of the habitat of this extraordinary animal my authority is silent. But its peculiarity is worthy of note. Its chief food is iron. This accounts for the hardness of its droppings which are used by lapidaries for polishing the hardest kinds of jade. It is possible that the origin of this fable is to be accounted for by the fact that some igneous mineral in a more or less decayed form is used for the purpose named, and as nobody could account for its condition they explained it by assuming it to be the droppings of an animal, the rest of which could then easily be imagined, food and all complete.

There are more fabulous birds in Chinese legends than there are beasts. The phoenix has already been mentioned. So far as I know, the Arabian legend in which it rises from its own ashes is not known in the Far East. But its place is taken by other

details quite as interesting. In the first place the bird is as rare in China as ever the phœnix was with the Arabs and others. It is only to be found when reason rules mankind. Consequently it is as uncommon as the fabled immaculate official of whom two specimens are to be known in Chinese history. One of these is already dead, and the other not yet born. When the phœnix does come, however, it is followed by all the rest of the feathered tribe, and brings with it prosperity and well-being to the whole country. Would that it might arrive to-morrow. But where is the rule of reason?

In the province of Shansi, and in the *hsien* of Hung-tung there is a bird which is endowed with what seems to be a power readily believed in by the Chinese, and not unknown in earlier times in the West, the power of changing its form. It can throw aside its bird-nature at will, divest itself of its feathers and become a woman. The metamorphosis is so complete that the bird-woman can be mated with a man and live with him as his wife. Should she fly off occasionally he ought not to be surprised, if he is acquainted with the circumstances.

One of the bits of superstition alluded to in a previous chapter (on owls) is connected with the Hiu-liu, a kind of laughing horned owl. This is one of the purely nocturnal kind, lying low during the day. One of its little peculiarities is its fondness for playing spiteful tricks on children. If their clothing is left out at night, the owl will drop some dust on them which has the certain effect of making the child ill. Another more uncanny power possessed by it is its ability to become the abode of some dead man's soul. This in itself should give it supernatural power, but not content with that the Hiu-liu in some marvellous manner adds to its impish attributes by eating finger nails. That explains very fully, and of course quite naturally, why country people always hide their nail cuttings.

Another extraordinary bird is known as the Fire-queller. It has a peculiar screeching cry, but its chief characteristic is its power, if thrown on a fire, of putting it out at once. In Shanghai one of our earliest fire brigade companies called itself, in what is perhaps questionable Chinese, the Mih-ho-loongs, the "Destroying-fire-dragons," but it is not unlikely that, had they known of the celebrated bird they might have named themselves differently, and more appropriately.

Next comes what surely must be a not distant cousin to Sindbad the Sailor's roc, which thought little of flying away with an elephant. This is the Chinese Tiger-eagle. It has a body as large as that of an ox, and its wings have a spread of 20 ft. As its name implies it is a deadly foe to tigers, leopards, etc.

At Twan-sin-chow there is said to be a strange fish-eating bird which makes its home in the swamps and marshes. Whenever it cries, swarms of mosquitoes issue from its mouth. Hence it has the name of Wan-mu-niao, or Mun-mu-niao, the "Mother

of Mosquitoes." It is a bird of considerable value to those who can catch or kill it, for fans made of its feathers have an extraordinary reputation for their mosquito repelling quality. It is quite possible that here we have a bit of perfectly correct natural history mingled with some not unnatural error. It is the swamp or marsh that is the real "mother of mosquitoes:" any fish-eating bird frequenting it, and there are many varieties of herons, egrets, bitterns, etc., may well, when calling to its mate whilst stalking through the reeds and grass, drive up flocks of mosquitoes, and thus give rise to the legend. Learned doctors, until Dr. Manson led the way, made not altogether dissimilar mistakes in respect to swamps. They long knew of their malaria-breeding powers, yet they never suspected the mosquito. It is a curious story that, but, of course, it belongs to another category.

What seems to be rather a mammal than a bird is the *Fei-sheng*, or "Flying Breeder," whose young, as its name implies, are born alive, and not produced first in the form of eggs. According to the description, the young, born whilst the parent is on the wing, are immediately able to fly after her. It is believed that there is here a merely fabulous story derived from imagination and a sight of some flying squirrels. Chinese midwives say that the use of a claw of this bird-mammal will procure an easy accouchement.

Hunan is credited with the possession, at Yung-chow, of a swallow which during high winds and stormy weather loves to fly in the gusty elements, but as soon as the storm subsides turns to stone again. Hence it is known as the Stone Swallow.

The Oil Squeezer is a native of Kaichow in Shantung. In appearance it might easily be mistaken for a sheldrake floating on the water. About the beginning of summer its body is said to exude a considerable quantity of oil. Hunters search for it on this account. When captured and killed, the bird is squeezed until no more oil can be obtained from it, and then the miraculous element comes in. No sooner is the dried skin thrown on the water than it becomes a living bird once more, and in time, presumably, supplies another quantum of oil.

What ardent fishermen the Chinese are everybody knows who is at all acquainted with them, and as the illimitable ocean yet contains many creatures in all probability quite unknown either to them or to western nations, the appearance in their natural histories of strange fishes is less to be wondered at than is that of beasts and birds. If Westerners have their mermaids, the Chinese have their mermen. They are called *Kiao-jen*, and are found in the southern seas where they are credited with the power to weave a beautiful kind of silky fabric which when hung up in a house ensures coolness to it no matter how torrid the weather may be outside. When this gentle creature weeps, its tears turn to pearls. There is another species of the same kind of animal, but this is more like a turtle minus the feet. Its little ones when alarmed take refuge in a pouch with which the mother is provided.

There is a connexion, not entirely explained to man's full satisfaction even yet, between the jackal and the lion. The smaller animal is sometimes called the "lion's provider," but many people have a shrewd suspicion that most of the providing is done by the larger, and that the jackal follows only that he may partake of the crumbs from the royal table. In China this relationship exists between a sort of hermit crab and a shrimp. The crab rejoices in the name of the Water Mirror, and wherever it goes the shrimp goes with it, being in fact carried in the stomach of its big friend. When the crab is hungry the shrimp issues forth to forage, and when it has satisfied its hunger comes back again to its living home. Ensconced there, the shrimp seems to supply nourishment as freely to the crab as to itself. If it should happen that the shrimp is killed or unable to return, the crab dies.

Other curious fish stories are those which tell of the Indestructible Winkle, which though it may seem dead of drought will revive on being put into vinegar; of the *Sih-Sih* fish which has an appearance something like that of a magpie with ten wings, and of the *Ho-lo* fish with one head but ten bodies.

Snakes and other reptiles, even more than fish, would be likely to lend themselves to the vivid imagination of an ignorant country people. It is so in all lands, and of course it is so in China, which is rich in reptilia. Thus we have the Round Snake of Kwei-chow, which takes its name from being egg-shaped, and so streaked and painted with five different colours as to resemble a painted landscape. People who see it, unless they know its deadly nature, are irresistibly tempted to pick it up on account of its beauty, thinking it to be merely a beautiful stone. But with the warmth of the body the creature becomes lively, and puts out its head. Then is the danger, for he who is bitten dies. The poison is so virulent that if any of it is spilt on the ground no grass will grow near the place for three years, and all that is necessary to poison arrows effectually is to stick them in the soil there.

Then there is the Square Snake of Kiangsi, which takes the shape of a trunk, squirts an inky fluid at people, and so kills them at once.

Still more marvellous is the Splitter. In England there is a belief not unlike that of the Chinese in this respect. Some English country people probably hold to this day that a snake when cut to pieces has sometimes the power of reuniting itself. This is the Chinese story: the splitter has a length of about fourteen inches and the circumference of a copper-cash, say about the size of a halfpenny. If a man comes near it, it leaps into the air, and coming down to earth again divides into twelve pieces. (These stories are always precise in detail.) If the man should be so incautious as to pick up one of these segments a head grows out from either end of it, the man is bitten, and inevitably dies. Should he be wary enough to leave so uncanny a creature to itself, the segments afterwards unite again.

Southern China and Annam can boast possession of the wonderful snake known as the Caller, or Calling Snake. Lonely travellers will hear it sometimes crying out, "Where are you from, and where are you going to?" If the man answers, the snake will follow him for several tens of li, and will sneak into his hotel when he reaches it in the evening. But as it invariably carries with it a very offensive smell, the inn-keeper seems to know what to expect. So he asks the traveller, "Did you hear any voice calling to you on the way?" The traveller answers, "Yes." Then the inn-keeper knows exactly what has happened and what to do. He takes a *Wu-kung*, a sort of flying centipede, and puts it in a box near the traveller's pillow. In the night, when the offensive smell shows that the caller is approaching, they open the box and the centipede bounces out, attacks the snake, gives it one bite, and kills it. Should a caller escape this dreadful fate—the penalty of coveting forbidden prey—he may live a very long time, during which period his body grows until it is several thousand catties in weight, after which, if he is killed his fat makes a lamp oil, which when burning defies the wind to blow it out.

Burma and Cochin China have a human-faced snake with the features of a pretty girl. There are two feet growing out from under the neck and these have each five human-looking fingers. If the captor cuts this snake in two it turns instantly into a pretty girl complete. The male of the same breed is said to be green in colour and to have a long beard. Its strength is such that it can coil round and kill a tiger, but it is afraid of the fox which attacks and eats it.

The last of the series is the *Jan*, or boa, of Kiung-chow in the Island of Hainan. As we have seen, boas or pythons are well known in Hongkong and in the south of China generally, and it is not surprising to find folklore well supplied with stories of their immense strength, size, and ferocity. The Jan is said to grow to a length of several chang, the chang being in English measure nearly 12 ft. This species is reputed to have a liking for young damsels whom it follows. Knowing this, hunters in search of it disguise themselves with flowers in their hair, and call as they go, "Hung niang-tsz," a pet name for a pretty girl. When the snake appears, they throw some female garments over it, whereupon it lies still. The hunters taking advantage of its quietude, rapidly chop off its head, and then run away. The death struggles of the monster are terrible to behold. It leaps about and levels everything in its way, even trees being torn up in its struggles.

There is, as we have been told by Dr. Edkins, a characteristic trait to be observed in all Chinese symbolism, in that connected with animals no less than that connected with trees, numbers, philosophy and other things. Whilst that of the ancient Hebrews was directed to the future, that of China looks backward to the past. But men of the present day, with the spectacle of a promised regeneration of China before their eyes, may well ask whether the Chinese also have not now definitely turned their faces towards the time to come, and not towards the time that is gone. The question is, perhaps, the most momentous ever put before the human race. Time alone can answer it.

A Strange Frog

W. H. Hudson Reprinted from <u>The Naturalist in La Plata</u> (1892).

The frog is a most timid, inoffensive creature, saving itself, when pursued, by a series of saltatory feats unparalleled amongst vertebrates. Consequently, when I find a frog, I have no hesitation in placing my hands upon it, and the cold sensation it gives one is the worst result I fear. It came to pass, however, that I once encountered a frog that was not like other frogs, for it possessed an instinct and weapons of offence which greatly astonished me. I was out snipe shooting one day when, peering into an old disused burrow, two or three feet deep, I perceived a burly-looking frog sitting within it. It was larger and stouter looking than our common Rana, though like it in colour, and I at once dropped on to my knees and set about its capture. Though it watched me attentively, the frog remained perfectly motionless, and this greatly surprised me. Before I was sufficiently near to make a grab, it sprang straight at my hand, and, catching two of my fingers round with its fore-legs, administered a hug so sudden and violent as to cause an acute sensation of pain; then, at the very instant I experienced this feeling, which made me start back guickly, it released its hold and bounded out and away. I flew after it, and barely managed to overtake it before it could gain the water. Holding it firmly pressed behind the shoulders, it was powerless to attack me, and I then noticed the enormous development of the muscles of the fore-legs, usually small in frogs, bulging out in this individual, like a second pair of thighs, and giving it a strangely bold and formidable appearance. On holding my gun within its reach, it clasped the barrel with such energy as to bruise the skin of its breast and legs. After allowing it to partially exhaust itself in these fruitless huggings, I experimented by letting it seize my hand again, and I noticed that invariably after each squeeze it made a quick, violent attempt to free itself. Believing that I had discovered a frog differing in structure from all known species, and possessing a strange unique instinct of self-preservation, I carried my captive home, intending to show it to Dr. Burmeister, the director of the National Museum at Buenos Ayres. Unfortunately, after I had kept it some days, it effected its escape by pushing up the glass cover of its box, and I have never since met with another individual like it. That this singular frog has it in its power to seriously injure an opponent is, of course, out of the question; but its unexpected attack must be of great advantage. The effect of the sudden opening of an umbrella in the face of an angry bull gives, I think, only a faint idea of the astonishment and confusion it must cause an adversary by its leap, quick as lightning, and the violent hug it administers; and in the confusion it finds time to escape. I cannot for a moment believe that an instinct so admirable, correlated as it is with the structure of the fore-legs, can be merely an individual variation; and I confidently expect that all I have said about my lost frog will some day be confirmed by others. Rana luctator would be a good name for this species.

