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# Lettre n°24

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#### Chers collègues et amis,

Nous avons fêté les 150 ans du Muséum de Toulouse qui nous a accueillis dans ses somptueux locaux, réhabilités de 2008 à 2011. Jacques Castanet, notre président dont c'était le dernier exercice, a souligné le record d'inscription, plus de 140 et 180 présents dans l'amphithéâtre... La barre a été placée très haut par Nicolas Vidal du Muséum de Paris sur la systématique moléculaire chez les squamates, remettant en question bien des certitudes (couleuvres : genre « poubelle »...).

D'autres communications portaient sur des espèces invasives anciennes mais terriblement destructrices comme les poissons par Mathieu Denoël et les chats domestiques par Roman Pavisse (ces derniers sont aussi la 1<sup>ère</sup> espèce invasive aux Etats-Unis d'après Allen Salzberg). Sur les tortues, deux communications de Marc Cheylan, l'une sur les apports de la génétique pour la tortue d'Hermann, origine avant l'arrivée de l'homme en Corse, introduite pour Minorque, avec deux unités génétiques, à l'Ouest, continentale (les Albères), à l'Est, insulaire (Corse, Sardaigne, Sicile). L'autre portait sur ses besoins hydriques dans le Var. Enfin, sur la Cistude en Midi-Pyrénées par Laurent Barthes, Manon Eudes et Rozenn Rocher, le suivi par « Site-Occupancy », la modélisation des probabilités de présence.

A l'Assemblée Générale, écourtée par un « timing » trop serré, j'ai réussi à soulever la question de « Pourquoi dans l'activité de l'année 2015, aucune mention de l'activité du Groupe Cistude de la SHF, aussi bien les Journées Techniques en Alsace, que le Vème Symposium Emys à Kiten en Bulgarie ? »

Les 30-31 octobre, j'ai soutenu moralement les jeunes collègues qui, à Ménigoute tenaient le stand SHF, avec l'aide de Maud et Mathieu Berroneau. Une mention particulière pour le film de Maurice Dubroca : « <u>les hyènes d'Harar</u> », en Ethiopie, la cohabitation, si naturelle, avec des fauves...

C'est l'occasion de vous présentez mes meilleurs vœux pour 2016, quelques photos et informations « cistudes et apparentées », bonne lecture !

Alain Veysset, rédacteur



Emys d'Ets Alocs, dorlotées au CRT,

et qui vous souhaitent une excellente année 2016 !

#### Dear Colleagues and Friends,

We celebrated the 150 years of the Museum of Toulouse who received us in its sumptuous premises renovated between 2008 and 2011. Jacques Castanet our president (and it was his last duty) has emphasized the record of 140 inscriptions and 180 people present in the hall... The crossbar was put very high by Nicolas Vidal from the Museum of Paris on molecular systematic among the squamata laying a lot of certainties down again (the Colubrid snakes, a bin genus...).

Other reports were on ancient invasive species but terribly destructive like fishes by Mathieu Denoël or domestic cats by Roman Pavisse (they are also the first invasive species in the US for Allen Salzberg). On turtles two reports by Marc Cheylan, one on the contribution of the genetics for the Hermann's tortoises, origin before humans in Corsica, introduced in Minorca with two genetic groups on the west side: continental (Albera) on the east one: insular (Corsica, Sardinia, Sicilia). The other one was on the need of water in the Var department. Finally was on the pond turtle in "Midi-Pyrénées" by Laurent Barthes, Manon Eudes and Rozenn Rocher the survey through: "Site-Occupancy", the modelling of the probabilities of presence.

The general meeting was shortened due to tightened timing. Anyway I succeeded to raise a question : "Why in the 2015 activities of the Society there were no mention of the activities of the "Cistude Group", none on the Technical Days in Alsace, none on the Vème Emys Symposium in Kiten in Bulgaria?"

The 30<sup>th</sup> and 31th of October I supported morally the young colleagues who kept the stand of the SHF in Ménigoute with the help of Maud and Mathieu Berroneau. A particular attention to the film of Maurice Dubroca "the hyenas of Harar" in Ethiopia, this so natural cohabitation with wild animals.

I take the opportunity to wish you a Happy New Year 2016 and also to give you some photos and information "Emys and more", enjoy reading !

