07 MAR 2016

DATE DAY

# DENEXS INTERES

## Business / Incor

DATE

UPPER HALF

A broader look at today's business

LOWER HALF

PUELIC AFFAIRS OFFICE NEWS CLIPPINCS

# Eallen elephants live through art

STORY & PHOTO BY JONATHAN L. MAYUGA

HIS is, perhaps, the most expensive monument ever to be built," Environment Secretary Ramon J.P. Paje said, referring to the estimated cost of the materials used to build the symbolic elephant monument—the crushed elephant tusks seized by Philippine authorities in 2013.

5 tons



## BUSINESS/INCE

DATE 3 PAGE UPPER HALF

A broader look at today's business

LOWER HALF

### PUBLIC AFFAIRS OFFICE NEWS CLIPPINGS

## Fallen elephants like through art

The elephant tusks, weighing at least 5 tons, is estimated to be worth P400 million. The tusks were seized by the Bureau of Customs (BOC) and were destroyed in June 2013, using a road roller.

About 2 tons of ashes were mixed with cement to construct the monument, which now stands beside the Biodiversity Management Bureau (BMB) of the Department of Environment and Natural Resources (DENR), whose primary mandate is to protect and conserve the country's rich biodiversity.

The pulverized tusks were cremated at a government animal incinerator to ensure complete destruction. The tusks were reduced to more than 2 tons of ashes after burning. The elephant monument depicts figures of a mother elephant and her calf, clinging to tusks which are crucial to an elephant's survival.

The monument, conceptualized by University of the Philippines Fine Arts graduate Janus Nuñez, was unveiled during a simple ceremony highlighting the celebration of World Wildlife Day on March 3 at the Ninoy Aquino Park and Wildlife Rescue and Rehabilitation Center in Quezon City.

The elephant is one of the most hunted animals on Earth, because of their precious tusks.

"As we unveil this structure made of concrete and part of the ashes from more than 4 tons of elephant ivory tusks that the Philippines crushed and burned on June 21, 2013, let us be reminded of the thousands of elephants killed for the precious tusks. May this structure inspire and drive us to move further and work harder to fulfill our common goal to fight illegal ivory and wildlife trade," Paje said in his

brief speech during the unveiling of the elephant monument. The event, the DENR chief said, is to further strengthen the country's commitment to the global effort to fight illegal wildlife trade.

"This is to send the message to the world that the Philippines do not tolerate killings of elephants and the illegal wildlife trade," Paje said.

The decision to destroy its stock-piles of elephant tusks made the Philippines the first country in Asia to conduct physical destruction of massive ivory stockpile in support of the global effort to combat illegal ivory trade and wildlife trade. It earned the Philippines commendations from former US Secretary of State and now presidential aspirant Hillary Clinton and the United Nations Environment Programme.

Paje said the move also aims to enhance public awareness and rally support for the global effort to combat illegal wildlife trade, as part of the country's commitment to the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES).

A party to the international treaty signed in Geneva, Switzerland, in 1973 to regulate commercial trade in certain wildlife species, including the critically endangered elephants, the Philippines strictly enforces Republic Act 9147, or the Wildlife Resources Conservation and Protection Act. In 1997 the Conference of Parties

of CITES has included the Philippines as one of eight countries of priority of concerns with regards to illegal ivory trade, particularly its role as a trade route and transit country for elephant tusks.

The seven other countries are Kenya, Tanzania and South Africa, which are considered as major sources of ivory in illicit trade; China (including Hong Kong) and Thailand as destinations of illegal ivory; and Malaysia and Vietnam as

## Business Mirror

DATE PAGE UPPER HALF

A broader look at today's business

LOWER HALF

### PUBLIC AFFAIRS OFFICE NEWS CLIPPINGS

### Fallen elephants live through and

trade routes and transit countries.

According to Paje, the Philippines is winning the war against illegal wildlife trade. Over the past five years under the Aquino administration, antiwildlifetrafficking operations led to the confiscation of illegally harvested wildlife resources, rescue of endangered species, and prosecution and conviction of unscrupulous wildlife traders.

"I can say that we are winning

the war against illegal wildlife trade. We have achieved a lot. We have made numerous arrests and we have a lot of conviction," Paje said. A total of 170 people were convicted by various courts, including 19 people who engage in the illegal wildlife trade and illegal loggers.

"Right now, the Philippines gained recognition worldwide as a leader in the campaign against illegal wildlife trade," Paje said.

However, he added that with such feat, authorities should not let its guard down, adding that much still needs to be done to strengthen the campaign against illegal wildlife trade. In terms of awareness, he said the Philippines has made waves when it became the first country to destroy elephant tusk stockpiles.

Paje said the creation of the Philippine Operations Group on Ivory (Pogi) and Illegal Wildlife Trade marks the beginning of a more aggressive and concerted approach among key government agencies in combating illegal wildlife trade.

Since its creation in 2013 Pogi had carried out 96 law-enforcement operations, confiscated more than 24,000 wildlife specimens, 500 of which belong to the critically endangered species. It has also filed 55 criminal complaints against 196 violators before various courts.

On the same event, the DENR-BMB led the awarding of 97 wildlife heroes for their effort in fighting illegal wildlife trade. The awarding, according to BMB Director Theresa Mundita Lim, is an opportunity to recognize the role of wildlife law enforcement and the importance of wildlife globally.

"This is also an opportunity to recognize the coexistence of biodiversity, not only in the Philippines, but worldwide," she said.

According to Lim, there is a need to further strengthen the effort against illegal wildlife trade, even as she said the Philippines is on the right track in combating such illegal trade.

"We need to strengthen our partnership with law-enforcement agencies, and coordination with other offices to stop illegal wildlife trade," Lim said.

The recipient of the Third Wildlife Law Enforcement Awards include members of the Philippine
National Police, the National Bureau of Investigation and the BOC.
According to Lim, the DENR-BMB,
as part of its effort to stop illegal
wildlife trade, is recognizing wildlife heroes who rescue injured or
trapped wildlife.

"We are now giving recognition to wildlife rescuers to encourage them to help save wildlife," she said. While the Philippines is one of the 17 megadiverse countries in the world, it is also considered one of the 34 biodiversity hot spots because of the rapid rate of biodiversity loss and it needs all the help it can get, Lim said.