Myths of the Amazonian Indians

Herbert H. Smith Reprinted from <u>Brazil: The Amazons and the Coast</u>, 1879, New York: Charles Scribner's Sons.

The myths that follow have an altogether different character from the animal stories. They are the goblin tales, which one hears from old women, as they sit by the fire, hugging their knees with their withered arms, and half speaking, half chanting, their lugubrious sentences. So I have seen and heard them often, and almost fancied that I saw the goblins themselves, among the shadows, under the darkened eaves:

The Bird of the Evil Eye.

Far away in the thickest forest lives the *Tucano-yúa*, Bird of the Evil Eye. It has a nest in a hollow tree; from a crevice under the branches, it surveys the ground beneath; if any animal passes near, the bird has but to look at it, and the evil eye does its work. All around, the ground is white with bones; the bird feeds on its victims, and not even the strongest can escape it.

Long ago a hunter, straying farther than was his wont, found this tree, with the bones lying white about it. As he looked, he saw the tucano-yúa peering out; but the bird did not see him, and, ere it could turn its head, the hunter shot it, and it fell to the ground. The man approached the body carefully, walking so that he did not pass before the eyes; then, with his knife, he cut off the bird's head, wrapped it in a cloth* and put it into his hunting-pouch. Ever after that, when this man saw a deer or paca or tapir, he held the tucano-yúa's head so that the bill was pointed toward the game, which instantly fell dead. But he took care never to turn the bill toward himself.

The man's wife wondered much at her husband's success in hunting; she questioned him often to discover the reason for this good luck; but he answered, always: "This is no business of yours; a woman cannot know of these things." Still she was not satisfied; day after day she watched her husband stealthily. And once, when the man and his wife went with a party to the woods, she watched more closely; when a deer or cotia passed by, she saw that her husband took something from his hunting-pouch and held it toward the game, which instantly fell dead. The woman's curiosity tempted her to find what this strange weapon could be. It chanced, after dinner, that the man went to sleep on the ground. The woman approached him softly, opened his hunting-pouch, and took out the head of the tucano-yúa. Turning it about, she tried to recall her husband's actions.

^{* &}quot;A handkerchief," said the narrator.

"He held it so," she said to herself, "with the bill turned toward the game." But as she spoke, she had carelessly turned the head against her husband's body, and in an instant she saw that he was dead. Overcome with fear, she started back; but in so doing she turned the deadly beak toward herself, and she, also, fell dead.

Boia-Asú, the Great Water-Snake.

The Indians, almost universally, believe in the existence of an enormous water-serpent, which they call *Boia-asú* or *Mãi d'Agua*, Mother of the Water. The fishermen ascribe to it the appearance or disappearance of small lakes and channels; the *igarepés*, they say, are the tracks of the snake's body; when he leaves a lake, it dries up, or is overgrown with grass. Sometimes the *Boia-asú* figures in the animal or goblin tales, but without any fixed characters.

The Flat-Feet.

The Indians of Santarem tell of a dwarf* that lives on the hot sandy campos, near the city: it has only one foot, but that is so large and flat that the dwarf uses it as a parasol; when the sun is hot, he lies down on his back and holds his foot over his head for shelter.

Possibly this myth was introduced by the Portuguese, though I obtained it from the Indians. Concerning the Old World version, Prof. H. H. Boyessen writes me:

"The legend of people who have such large feet that they use them for umbrellas, is a medieval German one; but it is hardly indigenous to the German soil, having, evidently, been imported from the Orient during the Crusades. It is found in a poem of which various versions exist; two fragmentary ones from the twelfth century (about 1180), and two complete, from the first half of the thirteenth. It describes the marvellous adventures of Herzog Ernst in the Orient, and teems with fabulous creatures and incidents. Among the many wonderful nations whom Duke Ernst visits, are the Flat-feet, who avail themselves of their enormous flat feet, to run over the swampy ground (all their country is marshy), and as umbrellas and parasols."

^{*} I never heard any special name for it.

The Curupira.

Everywhere on the Amazons one hears of the curupira, who lives in the forest, and leads people astray that he may destroy them. He is a little, brown man, they say; his feet are turned backward, so that his tracks are reversed, and one who attempts to run away from him along his trail, will but run to destruction. Some say that the curupira is bald, that he has enormous ears, or green teeth; but in these points the descriptions vary. The Indians use the name generically, evidently believing that there are many curupiras, as there are many deer or monkeys.*

Old Maria dos Reis, of Santarem, told me the following curupira story, one of many that are found among the Indians:

There was once a man who had a wife and one little child. One day this man went into the woods to hunt, and there he was killed by a curupira. The curupira cut out the man's heart and liver; then he took the man's clothes and put them on his own body, and, thus disguised, repaired to the house where the woman was waiting for her husband. Imitating the voice of the man, the curupira called:

"Old woman! old woman! where are you?" †

"Here I am," said the woman; and the curupira went into the house.

At first the woman took little notice of him, supposing that it was her husband. The curupira said:

"Here is some nice meat that I have brought you; go and cook it for me," and he gave her the heart and liver, which he had cut from her husband's body. She took them and roasted them over the fire; she brought mandiocameal also, and spread the dinner on a mat, and the curupira sat down with the woman and child, and all ate heartily.

"Now," said the curupira, "I will go to sleep;" and he lay down in a hammock. Presently he called: "Bring the child and lay it with me in the hammock." So the woman brought the child, and laid it on the curupira's arm, and the curupira and child went to sleep.

* Prof. Hartt (*O mytho do Curupira*, p. 2), says: "An Indian woman of Manáos told me that there were many curupiras, of both sexes who lived in hollow trees; they have the form of Indians; the female is more fleshy than the male, and has long hair." Bates (Naturalist on the Amazons, p. 43) writes: "Sometimes he is described as a kind of orang-utang being covered with long shaggy hair, and living in trees. At others he is said to have cloven feet and a bright red face. He has a wife and children and sometimes comes down to the clearings to steal mandioca." Other authors speak of female curupiras but I have never heard of them.

† "Minha velha! minha velha! onde está?" The terms "Old man," "Old woman," are used on the Amazons, as they are in the United States, as a kind of matrimonial nickname.

After awhile the woman came to look at him, and then she discovered that it was not her husband, but a curupira. In great alarm, she began to make preparations to leave the house; she put all the clothes and household utensils into a basket; then, softly taking the child from its resting-place, she placed a *pilão* (great wooden mortar) on the curupira's arm, and so ran off with the basket on her back, and the child astride of her hip.

She had run only a little way down the path, when the curupira awoke, and discovered the trick that had been played on him; jumping up, he ran down the path after the woman, calling loudly:

"Old woman! old woman! where are you?"

The woman saw the curupira coming, while he was yet a long way off: she ran still faster, but the curupira gained on her, at every step. There was a *mundui* bush by the path: the woman got under this and lay, trembling, until the curupira came up, calling:

"Old woman! old woman! where are you?"

"There was an *acurão* bird on a branch overhead, and it called "*Mundui!*" trying to tell the curupira where the woman was; but the curupira did not understand; so, after searching for awhile. he ran on down the path. Then the woman got up and ran off through the forest by another road; but in the mean time the curupira had discovered his mistake, and he ran after her, calling:

"Old woman! old woman! where are you?"

The woman came to a great hollow tree, with an opening at the base of the branches; on this tree sat a frog, *Curucuná*, which makes a very thick and strong gum.

"O Curucuná!" cried the woman, "I wish that you were able to save me from this curupira!"

"I will save you," said the frog; "the curupira shall not harm you."

Then the frog let down a long rope of gum; the woman climbed up this rope into the tree, and the frog put her into the hollow.

The curupira came up, calling:

"Old woman! old woman! where are you?"

"Here she is," said Curucuná.

Then the woman begged the frog not to let the curupira come up; but the frog answered: "Never fear: I will kill the curupira." And he did as he said; for he had covered the tree-trunk all over with gum, and, when the curupira tried to climb up, he stuck fast, and there he died; and the woman got away with her child and went home.

Old Maria told me that I should take great care when walking alone in the woods, for often the curupira calls from the bushes; when one follows the sound he calls

^{*} This is something like the note of the bird.

again, farther away, until the rambler is lost; then the curupira kills and eats him. He deceives hunters in the same way, by imitating the note of an *inambú*, flying from bush to bush.

Dr. Couto de Magalhães* says that the curupira is the guardian deity of the forest.

"In the province of Para, when the voyager hears some far-away noise in the forest, the paddlers say that it is the curupira, who is beating on the *sapopemas*† to see if the trees are strong enough to withstand a tempest which is drawing on. The function of the curupira is to protect the forests. Any one who cuts down or wantonly spoils the trees, is punished by being forced to wander for an immense time in the woods, without being able to find his way out."

Prof. Hartt‡ gives another curupira story, which, as he remarks, is interesting from its resemblance to the well-known "Boots and the Troll" tale:

A man was hunting in the forest; led astray by one of these beings, he lost his way, and at night went to sleep at the foot of a tree.

The curupira came up to him and beat on the *sapopema* of the tree; the man awoke.

"What are you doing here, brother?" asked the curupira.

"I was lost, and I remained here," answered the man.

"Then," said the curupira, "give me a piece of your heart to eat!"

Fortunately the man had killed a monkey: with his knife he opened its body, and cutting out a piece of the heart he gave it to the curupira, who ate it, supposing it to be the man's heart.

"It is very sweet!" said the curupira; "give me the whole!" And the man gave him the rest of the monkey's heart. Then he said:

"Now you must give me a piece of your heart."

The curupira thought that if the man could cut out his heart, he also could do the same. So he asked the hunter to give him his knife, cut open his own body, and fell dead. The man, free from his enemy, fled.

After a year, the hunter remembered that the curupiras have green teeth; so he went to get the teeth of the one he had killed, to make a string of beads. He found the skeleton at the foot of the tree; taking the skull in his hand, he struck one of the teeth with his hatchet: when, to his amazement and fear, the curupira stood alive and smiling before him.

^{*} Op. cit. Part II., p. 139.

[†] The great flat projecting roots, which serve as buttresses to many Brazilian forest-trees.

[‡] Op. cit. p. 3

"Thank you, brother, for having awakened me!" said the apparition. "I had laid down a moment to sleep." Then he gave the man an enchanted arrow, saying that with this he could kill any game; but he charged him not to tell any one from whom he had received it.

Heretofore this man had been a bad hunter; but now he killed much game every day. His wife, noticing this, asked him often how he had become so expert. The husband at length told his wife all, and immediately fell dead. *

Boots, eating a match with the troll, puts a bottomless sack under his vest; the giant eats, but Boots puts everything into the sack, and so wins the match. In the end he shows the troll how he has a hole in his stomach; *i. e.*, the end of the sack. Troll attempts to make a hole in his own stomach, and kills himself.

The myth of the curupira is found almost everywhere in South America, and it clearly existed when the whites first appeared. It is mentioned by De Laet; Acuña gives a very distinct account of it,† crediting the real existence of these people with reversed feet. Later, we find notices of the curupira in many authors. Humboldt‡ appears to have heard the story all through Spanish South America.

