

ENVIRONMENTAL TIMES

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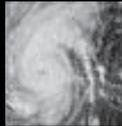
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ALIEN INVASION HITS FLORIDA

Invasive Non-native Plants and Animals Threaten Palm Beach County's Natural Heritage

WHAT ARE THESE ALIENS?

Invasive non-native plants and animals have been brought into Florida, either intentionally or accidentally, from other countries. Taken away from a place where they had natural predators and diseases to keep their populations in check, these plants and animals thrive all too well in Florida's mild climate. With nothing to stop them from spreading, these "aliens" crowd out native species until they dominate the landscape.



Rosarypea

ARE ALL NON-NATIVES BAD?

No. In fact, most non-native plants used in Florida landscapes do not spread into the environment. Of the more than 10,000 non-native plants estimated to be growing in Florida, only 1,200 have spread to the wild. And, of these, only 63 species are currently thought to be disrupting native plant communities.

HOW CAN I SPOT AN ALIEN?

The Florida Exotic Pest Plant Council (www.fleppc.org) lists invasive non-native plants that are altering native plant communities resulting in habitat loss for Florida's native plants and animals. The University of Florida / IFAS Electronic Data Information website (www.edis.ifas.ufl.edu) contains information on topics relevant to Florida's environment and natural resources, including invasive non-native animals.

WHAT CAN I DO TO HELP?

Whenever possible, use native Florida plants in your landscape. Check with your local nurseries or the Florida Native Plant Society (www.fnps.org) to determine the best plants for your area. Don't release exotic pets into wild areas. Instead, drop them off at your local humane shelter.

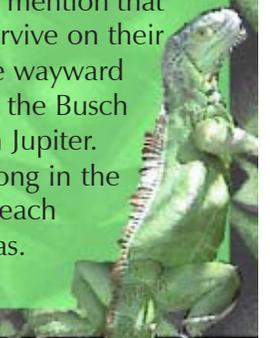
By Ann Mathews



Natural Areas and Pets A Bad Combination

A new animal species was found roaming the Seacrest Scrub Natural Area in Boynton Beach on November 4, 2005. A 70-pound, adult male African Spurred Tortoise (*Geochelone sulcata*) was dropped off at the natural area after it was found walking through the parking lot of a medical center down the street. This species of tortoise is sometimes acquired as a pet and often grows too large for the owner's home. Since it is illegal to introduce exotic animals to County natural areas - not to mention that many pets cannot survive on their own in the wild - the wayward tortoise was taken to the Busch Wildlife Sanctuary in Jupiter. Remember, pets belong in the home, not in Palm Beach County's natural areas.

By Barbara Bobsein



ALIENS AMONG US



BRAZILIAN PEPPER / CUBAN TREEFROG / MELALEUCA / MUSCOVY DUCK / BALSAMPEAR



A Fond Farewell To Jon Deputy Director Leaves ERM

One of the Department of Environmental Resources Management's (ERM) most dedicated employees, Deputy Director Jon Van Arnam, was promoted to Palm Beach County Assistant County Administrator in December, 2005. In his tenure at ERM, Jon has witnessed the rapid growth of Palm Beach County and ERM's responsibilities.

Jon was initially hired in 1988 as the supervisor of the Petroleum Storage Tanks Compliance and Cleanup Sections. Later, he worked in a managerial position in the Environmental Enhancement and Restoration Division. In April 1997, Jon became ERM's Deputy

Director. Each spring he spent roughly two months in Tallahassee during the legislative session, helping to ensure that ERM received adequate State funding. In addition, Jon represented ERM on issues related to the restoration and enhancement of the Loxahatchee River system. During the past several years, he was heavily involved in the Derelict Vessel Program, more recently known as the Hurricane Vessel Recovery Program. Jon also played a leading role in the Florida Local Environmental Resource Agencies organization.

Jon's tenacity and dedication to public service and his commitment to the environment will be a big loss to ERM. However, Palm Beach County will still benefit from his continued service, just in a different capacity. Jon, best wishes from your ERM family.