## Business/Imor

DATE PAGE

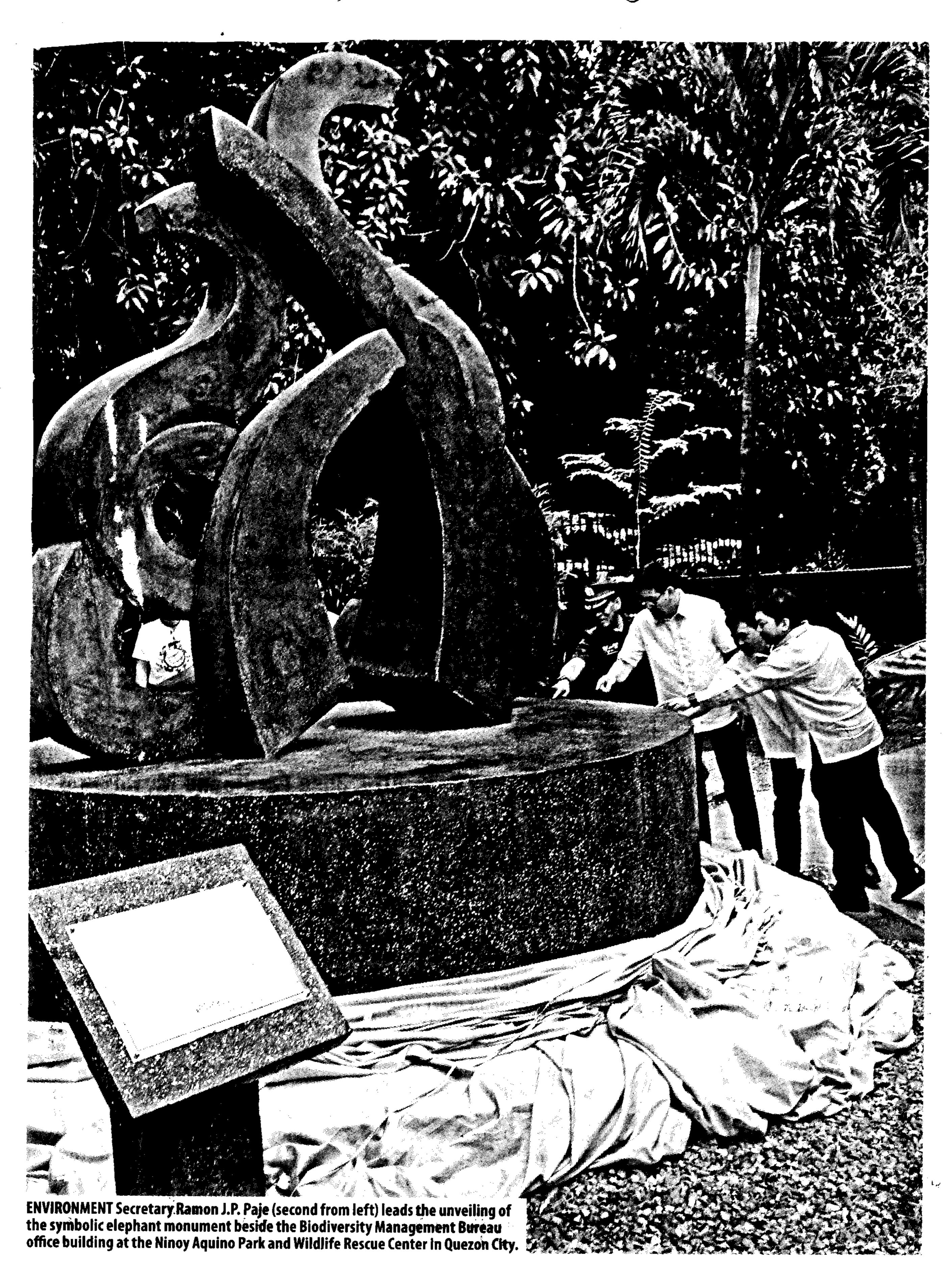
A broader look at today's business =

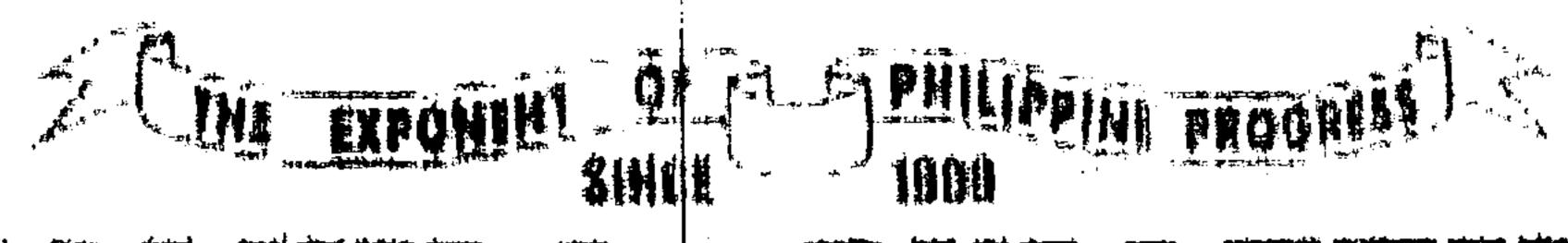
LOWER HALF

UPPER HALF

### PUBLIC AFFAIRS OFFICE NEWS CLIPPINGS

Fallen Elephants live through art





## MANUA BULLETIN THE NATION'S LEADING NEWSPAPER

07 MAR 2016

DATE

PAGE

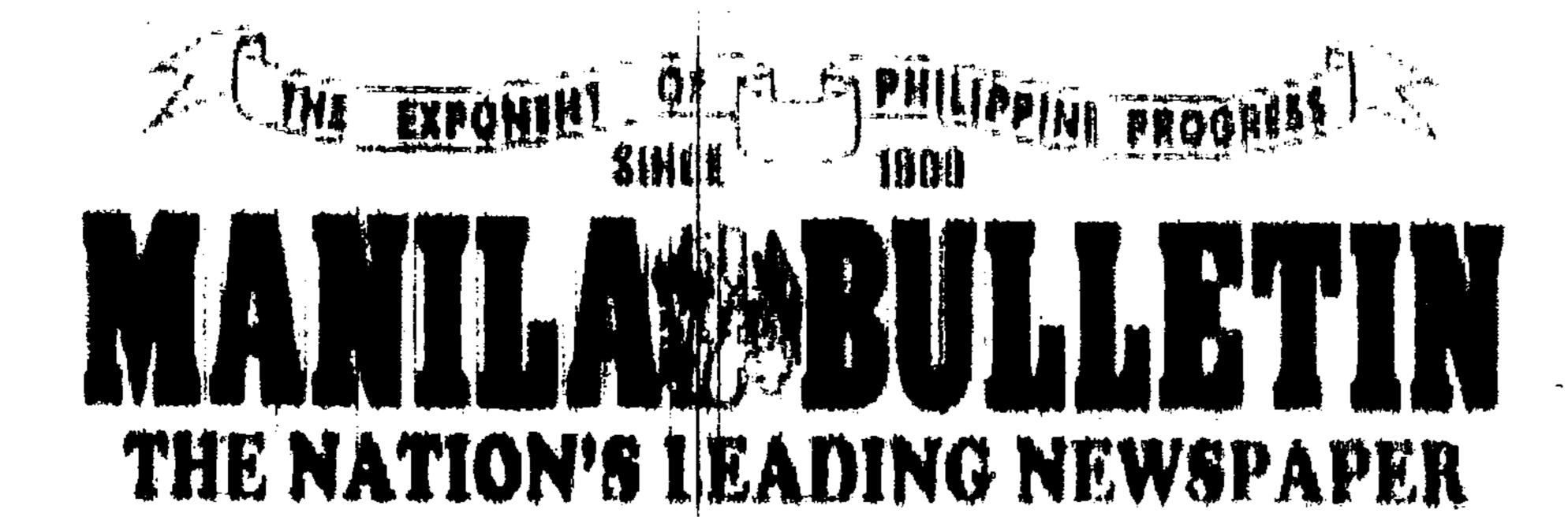
UPPER HALF

LOWERHALF

#### STRATEGIC COMMUNICATION AND INITIATIVES SERVICES



FOOD IN UNDESIRABLE SURROUNDINGS — Migratory birds seem not to mind as they swoop in and scrounge around for whatever nourishment they can find in direiy polluted Arrabal River, in Cebu City's South Road Properties. The 2014 Water Quality Status Report of the Environment Management Bureau in Central Visayas (EMB-7), on the basis of assessed water samples from most of the rivers in the city, noted dissolved oxygen (DO) and biochemical oxygen demand (BOD) levels that falled to meet DENR quality standards. (Juan Carlo de Vela)