"It is among the cataracts (of the Orinoco) that we first begin to hear of the hairy man of the woods, called *salvage*, that carries off women, constructs huts, and sometimes eats human flesh. The Tamanachs call it *achi* (*atschi*), and the Maypures *vasitre*, or great devil. . . . We shall first observe that there are certain regions where the belief is particularly prevalent among the people; such are the banks of the Upper Orinoco, the valley of the Upar, near the lake of Maracaybo, the mountains of Santa Martha and of Merida, the provinces of Quixos, and the banks of the Amazon near Tomependa. In all these places, so distant one from the other, it is repeated that the *salvage* is easily recognized by the traces of its feet, the toes of which are turned backward."

In Southern Brazil, according to Dr. Couto de Magalhães, the curupira stories are widely spread. They are found in Paraguay, and in Guiana: thus, their distribution corresponds very nearly with that of the Tupí language. So far as I know, there are no Old World legends which resemble these more closely than do the troll stories of Norway; yet there are curious points of resemblance with the negro and Malayan stories, which have arisen from the chimpanzee and orang-utang.

^{*} Observe, in this as in the Tucano-yúa story it is feminine curiosity which costs the man his life; a common feature in eastern tales.

^{† &}quot;Una gente que todos ellos tienen los pies al revès de suerte que quien no conociendo los quisiesse seguir sus huellas, caminaria siempre al contrario que ellos: llamanse *Mutayus*, y son les tributarios a estos Tupinambás de hachas de piedra para el desmonte de los arboles, quando quieren cultivar la tierra, que las hazen mui curiosas; y de continuo se occupan en labrarlas." Nuevo Descubrimiento, LXX.

[‡] Travels. English Translation, V., Part 1., p. 81.

Matinta-Perê.

I can learn very little about this mythical being, which seems to be rather a phantom than a definite form. The Indians say that it comes sometimes in the night, walking or flying about the paths and near the villages. Generally it is invisible, and only the rustling of wings is heard, or the song, *matinta-perê*, often repeated. At other times it assumes the shape of an old man, of a priest, or any other person or thing. When it is frightened by shouting, it disappears in the air, with rustling of wings. The story goes that it is fond of sweets, and is often heard at night about the little Indian sugar-mills. Probably such accounts are caused by the great moths, which are frequently heard about the mills, flying off rapidly when alarmed, but invisible in the darkness.

The matinta-perê is perfectly harmless. Sometimes it calls to a passer-by. A Santarem Indian told me of one which accosted an old man, who was passing by one of the sugar-mills; a voice came from behind a stump: "Where is your molasses?" but when the old man looked, he found nobody.

Another Indian told me that a matinta-perê was seen in the streets of Para, soon after the rebellion of 1835. The patrol heard some one singing; following the voice, they found an old mulatto woman in an orange-tree; as she could not answer their questions, they took her to the guard-house, and there she was locked in securely; but in the morning she was gone.

The Tau-taú* of Ereré seems to be only another name for the matinta-perê. It haunts a mirití grove near the village, and is sometimes seen in the form of a bat, a snake, a bird, etc., but it is never dangerous.†

Perhaps the following superstition relates also to the matinta-perê, but the narrator, an Indian of Santarem, could not tell me the name of the being that figures in it; when questioned, he called it a lost soul:

When a man wishes to become accomplished in any art or exercise, he must take a new calabash, that has never been used, and fill it with water; in the water he must place a shrimp. When the people are jumping over the fire in the village,‡ the man waits until many have jumped; then he also passes the fire, and taking his *cuia*, goes to the forest alone, and always in the thick night. Where four roads meet, he places the calabash on the ground and waits. After awhile there appears a being, sometimes in the form of a woman, sometimes

- * A settlement near Para is called Tau-taú.
- † Compare the *Uru-taú*, Phantom-bird, mentioned by Magalhães.
- ‡ This German and Eastern custom of jumping over the fire once a year, for good luck, is common along the Amazons; the fires are generally made for this purpose on St. John's Eve. There are some indications that the Indians held the superstition before the arrival of the whites; but the more probable supposition is, that it was introduced by the Portuguese.

as a bull, or a dog, or any other shape: all night the man must fight with the being for the possession of the *cuia*; at length the being becomes exhausted, and asks, "What do you want?" The man tells him, and the being says, "Take it and go!" But if the man is overpowered, the being kills him, and takes away the calabash, leaving the body on the ground.

Jurupary.

This Tupí word is now used for the Semitic devil; but beyond doubt, the name corresponds to an aboriginal myth, of which very faint traces are now found among the Indians. According to Dr. Couto de Magalhães, the jurupary is "a being who, in the night, chokes the children, or even the men, to bring them trouble and bad dreams."

Jurupary is said to transform himself into ravenous beasts. Sometimes he offers fruit to the Indians, who fall asleep, and are then devoured.

Claude d'Abbeville* (1614), treating of the Maranhão Indians, wrote:

"They believe in the existence of bad spirits, which we call devils, and they call jeropary, and fear them greatly. Speaking of them, they said: '*Ypochu jeropary*:' jeropary is bad, good for nothing. They told us that this evil spirit, appearing to them visibly, tormented them and afflicted them cruelly; but we never saw him."

Caá-Póra, The Forest-Dweller.

The caá-póra, or caypór, has often been confounded by authors with the curupira, but the Indian stories distinguish clearly between the two. The caá-póra is a giant, not a dwarf, and its feet are not turned backward, as in the curupira. Mr. Bates speaks of an Indian masked dance at Teffé, in which one of the maskers enacted the part of the caá-póra.

"According to the figure, he is a bulky, misshapen monster, with red skin and long, shaggy, red hair hanging half way down his back. They believe that he has subterranean campos and hunting-grounds† in the forest, well stocked with pacas and deer. He is not at all an object of worship, nor of fear, except to children."‡

^{*} Histoire de la Mission des Peres Capucins en l'Isle de Maragnan, Cap. LII.

[†] The idea of subterranean hunting-grounds, and worlds, is found in many Indian stories, and especially in the Mundurucú cosmogony, in which mankind is represented as emerging from the lower world by a hole, through which a cord has been lowered. We shall see it farther on in one of the Amazon myths.

[‡] Bates: op. cit., p. 120.

Dr. Couto de Magalhães* says that the caá-póra is the protecting deity of the forest game.

"They represent him as a man of gigantic size, covered with black hair over his body and face, and always riding on an immense wild hog; he is scowling, taciturn; at intervals he gives a cry to drive on his herd of wild hogs. Whoever sees him is certain to be unfortunate, and to have ill-luck in all he undertakes; from this comes the Portuguese Brazilian phrase, *Estou Cahipóra*: I am unfortunate, unlucky in my plans."

Anhanga.

This mythical being is mentioned by several ancient and modern authors, and stories of it are said to be found on the Amazons, but I have never heard them. I quote the description given by Dr. Couto de Magalhães:

"The destiny of the animals of the campo (open lands) appears to be confided to Anhanga. Tradition represents him as a white deer with fiery eyes. All who pursue an animal with young, run the risk of seeing Anhanga, and the sight produces fever, and sometimes madness.

"Near Santarem, an Indian was pursuing a doe, who was followed by a sucking fawn. The Indian wounded the fawn, and was thus able to capture it; he concealed himself behind a tree, and caused the little one to cry. Attracted by the agonized voice of her offspring, the deer approached the tree within a few paces, and the Indian shot her with an arrow; but as he went to secure his prize, he found that he was the victim of a delusion of Anhanga; the doe whom he had been pursuing was his own mother, who lay dead on the ground, pierced with the arrow, and all torn with spines."

From the same author I quote the following legend:

"Rudá, The God of Love.

"He is represented in traditions as a warrior who resided in the clouds. His mission was to create love in the heart of man, give him longings for home when he was absent, and cause him to return to his tribe from his wanderings. Like the other deities, it appears to have had inferior gods, namely: *Cairé*, or full moon: *Catiti*, or new moon, whose mission was to cause longings for the absent

^{*} Op. cit., Part II., p. 126.

lover. The Indians considered each form of the moon as a distinct being.

"An old lady of Pará gave me the text and music of the invocations which the Tupís made to Rudá and his two satellites. I transcribe them just as I heard them; but it appears to me either that the language is adulterated, or that it is a fragment of the older Tupí, for there are words that I do not understand. These invocations were made at the set of the sun, or the moon, and the song, like almost all those of the Indians, was slow, monotonous, and melancholy.

"The young Indian girl, oppressed with longings for her absent lover, directed her prayer to Rudá at sunset or moonset: extending her right arm in the direction in which she supposed her lover to be, she sang:

"'Rudá, Rudá, Iuáka pinaié, Amãna, reçaiçú iuáka pinaié, Aiueté Cunhã Puxiuéra oikó Ne mumanuára ce recé quahá caarúca pupé.'

"I do not understand the word pinaié, but by the sense, I presume it to be, 'who art,' 'who resideth;' the rest is perfectly intelligible.

"'O Rudá! Thou who art in the sky, and who lovest the rain! Thou who art in the sky! Cause that he (the lover) among the women that he meets may find that all are ugly; cause him to remember me this evening, when the sun sets in the west!'

"The new and full moon had similar invocations, and with the same end of bringing the lover back to his home.*

"The Rudá had also at his service a serpent, who recognized those young girls who had preserved themselves virgin, receiving from them the presents which they brought him, and devouring those who had lost their virginity. The Tupinambas of Pará believed that there were some of these serpents in Lake Juá, a little above Santarem. When any young girl was suspected of having lost her virginity, her parents took her to the lake, and, leaving her alone on a little island, with the presents destined for the serpent, retired to the margin near by and began to sing:

"'Arára, arára mbóia, Cuçucui meiú.'

"'Arára! O Arára Snake! Here is thy food!'

"The serpent began to come to the surface and to sing, until he saw the girl; then he received the presents, if the girl was really virgin, and in this case he

^{*} For want of space I omit the other songs. Many similar ones, both in Tupí and Portuguese, are sung on the Amazons.

swam around the lake singing softly until the fishes went to sleep, and the voyagers could gather them for their voyage; or, in the contrary case, he devoured the girl with frightful cries."

Oiára, The Water-Maidens.

Stories of water-maidens are common on the Lower Amazons. The Indians say that these maidens are exceedingly beautiful; they have long, black hair, in which they entwine the flowers of the morerú.† They entice the young men by their beauty, and by the sweetness of their songs; once in their embrace, they drag them down into the water, and nothing more is ever heard of them.

Although these tales are current among the Indians, I am inclined to think that they were introduced by the Portuguese. But there was, undoubtedly, an aboriginal myth which bore a considerable resemblance to the Old World stories, which have been tacked to it. The myth, as given by Dr. Couto de Magalhães, represents the Oiára (or Uauyará) as a male, not a female:

"The fate of the fishes was confided to Uauyará; the animal into which he transformed himself was the river-porpoise. No one of the supernatural beings of the Indians furnishes so many legends as this. There is not a settlement of the province of Pará where one may not hear a series of these stories, sometimes grotesque and extravagant, often melancholy and tender. The Uauyará is a great lover of our Indian women; many of them attribute their first child to this deity, who sometimes surprises them when they are bathing, sometimes transforms himself into the figure of a mortal to seduce them, sometimes drags them under the water, where they are forced to submit to him. On moonlight nights the lakes are often illuminated, and one hears the songs and the measured tread of the dances with which the Uauyará amuses himself."

^{*} Couto de Magalhães: op. cit., Part II., p. 139.

[†] Pontederia. Dr. Barboza Rodriguez says that the oiára has the tail of a porpoise.

Hunting the Ipi

Paul du Chaillu Reprinted from <u>The Country of the Dwarfs</u>, 1872, New York: Harper & Bros.

The following day I hunted near the sea-shore, from which I then concluded to go to Amembié to see Olenga-Yombi.

On our way we passed by an island of trees growing in the midst of the prairie. That island is called "Nengué Ncoma." The people are afraid of Nengué Ncoma, and at night nobody would dare to pass by it; and, though we were far away, my men looked at it with superstitions dread, and quickened their steps. "Oh," said one of my guides, "whoever enters this island is likely to die suddenly in it; if he does not die he becomes crazy, and roams about till he dies. There is a woman that we see now and then, crazy and wandering all over it. In this island of Nengué Ncoma lives a crocodile, whose scales are of brass, that never leaves the island; he lives in the centre of it; no gun can kill that crocodile."