By Ginny Powell

PRESENTING THIS AWARD TO... ERM Wins Several Golden Palm Awards



Congratulations to nine Department of Environmental Resources Management (ERM) staff members who received 2005 County Administrator's Golden Palm Awards and shared nearly \$16,000 in award money. Jon Van Arnam, Ben Harkanson, and Rod Braun were recognized for their rapid assistance with boat removals after Hurricanes Frances and Jeanne. Carolyn Beisner and Ann Mathews received an award for facilitating volunteer mangrove planting events and using new techniques to propagate mangrove seeds. Paul Mikkelsen and Bruce Wayne were part of an ISS team that developed an application for a new records management system. John Hughes was recognized for his initiative in saving money due to the timely purchase of fencing material for ERM's natural areas. Rich Walesky was acknowledged for his long-term leadership and implementation of County environmental programs. The Golden Palm Award is the highest level of recognition for County employees. It is given to employees who provide exceptional service, initiate cost saving procedures, or improve existing County programs.

By Ginny Powell

Upcoming Meetings

- AREEC - Jan. 12, March 9
- CLASC - Jan. 16, Feb. 6, March 6
- NAMAC - Jan. 20, Feb. 17, March 17
- PBCRRT - Jan. 10, Feb. 14, March 14
- SLWIAC - Jan. 12, March 9

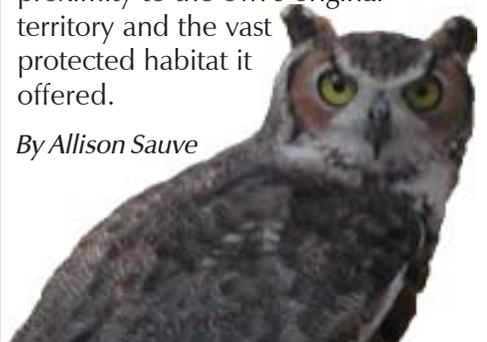
For times and locations, please call 561-233-2400. Dates and times are subject to change.

- AREEC - Artificial Reef and Estuarine Enhancement Committee
- CLASC - Conservation Land Acquisition Selection Committee
- NAMAC - Natural Areas Management Advisory Committee
- PBCRRT - Palm Beach County Reef Research Team
- SLWIAC - South Lake Worth Inlet Advisory Committee

A Return to the Wild

A great horned owl (*Bubo virginianus*) was successfully released back into the wild in the O'Connell Tract of the Hungryland Slough Natural Area located in north Palm Beach County. The young owl was originally brought to the Busch Wildlife Sanctuary with severe head trauma from being hit by a car. The owl recovered after two months of extensive treatment and was ready to be released. Hungryland Slough offers 2,944 acres of high quality wetland and upland habitat which adjoins the existing 60,228-acre Corbett Wildlife Management Area. The sanctuary and Department staff agreed that the Hungryland Slough Natural Area would be an ideal site for relocation due to its close proximity to the owl's original territory and the vast protected habitat it offered.

By Allison Sauve



COUNTING TURTLE NESTS

Volunteer Sea Turtle Monitoring Program

During the 2005 nesting season, 65 volunteers conducted daily nesting surveys on 4.5 miles of beach in Coral Cove, Jupiter Inlet Colony, and Palm Beach between April 1 and August 31, 2005. They recorded a total of 7,568 sea turtle nests. A record number of green nests were recorded at Coral Cove (335) and Jupiter Inlet Colony (109). Coral Cove also recorded double the average number of leatherback nests. Unfortunately, loggerhead nesting at Palm Beach continued to decline (681), and Coral Cove recorded the lowest number of loggerhead nests (1,184) since 1999. However, loggerhead nesting did increase at Jupiter Inlet Colony and on other beaches in Palm Beach County. The Department would like to thank all the volunteers who participated in the 2005 nesting season for a job well done!

By Carly DeMaye



2005 Sea Turtle Nesting Results (Volunteer Beaches)

Loggerhead - 2,560
Green - 480
Leatherback - 26
Total Nests - 7,568

BEACH BUILDING BEGINS

Ocean Ridge Shore Protection Project Status

On November 22, 2005, the cutter suction dredge *Illinois* began pumping sand from an offshore borrow site to the Ocean Ridge shoreline just south of the Boynton Inlet. Approximately 600,000 cubic yards of beach-compatible sand from a site located less than 1/2 mile offshore will be pumped through a submerged pipeline onto the beach. Approximately one mile of beach will be widened starting 1,900 feet south of the inlet jetty and ending near Edith Street. Bulldozers will shape the beach to an initial width of up to 400 feet. Within a year, ocean waves will sort and spread the sand out into a natural slope, leaving about 150 feet of dry beach.