DATE PAGE UPPER HALF

LOWERHALF

STRATEGIC COMMUNICATION AND INITIATIVES SERVICES

## Garbage as high as 3-story building collected in Manila

By ANNA LIZA VILLAS-ALAVAREN

arbage that reached as high as a three-story building has been recovered from Estero De Kabulusan and Antipolo Open Canal in Manila after the first week of the Metropolitan Manila Development Authority (MMDA)'s cleanup campaign.

Baltazar Melgar, MMDA Flood Control Office Chief, said they have so far retrieved about 1,200 cubic meters of trash from north and south Antipolo open canal Sta. Cruz and Estero de Kabulusan in Tondo, both in Manila City since Tuesday.

"When piled, trash can reach as high as three-story cube building whose length and width is 10 meters," said Melgar, during the agency's radio program over DZBB.

Melgar said they had difficulty clearing the areas because of obstructions like stalls, vendors, car spare parts in the area.

"Because of narrow roads, we had to clear areas leading to subject waterways as big equipment like backhoe could not enter and maneuver," Melgar said.

Collected trash, which consisted of

broken appliances, old bed mattress, plastic bags and containers, car spare parts, cable wires, styrofoams and silt, filled 110 dump trucks.

Melgar said they still have to clear the entire stretch of clogged waterways eading to Vitas and Tecson Street in Tondo.

"We are not done yet. There are still portions of esteros that we have to clear," he said. Thus, Melgar said they have asked barangay captains to assist them in ordering owners of car repair shops to remove car wheels and other spare parts scattered all over the area.

"We have given them two days to remove spare parts being sold there," he said. He also asked informal settlers along Estero de Magdalena not throw their household waste at the waterways.

"Instead, they can place their trash orderly along the streets and wait for the garbage collectors of the local government units," he said.

MMDA general manager Corazon Jimenez said the amount of garbage collected was "no laughing matter."

"Imagine these trash impede the flow of water, the main cause of flooding," she said.

Collected garbage will be transferred

to the Malabon sanitary landfill, Melgar said. Jimenez said that they will take pictures of the creek after clearing the waterways.

Prior to this year's Estero Blitz clanup campaign, Jimenez said they have sought the Ombudsman to hold barangay officials responsible for keeping "esteros" and waterways in their areas free from debris and trash.

The MMDA will take photos of waterways that are heavily-silted prior to clearing them. Copies of the photos will be given to the barangay and the Ombudsman.

If the MMDA returns to the waterways and find that they are clogged once again, the photos taken before can be used as evidence against barangay officials.

# Standard DEFINING THE NEWS

DATE
AT
PAGE

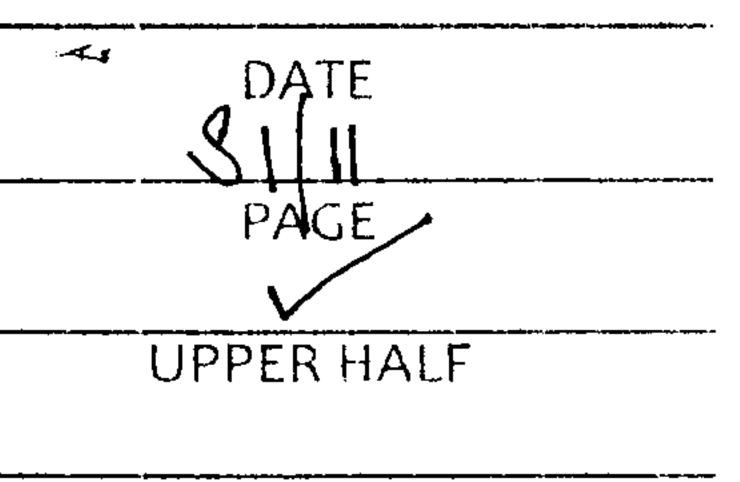
UPPERHALF

LOWER HALF

STRATEGIC COMMUNICATION AND INITIATIVES SERVICE

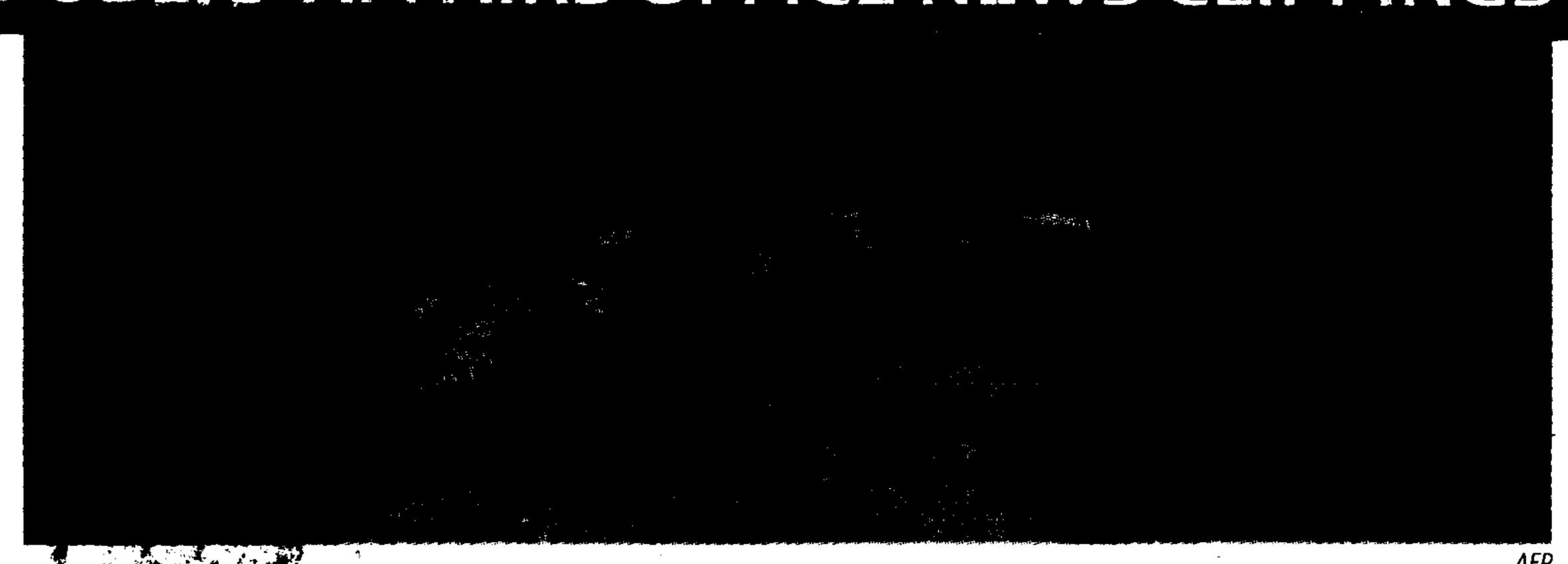


Spare Rejiculture officials in the Cordillera Administrative Region say they have been spared the damaging effects of El Niño, as this photo from La Trinklad, Benguet shows. DAVID CHAN



LOWER HALF

#### PUBLIC AFFAIRS OFFICE NEWS CLIPPINGS



A HUGE lagger of copper mine tailings are impounded in a containment area that used to be an open pit mine of Marcopper Mining Carp: In March 30, 1996 photo.