Alain Veysset, editor



Photo d'une petite Mauremys trouvée dans la rocaille, en compagnie de 2 autres petites. Elle s'est faite transpercer par une racine de zoysia, sorte de chiendent-gazon. La plante est entrée par le flanc et est ressortie par l'épaule! Bien entendu nous lui avons enlevé sans difficulté et sans saignement. C'était en novembre 2015, je l'ai donc gardée en aquarium chauffé, elle va très bien et est en pleine croissance. Jean-Paul Hardy

#### Selected photos from the 43th SHF Congress



Jacques lance le 43<sup>ème</sup> Congrès...

Dans Toulouse la Rouge, ici le Capitole.



Que de jeunes dans l'amphithéâtre ! Et les anciens, cheveux blanchis, certes, mais au 1<sup>er</sup> rang et au taquet...



L'éléphant ornant la majestueuse entrée du Muséum et son ptérodactyle planant... A twenty five million year fossil of tortoise was discovered on the Toulouse metro's building site. This evokes the Miocene period, when the Toulouse region was warmer and more humid than today. It is Francis Duranthon, the curator of the Natural History Museum who studied this specimen of Ptychosgaster genus which is about 40cms long [La Tortue] February 2003...

#### Selected photos from Toulouse



Soirée festive dans un restaurant à côté du Muséum avec les deux principaux organisateurs du Congrès, Maud et Laurent…



Mickaël Barrioz, notre nouveau président au côté de Claude Miaud et dernier repas au Muséum, à la cafétaria, au premier plan, une élégante...



Une très belle histoire de discoglosse par Salvador Bailon, abondant fossile disparu, redécouvert, puis déclaré éteint, enfin ressuscité (nous sommes en Palestine…) du marais et préservé. Matthieu Berroneau et son équipe nous remercie de notre attention !

#### Selected photos from Toulouse and Ménigoute



L'occasion des retrouvailles amicales, de riches échanges, d'apprécier les talents comme ceux de Marion Jouffroy, organisatrice et illustratrice du congrès.



Les charmants sourires de la SHF à Ménigoute.



Pacte de non-agression de 4 siècles, entre les 160 hyènes tachetées qui entourent la ville d'Harar et ses habitants... Des animaux à l'intelligence sociale exceptionnelle. Qu'attend-on pour cohabiter, vivre avec la nature, plutôt que la détruire ?

# <u>Kiten protocol</u>

*Having met together* in Kiten, Bulgaria, from de 19<sup>th</sup> to the 21<sup>st</sup> august, in the 5th International Symposium on *Emys orbicularis*, experts on the study and protection of the species, representatives from nine European countries,

*Concerned* by the overall increase in illegal traffic of native animal species in Europe and in particular by the massive cross-border illegal traffic in turtles.

*Conscious* that the distribution area and density of populations of the five continental species of turtles native to Europe has fallen and shrunk dramatically in recent decades.

*Aware* that a proper quick release of the animals sized can save many lives and restore wild populations of turtles.

**Recognizing** that the principle of state sovereignty over its territory and over the species that live in that territory should not be an obstacle to achieve full and effective international cooperation.

**Recognizing** the efforts that authorities of the various European countries have undertaken in recent years to protect by law and sign international agreements protecting wildlife.

**Recognizing** that the delicate situation in which Europeans turtles are requires the widest possible cooperation among all countries and their participation in giving adequate and effective national and international response in accordance with their responsibilities;

*Agree* to recommend to the authorities of the European countries to follow the measures listed below in case of massive confiscation of turtles:

**Bear always in mind** article VIII of CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) and the imposed changes in the Conference of the Parties (CoP 9) at Fort Lauderdale, 1994, sections 4 and 5, that establish what should be done once the animals have been seized, although there are some actions highly recommended to carry out:

*Establish* the precise locality of origin of the animals confiscated through a quick police investigation.

At the same time, *carry out* genetic analysis of the turtles in order to determine their origin.

*Accomplish* a thorough check out of the animals, keeping them in separate groups to avoid stress and to ease its control.

**Encourage** a quick release of the turtles at their place of origin, once the exact locality has been fixed and the health of each of the animals verified.

These main recommended measures shall be accompanied with other recommended actions:

Acceptance of economic costs by the authorities, based on realistic budgeting.

Intensify control over traffic of protected species on the Internet.

*Increase* coordination between different state organs and between different organs in different countries in order to rapidly locate and repatriate confiscated animals.

Encourage the creation of *Recovery Centers* recognized as collaborative CITES Centers with the aim of keeping animals for fixed periods of time, assessing their health and with the main aim of finally releasing the animals in their original habitat.