The Ocean Ridge shoreline was first restored in 1998. It is maintained by the sand transfer plant and periodic dredging of the interior sand trap at Boynton Inlet. Overall, the initial project performed well over the last eight years, even during the 2004 hurricanes, though the timing of the new project was accelerated one year by the storms. The Ocean Ridge project will be closely monitored to minimize impacts to local resources. Call 561-233-2400 for more information or visit the Department website at www.co.palm-beach.fl.us/erm.

By Tracy Logue



The *Illinois*

The Project By The Numbers

Total Construction Cost - \$3,380,000
U.S. Army Corps of Engineers - \$1,000,000
Federal Government - \$1,300,000
State of Florida - \$557,000
Palm Beach County - \$557,000

Sea Turtles in the Lake?

Little is known about the sea turtle population in the Lake Worth Lagoon (LWL). We know sea turtles use the LWL, but the extent and distribution are unknown. The Department has contracted with InWater Research Group, a non-profit organization specializing in sea turtle monitoring, to establish a LWL sea turtle baseline population assessment.



Green Sea Turtle

Data is collected via netting activities and visual transects. Turtles are captured by setting a 150-meter tangle net in "turtle friendly" areas of the LWL. After capture, the turtles are weighed, measured, tagged, photographed, and assessed for general health. The turtles are then released at the site of capture.



Flipper Tag

To date, 72 sea turtles have been spotted (1 loggerhead and 71 greens) and 12 sea turtles (1 loggerhead and 11 greens) have been captured. The success of the study is calculated in Catch Per Unit Effort (CPUE). The CPUE has ranged from 1.5 - 4.8 turtles per km/net hour. Based on these results, the LWL may provide important developmental habitat for Florida's green sea turtles. Additional sampling events are scheduled for winter and spring of 2006. This project is funded, in part, by a grant from the Sea Turtle Grants Program, which is funded from proceeds from the sale of the Florida Sea Turtle license plate. Learn more at www.helpingseaturtles.org.



By Carly DeMaye

Impact on Natural Areas

When Hurricane Wilma passed through Palm Beach County on October 24, 2005, she blew down over 200 recently planted trees on Peanut Island. The native trees, which were planted in the maritime hammocks located around the island, were part of the Peanut Island restoration project completed in the summer. Department staff, including sea turtle students, spent two weeks uprighting and re-staking the fallen trees. The hurricane also blew down trees and fences in the County's natural areas. Much of the damage was concentrated in the western and southern natural areas.

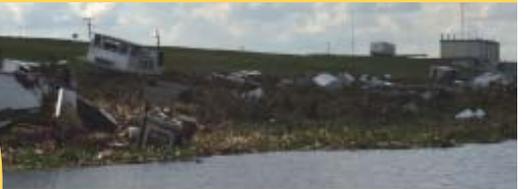
By Carolyn Beisner



Impact on Boats

Hurricane Wilma's mad dash across the state left vessels wrecked from one end of the county to the other. Department staff recorded 127 boats sunk or beached during surveys conducted the first week of November. Seventy-three of these were found in the Intracoastal Waterway and Lake Worth Lagoon between Jupiter and Boca Raton. The greatest devastation took place along the edge of Lake Okeechobee. Gusts of 112 mph were recorded at Belle Glade where the storm demolished the marina. Boats, recreational vehicles, and buildings were smashed on site or hurled across the perimeter canal where they formed a line of debris at the base of the levee that stretched for hundreds of yards. Fifty-three boats were counted in an area of about 50 acres. The Army Corps of Engineers will clear the canal of debris. Removal of the east coast wrecks is expected to begin around Christmas.

By Ben Harkanson



HURRICANE

Impact on Programs

The Department's Contamination Cleanup and Monitoring Section inspected and documented damage to remediation systems countywide after Hurricane Wilma. Fortunately most sites sustained only light structural damage with the major systems intact. The Contamination Cleanup Section is currently working to clean up over 250 sites at a cost of approximately \$6 million yearly to identify, assess, and direct resources through state funded contracts to petroleum contaminated sites in Palm Beach County.