### CA defends citing of internet sources in disaster case involving Marcopper

denied Marcopper Mining Corp.'s appeal against its decision subjecting to trial the class suit by local fishermen affected by a mining pit's collapse 20 years ago.

The mining firm unsuccessfully petitioned the appellate court to reverse the Boac Regional Trial Court (RTC) Branch 38's July 5, 2013 order denying its motion to dismiss the Calancan Bay Fisherfolk Federation's (CBFF) class action.

In dismissing the mining firm's motion for reconsideration, the CA Former Fifth Division also defended its June 29, 2015 decision that cited Wikipedia and other online sources in explaining why it allowed the Boac court to tackle the suit.

Marcopper claimed the June ruling — based on the grounds of massive damage to locals' health and the environment — was anchored on unsubstantiated conclusion of facts tantamount to prejudgment of the case.

But the appellate court, in a five-page resolution penned by Associate Justice Jose C. Reyes, Jr., rejected this contention.

It did not give credence to Marcopper's argument that its earlier decision was based on unofficial and unverified reports found on the Internet that are neither part

THE Court of Appeals (CA) has of the case records nor matters of with diseases in the aftermath of judicial notice.

> The appellate court explained it had to study why the mining pit collapsed in March 1996 and how the villagers and the island's water systems were affected by the ensuing tailings leak. It held that the use of Internet articles to resolve the petition to dismiss the class suit was "in a fair and just manner."

> The appellate court reasoned out that even the Supreme Court since 2004 has cited articles from Wikipedia, a free encyclopedia built collaboratively by online users.

> "Resort to the internet was made to supplant the missing information that will provide a sufficient background to apprise the Court of the basis and the reason for the tort case filed by the fishermen," the CA added.

> The June 29, 2015 decision allowed the Boac RTC to proceed with the case after finding the incident to be "an environmental disaster with far-reaching consequences" which the trial court can take cognizance of.

> The appellate court also took note of the fact the class suit listed the names of persons who died and children who were afflicted

the disaster.

According to the original decision's footnotes, the following findings were sourced from Wikipedia on June 1, 2015: an estimated 84 million metric tons of mine tailings were discharged into Calancan Bay from 1975 to 1988, and some mine tailings exposed to ocean breeze were carried by the wind to the nearby rice fields, open water wells and village homes.

Another fact culled from the online encyclopedia is President Fidel V. Ramos's March 1998 placement of certain Calancan Bay villages under the "state of calamity for health reasons." It also cited the Wikipedia definition of "mine tailings."

The decision also cited a feature story published by the Philippine Center for Investigative Journalism in 1999, which detailed the plight of the disaster's victims.

Marcopper's petition against the Boac RTC was based on procedural grounds, arguing CBFF committed undue delay in seeking relief. The firm claimed the complainants were already aware of the discharge of mine tailings In the state of they did not take.

any legal on at the time. -Vince Alvic Alexis F. Nonato



UPPER HALF

PUBLIC AFFAIRS OFFICE NEWS CLIPPINGS

#### Loren urges LGUs to submit climate change action plan

SENATOR Loren Legarda has deplored the report that as of July 2015, only 584 out of 1,634 cities and municipalities, or 36 percent, in the country have local climate change action plans.

She urged local government units to comply with Republic Act No. 9729 by submitting their respective LCCAP to the Climate ChangeCommission(CCC).

"All LGUs should follow the law and have their own local climate action plans," said Legarda, chairperson of the Senate Committee on Climate Change and principal author of RA 9729 or the Climate Change Act.

"We can no longer delay climate action. For a vulnerable nation like the Philippines, delayed action means loss of lives, livelihood, ecosystems and biodiversity," she said.

"We need to take urgent action to adapt to the effects of climate change, reduce the risks in the communities, mitigate global warming, and move towards sustainability, she added.

RA 9729 mandates that LGUs shall be the frontline agencies in the formulation, planning and implementation of climate change action plans in their respective areas, consistent with the provisions of the Local Government Code, the National Framework Strategy on Climate Change, and the National Climate

Change Action Plan.

Legarda said local action is crucial because every community has its own vulnerabilities, risks and hazards. She said that LGUsmust determine how their community is affected by climate change.

"Thelocation of the community, the direct impact of climate change, and the risks posed by extreme weather events are crucial incrafting a climate change adaptation plan," said Legarda.

"It is lamentable that we are among the least emitters of greenhouse gases yet we are directly hit by the effects of climate change. But we have no more time to wail and complain," she said.

Bernadette E. Tamayo

## BUSINESS/LITOR

DATE
PAGE

UPPER HALF

LOWER HALF

A broader wok at today's business

### PUBLIC AFFAIRS OFFICE NEWS CLIPPINGS

## WWF's Earth Hour set on March 19, the event's 10th year

OUNTRIES around world will once again swift off their lights with the observance of Earth Hour. And what makes this year's event more significant is that it is the environment campaign's 10th year.

Earth Hour 2016, spearheaded by World Wide Fund for Nature (WWF), will be celebrated on March 19 between 8:30 p.m. and 9:30 p.m. across the globe, including the Philippines.

WWF-Philippines, led by its national ambassadors Marc Nelson, Rovilson Fernandez and Iza Calzado, and Earth Hour steward Mikee Cojuangco-Jaworksi, recently announced the event's plans in the country. The Philippines's Earth Hour main event shall be held at the Quezon City Memorial Circle from 7 to 10 p.m. on March 19.

"It shall be a showcase of climate solutions," Earth Hour Philippines Director Atty. Gia Ibay said.

She said stationary bikes will partially power this year's event "to show that united [Filipinos] can light up this country with their collective energy.

Together, anything is possible." During Earth Hour, lights are turned off for 60 minutes to deliver a powerful message about the need for decisive climate-change solutions, the WWF-Philippines news release said.

The decade-old movement has grown from a symbolic switch-off event in Sydney, Australia, in 2007 to the world's largest open-sourced environmental campaign mobilizing hundreds of millions of people in over 7,000 cities and 172 countries, WWF-Philippines said.

