

36

36

36

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36



生於1932年，幼年時因戰爭流離失所，在台南啟蒙繪畫。少年時，組成「東的畫會」，於後加入「現代版畫會」。在藝術領域上成就不凡。

吳昊的「花」，色彩鮮艷的滿對比強烈，花朵充滿生命力，枝葉彷彿散發著芬芳，讓畫面充滿歡愉的氛圍。

2 of 3

2020 - HAWAII BELLOWS

caliber.
COMPOSITION BOOK
GEORGE BALAZS
+1 808 683 8402
8-19 KOREA JEJU
9-19 TAIWAN
10/11-2019 TAHITI NAPUKA
11-2019 KINLO
11/12 2019 SAPOA

RETURN TO SENDER
Your package has been returned due to service impacts at the destination country
1. Go to: www.usps.com/help/claims.htm
Click on: "International Shipments" tab for instructions

柏樂滋



1-2020 HILO PUWA
1-2020 IRC NECKER
2/3 2020 TAHITI
HUAHINE

¾ IN x 7 ½ IN
(24.7 cm x 19 cm)

RULE

Paradise renewed

A brief absence of humans shows remarkable changes in Hanauma Bay

5-31-2010

By Mindy Pennybacker
mpennybacker@staradvertiser.com

week to look for honu.

The retired former researcher with the National Oceanographic and Atmospheric Administration in Hawaii said he'd seen three honu in the Backdoors and Keyhole channels, but these were the first turtles he'd seen in his four visits to the closed bay, so far.

"Clearly, not having tourists here is not causing the turtles to come around," Balazs said with a wry grin.

It was time to leave. In a last look back at the blue bay, a black-and-orange butterfly flew past and hovered against the wind at the cliff's edge for a moment before diving down toward the sea.

Returning to the nearly empty parking lot, devoid of tour buses and trolleys and rental cars, one felt far from civilization and reluctant to return to town.

LETTERS TO THE EDITOR

7-30-2020

Public irresponsible at beaches, parks

The massive COVID-19 number increase is alarming and irresponsible. Our politicians are not taking this seriously.

Beaches and parks remain open and are a contributing factor. Drive by a major beach on a Saturday and it's choke-crowded with people. Many large groups in large tents, having parties. The parking lots are jam-packed with vehicles.

Yes, the outside is open air. But if people are in close proximity for long periods of time, you have points of exposure and then spread.

Malls, stores and restaurants are mostly open and have made provisions for social distancing. Many fastidiously clean after every customer.

I support our local businesses and hate to see them close up again. We have lost too many businesses permanently already.

Instead, close the public recreational facilities and send a significant message to the non-complying public.

Chris Higgins
Kalihi

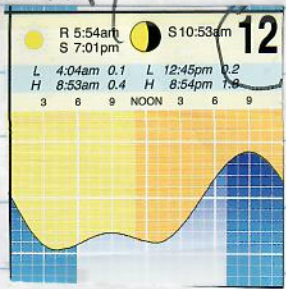
Another scientist, specializing in very large marine animals, had just arrived and was standing at an overlook on the road up the cliff. He was George Balazs, who has been studying green sea turtles and working for their conservation since 1971; at Rodgers' invitation, he had been visiting the closed bay once a

(86)

HANAUMA BAY

MAY

(1)



TUESDAY

Kuulei Roger's observed Team J

745 - 945 am

from upper Roadway, only one Turtle seen

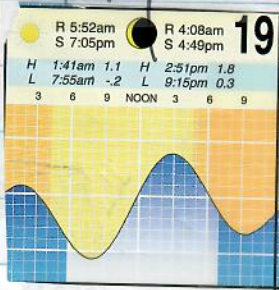
751 AM - Surfaced

then gone. Back door 2 PROMISED STONE
Lynette

(2)

HANAUMA

MAY



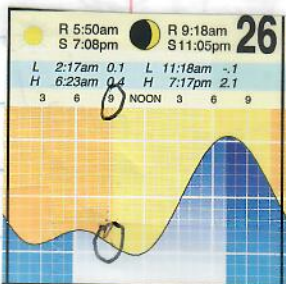
TUESDAY
START
8:15 am

Met Louis Chung HANAUMA NAKA 3 years this position. Prior TARA SAW UUA 9:43 am.