By Mark Williams



WILMA HITS

Impact on People

The Department office sustained water damage from the storm; combine that with no electricity for nine days and working conditions were rough to say the least. That didn't stop Department staff from helping the County and its residents recover from Hurricane Wilma. Staff removed debris from roadways and cleaned up the natural areas and other environmentally sensitive lands. Other Department employees assisted with food distribution to the hardest hit areas - retirement communities, trailer parks, and the towns around Lake Okeechobee. Food, water, and ice were delivered to hundreds of grateful people.

By Ann Mathews



RESTORING NATURE

Pine Glades Natural Area Update

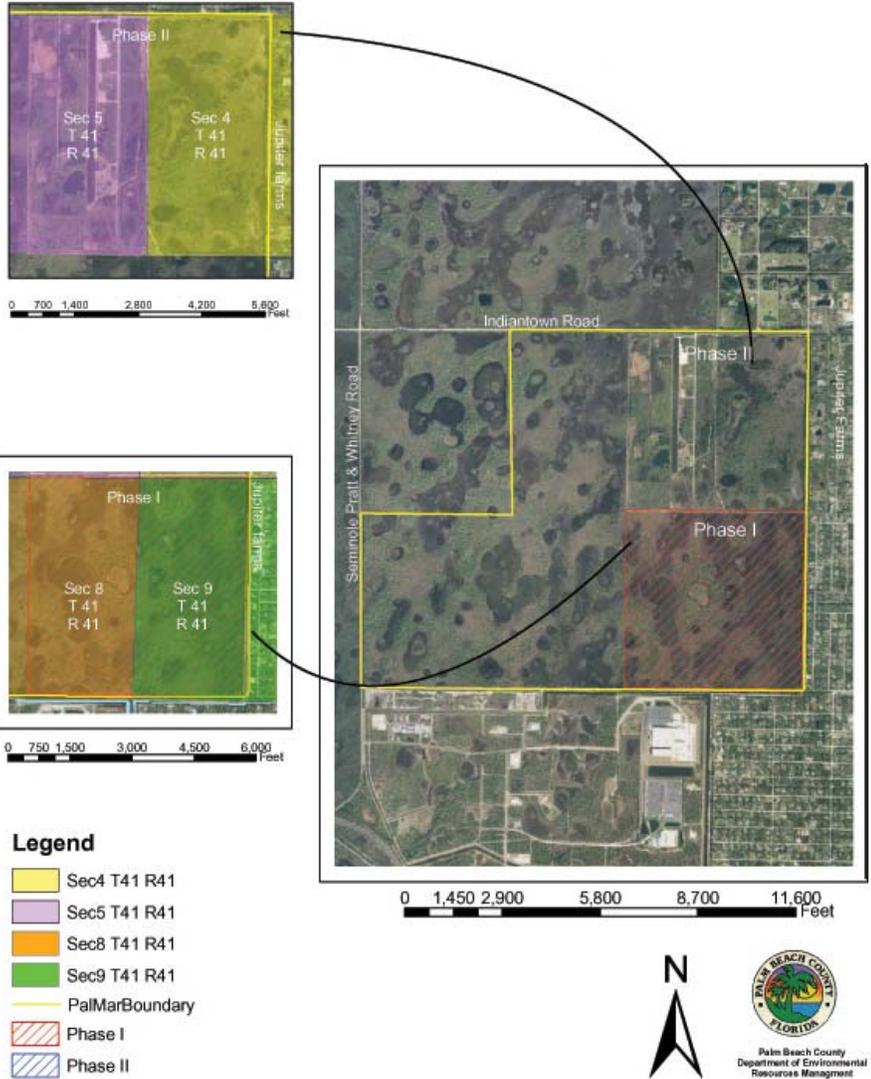
On November 15, 2005, the Palm Beach County Board of County Commissioners approved an Agreement with Minto Communities, LLC in which the County agreed to conduct offsite wetland mitigation activities required as part of environmental resource and dredge and fill permits related to a proposed 250-acre planned development within the former southern portion of the County's Pond Cypress Natural Area. In consideration of the County's agreement to conduct these mitigation activities, Minto will pay the County \$3,203,906. The Board also authorized the execution of a Conservation Easement to be placed over the approximate 655-acre mitigation parcel in the southeastern portion of the County's Pine Glades Natural Area.