The Philippines has been championing the switch-off since 2008 and has topped participation records from 2009 to 2013—earning it the title of Earth Hour Hero Country. During Earth Hour, WWF-Philippines President and CEO Joel Palma said the organization is going to showcase renewable and sustainable technologies to prove they work.

"But the more important thing is how we do things and behave in the 365 days of the year. Problems can be enormous, but if we work together we can make things work out," Palma told the BUSINESSMIRROR at the sidelines of the news briefing for Earth Hour in Makati City. Although pursuing sustainable development is a big challenge, Palma remained optimistic, saying "big things start from small things.

"We have only one planet and one country. No matter how daunting the task is, if we work together, we can solve the problems of the planet," he said.

"It is just a matter of perspective. Work with government, indigenous groups and business. We can work with the lowest barangay up to the highest executive," he added. Palma said Leonardo DiCaprio's victory in the recent Oscars as Best Actor in *The Revenant* will boost the cause of environmentalism in the global stage.

"We are happy for Leonardo DiCaprio because he is an environmentalist and also an ardent champion of diversity," he said. Meanwhile, social media users can promote their commitment to the planet by donating their Facebook

## Business/fireor

A broader look at today's business

DATE PACE

UPPER HALF

LOWER HALF

### PUBLIC AFFAIRS OFFICE NEWS CLIPPINGS

### WWF's Earth Hour coet on March 19, the event's 10th year

feeds to spread climate awareness and action in a few clicks on earth-hour.org/climateaction. Users can also use the hashtags #Earth-HourPhilippines, #ChangeClimateChange and #RenewableisDoable to promote climate solutions.

"A simple action on social media is the kind of powerful statement that can excite friends and communities to be a part of the climate action we need to take on this global challenge," Earth Hour Global Executive Director Siddarth Das said in a news statement.

WWF-Philippines said a growing list of allies has pledged to support this year's efforts, led by government partners, such as the Climate Change Commission, departments of the Budget and Management, Energy, Foreign Affairs, Health, National Defense, Science and Technology; National Economic Development Authority, League of Cities of the Philippines, League of Provinces of the Philippines, Local Government of Quezon City, Metropolitan Manila Development AuthorCommission of the Philippines.
Corporate champions include
ArthaLand, Banana Peel, CocaCola, Healthy Options, H&M
Philippines, Philips, Starbucks
and White Gold Club. Technical
partners include Anakata and
Solar Solutions.

A media-driven campaign, Earth Hour is promoted through strong alliances with ABS-CBN, ABS-CBN RNG, ABS-CBN Sports and Action, the BUSINESSMIR-ROR, BusinessWorld, CNN Philippines, Eagle Broadcasting Corp., Eagle News, DZUP, Fleishman-Hillard, Focus Media, Leo Burnett, Net-25, the Philippine Daily Inquirer, Philippine Star, Orange Magazine TV, QCreativs, Radyo Pilipinas, Radyo Agila, Radyo Veritas, Rappler, Tech 2Go, TV5 and Yuneoh. WWF is seeking more government, corporate and media support.

At the same time, WWF-Philippines recently established its National Youth Council (NYC), believing that young people, including millennials, should

be given a bigger role in saving Mother Earth because they will be the stewards of the planet in the future.

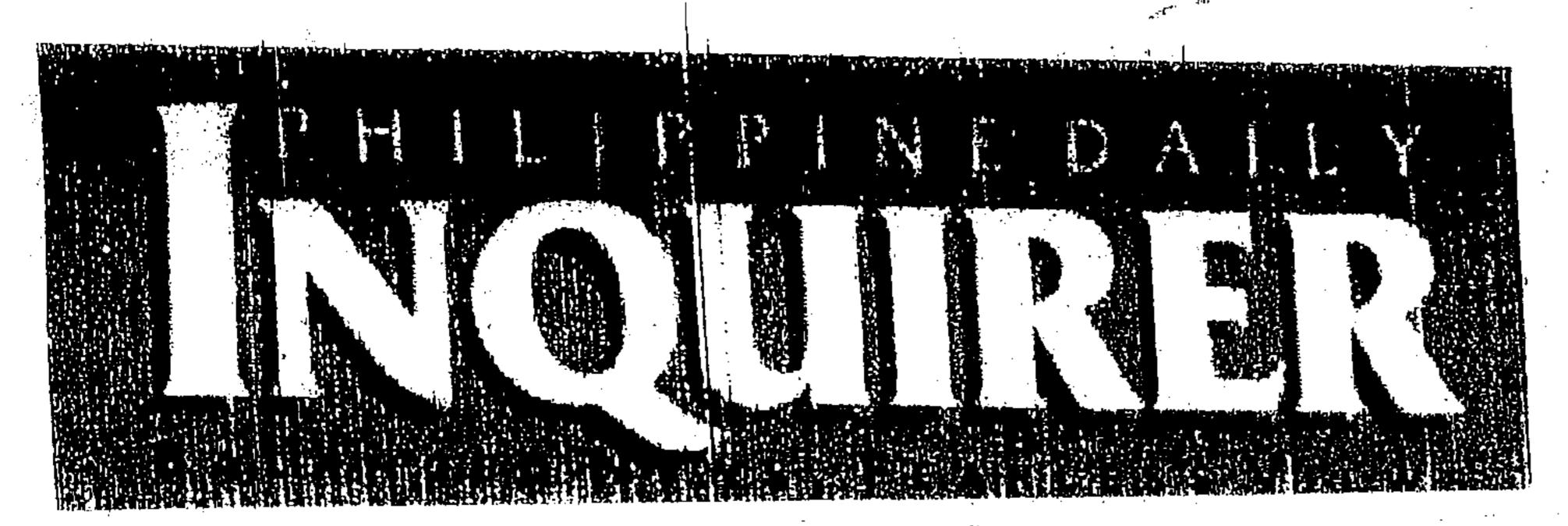
"We organized the group because this will give us a new insight and be relevant to the new trends to make sure we will have a living planet for the succeeding generations," Palma told the BUSINESSMIRROR.

"Theyknow more than us. I have a 24-year-old son and a 15-year-old daughter. The youth are very different now. Everything is fast," Palma added.

The members of the NYCWWF-Philippines are Alexandra Beatriz Cancio, Rama Co, Yzabela Nazal, Allen Lemence, Sophia Cruz, Deign Soriano and Kiana Porras.

Isobel Resurreccion, coordinator of the NYC WWF-Philippines, said the members were recruited from different Philippine-based public and private schools last year. The ages of the members range from 16 to 24 years old.

The terms of the members started on March 1 and renewable every two years. Rizal Raoul Reyes



I IPPER HALF

STRATEGIC COMMUNICATION AND INITIATIVES SERVICE

## El Niño taking heavy toll on Mindanao, says UN

By Ronnel W. Domingo

THE UNITED Nations is keeping the alarm raised on El Niño-caused drought that may result in food shortage as well as the spread of diseases in the worst-affected areas in Mindanao, especially among people displaced by natural calamities and armed conflict.

In a report released last Friday, the UN Office for the Coordination of Humanitarian Affairs noted that while the ongoing El Niño has affected large areas of the Philippines, the most severe damage to agriculture is concentrated in Mindanao.