Joan Budó (Spain) – C.R.T. l'Albera (Turtle & Tortoise Recovery Center). Uwe Fritz (Germany) – Senckenberg Dresden (Natural History Collections). Marc Girondot (France) – Centre National de la Recherche Scientifique, Paris. Peter Havaš (Slovakia) – Natura Carpathica, Košice. Yuri Kornilev(Bulgaria) – National Museum of Natural History, Sofia. Beata Prusak (Poland) – Polish Academy of Sciences, Magdalenka. Maria Schindler(Austria) – Danube Floodplains National Park. Joaquim Soler (Spain) – CRARC (Reptile Recovery Center). Ljiljana Tomović (Serbia) – University of Belgrade, faculty of Biology. Melita Vamberger (Slovenia) – Senckenberg Dresden (Natural History Collections). Alain Veysset (France) – Emys Conservation – Société Herpétologique de France.



An assessment of Emys orbicularis online trade in Romania, a threat factor for conservation



## Reptiles - Amphibiens - Conseil - Information - Nature - Environnement

Si vous chercher des informations concernant la taxonomie, la nomenclature, la biologie, la répartition... sur les Amphibiens et Reptiles du monde entier, l'Association RACINE peut vous aider !

Spécialisé dans la recherche bibliographique (avec plus de 75 000 références), nous pouvons certainement vous aider ou répondre à vos interrogations.

Réponse rapide et tarifs particulièrement étudiés.

Pour tout renseignement vous pouvez nous contacter :

Thierry Frétey Docteur d'Université en Biologie 5, allée des cygnes 35750 Saint Maugan tel : 02 99 07 34 53 email : fretey.thierry@wanadoo.fr

Je vous souhaite une Bonne Année 2016!

Bien cordialement Thierry Frétey

Maroya Spalding Walters, Latoya Simmons, Tara C. Anderson, Jamie DeMent, Kathleen Van Zile, Laura P. Matthias, Sonia Etheridge, Ronald Baker, Cheryl Healan, Rita Bagby, Roshan Reporter, Akiko Kimura, Cassandra Harrison, Kadri Ajileye, Julie Borders, Kia Crocker, Aaron Smee, Meg Adams-Cameron, Lavin A. Joseph, Beth Tolar, Eija Trees, Ashley Sabol, Nancy Garrett, Cheryl Bopp, Stacey Bosch, Casey Barton Behravesh

Pediatrics, January 2016

Dr Walters developed the data collection instruments, coordinated the data collection, conducted the analysis, and drafted and revised the manuscript; Ms Simmons and Dr Anderson reviewed and revised data collection instruments, helped coordinate data collection, and critically reviewed and revised the manuscript; Drs Reporter, Kimura, and Ajileye and Ms Bagby, Ms DeMent, Ms Van Zile, Ms Harrison, Ms Borders, Ms Crocker, Ms Adams-Cameron, and Mr Smee collected data through patient interviews, interpreted epidemiologic data, coordinated environmental sampling, and critically reviewed and revised the manuscript; Ms Matthias, Ms Etheridge, Mr Baker, Ms Healan, Mr Joseph, Ms Tolar, Dr Trees, Ms Sabol, Ms Garrett, and Ms Bopp conducted laboratory analyses, interpreted laboratory data, and critically reviewed and revised the manuscript; Drs Bosch and Behravesh reviewed and revised data collection instruments, supervised coordination of collection of patient and environmental data, and critically reviewed and revised the manuscript; and all authors approved the final manuscript as submitted.

#### Abstract

**OBJECTIVE:** Turtle-associated salmonellosis (TAS), especially in children, is a reemerging public health issue. In 1975, small pet turtles (shell length <4 inches) sales were banned by federal law; reductions in pediatric TAS followed. Since 2006, the number of multistate TAS outbreaks has increased. We describe 8 multistate outbreaks with illness-onset dates occurring in 2011-2013.

**METHODS:** We conducted epidemiologic, environmental, and traceback investigations. Cases were defined as infection with <u>></u>1 of 10 molecular subtypes of *Salmonella* Sandiego, Pomona, Poona, Typhimurium, and I 4,[5],12:i:-. Water samples from turtle habitats linked to human illnesses were cultured for *Salmonella*.