"It is a lie!" I shouted; "how foolish you are, my boys, to believe such things! To show you that it is a lie, I will enter that island of Nengué Ncoma," and I rushed, gun in hand, toward the island. A wild shriek came from the men. They shouted, "Oh, Chally, do not go." They did not dare to follow me. A little while after I touched the branches of the trees of Nengué Ncoma, but before I entered I turned back and looked toward the men, and as I looked at them I saw them mute with astonishment; and as I turned my back and entered the wood, terrific cries rent the air. They thought it was the last they should see of me. Surely the crocodile with brass scales would kill me, who dared to go into that island of which he was the king and solo inhabitant.

I walked on and explored every part of this small island of trees. I need not say that I did not meet with the crocodile. When I came out a wild shout greeted me; it was from my men, who were still at the same place where I had left them. I came toward them singing and saying, "Do you think I am crazy? I tell you I have not seen that crocodile with scales of brass. I looked every where, and I saw nothing but trees." They all shouted, "you are a mbuiti"—a spirit.

We continued our way till we came to Amembie. Poor King Olenga-Yombi was drunk as usual; he was so tipsy, indeed, that he could not stand on his legs. Nevertheless, he welcomed his friend Chally, and said all his country belonged to me, and in joy he ordered another calabash full of palm wine to be brought to him, and drank off about half a gallon of it at once. This finished him up for the day; he fell back in the arms of his wives, shouting, many times over, "I am a big king! I am Olenga-

Yombi!" and was soon asleep. Poor Olenga-Yombi, he is an inveterate drunkard; not a day passes by that he is not tipsy.

The next morning I started for a large plantation of the king's before he was awake. The name of that plantation was "Nkongon-Boumba." There I found a large number of the king's slaves, and among them were a great many good hunters. These slaves knew me; they knew that I was their master's great friend; they knew I was their also, and that I had a good stock of beads for them and their wives. The head slave of the king, an Ishogo man called Ayombo, welcomed me, and brought me food.

I said to them, "Friends, I have come to live with you."

They shouted "Yo! yo! yo!" "I want to hunt, and kill an ipi." "Yo! yo! yo! You shall kill an ipi," they shouted. "I want to kill gorillas and chimpanzees." "Yo! yo! yo! You shall kill gorillas and chimpanzees." "But, above all, I want to kill an ipi. My heart will go away sad if I do not kill an ipi." "Yo! yo! You shall kill an ipi. We know where some are. Yo! yo! yo! You shall see an ipi."

You ask yourself what an ipi is. The ipi was an unknown animal. How did I come to know that such an animal existed? One day I saw a monda to which was suspended a large and thick yellow scale, such as I had never seen before. The pangolin had scales, but they were much smaller. There was no doubt that this scale belonged to the pangolin family, only I learned that the animal from which it was taken was of a larger variety.

The ipi, I was told, was very rare. Years had passed away, and no ipi had been seen by me; but some time ago King Olenga-Yombi had sent me word that an ipi had been near his plantation of Nkongon-Boumba, and I had come specially to hunt the ipi.

Many of the king's slaves had come from far-away tribes, and queer and ugly fellows they were, with lean legs, prominent abdomens, retreating foreheads, and projecting mouths.

The day of my arrival we rested. The good slaves and their kind wives brought fowls, plantains, pea-nuts, sugar-cane, some pine-apples, little lemons, wild honey, dried fish—in fact, they brought to me the best things they had. I gave them nice beads, and to some of the leading slaves I gave red caps.

That night there was dancing. The idol or mbuiti was consulted as to the results of the chase, for these interior people are very superstitious. They sang songs welcoming me.

The next morning a few of the leading slaves and myself started for an ipi hunt.

We left the plantation at daybreak. Mayombo, the head slave, was the leader, and

some of his children were with us. We all had guns; the boys carried, besides, two axes. In a little while we were in the forest. It was an awful day's hunt, and the first time since my return that I had to rough it in such a manner. We wandered over hills and dales, through the woods and the streams, now and then crossing a bog, leaving the hunting-paths, struggling for hours through the tangled maze and through patches of the wild pine-apple, which tore my clothes to rags and covered my poor body with scratches. The thorns and cutting edges of sword-like grass which grew in many places, and the sharp points of the pine-apple leaves, were not very pleasant things to get among. It was like the good old time, but I did not fancy the good old time. I was not yet inured to such tramps; I had forgotten all about them, but I knew that it was nothing but child's play when compared with the hardships I had suffered in my former explorations, or with what I expected to undergo in the future. I knew that I was hardening myself for what was coming by-and-by, and that it was necessary that I should go through such schooling before starting for that long Nile journey from which I knew not if I should ever come back. I must get accustomed to sickness, to hunger, to privations of all kinds, to forced marches; I must be afraid of nothing, and trust in God for the result.

The end of the day was approaching; the birds gave forth their last songs, calling their mates, so that they might not be far apart for the night; the butterflies had ceased to fly, and were hiding themselves under the large leaves to keep away from the rains.

We had not been successful, but did not despair. We were to sleep in the woods, for the plantation was too far away. Oh, I was so tired. Mayombo immediately went off to cut some poles to support the large leaves which were to protect us from the rains, while his two sons collected as fast as they could the leaves, and I looked after fire-wood. I soon came to a spot where the dead branches lay thick on the ground, and I shouted, "Come here, boys!" A little after sunset our camp was built and our fires were lighted; then the boys pulled from their bags several plantains and a little parcel of dried fish packed in leaves. Not far from our camp a little rivulet ran meandering toward the sea; its water was clear and cool, so we had chosen a nice spot for the bivouac; but fires were to be kept burning brightly all night, "for," said Mayombo, "leopards are very plentiful here; we can not keep our goats; and two men have been missing within a month." After that exhortation, Mayombo, who was a great smoker, filled his pipe and lay down by the fire. In the mean time my supper had been cooked, but I was too tired to enjoy it, and I was too tired even to sleep.

The next evening we returned to the plantation, where all were glad to see us. After a day of rest we started again, for Mayombo swore that I should not rest till I had an ipi. We went in another direction, and Mayombo again took his two sons with him. Toward noon Mayombo gave a cluck, and pointed out to me a dead tree lying on the ground, and a strange-looking track leading up to it, and whispered into my ears the word "Ipi!"

That dead tree had been lying there, I suppose, for hundreds of years; nothing remained of it but the trunk, which was hollow throughout, and looked like a tube fifty or sixty feet long.

I examined the ground carefully at one end of the trunk, and saw no footprint there, so the animal had not gone out; at the other end the tracks were fresh, and it was evident that the animal had hidden inside the night before. I said to Mayombo, "Perhaps the ipi has gone away." "Oh no," said he; "don't you see there is only one track? Besides, it could not turn on itself, and, in order to get out, it has to go straight on to the other end."

Immediately he took the axe and cut down some branches of a tree, of which he made a trap to catch the animal if it should come out. The branch was put firmly in the ground, and the top was bent over with a creeper attached to it, at the end of which was a ring, through which the animal would have to pass before he could get out; a little forked stick held the ring, which the animal would shake as it passed through; the limb would fly up instantly, and high in the air would the ipi dangle.

When all this had been done, Mayombo, who had collected wood at the other end, set fire to it, to smoke the animal out. He was not mistaken; the ipi was inside, and it made for the opposite extremity and was caught. There was a short struggle, but we ran up and ended it by knocking the ipi with all our might on the head.

I saw at once that the ipi belonged to the pangolin genus (*Manis* of the zoologists), which is a very singular kind of animal. They are ant-eaters, like the Myrmecophaga of South America; but, while the South American ant-eater is covered with hair like other mammalia, the pangolins have an armor of large scales implanted in the skin of the upper surface of the body, from the head to the tip of the tail, each scale overlapping the other like the slates on the roof of a house.

Like the ant-eater of South America, the pangolins have no teeth, but they have a long extensile tongue, the extremity of which is covered with a glutinous secretion so sticky that their prey, after having been touched, adheres to the tongue and can not get away. The tongue of an ipi may be extended out several inches. The ipi feeds on ants.

During the day the ipi hides itself in its burrow in the earth, or sometimes in the large hollows of colossal trunks of trees which have fallen to the ground, like the tree just described to you; but they generally prefer to burrow in the soil, and these burrows are usually found in light soil on the slope of a hill. By the singular structure of the ipi, it can not turn to the right or to the left at once; in fact, it is quite incapable of bending its body sideways, so it can not "right about face" in its burrow. Accordingly, there are two holes in each burrow, one for entrance and one for exit.

But if the ipi and the pangolin can not bend their bodies sideways, they are very flexible vertically, their stomachs having no scales; so, if they are surprised or want to sleep, they roll themselves in a ball, the head being inside and forming the centre, and they coil and uncoil themselves in this manner very readily.

The only way you can find the ipi or the pangolin is by the trail they leave on the soil, and following them till you reach their burrows.

The great trouble in finding the ipi is not only that the animal is very scarce, but that it never comes out except at night, when the rattle it makes among the dead leaves is great. The strange creature must see well with its queer little eyes to be able to perceive the ants upon which it mostly feeds, and it must take time in satisfying its appetite, for a great many little ants must be required to fill its stomach. When the ipi has found a spot where the ants it wants to eat are plentiful, it stops by them, and with its long tongue, which protrudes several inches, catches them one by one. When an ant is caught the tongue goes in again. I wonder how many hundreds of times the tongue must come out and go in with an ant before the hunger of the ipi is satisfied!

I was not mistaken; this ipi was a new species, and the scientific name is Pholidotus Africanus. This large one was a female, and measured four feet six inches from the head to the tip of the tail. It was very stout and heavy, the tail very short in comparison with its body, and the scales very thick, and of a yellow or tawny color. The males are said to be much larger, and, according to what the negroes say, must reach the length of six feet. They are very ugly to look at. Their tail, being very thick, makes a large trail on the ground as they move about.

Though in some respects they may be thought to resemble the lizard, the pangolins have warm blood, and nourish their young like the rest of the mammalia.

I need not tell you that I was glad to discover this new species. After securing the ipi we returned at once to the plantation, and as soon as I arrived I went to work and took off its skin, and hard work it was, I assure you, the scales were so thick and big.

When we came into the village with the ipi there was great excitement, for the animal is so rare that but two or three persons there had ever seen a specimen.

I went to bed happy, feeling that I had had the good fortune of discovering a new and most remarkable animal, which God had long ago created, but which had never before been seen by the white man.

Of course I had a curiosity to see how the ipi tasted, and I had some for breakfast the next morning, and it was good, but not fat, though the natives said that at certain seasons they are very fat. Editor's Note: The following is a reprint that appeared from the Smithsonian Reports for 1901, Pages 601-666 (with plates I-III), as printed by the Government Printing Office in 1902. The title for the report is <u>The Okapi</u> by Sir Harry H. Johnston and was a reprint of *The Okapi*; *The Newly Discovered Beast Living in Central Africa* that appeared in McClure's Magazine in September 1901 (pages 497-501).

The Okapi; The Newly Discovered Beast Living in Central Africa ¹

By Sir Harry H. Johnston, K. C. B.,

Special Commissioner for Uganda, British East Africa, the discoverer of the Okapi.

The author of this article remembers having encountered in his childhood—say, in the later sixties a book about strange beasts in Central Africa, which was said to be based on information derived from early Dutch and Portuguese works. The publication of this book was more or less incited at the time by Du Chaillu's discoveries of the gorilla and other strange creatures on the west coast of Africa, and its purport was to show that there were in all probability other wonderful things yet to be discovered in the Central African forests. Among these suggested wonders was a recurrence of the myth of the unicorn. Passages from the works of the aforesaid Dutch and Portuguese writers were quoted to show that a strange, horse-like animal of striking markings in black and white existed in the very depths of these equatorial forests. The accounts agreed in saying that the body of the animal was horse-like, but details as to its horn or horns were very vague. The compiler of this book, however, believed that these stories pointed to the existence of a horned horse in Central Africa.