"About half of the total 194,000 hectares of affected farm areas are in Mindanao, 87 percent of which [crops] have no chance of recovery," the UN Ocha said.

The report zeroed in on Zamboanga City, where the local government expects that up to 30 percent or 3,500 hectares of rice fields "may be lost in the coming months" as drought persists.

The UN Ocha also noted that the City Health Office was concerned that water shortages may raise the risks of diarrhea and other waterborne diseases among children and other vulnerable groups, adding that six evacuees reportedly died last December and January.

The agency added that, with fears of the mounting impact of El Niño on food security and health of the evacuees, city authorities are resuming food distribution—including kitchen sets and cash—to all transition sites for 11 months starting March.

"However, temporary assistance to address the immediate needs of the IDPs alone cannot provide durable solutions to their displacement," the UN Ocha said.

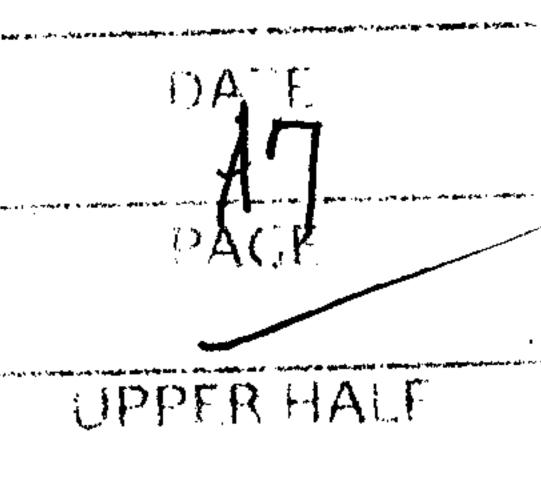
"As of mid-February, just over 2,000 out of the planned 6,500 permanent housing units under the government's Zamboanga Recovery, Reconstruction and Rehabilitation (Z3R) were completed," it said. "With an increasing delay in the Z3R implementation timeline, aid agencies fear that most of the remaining [evacuees] may be left in

limbo into the third year of displacement."

Evacuees were left homeless when a group linked to the Moro National Liberation Front attacked the city in September 2013.

According to UN Ocha, other humanitarian agencies on the ground—including Community and Family Services International, Food and Agriculture Organization, International Labor Organization, International Organization for Migration and UN Refugee agency-continue to support local authorities with providing camp management, protection, civil documentation, livelihood and community engagement assistance to the evacuees.

## The Manila Times



LOWER HALF

STRATEGIC COMMUNICATION AND INITIATIVES SERVICE



WORTH EXPLORING The 42 caves in Santa Teresita town in Cagayan province also feature steep descents that can be challenging even to seasoned spelunkers. CONTRIBUTED PHOTO

### Germany releases book on PH caves

TUGUEGARAO CITY, Cagayan: A 112-page book printed in Germany featuring a few dozen Philippine caves is expected to boost tourism in the town of Santa Teresita in Cagayan province.

The book which is in its 61st edition was published by Michael Laumanns and was printed and distributed in Berlin, Germany by Berliner Hohkenkandiche Berichte.

Belgian and Lebanese cavers Piere Bartholeyns and Chadi Chaker, respectively, on Wednesday handed over to Mayor Lolita Garcia the book on the caves of Santa Teresita town in a simple ceremony.

"From obscurity to international caving prominence," Nida dela Cruz, president of the Sierra Madre Outdoor Club (SMOC), gushed while acknowledging the efforts of SMOC members who were instrumental in bringing local and international cavers after an initial exploration in 2012 by Americans, British and Germans.

Dela Cruz said the book is a report of the Northern Luzon International Caving Expedition Philippines 2015 where multi-national cavers explored and surveyed 42 caves in Santa Teresita.

Also containing survey maps plus descriptions of the caves, the book is published in both English and French and serves as a guide to other international and local cavers who want to experience, discover or study the said caves.

Garcia said she never expected the tremendous influx of foreign enthusiasts to the caves of her town which were only visited by farmers out in their fields and "we are very excited over this new development."

LEANDER C. DOMINGO

## BUSINOS VIRON

A broader look at today's business

DATE

UPPER HALF

LOWER HALF

PUBLIC AFFAIRS OFFICE NEWS CLIPPINGS

### Cavite braces for negative effects of El Niño

RECE MARTIRES CITY,
Cavite—While the
Philippine Atmospheric,
Geophysical and Astronomical
Services Administration of the
Department of Science and
Technology has declared that El
Niño and its erratic changes in
weather conditions will persist
until the first half of 2016, the
Provincial Agriculture Office of
Cavite assures farmers here that
they will not be adversely affected
by drought or extreme dryness.

In an interview on Friday,
Lolita Perena, chief of the Office
of the Provincial Agriculturist of
Cavite, said that unlike the sad
experiences of farmers in other
provinces, the farmers in Cavite
need not worry because the
provincial government has been
preparing well for any possible
worst scenario in case El Niño
intensifies.

"We see to it that our farmers from upland areas like Silang, Ternate, Maragondon, Alfonso, Magallanes and General Mariano Alvarez [towns] are equipped with water pumps and hundreds of artesian and deep wells that can provide water supply for both residential and irrigation purposes," Perena said.

"There also artificial irrigation systems coming from the seas and rivers that surround Cavite," she said, adding that the provincial government is distributing fruit and vegetable seeds and root crops that farmers can plant in alternative intervals to planting rice crop.

According to Perena, agriculture ought to be taught to elementary and high-school students not only to emphasize the important contribution of agriculture to our food supply but also to be well-prepared for possible devastating effects of unpredictable changes in weather conditions, such as drought or extreme dryness, storms, floods and global warming.

Moreover, Perena revealed

that Cavite's economy is largely dependent on agriculture.

"Despite urbanization and industrialization, a significant number of Caviteños are still engaged in agribusinesses.

The data we gathered showed that though the province lies in the industrial belt, the agricultural land is about 49.38 percent, or 70,466.53 hectares, of the total land area of the province. This is 1,176.5 hectares bigger than that of the declared agricultural lands in 2008 [69,290.03 hectares]," Perena explained.

Likewise, Perena said, in the meantime, as an intervention and mitigation strategy, the Department of Agriculture is considering the utilization and installation of solar water pumps in agricultural areas, as well as the development of small water impounding projects to cushion the impact of the drought in some vulnerable provinces. PNA

BAGE 2

UPPER HALF

LOWERHALF

### STRATEGIC COMMUNICATION AND INITIATIVES SERVICE

PAGE \$12

### Energy farming

ENERGY farms are not new to us. We now have wind farms and solar farms producing electricity spread across the country. And more are expected to come.

This is thanks to the Renewable Energy Act that provided incentives for private investors.

As of Dec. 2015, the Department of Energy (DOE) reported that registered projects under the Renewable Energy Program include the following: seven wind farms and 13 solar farms generating 426.9 and 146.3 megawatts (MW), respectively.