**RESULTS:** We identified 8 outbreaks totaling 473 cases from 41 states, Washington DC, and Puerto Rico with illness onsets during May 2011-September 2013. The median patient age was 4 years (range: 1 month-94 years); 45% percent were Hispanic; and 28% were hospitalized. In the week preceding illness, 68% (187 of 273) of case-patients reported turtle exposure; among these, 88% (124 of 141) described small turtles. Outbreak strains were isolated from turtle habitats linked to human illnesses in seven outbreaks. Traceback investigations identified 2 Louisiana turtle farms as the source of small turtles linked to 1 outbreak; 1 outbreak strain was isolated from turtle pond water from 1 turtle farm.

**CONCLUSIONS**: Eight multistate outbreaks associated with small turtles were investigated during 2011-2013. Children <5 years and Hispanics were disproportionately affected. Prevention efforts should focus on patient education targeting families with young children and Hispanics and enactment of state and local regulations to complement federal sales restrictions.

The headline "Turtles invade Auckland city waterways" was way off the mark. There are a lot of reasons for this. Here are a few:

Prior to importation being banned in 1965 about 30,000 red-ear slider turtles had been brought into the country. Since then about 2000 turtles have been bred per year in New Zealand. That's a total of about 130,000 animals. If they were able to survive and reproduce in the wild there would now be many millions of them running around Auckland yet only a handful are found each year.

There are two reasons why we are NOT being invaded. The first is that turtles cannot reproduce here without human help. Turtle eggs require high temperatures and lots of moisture to hatch. The few areas where it's warm enough are inevitably too dry for the eggs to survive. There have been a few cases of turtle eggs hatching outdoors but they have always been situations near a north facing rock wall or other heat sink that was watered consistently. The sex of hatchling turtles is controlled by ground temperatures so even those situations are only able to produce males because of the cooler temperatures.

The other problem for turtles in New Zealand is that it is too cool in the summer and too warm in the winter. The cool temperatures in summer prevent them from being able to warm up enough to digest the vegetation they eat (they do NOT eat live fish, birds or eggs) and the relatively warm winter temperatures keep them from hibernating properly so they lose weight and die of starvation and disease after about four years.

Turtles are also no threat to the few natural wetlands in New Zealand because the water is too cool for them to be able to warm up enough to eat. Turtles might survive for a few years in warmer man made ponds, backwaters of the Waikato River and the numerous weed choked canals in the Hauraki Plains but, even there, they inevitably die after a few years.

Hopefully when the Auckland Council goes through their "major pest management review" they will consult with someone that is actually familiar with the biology of turtles.

#### Dr. Mark Feldman

Dr. Feldman has regularly spoken at the TSA conference concerning updates to recommendations on drugs and doses to induce egg laying in turtles. His research is carried out at the largest turtle farm in the USA where they have large numbers of turtles available to develop new drugs and determine dosages, and in New Zealand where he has maintained a colony of turtles for 25 years so he can detect any long term side effects. He has also spoken in Australasia at the vertebrate pest conference on real and perceived threats of introduced turtle species, published articles on the real and perceived threats of turtles under New Zealand conditions and consulted for, and spoken at, a conference of the US Fish and Wildlife service on American turtle farms and their relevance to turtle conservation.

His address- 50 Darwin Road Kerikeri

#### by Tim McCormack / ATP/IMC

Hanoi, Viet Nam, October 26, 2015—More than 200 freshwater turtles are currently being cared for at Soc Son Rescue Centre and the Turtle Conservation Centre following one of Viet Nam's biggest ever turtle seizures.

The animals, including around 100 Indochinese Box Turtles Cuora galbinifrons and Bourret's Box Turtles Cuora bourreti, more than 50 Keeled Box Turtles Cuora mouhotii and over 30 Big-headed Turtles Platysternon megacephalum and a small number of leaf turtles Cyclemys spp. were confiscated by Nam Tu Liem district police in Hanoi last month.

The turtles were seized in two shipments. The first took place on the evening of 21 September after a car was seen behaving suspiciously at My Dinh bus station. A 31-year old women living in Hanoi was found with suitcases containing Indochinese Box Turtles and other species. She said she had bought the animals from a 32year old woman from Ha Tinh province the previous day. The latter was caught with a second turtle shipment intercepted by the police which also included one King Cobra Ophiophagus hannah. The major threat to the turtles is illegal trade, fueled by demand for their meat, their parts in traditional medicines and as pets.

"This seizure clearly highlights the insidious threat posed by illegal trade in these rare turtles, which is continuing to push these species closer to the brink of extinction," said Dr Chris R. Shepherd, Regional Director of TRAFFIC in Southeast Asia.