Somehow these stories—which may have had a slight substratum of truth—lingered in the writer's memory, and were revived at the time Stanley published his account of the Emin Pasha expedition, In Darkest Africa. A note in the appendix of this book states that the Kongo dwarfs knew an animal of ass-like appearance which existed in their forests, and which they caught in pitfalls. The occurrence of anything like a horse or ass—animals so partial to treeless, grassy plains—in the depths of the mightiest forest of the world seemed to me so strange that I determined to make further inquiries on the subject whenever fate should lead me in the direction of the great Kongo forest. Fate was very kind to me in the matter. In the first place, soon after I arrived in Uganda, I was obliged to intervene to prevent a too-enterprising German carrying off by force a troop of Kongo dwarfs to perform at the Paris Exhibition. These little men had been kidnapped on Kongo Free State territory. The Belgian authorities very properly objected, and as the German impresario had fled

with his dwarfs to British territory, they asked me to rescue the little men from his clutches and send them back to their homes. This I did, and in so doing, and in leading them back to the forests where they dwelt, I obtained much information from them on the subject of the horse-like animal which they called the "okapi." They described this creature as being like a zebra, but having the upper part of its body a dark brown. The feet, however, they said, had more than one hoof.

When I reached Belgian territory, on the west side of the Semliki River, I renewed my inquiries. The Belgian officers at once said they knew the okapi perfectly well, having frequently seen its dead body brought in by natives for eating. They informed me that the natives were very fond of wearing the more gaudy portions of its skin; and calling forward several of their native militia, they made the men show me all the bandoliers, waist belts, and other parts of their equipment made out of the striped skin of the okapi. They described the animal as a creature of the horse tribe, but with large, ass-like ears, a slender muzzle, and more than one hoof. For a time I thought I was on the track of the three-toed horse, the hipparion. Provided with guides, I entered the awful depths of the Kongo forest with my expedition, accompanied also by Mr. Doggett, the naturalist attached to my staff. For several days we searched for the okapi, but in vain. We were shown its supposed tracks by the natives, but as these were footprints of a cloven-hoofed animal, while we expected to see the spoor of a horse, we believed the natives to be deceiving us, and to be merely leading us after some forest eland. The atmosphere of the forest was almost unbreathable with its Turkish-bath heat, its reeking moisture, and its powerful smell of decaying, rotting vegetation. We seemed, in fact, to be transported back to Miocene times, to an age and a climate scarcely suitable for the modem type of real humanity. Severe attacks of fever prostrated not only the Europeans; but all the black men of the party, and we were obliged to give up the search and return to the grass lands with such fragments of the skin as I had been able to purchase from the natives. Seeing my disappointment, the Belgian officers very kindly promised to use their best efforts to procure me a perfect skin of the okapi.

Some months afterwards the promise was kept by Mr. Karl Eriksson, a Swedish officer in the service of the Kongo Free State, who obtained from a native soldier the body of a recently killed okapi. He had the skin removed with much care, and sent it to me accompanied by the skull of the dead animal, and a smaller skull which he had obtained separately. The skin and skulls were forwarded to London, where they arrived after considerable delay. The British Museum intrusted the setting up of the okapi to Mr. Rowland Ward, of Piccadilly, and from the rnounted skin and other data I have made the drawings which illustrate this article. I also give a photograph, taken by myself, of a bit of forest where the okapi was found. Before sending this skin to Europe, and while it still retained some indications of the shape of the animal, I made the colored drawing which appears as the frontispiece to this issue of McClure's

<u>Magazine</u>, and which will also be given in the <u>Proceedings of the London Zoological Society</u>. This colored drawing differs in some particulars from the appearance of the okapi as set up by Mr. Rowland Ward, and as represented in the illustrations of the present article. Until the okapi has been photographed alive or dead, and its exact shape in the flesh is thus known, it is difficult to say which of my two drawings is the more correct. In the first illustration, which appears as the frontispiece, I have given the creature a more horse-like build. In the sketch which accompanies this article, and which is in the main drawn from Mr. Rowland Ward's building up of the animal from the flat skin, the shape of the body inclines a little more to the giraffe, the okapi's nearest ally.

The size of the okapi is that of a large stag. It stands relatively higher in the legs than any member of the ox tribe, otherwise I should compare its size to that of an ox. Like the giraffe, this creature has only two hoofs, and no remains whatever of the other digits, which are represented in the deer, oxen, and in most antelopes by the two little "false hoofs" on either side of the third and fourth toes.

The coloration of the okapi is quite extraordinary. The cheeks and jaws are yellowish white, contrasting abruptly with the dark-colored neck. The forehead is a deep red chestnut; the large, broad cars are of the same tint, fringed, however, with jet black. The forehead ranges between vinous red and black in tint, and a black line follows the bridge of the nose down the nostrils. The muzzle is sepia colored, but there is a faint rim or mustache of reddish-yellow hair round the upper lip. The neck, shoulders, barrel, and back range in tone from sepia and jet black to rich vinous red. The belly is blackish. except just under the knees. The tail is bright chestnut red, with a small black tuft. The hind quarters, hind and fore legs are either snowy white or pale cream color, touched here and there with orange. They are boldly marked, however, with purple-black stripes and splodges, which give that zebra-like appearance to the limbs of the okapi that caused the first imperfect account of it to indicate the discovery of a new striped horse. The soft parts of the animal being as yet unknown, it can not be stated positively that the okapi possesses a prehensile tongue like the giraffe, but the long and flexible lips would seem to atone for the very weak front tooth. It is probably by the lips and tongue that the creature gathers the leaves on which it feeds, for according to the accounts of the natives it lives entirely on foliage and small twigs. Like all living ruminants (except the camel), it has no front teeth in the upper jaw. The molars are very like those of the giraffe.

My first examination of the skull and skin of the okapi caused me to name it tentatively "Helladotherium." The helladotherium was a giraffe-like animal that existed in the Tertiary epoch in Greece, Asia Minor, and India. In India the helladotherium attained a very size, but the Greek specimens were not quite as large as the modern giraffe. The helladotherium was hornless, like the okapi, and in another

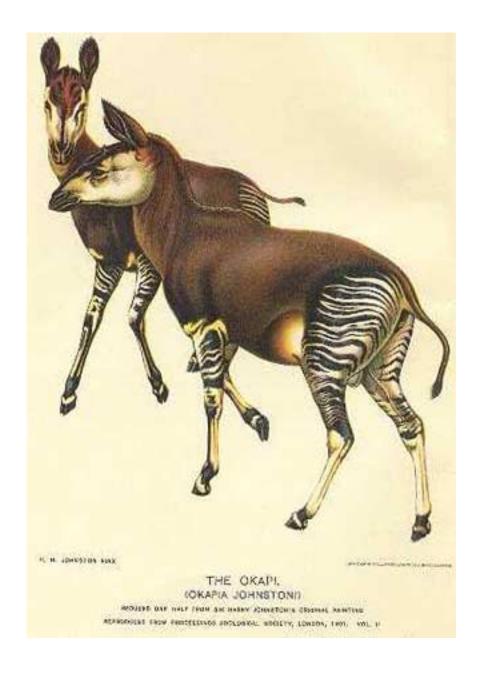
point it resembled this animal, because the neck was not disproportionately long, and the fore and hind limbs were nearly equal in length. The okapi bears on its skull remains of three horn cores, once no doubt as prominent as those in the existing giraffes. The process of degeneration, however, has set in, and in the living okapi the horn cores have been worn down to two small knobs on the forehead, covered outwardly with little twists of hair, and one less conspicuous knob or bump just between the eyes. Though the okapi bears certain superficial resemblances to the helladotherium, it is probable, on the whole, that it comes nearest in relationship to the giraffe. Being, however, sufficiently different from both, it has been constituted by Prof. Ray Lankester a separate genus, to which he has given the name Ocapia.

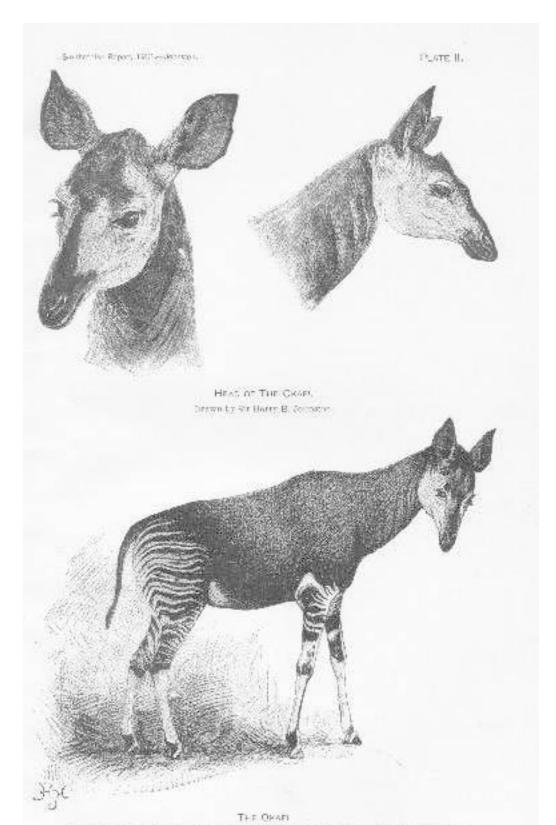
So far as is yet known, the existing range of the okapi is confined to the northern part of the Kongo forest, near the Semliki River. The okapi is found in the little territory of Mboga, which is an outlying portion of the Uganda Protectorate. It is also found in the adjoining territory of the Kongo Free State. This same forest, I believe, conceals the wonders besides the okapi, not yet brought to light, including enormous gorillas. I have seen photographs of these huge apes, taken from dead animals which have been killed by the natives and brought in to Beligians. A careful search might reveal several other strange additions to the world's mammalian fauna.

Quite recently fossil remains of giraffe-like animals have been found in Lower Egypt, as well as in Arabia, India, Greece, Asia Minor, and southern Europe. It is possible that the okapi and the giraffe are the last two surviving forms of this group in tropical Africa. The giraffe has escaped extermination at the hands of carnivorous animals by its development of enormous size and its wary habits. The giraffe, unlike the okapi, prefers relatively open country, dotted with the low acacia trees on which it feeds. Towering up above these trees, the giraffe with its large eyes can from 20 feet above the ground scan the surrounding country and detect the approach of lions, the only creature besides man which can do it any harm. Man, of course — the British and Boer sportsmen well in advance of the others — is doing his level best the exterminate the giraffe, as he has exterminated the mammoth, the Ur ox, the guagga, the dodo, and the auk. But for the presence of man, the giraffe might have been one of the lords of the earth. The defenseless okapi, however, only survived by slinking into the densest parts of the Kongo forest, where the lion never penetrates, and where the leopard takes to a tree life and lives on monkeys. The only human enemies of the okapi hitherto have been the Kongo dwarfs and a few black negroes of the larger type who dwell on the fringe of the Kongo forest. How much longer the okapi will survive now that the natives possess guns and collectors are on the search for this extraordinary animal, it is impossible to say. It is to be hoped very earnestly that both the British and Belgian Governments will combine to save the okapi from extinction.

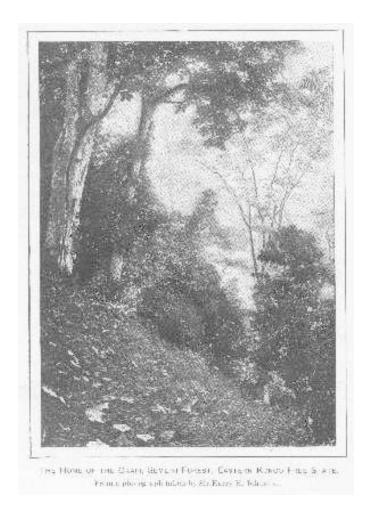
The group of ruminants to which the Ocapia belongs includes at the present day

the giraffe and possibly the prongbuck of North America. Far back in the history of the Artiodactylae,³ when in a section of them horns became the dominant characteristic, these appendages were developed mainly in two different fashions. The deer tribe grew bony appendages which started from knobs on the frontal bones, and these appendages fell off and were renewed every twelve months. When the horns of the stag fall they leave only a bony knob, which rises very little above the level of the skull. The Bovidae, or oxen-antelope group, developed first long bony prominences which went on growing year by year up until the age of maturity. These bony prominences came in time to be cased by horny coverings, and this we have the hollow-horned ruminants; for when these horny coverings are removed from the long bony sockets they are found to be hollow; they are not solid bony antlers growing from the top of a horn core. But midway between these two main groups there is a third, of which the giraffe and the prongbuck are two divergent specimens. Here





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was an intermediate stage between the deer and the oxen. Bony prominences, like those of the Bovidae, but not so long, grew out from the skull and were covered with hair. From the top of these prominences (as in the case of the prongbuck, the extinct Sivatherium, and probably in the ancestors of the giraffe) grew antlers or horns which were shed from time to time, as in the deer. This is the case with the modern prongbucks, and in all probability this was the case with the ancestors of the giraffe and other early embers of the giraffine family. To-day the giraffe only retains the long horn cores or sockets, from the end of which in all probability antlers once sprang. In the case of the okapi, as already remarked, these bony prominences have gradually dwindled to scarcely discernible bumps. In other respects, however, the new beast of Central Africa represents pretty nearly the primitive type from which the giraffe rose in exaggerated development of neck and limbs.