While looking up statistics on renewable energy, what caught my attention is the number of biomass projects in operation placed at 36 and generating 352.98 MW. We don't hear much about such projects so I decided to write this article given their significance in creating livelihood opportunities in the rural areas.

Poverty is the biggest challenge we have to solve and most of the poor are in the rural areas. I think this is one solution to the problem.

Unlike wind farms and solar farms, biomass projects would require a lot of fuel that can be grown like any other farm produce. Others are farm waste products that are just left to rot in the fields till now.

At present, biomass technologies utilized in the country vary from the use of bagasse and biogas as boiler fuel for cogeneration, rice/coconut husks dryers for agricultural produce, biomass gasifiers for mechanical and electrical applications, fuel wood and agriwastes for oven, kiln, furnace, and stoves for cooking and heating purposes.

The use of biomass for electricity generation provides more promise for income generation because of the volume required. These power producers are ready to pay for such fuel sources.

MAPPING THE FUTURE

Jose Rene C. Gayo



The best example I can cite is the sugar industry. Sugar milling requires energy for its operation. Bagasse is a waste-product of the process and is used as fuel for power generation of sugar mills. But this is only possible during the milling season.

During the off-milling season, such a fuel source is not available. For sugar mills with refining operations, they have to buy biomass feedstock to run their sugar refin-

ery during the off-milling season.

This becomes an opportunity for coconut farmers since there are people willing to pay a price for the coconut shell to supply to these sugar refineries. Other farmers located near those sugar centrals have seized the opportunity by planting fast-growing trees like ipil-ipil to sell as fuel wood.

Following the example of the sugar industry, some manufacturing firms have also opted to use rice hull for their power needs. This is the case for a number of rice mills, feed mills, and cement factories especially in Luzon where these are readily available. Looking at the figures from the DOE, 17 projects have been listed using biomass for energy generation for their own use.

What is significant to note is the number of electricity producers selling to the grid. This means that there are now cogeneration plants using biomass with the idea of selling the electricity that they produce to consumers.

#### STRATEGIC COMMUNICATION AND INITIATIVES SERVICE

The DOE listed 19 such projects.

I would attribute these developments to the Renewable Energy Law since there is a set price referred to as Feed-in-Tariff (FIT). FIT is the per kWh rate guaranteed to renewable energy (RE) developers to ensure the viability of their projects. Eventually, the consumers will shoulder this under the FIT-allowance, a separate line component in the power bills.

According to the DOE, biomass, solar and wind will be among the major sources of energy for the next decade, accounting for more than a third of the country's total energy supply. Especially for biomass power plants, it will mean more demand for bagasse, coconut husks, rice hulls, bamboo, wood chips, and super napier grass called Pakchong. But there are more opportunities for energy farmers.

The other types of energy sources that can be "grown" in the farm are the biofuels. Biofuel refers to fuels made from plant sources and primarily used for thermal and power generation.

These are classified under the broader group called alternative fuels. These are fuels that are not composed substantially of petroleum and thus, are alternatives to petroleum. As a substitute to this traditional fuel, it is expected to yield significant energy security and environmental benefits to its consumers.

As mandated by the Biofuels Act, the DOE is implementing a long-term Alternative Fuels Program to: (1) reduce our dependence on imported oil, and (2) provide cheaper and more environment-friendly alternatives to fossil fuels.

Through the said program, the DOE intends to tap the country's domestic produce as viable sources of energy.

The goal is to develop indigenous and renewable energy fuels for long-term energy security, which will be a pillar for our country's sustainable growth.

I would like to highlight two alternative fuels with big potential in the Philippines. These are ethanol and biodiesel.

Ethanol is a renewable fuel source. It is produced from plants that process and sore energy from the sun.

In a sustainable cropping system, plant feedstock can be produced year after year. These crops include sugar cane, cassava, sorghum, and corn.

It also has environmental benefit. Pure alcohol fuel, such as ethanol, has nearly complete combustion. This means that very little carbon monoxide is formed.

Ethanol does not contain contaminants commonly found in gasoline such as sulfur and benzene. Compared to gasoline, harmful emissions and pollution are Planted in sloping areas, it can help stat reduced. When blended with lize the soil because as a tree it has extended goline, ethanol contributes a reduction sive root system and can help in carbon s in most emissions according to its per- questration.

centage in the blend.

mands the market for Filipino farmers, thus biofuel mix. The jatropha oil is source enhancing rural economic development.

Biodiesel is a renewable and biodegradable diesel fuel extracted from plant seed oil. A natural hydrocarbon with negligible sulfur content, it will substantially help in reducing emissions from diesel-fed engines.

Two crops are of interest to us as sources of biodiesel: coconut and jatropha.

The Philippines has launched the use of biodiesel, particularly, Coconut Methyl Ester or CME. CME is derived from coconut oil and is more known as coco-biodiesel. As cited by DOE, studies show that the addition of coco-biodiesel results in better combustion, less pollution, and more engine power. The engines run smoothly and with longer maintenance intervals.

use of coco-biodiesel will provide and establish a long-term, sustainable alternative domestic market for coconut oil. Hopefully it will also stabilize the market and increase coconut production.

Jatropha Curcas or "Tuba tuba" is a nonedible plant that grows mostly in tropical countries. It is resistant to drought and can easily be planted or propagated through seeds or cuttings. It starts producing seeds within 14 months, but reaches its maximum productivity level after four to five years. The plant remains useful for about 30-40 years.

The jatropha seeds can produce an oil content of 30-35 percent, depending on the quality of the soil where it is planted. The plant has a yield potential of 0.75 2 tons of oil per hectare per year.

Benefits of jatropha as biodiesel include the reduction of greenhouse gas emission Local production of jatropha se so pract cal because as a non-food crop, it will n compete with food demands. It can gro on marginal and degraded land, leavir prime agricultural land for food crop

It was reported recently that a Malaysia company has opened its first gas station As to its economic benefit, ethanol ex- Bohol that makes use of jatropha oil for i from growers in Bohol. The company in press release mentioned that they w replicate this model in other provinces the Philippines.

> The use of biomass and biofuels for pov er generation may just be the answer to the need for electrification of far-flung area especially the small islands.

> It will also provide income opportuniti for people living in those areas by growing their own fuel requirements.

- For the country as a whole, it will mea less dependence on imported petroleu and savings in our foreign exchange.

(The author is a member of the Ma Agribusiness and Countryside Developme Committee, manager for MAP's Farm Bu ness Schools project, and president of t Foundations for People Development. Fee back at map@map.org.ph and rer gayo@gmail.com. For previous article please visit www.map.,; g.ph.)