"The authorities responsible for intercepting this shipment are to be congratulated. TRAFFIC urges the authorities to charge the offenders behind this case and to increase efforts to break down the networks involved in the illegal trade in freshwater turtles in Viet Nam."

The Indochinese Box Turtle is assessed as Critically Endangered on the IUCN Red List of Threatened Species, while Keeled Box Turtles and Big-headed Turtles are Endangered. Bourret's Box Turtle is likely to be assessed as Critically Endangered. It was only recently described and is not protected under current legislation in Viet Nam.

The confiscated turtles were transferred to a rescue centre in Hanoi thanks to assistance from local NGOs, the Asian Turtle Program (ATP) of Indo-Myanmar Conservation (IMC) and Four Paws Vietnam, with the Turtle Conservation Centre (TCC) of Cuc Phuong National Park and Soc Son Rescue Centre working closely as the government agencies responsible for the rescue and placement of animals in Viet Nam.

Some of the animals were later transferred to the TCC, where quarantine facilities and trained staff are equipped to handle large numbers of these sensitive species. The animals are currently being rehabilitated and some will possibly be released back into the wild at a future date.

ATP and TCC are currently seeking emergency support including additional ATP staff and volunteers to maintain the intensive treatments needed over the next few months. Donations are also urgently sought to construct long-term, secure enclosures for the animals once they move out of quarantine.

"We thank all those that have provided assistance to date, it is very positive to see such a quick and co-ordinated response with a number of agencies and organizations working together to give these animals the best chance of surviving their ordeal," said Tim McCormack of the ATP.

"Although species like the Indochinese Box Turtle now have clear legal protection in Viet Nam, thanks to improvements in wildlife legislation in recent years, it is likely that further confiscations will occur. It is essential that mechanisms are in place to rescue, place, rehabilitate and ultimately release these animals back into their natural habitat."

If you are able to offer support please contact: Support@asianturtleprogram.org or visit http://www.asianturtleprogram.org/pages/support atp.html

# Tesco ends turtle trade: Chain's Chinese stores stop selling reptiles as a delicacy after complaints from campaigners

- <u>Tesco</u> has bowed to pressure from animal welfare campaigners
- Stopped the sales of turtles for the dinner table at its stores in China
- Supermarket giant has been selling the live turtles for eight years
- Said it stopped as it is 'not in line with our approach on animal welfare'

By Sean Poulter Consumer Affairs Editor For The Daily Mail

#### October 2015 | Updated: 19:18 EST, 13 October 2015

Tesco has abandoned the sale of turtles for the dinner table at its stores in China where they were packed alive into plastic bags or butchered in front of customers. The company has bowed to pressure from animal welfare campaigners who accused <u>the retailer</u> of putting profit before animal welfare.

The Daily Mail has highlighted how in some instances the wriggling turtles were picked from tanks and triple wrapped in plastic bags. Tesco has bowed to pressure from animal welfare campaigners and stopped the sale of turtles for the dinner table

At the same time, soft-shelled turtles – a popular Chinese delicacy priced at  $\pounds 5$  - were killed in front of customers by having their heads chopped off. The retailer has been selling the live turtles since 2007, however the company said yesterday that the trade has stopped because 'this is not in line with our approach on animal welfare'.

Two UK-based groups Viva and One World Wildlife have been campaigning for Tesco to stop the trade. Viva said: 'Tesco previously ignored reptile experts' evidence of cruelty and statements that the trade in turtles contributed to the decimation of wild stocks.

'This cruel trade in live animals would have never been acceptable in Britain, yet presumably these profits came back to fill Tesco's coffers in this country.

'So we welcome the chain finally making the ethical move to stop selling live turtles in their stores in China. It shows that sustained consumer pressure really does work.'

Spokesman for One World Wildlife, Dominic Neate, said: 'We may think of turtles as pets like kittens and puppies, but Tesco staff butchered them in front of shoppers' eyes, or wrapped them live in plastic, unable to breathe, advising that it was best to eat them within the hour.

In 2013, the Daily Mail saw how the turtles were being sold at Tesco stores in Beijing that had been visited by David Cameron during a previous UK trade mission. In one, members of staff in white uniforms were standing around the meat and fish counters where tanks held live turtles, fish, bull frogs and terrapins.

One caught a turtle in a pair of 10-inch metal tongs and wrapped it in three thin plastic bags. The turtle desperately fought to get out of the bag until it was returned to the customer service desk. At the Fengtai East branch, a member of staff hacked at a soft shell turtle for seven minutes, trying to chop its head off.