NO turtles seen from High on Beach Bench 1040 - 1130 am - watch for heads up under Messerschmidia overhang

MAY 26 TUESDAY Departed 1230 PM

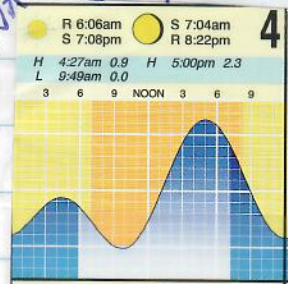
Kuulei Reports seeing one turtle 9 AM AT BACKDOOR



TUESDAY

I didn't Go.

HANAUMA 8-4



LB&GB

877-5631

(87)

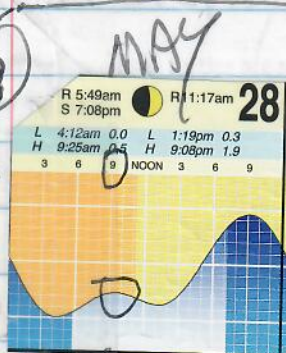
5/22/2020 VISITED Mililani Cemetery
Friday Miriam Pillios 1963-2016

GARDEN PP, Section 41 LOT 10

VIA DAUGHTER JOSEF SON NATHAN
NUMBER HUSBAND STEVEN KAGANOVE
1401 BRENTWOOD DR.

MAILED MIDLAND, MI 48640-2819
5-28-2020

MANAUMIA (3)



on site 9:20am. 9:30am saw
fast lava swim across backdoor.

9:42 1 Juvenile (BD) near same coral
head as 5/12/2020. 9:45am 2 surfaced
at area near nearby coral head.
Nothing more. MINDY PENNYBACKER
11 AM AT

and Craig Kojima Photographer. Bench on
beach - nothing. Departed ~ 12:15 PM.

"If you can see fish you can surely
see turtles"

17 JULY 11-12 noon none seen

(5) FRIDAY

21 JULY 2020 TUES. 11:00 - ~ PM none

(6) seen - met Liz KUMABE

2 AUGUST TUES. 1 PM 12 PM met Brook

TALKED TO LIZ. SAW BUOYANT/TURTLE middle
of Bay. LARGE.

GO TO PAGE 94

Wednesday webX ^{WB Park} BFBP = Bellow Field Beach Park = WB Beach Park = WF
6-3-2020 12NOON TO 115pm. Jenn Lynch,
TW, MARK FLINT, Melissa Jung (Colorado), KATY, Shari
IK, MILANI, SB DARIELLE WILLIAMS

- Delink from Rebuttal
10 wk Time-line to Presentation
Monumental TASK
FOIA PARR Longline - Fresh NO CASE,
sent Jenn presentation ALL Neuropsysed by TW.
2/9/2020

6/10 Wed. 12-1pm same roll as above but
no MILANI, MARK FLINT or SB.

6-11-2020 445-545pm BELLOWS
THURSDAY (WAIMANALO State Rec. AREA)
Walked to left to ROCKS - START OF
MAKINE CORP/BELLOW AFB Beach. LARGE FLAG
AREA 4 STAKES AND folding sign (photos)
STAND WATER from stream immediately IN AND
Slopes that way. NO INDICATION from SAND
INSIDE AREA of TAPED. TIRE TRACKS all along
beach - patrol by AFS?

6-12/20 Bellow 3:30pm - 445pm on site
FRIDAY Walked to beyond second toilet
6 Flagged areas - photos. TIRE TRACK
None look Raked, None look like nests.

MAN
Footprints

(2)

Tire
tracks
by
Rocks

Bellows continued

CAROLL COX ENVIROWATCH@
(ENVIROWATCH.ORG)

(89)

6/12/20 Potential entangling nesting turtle
old nets for lifeguard tower parking 808-625-2175

6/13/20 SAT TO gate to Beach
Saw 8th Flagger - This one took
good (likely eggs) photos. Several large
fishers on end of jetty, organized all
photos

Bellows

by Nina Wu
wu@staradvertiser.com

6/12/20

Green sea turtles are nesting at Bellows Beach for the first time in documented history — and humans are being asked to tread lightly around them.

It is the first time U.S. Marine Corps Base Hawaii has documented nesting at Bellows Beach, according to spokesman Maj. Roberto Martins, possibly as a result of reduced foot traffic due to the coronavirus pandemic. Without as much traffic, turtle tracks and nests were more visible to

Signs warning of nesting green sea turtles are placed at Bellows Beach. So far, 13 nesting sites have been identified at the beach.

natural resources experts.

So far, he said, 13 nesting sites have been identified at the beach.

To help protect them, the city Department of Parks and Recreation will keep the Bellows Field Beach Park Campground closed through Sept. 4.