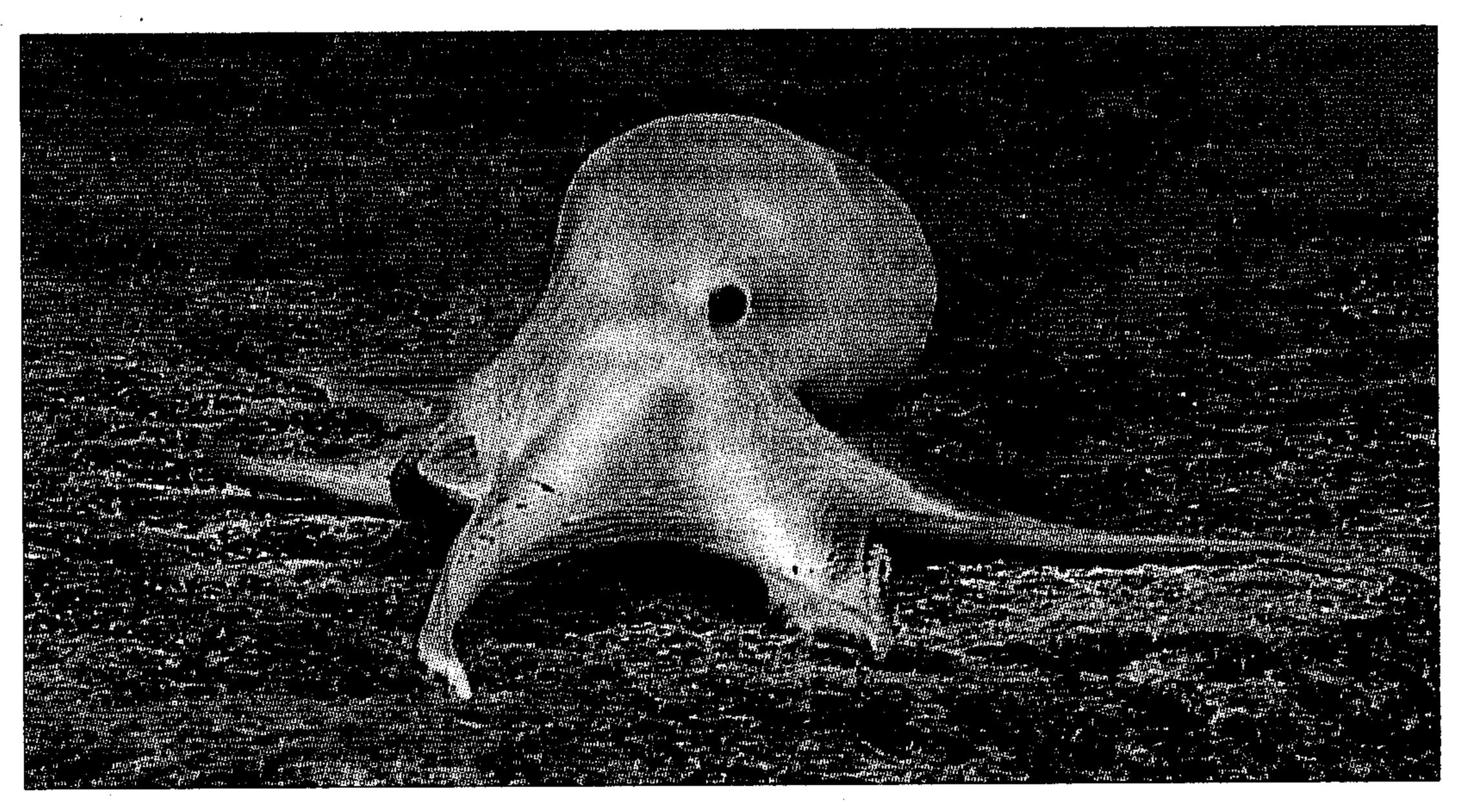
# Madaga



LOWER HALF

#### PUBLIC AFFAIRS OFFICE NEWS CLIPPINGS

### 'Ghostlike' octopus found in waters off Hawaii



**Deep sea dweller.** An incirrate octopod skims the ocean floor at a depth of 4,290 meters. This image is taken by remotely operated underwater vehicle Deep Discoverer of NOAA near Necker Island, or Mokumanamana, on the northwestern end of the Hawaiian archipelago.

REUTERS PHOTO

NEW YORK. — An underwater research craft has spotted a "ghostlike" octopus that appears to belong to a previously unknown species on the ocean floor near Hawaii, a discovery that highlights how little is known about the deep sea, a US zoologist said on Saturday.

The milky white creature, nicknamed "Casper the Friendly Ghost" by Twitter users, was caught on cameras mounted on the craft as it explored the Pacific Ocean at a depth of 4,290 meters, or about 2-1/2 miles, the National Oceanic and Atmospheric Administration (NOAA) said.

Describing the animal as an incirrate octopod, one of two main groupings of octopods, NOAA said it was the first time an incirrate was spotted so deep in the ocean.

"This animal was particularly unusual because it lacked the pigment cells, called chromatophores, typical of most cephalopods, and

it did not seem very muscular," said Michael Vecchione, a research zoologist at NOAA's National Marine Fisheries Service. Cephalopods belong to a biological class that includes octopuses, squid and cuttlefish.

"The deep sea is so poorly known that finding new or unexpected things happens fairly often," Vecchione said in an email, adding that he was excited by the images. "What is unusual is the opportunity to explore this deep."

The octopod "almost certainly" was one of a species never previously described by scientists, and it may well belong to a genus that has yet to be identified, wrote Vecchione, who is affiliated with the Smithsonian Institution in Washington, D.C.

To be certain, he said in the email, scientists

See GHOSTLIKE ➤ Page B6

#### **GHOSTLIKE**

would need at least one specimen, and preferably several of them.

NOAA has posted a video on the website showing a pale, rounded form with expressionless eyes and languid tentacles resting on the ocean floor. Its appearance led some Twitter users to say it resembled the cartoon character Casper the Friendly Ghost.

Last week's discovery came during the first dive of the 2016 season from the Okeanos Explorer, a ship operated by

NOAA that explores little-known parts of the oceans.

The remotely operated underwater vehicle Deep Discoverer came across the octopod near Necker Island, or Mokumanamana, on the northwestern end of the Hawaiian Archipelago.

-- Reuters

## Business World

DATE 651 PAGE

UPPER HALF

LOWER HALF

#### PUBLIC AFFAIRS OFFICE NEWS CLIPPINGS



REUTERS / FLORIDA MUSEUM OF NATURAL HISTORY

VARIOUS LIZARD specimens are shown preserved in ancient amber from present-day Myanmar, in this handout photo provided on March 5.

## Clue to 'lost ecosystem' in 99-M-year-old lizard

A FOSSILIZED lizard found in Southeast Asia preserved in amber dates back some 99 million years, Florida scientists have determined, making it the oldest specimen of its kind and a "missing link" for reptile researchers.

The lizard is some 75 million years older than the previous record holder, according to researchers at the Florida Museum of Natural History who announced the finding this week.

"It was incredibly exciting to see these animals for the first time," Edward Stanley, a member of the research team, said on Saturday. "It was exciting and startling, actually, how well they were preserved." Small reptiles have delicate bodies and typically deteriorate quickly, Mr. Stanley said. Being encased in solid amber helped to lock the specimen together.

The researchers used high-resolution digital X-ray technology to examine the creatures and estimate the age of the amber without breaking it.

The discovery will help researchers learn more about the "lost ecosystem, the lost world" to which the creatures belonged, Mr. Stanley said, and it may help researchers learn more about the creatures' modern relatives.

"It's kind of a missing link," he said. — *Reuters*