¹ Reprinted, by permission, from <u>McClure's Magazine</u>, September, 1901, pages 497-501.

 $^{^2}$ As a matter of fact, the dwarfs pronounced the word "o'api," but the big black tribes of the forest called the creature "okapi."

³ Most of the readers of <u>McClure's Magazine</u> are aware that the Artiodactyla are a suborder of ungulates in which the middle toes are equally developed. This groups includes the hippopotamus, the pigs, camels, deer, giraffes, oxen, sheep, goats, and antelopes.

A Chinese Woodpecker

George Lanning

Reprint from Wild Life in China, (Shanghai: "The National Review" Office. 1911).

There are many species and varieties of woodpeckers in different parts of China, and a specimen of the Fukien rufous kind will be found in the Shanghai Museum. He is about the size of the green species, but far less handsome, being covered with dark brown plumage with ruddy brown bars. Another variety is the Yungipicus Kalensis, a woodpecker about the side of a bulbul and marked very much like *Picus Mandarinus*. David describes a still smaller variety under the name of Vivia Innominata, but he does not say that it is found in this neighbourhood. It may have been this that I once saw in the Chekiang province when on a Christmas shooting trip. My companion and I were walking back to the boat one day with our guns under our arms. Crossing a mulberry plantation our attention was attracted to what we at first took to be a member of the tit family. It was a tiny little thing, and at thirty yards looked so like a tit that we should probably have passed it without further notice. But as our path lay closer to the tree, one of the low-cut mulberries, we saw that our little friend was certainly not an ordinary tit, and closer inspection still, of which he appeared to take no notice, shewed far more resemblance in bill and head to the woodpecker family. So we stood in wondering admiration. What could we call it? It had all the lightsome grace of the tits, but there was the woodpecker bill. We debated the question, the subject of debate all the while continuing his careful search for food within about ten yards of us. Science suggested shooting him so that he might be definitely examined, catalogued, and stuffed. Admiration argued mercy. How pretty he is, how lissome: watch him now standing on his head as the blue tit will; and. then, how trustful! Could anybody but a miscreant murder a fragile little creature like that after standing and weighing his fate? Besides, your cartridges are No. 5. You know they are, and the little inch or two of daintiness threatened with doom would be blown to bits at this distance. So there are a dozen reasons why you shouldn't shoot. "Tut, tut!" Science replied. "Think of the gain to the world's knowledge. This is a bird which is possibly new even to ornithologists. You have never seen anything like it before, and probably never will again!'

True words. I cannot tell whether there is a sort of avian telepathy which warned the little woodpecker-tit that Science might get the better of the argument, but he was off like a flash, and we saw him no more. We often think and speak of him, but to this day the debate has never been ended, though I think admiration and mercy are gradually getting the better of the regrets of science. Still—I should very much like to know exactly what she was.

From the Past: Curiosity

"A few days since, a party of gentlemen and ladies from Pulteneyville, made an excursion of pleasure, in a small sail boat, on Lake Ontario. While at the distance of about half a mile from the shore, they saw a large seal swimming in the lake. It soon approached the boat, and attempted to come on board, first at the bow. Failing there, it went round and made another effort at the stern, where the ladies were sitting. they had the courage to repeal the unwelcome visitor, and the party returned to the land, without the company of the singular animal. It is a very rare thing to see one of these animals in our lakes. This is the first time that we have ever heard of one having been seen in Lake Ontario. (Wayne <u>Sent</u>.)"

Source: Niles Weekly Register (Baltimore, MD), Sept. 12, 1829.

From the Past: Australian Mystery Beast

"I have already alluded to the paucity of quadrupeds, both in species and in number, but I have still to record the remarkable fact of the existence, in these parts, of a large quadruped, with a divided hoof: this animal I have never seen, but twice came upon its traces. On one occasion, I followed its track for above a mile and a half, and at last altogether lost it in rocky ground. The footmarks exceeded in size those of a buffalo, and it was apparently much larger, for, where it had passed through brushwood, shrubs of considerable size in its way had been broken down, and from the openings there left, I could form some comparative estimate of its bulk. These tracks were first seen by a man of the name of Mustard, who had joined me at the Cape, and who had there been on the frontier during the Caffre war; he had told me that he had seen the *spur* of a buffalo, imagining that they were here as plentiful as in Africa. I conceived, at the time, that he had made some mistake, and paid no attention to him until I afterwards twice saw the same traces myself."

Source: Grey, George, Esq. 1841. <u>Journals of Two Expeditions of Discovery in North-west and Western Australia During the Years 1837, 38 and 39...</u> (Adelaide: 1964 Reprint, Libraries Board of S. Australia.)

[Ed. Note — Water Buffalo were introduced into Australia in the 1820s.]

Eyes that Shine at Night

Ernest P. Walker, Assistant Director, National Zoological Park Reprinted from *Annual Report of the Smithsonian Institutions*, 1938.

The "shining" of eyes at night by the reflection of light is a common and generally fairly well known natural phenomenon of which little has been recorded except incidentally in accounts of hunting and of campfire scenes. The shining of the cat's eyes at night by reflected light is probably the best known of all eye reflections. The eyes of human beings very rarely shine. There are, however, occasional reports of the shining of a human being's eyes, and I have heard of one instance of a person being shot at night because his eyes shone. These, however, I have not verified.

While studying the condition and activity of small mammals in the recently completed Small-Mammal House in the National Zoological Park, I became interested in the different kinds of reflections obtained from the eyes of different animals and proceeded to make inquiry from naturalists and to search for literature on the subject.

In A Survey of Nocturnal Vertebrates in the Kartabo Region of British Guiana, Crawford ¹ refers to the glow of eyes and lists the kinkajou, jaguar, puma, ocelot, yaguaroundi, margay, opossum, three species of toads of the genus *Bufo*, and the giant goatsucker *Nyctibius*. He does not refer to the colors and does not mention the caimans which inhabit that general region and whose eyes give perhaps the most pronounced and beautiful glow I have observed.

A. J. Van Rossem ² lists 28 species of birds observed by him or recorded by others as "shining." He also refers to light reflections from the eyes of insects, spiders, and domestic animals. In this paper he lists 3 manuscripts and 5 publications recording eye shines, and brings out points that should be studied by future students of the subject. No other published material on the shining of the eyes of vertebrates has come to my attention.

Examinations of the eyes of various animals as well as those of man by use of the opthalmoscope have been made by several writers, notably Johnson ³ and Wood. ⁴

¹ Crawford, S. C., A survey of nocturnal vertebrates in the Kartabo region of British Guiana. <u>Journ. Animal Ecol.</u>, vol. 2, p. 282, November 1933.

² Van Rossem, A. J., Eye shine in birds, with notes on the feeding habits of some goatsuckers. The Condor, vol. 29, pp. 25-28, January 1927.

³ Johnson, G. L., Contributions to the comparative anatomy of the mammalian eye, chiefly based on ophthalmoscopic examination. <u>Proc. Roy. Soc. London</u>, ser. B, vol. 194, 1901.

⁴ Wood. C. A., The fundus oculi of birds, especially as viewed by the ophthalmoscope. Chicago, 1917

Both authors picture the surface of the retina as revealed to them through the opthalmoscope. These pictures, however, might be compared to the view that would be obtained by standing outside a dark room and projecting a beam of light onto the walls of the room, thereby revealing the color and other features of the walls to the observer standing outside. This is quite different from the "shining" of eyes, which merely brings back toward the observer diverging rays of colored light like small incandescent lights seen from a distance.

Information on the "shining of eyes" is so meager that it appears justifiable to record my observations in the hope that someone may be able to use them as a foundation for further studies. While eyes of animals in the wild are frequently observed at night, the name of the owner of the eyes is often unknown, and there is little likelihood that the same individual can be observed again under similar conditions. A zoo is unexcelled for this purpose as it permits one to study many different kinds of animals under more or less constant conditions and to observe repeatedly the same individuals.

In obtaining my observations I used a reflecting head lamp, similar to a hand flashlight, worn on my forehead connected by a cord to a three-cell battery in a pocket or on my belt. Flashlights carried in the hand were used at times but were not entirely satisfactory as the rays of the light must closely parallel the line of sight of the observer in order to obtain reflections from the greatest number of species and uniform results. The best results are obtained with a light of moderate intensity. If it is too bright, the shining is less conspicuous or does not show at all. Four main points are observable in every case. They are:

- (a) Whether or not the eyes reflect light.
- (b) If they reflect, the color of the reflection and whether the color is individually constant or variable; also whether or not it varies in different individuals of a species.
 - (c) Whether the reflection is dull, medium, or brilliant.
- (*d*) The angle from which reflections are obtainable, i. e., whether it is necessary for the observer to be opposite the center of the eye, or if the reflection can be obtained from behind the animal and in front of it, as well as directly opposite the center of the line of vision. This might be considered as wide or narrow angle of reflection.

For the sake of brevity the data given in the appended list relates almost entirely to observations on (b) and (c).

The description of colors in words and the indication of varying degrees of

brilliance or paleness are so difficult that the observations herein recorded can in general indicate only relative differences between animals.

The word "glow" is sometimes used to describe the character of the reflections. This term can well be used for the reflections given off by the eyes of alligators, crocodiles, and caimans; "shining" their eyes gives one the impression that he is looking into a brilliantly glowing pinkish opening in a dull surfaced bed of coal. In the majority of mammalian eyes observed I have gained the impression of looking at a highly polished metal surface. Sometimes the effect is likened to looking into an incandescent globe of the color indicated. Often pronounced light rays appear to emanate from the eyes. In some eyes, such as those of the smaller rodents, the effect is that of looking into an illuminated piece of amber.

To assist the reader to understand the character of the reflections, a colored drawing has been prepared for a few animals, to show some of the range of reflections obtained. Efforts were made to produce a plate that would show not only the colors but the glow or brilliance of the eyes, but several artists were unable to produce the effect even on an original and, had they done so, it is doubtful whether it could have been reproduced. The proper effect could undoubtedly be well simulated by placing small incandescent lights behind translucent spots of the right color on an opaque background. Indeed, the brilliance of the reflections is as impossible to show as is the gleam from snow in sunlight. At my suggestion, Mr. Fred Adams of the Dufaycolor, Inc., New York City, experimented in taking a few color pictures by photoflash. The results as to eye shine, though not entirely satisfactory, are promising.

The illustration shows the eyes in pairs, and as disks. Frequently, however, only a single eye is seen, or in some instances, depending on the position, both eyes are seen as ovals or crescents, or other modifications of a true circle. In practically all species, however, it is possible to obtain the shine in both eyes simultaneously to some extent, even though they are not perfect circles.

A confusing factor is the circumstance that different persons apparently see the reflections as quite different colors. One person who is usually good in recognizing colors by daylight insists that the reflections are without color. Others have described or painted for me their conception of some of the reflections much more reddish than I see them.

I have made no experiment designed to prove which surface of the eye produces the reflections. In the case of the animals that have eyes that "glow" or are like amber it appears that we look into the eye through the pupil as if the reflection came from the front surface of the retina. In those animals that give a reflection as from polished metal I gain no impression of looking into the eye. In most of these cases, however, the reflection is not obtainable closer than 8 to 20 feet—a distance that prevents one from observing which surface reflects. The reflections of alligators, crocodiles, and caimans can be seen when the observer is within a foot of the animal. In most animals, other than man and the higher primates, the retina has an extra coat or layer, the *tapetum lucidium*. This may be the reflecting surface.