The middle-aged staff member turned with an impatient expression, and snapped: 'Look, I'll let you know when it's done. The head won't come out.'

The Daily Mail has highlighted how in some instances the wriggling turtles were picked from tanks and triple wrapped in plastic bags where they survived for an hour before suffocating

Five minutes later the grisly job was done and the butcher, with dark blood speckles on his apron, asked if we also wanted the head, too. Animal activists say a turtle remains aware and able to move its eyes for up to an hour after decapitation unless their skulls are crushed with a hammer.

An assistant explained: 'First you chop the head off and then you lift the turtle up so as to let the blood drain.

'When you get home, put it in boiled water to sterilize it. After a few minutes later, take a knife and cut the shell off the turtle, remove the innards and rinse it. Then chop into pieces and it's done.'

The fresh water turtles are shipped from farms in Dalian, a Northeast China coastal city.

October 13, 2015 @ 7:28 PM (No author supplied )Ary News- For photos of turtle to identify them

<u>http://arynews.tv/en/wwf-pakistan-sindh-wildlife-department-rescue-62-vulnerable-tortoises-</u> <u>turtles/</u>

KARACHI: A joint team of WWF-Pakistan and Sindh Wildlife Department on Tuesday rescued 62 vulnerable tortoises and freshwater turtles which were later released at Hub Dam near Khar Centre in the Kirthar National Park.

The reptiles were discovered in the morning when a reporter and passerby, crossing the EBM Causeway in Korangi Industrial area, Karachi, noticed a large number of tortoises and freshwater turtles struggling for life by the roadside.

Twenty-five reptiles were found dead, possibly crushed under traffic.

The rescued turtles and tortoises were possibly discarded by illegal wildlife traders, who in fear of strict vigilance from the Sindh Wildlife Department abandoned them under the cover of darkness in this area. A number of burlap bags were also discovered, indicating that the animals were transported to the area.

According to WWF-Pakistan's experts, these species are not found in Karachi and were brought from other parts of the country.

Both species of the rescued reptiles i.e. Afghan or Central Asian tortoise (Testudo horsfieldii) and black pond turtle (Geoclemys hamiltonii) are categorized as vulnerable according to the IUCN Red list and are also protected as they are included in the Second Schedule of the Sindh Wildlife Protection Ordinance 1972.

Altaf Sheikh, Manager Conservation WWF-Pakistan, said the population of these two reptiles is rapidly declining as their illegal trade has escalated due to higher market demand over the past few years.

He also informed that these turtles and tortoises are smuggled to China, Hong Kong and other central Asian countries, adding that because of strict vigilance a number of consignments have been confiscated and repatriated by China and Hong Kong.

Naveed Ali Soomro, Coordinator, WWF-Pakistan, said that smuggling of turtles and tortoises has recently received a lot of hype as it has huge economic benefits to the poachers. In the international market, each turtle is believed to be worth PKR 200,000 to 500,000 depending on the weight and size of a turtle.

"It is high time to reinforce the decision taken by the Sindh High Court on the protection of these endangered species", he added.

The tortoises and turtles were shifted to Sindh Wildlife Department from where they were sent for release. It is feared that a few tortoises and turtles were taken by children and residents of the area to their houses.

WWF-Pakistan has requested these residents to return these reptiles as they may die if proper care is not provided.

#### Tourists Thwart Turtles from Nesting in Costa Rica

#### By ELISABETH MALKIN and PAULINA VILLEGASSEPT. 18, 2015- NY times



Effects of El Niño helped ease access to Ostional Beach in Costa Rica, drawing tourists who disrupted sea turtle nesting. Credit Sindicato de Trabajadores de MINAE

MEXICO CITY — The day-trippers swarmed onto the beach to watch one of nature's most extraordinary sights, hundreds of thousands of olive ridley sea turtles crawling out of the ocean to lay their eggs in the sand.

The turtles did not want the company. Scared off by the thousands of tourists massed along Ostional Beach on Costa Rica's Pacific Coast, snapping selfies and perching their children on the turtles' backs, the ancient reptiles simply turned around and retreated into the sea.

"It was a mess," said Yamileth Baltodano, a tour guide who was at the scene when the turtles were scared away two weeks ago.

What happened during the first weekend in September was a one-time event, when a confluence of factors allowed the utterly unexpected to take place. But it was a cautionary tale for the conservationists charged with protecting the turtles, which are <u>classified as vulnerable</u>, not to mention a social media sensation. Now Costa Rican officials are scrambling to make sure it does not happen again.