Over the years, water levels and flows within the proposed mitigation area have been adversely impacted by the construction of several berm and canal systems. These berms and canals effectively stop normal surface water flows out of the mitigation site. As a result, water levels within the eastern portion of the mitigation area are much higher than they should be during the rainy season. Conversely, when rainfall ceases, the wetlands along the eastern and southern portions of the mitigation area rapidly dry out due to seepage losses to the adjacent canals.

The proposed mitigation plan includes the initial removal and ongoing control of invasive exotic and nuisance plant species, hydrologic restoration of the site, restriction of unauthorized uses, and implementation of a perpetual management and maintenance plan. About 124 acres which are dominated by exotic plants shall be cleared using heavy mechanical equipment. Areas with less than 50% exotic plants shall be treated by hand.

Hydrologic restoration of the mitigation area includes erecting a seepage barrier to prevent water exiting the Natural Area through the berms and constructing a proposed off-peak water control structure to reduce water levels within the Natural Area when they become too high. Restoration should begin in 2006.

By Sandy Mann



Department Receives State Grant

The Department was awarded a \$175,000 grant from the State of Florida Division of Forestry to conduct a countywide tree canopy analysis. The non-profit American Forests will use LandSat satellite imagery from 1995 to 2005 to determine historical tree canopy cover and land use trends. The effects of the 2004 and 2005 hurricanes on the existing tree canopy will also be analyzed. In addition, American Forests will provide training to County and municipal staff for its Citygreen software. This software calculates the dollar benefits of trees based upon their stormwater runoff storage capacity, carbon dioxide storage capacity, air quality, and energy savings. The County will disseminate the results of the analysis to the 37 local municipal governments in order for them to formulate and develop their own canopy replacement and urban forestry programs.

By Matthew King



NATIVE PLANT SPOTLIGHT

Coontie Plant (*Zamia pumila*)

Despite its appearance, the coontie is neither a fern nor a palm, but a cycad, an ancient cone-bearing plant. The coontie was an important food source for the Calusa, Timucua, and Seminole Indians. They ground the underground stems into a flour called "Seminole bread" or "Arrow Root". The coontie is a perennial evergreen plant that grows to a height of approximately 2 feet. It is cold-tolerant, even finding its way into north Florida. The coontie's high drought tolerance and moderate salt tolerance make it an excellent choice as a low-maintenance landscape plant. It prefers well-drained soils and should be planted a minimum 12-24 inches apart.

Mealy bugs and scale occasionally attack coontie plants. The use of an insecticidal soap will take care of these pests. One insect that should be encouraged to forage on the coontie is the Atala butterfly. Once thought extinct, the Atala is making a comeback in South Florida thanks in part to the increased use of coontie in the landscape. In order to encourage the arrival of the Atala on the coontie, a minimum of eight to ten coontie plants clumped together is recommended.

By Matthew King



Atala Butterfly

Atala Butterfly Caterpillars

GET READY FOR A SEACOW INVASION

Manatees Head to South Florida to Find Warmer Waters

Similar to the snowbirds that are attracted by South Florida's mild winter weather, manatees are also arriving in our area to take advantage of the County's warm waterways. Manatees seek out water that is above 68 degrees. Local "hot spots" where manatees tend to congregate in the winter include Jupiter Sound, the C-18 Canal, Southwest Fork of the Loxahatchee River, Earman River, Central Lake Worth Lagoon (near the FPL plant), and Lake Wyman in Boca Raton.

Think of the Intracoastal Waterway (ICW) as the manatee's version of I-95. Just as local motorists need to share I-95 with snowbirds, local and visiting boaters need to share the ICW with manatees. Manatee mortality associated with boat strikes has recently increased in Palm Beach County. For years, the average number of manatees killed was less than two. However, this rate has been increasing since 2002 when six manatees were killed by boats. As of October 2005, five manatees have been killed this year.

The Department has been taking a number of steps to help protect manatees. A survey of manatee speed zone sign damage was recently completed that will help guide repair efforts. New brochures are being created with maps of speed zones. These maps will also be part of new information kiosks that will be built at local boat ramps. The Department has also been involved in the development of a manatee protection plan that will address manatee conservation issues countywide. The goal of the plan is to summarize all that is known about manatees in the County, their habitats, local threats, and the steps being taken to minimize those threats. To see a copy of the plan or provide comments, visit www.co.palm-beach.fl.us/erm/enhancement/manatees.asp.