The editor of the Journal of the Bombay Natural History Society (vol. 31, No. 1, p. 221) makes a brief comment regarding a short article by A. A. Dunbar Brander relative to the source of color in the eye of the gaur, which reads:

In volume IV of the Society's Journal the late Mr. J. D. Inverarity came to the same conclusion as Mr. Dunbar Brander and pointed out that the blue colouring of the gaur's eye is due to the *tapetum lucidium*—the lining to a greater or less extent of the back part of the choroid membrane of the eye which, in the gaur, is of a lovely peacock-blue color. It is this membrane which causes an animal's eye to shine in the dark. In the human eye it is opaque and black.

The eyes of most domesticated and some wild animals deteriorate in captivity so that the vision may become very poor. Defective eyes have been apparent in a few of the cases observed.

At the suggestion of Dr. Earl S. Johnston, of the Smithsonian Institution, Division of Radiation and Organisms, beams of red and blue light have been projected into the eyes. These rays were obtained by fastening a single thickness of red or blue Cellophane over the flashlight lens. Over 40 species of mammals, reptiles, and amphibians were examined under the red rays, but there was very little variation in colors of the reflected light from various animals other than the addition of a red tinge. They varied from a dull reddish amber through reddish silver to reddish gold, the differences being mainly those of brilliance. Observations on 30 species of mammals and reptiles gave similar results with blue rays, the reflections ranging from dull and pale bluish silver to blue-green and blue, with the metallic luster persisting in those species that give brilliant reflections under normal light. The reflections from the crocodilians were partially opalescent. The characteristics of the responses to colored lights indicate that fluorescence does not account for the response to the rays of the torch. Reflection is left as the only probable source of the return light.

In some animals the color of the "shine" is constant whereas in others it may appear as three different colors in a few seconds, while in some instances the color is constant for each observation but may be different on different days.

It has been suggested that the change is caused by the animal's changing the direction of its eyes. In some cases this is true, but in others I have been unable to

detect any changes in the position of the eye, and since most animals change their line of sight mainly by moving the head rather than rolling the eyes it is probable that a change that would alter the reflected light would be detected in movement of the head. Most of the bears that I have observed swing their heads from side to side without changing the color of the reflections from their eyes.

A few animals, notably the binturong and the golden cat, close their eyes very quickly when the beam of light is directed at them. Most, however, stare directly at the light or move the head only slightly.

Of the monkeys, no shine was detected from the eyes of orangutans, chimpanzees, gibbons, macaques, langurs, baboons, and marmosets. A faint suggestion of a shine was detected in the ring-tailed lemur. On the other hand, the eyes of the slow loris and the potto gave the most brilliant reflections of all eyes observed. Mr. A. J. Van Rossem once told me he had seen the eyes of spider monkeys shine.

My observations suggest that the majority of rodent eyes shine but dully in browns, hazel or amber, but the porcupines are an exception—their eyes are very brilliant—generally silvery and reflecting through a wide angle.

In the case of snakes, one is sometimes tempted to mistake the shine from the surface of the scale over the eye (the brille) for the true reflection of the eye.

These studies have been more fruitful of unsolved questions than of answers. Some of the questions are:

- 1. Do the animals possess vision over a wide cone or only over that cone in which reflections may be obtained? If the former is the case, it indicates that such animals as the hippopotamus and Old World porcupines can see in practically any direction except for a narrow angle directly behind them. Others have a very narrow angle of vision.
 - 2. What is the difference between eyes that shine and those that do not?
 - 3. What produces the different colors of reflections?
- 4. What changes take place in an eye that cause it to give differently colored reflections in quick succession?
- 5. What is the explanation of the fact that eyes that do not change colors quickly give quite different colored reflections on different dates?

6. Why do some eyes that give reflections at a distance beyond 8 to 10 feet fail to give any when viewed at a lesser distance?

In the following list the occurrence of the letters C., or C. and E., indicate that the observations were made by Jeremiah A. Collins or Collins and Arthur L. Edwards, National Zoological Park policemen, while on night duty. This opportunity is taken to thank them for their assistance. The mark / between notes indicates different dates of observation. Some of the animals have been observed many times. The figures in parentheses indicate the number of individuals observed.

Mammals

Marsupialia

Didelphidae:

Virginia opossum (*Didelphis virginiana*) Dull orange.

Zorro or banana opossum (*Metachirus opossum*) Silvery to pale amber.

Macropodidae:

Tree kangaroo (*Dendrolagus inustus*) (2) Dull deep red amber. / Deep reddish

orange./Reddish orange and blood red.

Carnivora

Felidae:

Cheetah (*Acinonyx jubata*) Green. C.

Puma (Felis concolor) (3) Pale green to silvery-gold.

Lion (Felis leo) Golden. C.

Uganda wild tabby (Felis ocreata) Green changing to slightly golden. / Green

then silvery.

Jaguar (*Felis onca*) Golden. C.
Ocelot (*Felis pardalis*) Bright golden. C.

Lesser tiger cat (Felis pardinoides) (1) Green with occasional silvery tinge. Reflection

obtained when rays are at a wide angle from eye.

East African leopard (Felis pardus suahelicus) Green. C.

Siberian tiger (Felis tigris longipilis) (2) Pale green. / Silver. C.

Caracal (*Lynx caracal*) Greenish gold.
Bay lynx (*Lynx rufus*) (2) Green and silvery.

Bay or golden cat (*Profelis temmincki*) (2) Dull orange. / Silvery. / Repeatedly observed,

usually pale golden.

Viverridae:

Binturong (Arctictis binturong) Green changing to salmon pink then yellow./

> Yellow./Silvery to golden, but shut eyes quickly. / Brilliant silver and light green. / Opalescent.

Civet (Civettictis civetta)

Pale green, silver, orange, depending on angle. Pale green and silver. / Clear light green.

Neumann's genet (Genetta dongalana neumanni)

Civet (Moschothera megaspila)

Silver, yellow, and occasional green.

Palm civet (Paradoxurus hermaphrodytus) (3)

Green, then amber. / Pale blue-green then golden. / Golden and silver. / Green, then golden, then silver. 1 dull and 1 brilliant. / Green then golden.

Canidae:

Coyote (Canis latrans) (4) Brilliant golden. / Golden and light greenish.

/ Constant brilliant blue-green. / Green and silvery.

Golden and greenish. / Very small, variable orange Albino coyote (Canis latrans) (2)

to silvery and green.

Green, then silvery. Timber wolf (Canis lupus lycaon)

Wolf (Canis lupus nubilus) (5) Orange, silvery, and green. / Orange, golden, and

occasional green.

Wolf and dog hybrid (Canis lupus nubilus x domesticus) Usually light golden silvery.

Occasionally green.

Variable. Brilliant golden, sometimes tinged with reddish. Texas red wolf (Canis rufus) (7)

Sometimes silvery. Often blue-green. Changes due

to position.

Golden. C. Maned wolf (Chrysocyon jubata)

Sumatran wild dog (Cuon javanicus sumatrensis) Green. C.

Red fox (Vulpes fulva) (4) One animal with one large brilliant reddish gold eye

and one very small and dull. Three others faint greenish

silvery; silvery and golden; all brilliant.

Procyonidae:

Gray coatimundi (Nasua narica) (2) Blue green, silvery to gold. / Green and silvery.

Kinkajou (Potos flavus) (3) Light bright gold; golden, then green. / Brilliant deep

gold, occasionally with green tinge. / Golden. / Brilliant orange to gold. Slight difference between 2 animals

observed.

Black raccoon (*Procyon lotor*) (3) Medium amber. / Pale green. / Silvery and later light

yellow. Did not shine, then green.

Very pale yellow. Albino raccoon (*Procyon lotor*) (1)

Very pale yellow. Normal raccoon (Procyon lotor)

Bassariscidae:

Ring-tail or cacomistle (Bassariscus astutus) (2) Green, silvery, orange.

<u>Mustelidae</u>:

Hog badger (*Arctonyx collaris*) (2) Brassy to silvery. Fairly brilliant./silver to light gold.

Asiatic marten (*Charronia flavigula henricii*) Blue green. / Green. / Green. White tayra (*Galictis barbara barbara*) (2) Dull silvery to light orange.

Alaskan otter (*Lutra canadensis*) Light amber.

Florida otter (*Lutra canadensis vaga*) Silvery to amber. / Silver. / Brilliant pale yellow

both in water and out.

Skunk (*Mephitis nigra*) (4) Bright deep amber. / Gold.

Small-clawed otter (*Micraonyx leptonyx*) Pale yellow to light amber. / Light golden to silvery.

Ferret (*Mustela eversmanni*) Blue-green to silver. Mink (*Mustela vison vison*) Yellow and green.

Florida spotted skunk (Spilogale ambarvalis) Very light amber. / Silver to light amber.

Ursidae:

Glacier bear (*Euarctos emmonsii*) Silver tinged with golden.

Polar bear (*Thalarctos maritimus*) Silver tinged with very pale blue. Like a star.

Hybrid bear (Thalarctos maritimus x Ursus gyas) (3) Greenish silvery and blue-green.

Kidder's bear (*Ursus kidderi*) Golden-silvery to deep gold.

Pinnipedia

Otariidae:

California sea lion (Zalophus californianus) Very dull pale amber.

Phocidae:

Pacific harbor seal (*Phoca richardii*) (2) Golden.

Primates

Callitrichidae:

Black-tailed marmoset (*Mico argentata*) None.

<u>Cercopithecidae</u>:

Javan macaque (*Macaca mordax*) None.

Lemuridae:

Ring-tailed lemur (Lemur catta) (2) Dull pale amber. / One golden and one light

gold. / Golden.

Slow loris (*Nycticebus coucang*) (3) Brilliant amber. / Brilliant deep red amber. /

Brilliant deep red gold. / Deep amber. / Amber.

Potto (*Perodicticus potto*) Brilliant faint-greenish to very pale lemon.

Rodentia

Sciuridae:

Sumatran tricolored squirrel (*Callosciurus melanops*) (2) Dull pale amber.

Albino woodchuck or groundhog (*Marmota monax*) Orange. Javan giant squirrel (*Ratufa bicolor*) Red amber.

Rock squirrel (*Ratufa* sp.) Dull deep orange.

Lesser white squirrel (Sciurus finlaysoni) (6) Dull pale amber / Light golden.

Hoffman's squirrel (*Sciurus hoffmani* sub. sp.) (2). Dull light brown.

Fox squirrel (*Sciurus niger*, dark phase) Red amber / Deep orange.

Heteromyidae:

Merriam's silky pocket mouse (*Perognathus merriami merriami*) (2) Medium amber, medium bright.

Jaculidae:

Egyptian jerboa (*Jaculus jaculus*) (5) Pale amber. / Very pale amber.

<u>Cricetidae</u>:

Woodrat (*Neotoma micropus*) Pale yellow amber. / Light dull amber.

White-footed mouse (*Peromyscus leucopus*) (2) Dull amber. / Dull amber.

Cotton rat (Sigmodon hispidus) Dull deep amber.

Muridae:

Gambia pouched rat (*Cricetomys gambianus*) (2) Dull orange.

Bamboo rat (*Notocleptes sumatrensis*) Pale amber. / None.

Grasshopper mouse (*Onychomys leucogaster*) Dull amber.

<u>Dipodidae</u>:

Kangaroo rat (*Dipodomys merriami*) Dull pale amber. Kangaroo mouse (*Microdipodops pallidus*) Dull pale amber.

Hystricidae:

Malay porcupine (Acanthion brachyurum) (3) Brilliant silvery orange (reflect in scant

light)./Bright light silver. Reflect at wide angle from light source and overwide angle.

African brush-tailed porcupine (*Atherurus africana*) (2) Very bright silver to very pale yellow.

East African porcupine (*Hystrix galeata*) (2) Medium amber. / Orange when first

awakened; silvery.

Brush-tailed porcupine (Thecurus sumatrae) (2) Brilliant silvery. Shine in scant light.