"We are reassessing the way we work and the way we tackle the issue," Mauricio Méndez, deputy director of the Tempisque Conservation Area, which includes Ostional Beach, said in a telephone interview on Friday.

The olive ridley nesting season, from August through October, coincides with Costa Rica's rainy season, which ordinarily provides a natural barrier that protects the turtles. During that time, the beach is all but cut off by the flood tide of the swollen Nosara River, which blocks access on bridges. Even in the dry season, the beach is accessible only by a four-wheel-drive vehicle driven by a local guide.

But this year, low rainfall caused by El Niño left the river all but dry, making passage to the beach easy.



Mr. Méndez said officials were working on changes before the next arrival, expected on Oct. 4. He said he hoped to double the number of police officers and security guards, and even to bring in the Coast Guard. Groups will only be allowed in with guides and will be limited to the edges of the nesting area.

Thousands of Olive Ridley sea turtles returned to the sea when they found their nesting places crowded with tourists. Credit Sindicato de Trabajadores de MINAE

Despite the commotion, turtles still managed to lay some eggs, perhaps at night. Mr. Méndez and his team found many more eggs than they expected after the frolicking tourists went home.

"A tornado can be happening, and they will continue to deposit the eggs, carve it out, nest, and go back to sea," he said.

The turtles, who lay their eggs during a three- to four-day period each month, began to arrive early on Sept. 4. Photographs of the phenomenon quickly began to spread on social media.

From a distance, aboard a boat, Vanessa Bézy, a sea turtle biologist, watched in dismay as hordes of tourists clogged the beach, overwhelming the guards.

"I almost had a panic attack because it was so crowded," said Ms. Bézy, a doctoral candidate at the University of North Carolina at Chapel Hill, who has been studying nesting behavior at Ostional Beach for five years. "It was basically a free-for-all."

#### TORTUES BERBÈRES POUR LA PAIX

En Afrique du nord, la tradition berbère raconte que la tortue chasse les mauvais sorts, les mauvais génies et protège la maison.

Les tortues de Rachid Khimoune sont coiffées de casques militaires de différentes armées du monde pour symboliser « les horreurs de la guerre ».

« Plus jamais cela » dit-on ! Mais chaque époque génère son lot de violence et de misère, à l'image du reptile qui hiberne et revient au printemps.

Par cette installation, Rachid Khimoune souhaite apporter un message d'espoir et de paix pour l'année à venir.

https://www.facebook.com/events/931723783581799/

Date: November 25, 2015

Source: Medical University of Vienna

In a genome comparison conducted by a working group led by molecular biologist Leopold Eckhart of the University Department of Dermatology at MedUni Vienna, it was discovered that genes for important skin proteins arose in a common ancestor shared by humans and turtles 310 million years ago. The study has now been published in the journal *Molecular Biology and Evolution*.

The turtle shell is a highly successful concept of evolutionary development and its defensive function clearly distinguishes turtles and tortoises from other reptiles. In the study, the working group led by Leopold Eckhart investigated the genes responsible for the skin layers of the shell of the European terrapin and a North American species of turtle, in order to compare them with the genes of human skin.

The study findings suggest that a hard shell was formed as the result of mutations in a group of genes known as the Epidermal Differentiation Complex (EDC). Comparisons of genome data from various reptiles suggest that the EDC mutations responsible occurred when turtles split off from other reptiles around 250 million years ago.

#### Humans and turtles share a common ancestor

What is remarkable is that the basic organisation of the EDC genes is similar in humans and turtles. This leads to the conclusion that the prototypical EDC genes developed in a common ancestor, who lived 310 million years ago and was similar to modern reptiles.

In the case of turtles, these genes developed so as to form proteins that bring about a significant hardening in the outer layer of skin, intensified cross-linking and hence the formation of a shell. In humans, the EDC genes protect the skin from the penetration of microbes and allergens.

This new study shows that evolutionarily related genes have a protective function both in humans and also in tortoises and turtles. It is hoped that comparing the skin of humans and animals will provide a better understanding of the interaction of proteins. In future, the knowledge derived from this may lead to medical applications, for example to improved treatment for psoriasis, in which EDC gene mutations are found.

Participating in the study were: Center for Integrative Bioinformatics Vienna (CIBIV), Max F. Perutz Laboratories, University of Vienna; University of Veterinary Medicine of Vienna, Schönbrunn Zoo and the University of Bologna.