By Paul Davis





MATERIAL GAINS

Volunteers Perform "Sew" Well at Natural Area Work Projects

CLEANING UP AFTER WILMA

The 97-acre Hypoluxo Scrub Natural Area, located in Hypoluxo, needed cleaning after the winds of Wilma whipped debris throughout the site. Our hard-working volunteers removed more than 800 pounds of debris and trash.

GREEN THUMBS ALL AROUND

Scrub habitat is one of Florida's most endangered natural communities. Volunteers did their part to preserve this fragile resource by planting 150 scrub oak seedlings and removing 340 pounds of trash from the 14-acre Rosemary Scrub Natural Area located in Boynton Beach.

JUPITER HIGH SCHOOL LENDS A HAND

Students from the Jupiter Community High School Environmental Research and Field Studies Academy have assisted the Department with several habitat restoration projects. Students planted endangered fourpetal pawpaws in the 55-acre Lake Park Scrub Natural Area located in Lake Park. They also planted 1,500 sea oat seedlings along the dune at Coral Cove Park. If that wasn't enough, they removed 940 pounds of trash from the 576-acre Juno Dunes Natural Area located in Juno Beach.

FLORIDA COASTAL CLEANUP UPDATE

More than 190 volunteers participated in the 2005 Florida Coastal Cleanup event held at Lake Osborne in Lake Worth. Volunteers recorded the type of trash they removed on data cards which were forwarded to the Ocean Conservancy in Virginia. The top three trash items removed from the lake shoreline were caps/lids - 1,612, cigarettes - 1,175, and food wrappers - 1,160.

By Ann Mathews



1. Volunteers smile for the camera amidst the garbage collected during the 2005 Florida Coastal Cleanup. 2. National Public Lands Day participants plant thousands of red mangrove seedlings. 3. Students from the Jupiter Community High School Environmental Research and Field Studies Academy (JERFSA) prepare to plant fourpetal pawpaw seedlings. 4. A JERFSA student holds up some hubcaps found at the Juno Dunes Natural Area. 5. Students from Northwood University spend some time in the Department's nursery. 6. Hurricane Wilma debris removed from the Hypoluxo Scrub Natural Area. 7. Volunteers plant one of 150 scrub oak seedlings at the Rosemary Scrub Natural Area. 8. JERFSA students prepare to plant 1,500 sea oat seedlings at Coral Cove Park.

Helping a Worthy Cause With Old Spectacles

Department employees generously donated 56 pairs of prescription eyeglasses to the Give the Gift of Sight Foundation for their October "Sight Night" program. These used eyeglasses are collected and distributed by charitable vision care programs in North America and developing countries where vision care and access to eye sight correction may be limited. Since 1993 the Give the Gift of Sight Foundation has reached 4 million people. For more information visit www.sightnight.org. A special thanks to all those who participated in this program.

By Jamie Caston



THE BACK PAGE

Last But Not Least...

The Department welcomes the following new employees: **Administration** - Robert G. Robbins; **Environmental Enhancement & Restoration** - Kathleen G. Vaughn; **Finance & Support Services** - Hilary-Ann Fox

If you would like *The Environmental Times* mailed to you, call 561-233-2426.

Working Up a Sweat

Department staff have been busy pounding the pavement as they compete in marathons throughout the state, country, and world. Bob Deacy completed the Dublin Marathon on October 31 in Dublin, Ireland and raised over \$16,000 for the Leukemia and Lymphoma Society. Julie Bishop ran the Marine Corps Marathon in Washington D.C. on October 30 and the Palm Beach Marathon on December 4. She ran a personal best time - 3 hours, 59 minutes - at the Palm Beach Marathon and qualified for the 2006 Boston Marathon. Other Department staff competing in the Palm Beach Marathon included Christopher Dean (ran the full marathon), Jacey Biery (ran the half marathon), and Jerry Cook (ran the half marathon). Congratulations to all the participants.

By Ann Mathews



Bob Deacy in Dublin



Julie Bishop in D.C.

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