Erethizontidae:

Prehensile-tailed porcupine (Coendou prehensilis) Light orange. Visible from very wide

angle. / Golden to light yellow both close up and at a distance.

Myocastoridae:

Coypu rat (*Myocastor coypu*) (2) Dull silver tinged with gold.

Capromyidae:

Hutia (Capromys pilorides) (8) Dull medium amber. / Deep reddish orange. /

Deep golden or reddish orange.

Cuniculidae:

Central American paca (*Cuniculus paca virgatus*) Darkredamber, moderate brilliance.

/ Deep golden.

Dasyproctidae:

Agouti (Dasyprocta croconota prymnolopha) (2) Dull orange.

Hydrochoeridae:

Capybara (*Hydrochoerus hydrochoerus*) Dull hazel. / Brown eye but no reflection.

Lagomorpha

<u>Leporidae</u>:

Varying hare or snowshoe rabbit (*Lepus americanus*) Medium amber, medium brilliance.

/ Orange.

Artiodactyla

Bovidae:

Aoudad (Ammotragus lervia) Silver. C.

Anoa (Anoa depressicornis) Brownish red. C.

Gaur (*Bibos gaurus*) (2) Brilliant gold. / Silver. C.

Gayal (Bos frontalis) Gold. C.

White-tailed gnu (*Connochaetes gnu*) (2) Brilliant greenish-silver.

African buffalo (*Synceros caffer*) (2) Bright silvery greenish gold. / Silver, C.

<u>Tragulidae</u>:

Javan mouse deer (*Tragulus javanicus*) Copper, silvery, pale green. / Brilliant silvery with

pale blue-green tinge./Greenish silver, then golden. Reflects over wide angle and when light is

directed at wide angle. Brilliant

Cervidae:

Axis deer (*Axis axis*) Silvery with faint greenish tinge. / Pale amber.

Barasingha deer (Cervus duvaucellii) Green, silver, and gold.

Barking deer (Muntiacus javanica) Golden. C.

Barking deer (*Muntiacus sinicus*) Female, 1 eye gold, 1 eye silver. C.

<u>Camelidae</u>:

Llama (*Lama glama*) Orange. / Orange.

Giraffidae:

Giraffe (Giraffa camelopardalis) (4) Greenish silvery gold. / Bright silver. C.

Hippopotamidae:

Pigmy hippopotamus (*Choeropsis liberiensis*) Gold (wide angle). / Brownish red. C. Hippopotamus (*Hippopotamus amphibius*) Gold (very wide angle). / Gold. C.

Perissodactyla

Equidae:

Asiatic wild ass or kiang (*Equus onager*) Silvery, pale amber. Wide angle. / Silver.

Mongolian wild horse (*Equus przewalskii*) Silver. / Silvery, pale amber.

Chapman's zebra (*Equus quagga chapmani*) Brilliant silver with gold tinge. / Silver. C.

Mountain zebra (*Equus zebra*) Dull silver.

<u>Tapiridae</u>:

Asiatic tapir (*Acrocodia indicus*) Brilliant gold. / Brownish red. C. Baird's tapir (*Tapirella bairdii*) Brilliant gold. / Brownish red. C.

Brazilian tapir (*Tapirus terrestris*). Ruby red. C.

Rhinocerotidae:

Black rhinoceros (*Diceros bicornis*) Dull red. C.

Proboscidea

Elephantidae:

Sumatran elephant (*Elephas sumatranus*) Red. C.

African elephant (Loxodonta africana oxyotis) Pale silvery. / Red. C.

Edentata

Choloepodidae:

Two-toed sloth (*Choloepus didactylus*) Bright red. C.

<u>Dasypodidae</u>:

Six-banded armadillo (*Dasypus sexcinctus*)

Light dull brown.

Birds

Casuariiformes

Casuariidae:

Cassowary (Casuarius sp.)

Amber. C.

Dromiceiidae:

Common emu (*Dromiceius novaehollandiae*)

Dull amber.

Sphenisciformes

Spheniscidae:

Jackass penguin (Spheniscus demersus)

Gold. C.

Pelecaniformes

<u>Phalacrocoracidae</u>:

Flightless cormorant (Nannopterum harrisi)

Dull pale amber

Farallon cormorant (*Phalacrocorax auritus albociliatus*)

Brilliant silver.

Florida cormorant (*Phalacrocorax auritus floridanus*)

Gold. C.

Fregatidae:

Lesset frigate bird (Fregata ariel)

Silver. C.

Ciconiiformes

Ardeidae:

American egret (Casmerodius albus egretta)

Silver. C.

Snowy egret (*Egretta thula*)

Gold and silver. C.

Louisiana heron (*Hydranassa tricolor ruficollis*)

Gold and silver. C.

Black-crowned night heron (*Nycticorax nycticorax naevius*)

Silver.

Cochleariidae:

Boatbill heron (Cochlearius cochlearius)

Silvery pale gold. Ruby red. C.

Balaenicipitidae:

Shoe-bill stork (*Balaeniceps rex*)

Amber. C.

Scopidae:

Hammerhead (*Scopus umbretta*) Silver. C.

Ciconiidae:

Woolly-necked stork (*Dissoura episcopus*) Silver. C.

Saddle-billed stork (*Ephippiorhynchus senegalensis*) Bright gold. C.

Malay stork (*Ibis cinereus*) Silver. C. Indian adjutant (*Leptoptilus dubius*) Gold. C.

<u>Threskiornithidae</u>:

Roseate spoonbill (*Ajaia ajaja*) Ruby red. C.

Phoenicopteridae:

Chilean flamingo (*Phoenicopterus chilensis*) Ruby red. C.

Anseriformes

Anatidae:

Wood duck (*Aix sponsa*) Silvery gold.

Black-bellied tree duck (Dendrocygna autumnalis) Gold to silver. C.

Falconiformes

Cathartidae:

California condor (*Gymnogyps californianus*) Faint pale gold.

Accipitridae:

Red-tailed hawk (*Buteo borealis*)

No reflection. / None.

Red-shouldered hawk (*Buteo lineatus*) Faint silvery.

Galliformes

<u>Megapodiidae</u>:

Molucca megapode (Megapodius freycineti) Gold. C.

<u>Cracidae</u>:

Panama curassow (*Crax rubra*) Bright gold. C.

Phasianidae:

Chukar partridge (*Alectoris graeca*) Gold. C.

Argus pheasant (Argusianus argus) Silver. / Bright gold. C.

Cheer pheasant (*Catreus wallichii*) Gold. C.

Migratory quail (*Coturnix coturnix*) Silver. C. Jungle fowl (*Gallus gallus*) Gold. C.

Green peafowl (*Pavo muticus*) Bright gold. C.

Ring-necked pheasant (*Phasianus torquatus*) Silvery to pale brass.

Gruiformes

Gruidae:

Demoiselle crane (*Anthropoides virgo*) Silvery to pale brass. / Gold. C.

Sandhill crane (*Grus canadensis tabida*) Silvery to pale brass.

Psophiidae:

Gray backed trumpeter (*Psophia crepitans*) Amber. C.

Hallidae:

New Zealand mud hen (*Porphyrio melanotus*) Silver. C. Gray-headed porphyrio (*Porphyrio poliocephalus*) Silver. C.

Charadriiformes

Haematopodidae:

European oyster catcher (*Haematopus ostralegus*) Gold. C.

Charadriidae:

South American Lapwing (*Belonopterus cayennensis*) Silver. C.

Laridae:

Silver gull (*Larus novaehollandiae*) (50) No shine. / No shine.

Columbiformes

Columbidae:

Nicobar pigeon (*Caloenas nicobarica*) Silver. C. Archangel pigeon (*Columbia livia*) (domestic) Gold. C. Victoria crowned pigeon (*Goura victoria*) Gold. C.

Psittaciformes

Psittacidae:

Yellow-naped parrot (*Amazona auropalliata*) Gold. E. and C. Double yellow-head parrot (*Amazona oratrix*) Gold. E. and C. Illiger's macaw (*Ara maracana*) Gold. E. and C.

Mexican green macaw (Ara mexicana)	Gold. E. and C.
Banksian cockatoo (Calyptorhynchus magnificus)	Silver. E. and C.
Sulphur crested cockatoo (Kakatoe galerita)	Silver. E. and C.
Leadbeater's cockatoo (Kakatoe leadbeateri)	Silver. E. and C.
Slender-billed cockatoo (Kakatoe tenuirostris)	Silver. E. and C.
Cockatiel (<i>Leptolophus novaehollandicus</i>)	Gold. E. and C.
Quaker paroquet (<i>Myopsita monachus</i>)	Gold. E. and C.
Kramer's paroquet (<i>Psittacula krameri</i>)	Gold. E. and C.
Long-tailed paroquet (<i>Psittacula longicauda</i>)	Gold. E. and C.

Strigiformes

Strigidae:

Great horned owl (*Bubo virginianus*) Orange, medium brilliance. / Different individuals:

greenish silvery gold; medium brilliance;

golden red.

Screech owl (*Otus asio*) Ruby red.

Barred owl (*Strix varia*) Orange, brilliant. / Fairly brilliant deep gold.

Caprimulgiformes

Podargidae:

Tawny frogmouth (*Podargus strigoides*) Ruby red. C.

Coraciiformes

Alcedinidae:

Kookaburra (*Dacelo gigas*) Gold. C.

Momotidae:

Motmot (Momotus momotus parensis) Gold. C.

Bucerotidae:

Long crested hornbill (*Berenicornis cornatus*) Amber. C. Rhinoceros hornbill (*Buceros rhinoceros*) Green gold. C.

Abyssinian ground hornbill (*Bucorvus abyssinicus*) Gold. C. Concave casque hornbill (*Dichoceros bicornis*) Gold. C. Pied hornbill (*Hydrocissa convexa*) Silver. C.

Piciformes

Ramphastidae:

Toco toucan (*Ramphastos toco*) Silver. C.

Passeriformes

Corvidae:

American crow (*Corvus brachyrhynchos*) Silver. C. Australian crow (*Corvus coronoides*) Silver. C.

Paradiseidae:

Lesser bird of parsdise (*Paradisea minor*) Gold. C. Red bird of paradise (*Paradisea rubra*) Gold. C. 12-wired bird of paradise (*Seleucides niger*) Gold. C.

Sturnidae:

Glossy aplonis (*Aplonis chalybea*) Ruby red. C.

<u>Icteridae</u>:

Cuban red-winged blackbird (Agelaius assimilis) Silver. C.

Reptiles

Loricata

Crocodylidae:

Alligator (Alligator mississipiensis) (15) Brilliant pinkish orange glow

Caiman (Caiman sclerops) (3) Very brilliant pinkish orange glow. Effect of

looking far into the eye.

West African crocodile (Crocodylus catapractus) (1) Brilliant pinkish orange glow.

Salt-water crocodile (*Crocodylus porosus*) Pinkish orange glow.

Broad-nosed crocodile (Osteolaemus tetraspis)

Brilliant pinkish orange glow.

Malayan gavial (*Tomistoma schlegeli*) Pinkish orange glow.

Squamata

No satisfactory shine observed from any of about 25 species of lizards.

Ophidia

Boidae:

Green tree boa (*Boa canina*) Brilliant lemon. Cook's tree boa (*Boa cooki*) Bright orange. Colubridae:

Pike-headed tree snake (Oxybelis acuminatus) Pale golden, fairly bright.

Crotalidae:

Copperhead (*Agkistrodon mokasen*) Faint glisten.

Viperidae:

Gaboon viper (*Bitis gabonica*) Dull pale silver.

Amphibia

Salientia

Bufonidae:

Sapo de concha (*Bufo empulul*) Dull pale orange.

Cuban giant toad (Bufo peltocephalus) Amber, medium brilliance

Leaf toad (*Bufo superciliosus*) Amber.

Ceratophrydae:

Horned toad (*Ceratophrys dorsata*) Brilliant medium amber.

Hylidae:

Australian tree frog (*Hyla caerulea*) Brilliant pale amber.

Cuba tree frog (*Elyla septentrionalis*) Deep amber, medium brilliance

Fishes

Zebra fish (*Brachydanion rerio*) Brilliant silver.

[Editor's Note: Due to technical difficulties, the accompanying plate could not be reproduced along with the article.]