**Story Source:** The above post is reprinted from <u>materials</u> provided by <u>Medical University of</u> <u>Vienna</u>. Note: Materials may be edited for content and length.

#### Journal Reference:

 Karin Brigit Holthaus, Bettina Strasser, Wolfgang Sipos, Heiko A. Schmidt, Veronika Mlitz, Supawadee Sukseree, Anton Weissenbacher, Erwin Tschachler, Lorenzo Alibardi, Leopold Eckhart. Comparative genomics identifies epidermal proteins associated with the evolution of the turtle shell. Molecular Biology and Evolution, 2015; msv265 DOI: <u>10.1093/molbev/msv265</u>

#### Turtles and tortoises library





#### The Leatherback Turtle Biology and Conservation

Hardback, 246 pages, 9 b&w photos, 70 line drawings,16 color plates

ISBN: 9781421417080 (2015) \$70.00 Plus \$7.00 for S&H in US.

Edited by James R. Spotila and Pilar Santidrián Tomillo

Weighing as much as 2,000 pounds and reaching lengths of over seven feet, leatherback turtles are the world's largest reptile. These unusual sea turtles have a thick, pliable shell that helps them to withstand great depths—they can swim more than one thousand meters below the surface in search of food. And what food source sustains these goliaths? Their diet consists almost exclusively of jellyfish, a meal they crisscross the oceans to find.

Leatherbacks have been declining in recent decades, and some predict they will be gone by the end of this century. Why? Because of two primary factors: human redevelopment of nesting beaches and commercial fishing. There are only twenty-nine index beaches in the world where these turtles nest, and there is immense pressure to develop most of them into homes or resorts. At the same time, longline and gill net fisheries continue to overwhelm waters frequented by leatherbacks.

In The Leatherback Turtle, James R. Spotila and Pilar Santidrián Tomillo bring together the world's leading experts to produce a volume that reveals the biology of the leatherback while putting a spotlight on the conservation problems and solutions related to the species. The book leaves us with options: embark on the conservation strategy laid out within its pages and save one of nature's most splendid creations, or watch yet another magnificent species disappear.

James R. Spotila is the L. Drew Betz Chair Professor of Environmental Science at Drexel University and director of the Center for Biodiversity and Conservation. The founding president of the International Sea Turtle Society and chairman of the board of The Leatherback Trust, he is the author of Sea Turtles: A Complete Guide to Their Biology, Behavior, and Conservation and Saving Sea Turtles: Extraordinary Stories from the Battle against Extinction. Pilar Santidrián Tomillo is a Marie Curie Fellow at the Mediterranean Institute for Advanced Studies and the research director of The Leatherback Trust.

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#### Health Care & Rehabilitaion of Turtles and Tortoises By Amanda Ebenhack

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Turtles and tortoises have been around for over 250 million years. In recent times, turtles and tortoises have been hardy and interesting family pets. These prehistoric beauties are worthy of our respect, both in captivity and in nature, particularly as it pertains to proper care, feeding, and especially when they require medical treatment. Most incidents causing the demise of these wonderful creatures in nature result from human interference. As urban sprawl encroaches on their natural habitats they are forced into streets and they come into contact with mowing equipment, agricultural equipment, and recreational vehicles, both on the road and on the water. Many are hit by automobiles, chewed on by dogs, and run over by mowers. Although some injuries may appear fatal, turtles and tortoises have amazing abilities to heal in addition to an incredible will to survive. Many times, injured turtles and tortoises end up in the hands of rescuers who do not understand their amazing healing abilities. To an inexperienced eye many shell fractures and injuries look fatal when they are not. Many veterinarians not experienced with chelonians may euthanize an animal without even attempting rehabilitation. In addition to a wealth of information on anatomy, captive care, diet and nutrition, and indoor and outdoor enclosure design, this book is intended to help with the medical care of injured turtles and tortoises. Also included is general first aide and supportive care for most afflictions that can befall turtles both in nature and in captivity. This exciting and informative book features the most current information on hydration, tube feeding, shell fractures and wound care, shell conditions, bacterial and viral diseases, respiratory illness, parasites, and guidelines for checking for overall wellness of injured or recovering turtles and tortoises.

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Alain Veysset :	Président
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<u>Remerciements</u> :	
Logo :	Pierre DEOM, rédacteur de La Hulotte
Soutien :	Soptom (France) - CRT (Espagne)
Informations, crédits photos	: Allen Salzberg et Herdigest (U.S.A), Thierry Frétey, Alain Veysset, Internet