In social media posts, DPR said the campground would remain closed until then “due to unprecedented turtle nesting” in order to protect the honu and let them complete their nesting cycle without interruption.

While the sea turtles — more popularly known as honu in Hawaii — have nested along various Oahu shorelines before, this is believed to be the first

3-4:15 PM see Kaneohe Corps
photos Marine BASE
NWUP/A one from bridge edge surfacing
6/18/2020 one by TRIPipes
5 TO Right of TRIPipes.
Some long brs at pipes distance
location one med. MOTIVLES NDTMRS.

time it has been documented in the Bellows camp area, according to the U.S. Fish and Wildlife Service.

“This is very exciting,” said USFWS biologist Nanea Valeros. “It’s exciting to see a turtle nest, and there aren’t many words to describe what it’s like to sit and quietly watch as she digs her nest, or to watch as hatchlings emerge. ... It’s very special.”

However, at the same time, it is important for the public to remember the turtles need space and quiet.

The Marine Corps has put up signs at the beach and roped off the nesting

Please see TURTLES, B6

6/19/20 Friday 345-445 WB Beach Park photos
WALKED Right TO CAUMILO ST. HOUSES. ONE POSSIBLE
older EXCAVATION



BELLOWS

Saving green sea turtles

The Bellows Beach campground will be closed through Sept. 4 because honu are nesting at the park for the first time in documented history.

6/12/20

include the quieter beaches due to recent stay-at-home orders. Also, Hurricane Walaka had wiped out original nesting grounds at French Frigate Shoals two years ago.

Until studies are done, none of this can be confirmed for sure, said Browning.

Green sea turtles are considered a threatened species in Hawaii and an endangered species elsewhere in the Pacific, and are protected by both federal and state laws.

In addition to keeping a proper distance from sea turtles, using the "rule of thumb," Valeros advises the public to avoid flash photography or videography, or any artificial light sources around them because it can disorient the mother turtles and hatchlings. The area between the nest and ocean should also remain clear.

Female green sea turtles, depending on size, can lay from 60 to 160 eggs per clutch, and can return in two-week periods to lay more over several months before leaving the nesting area.

Sea turtle eggs usually incubate for about 60 days, after which hatchlings emerge and make a beeline for the ocean, guided by moonlight.

Only 1 in 10,000 sea turtle hatchlings makes it to adulthood, by some estimates.

Valeros said the public's help is vital to helping the hatchlings so that future generations can enjoy them as well.

Reports of sea turtle nest sites and hatchlings that need protection can be reported to the NOAA hotline at 888-256-9840. Reports of violations at Bellows can be reported to the conservation law enforcement officer at 387-7975.

WHEN YOU SEE A TURTLE OR HATCHLING ON THE BEACH

- >> Do not approach it, and watch from a distance.
- >> Avoid using flash photography/videography or anything with an artificial light source, including from cellphones and flashlights, because they can disorient nesting females and hatchlings.
- >> Maintain a clear path between the turtle and ocean. Do not block a hatchling or try to direct it.
- >> Maintain quiet. Noises can disrupt nesting females and hatchlings.
- >> No off-roading or vehicles allowed on the beach.
- >> Dogs are not allowed at Bellows Field Beach Park or campground.
- >> Avoid passing between nest areas and ocean. Walk behind nests.



LANCE CPL. SAMANTHA SANCHEZ / MARINE CORP

Warning signs are posted at Bellows Beach

Source: USFWS, MCBH

⑤ 6/22 Monday Bellows 830-1045^{AM} with LANCE Bookless. DAIN & others walked north to south. Met KEVIN DON MOYER FWS

⑥ 6/28 Sunday Bellows 415-515^{PM} W S RA TO ROCKS ME #1 THEIR SITE 10 & 11. TRACKS discerned inside flagged area. SHALLOW EXCAVATION. Need to RAKE.

⑬ ⑭

Presumed Nest	Date Found	Est. Date of Emerg (+60)	Possible Exc. Date (+70)
	1	1-Apr-20	10-Jun-20
	2	22-May-20	31-Jul-20
#8	3	22-May-20	31-Jul-20
	4	23-May-20	1-Aug-20
	5	23-May-20	1-Aug-20
	6	23-May-20	1-Aug-20
	7	23-May-20	1-Aug-20
#7	8	2-Jun-20	11-Aug-20
	9	4-Jun-20	13-Aug-20
#1	10	4-Jun-20	13-Aug-20
	11	4-Jun-20	13-Aug-20
	12	9-Jun-20	19-Aug-20

14
11
June 18th

Tuesday (7)

7/14/20 Raked sites from North to South - photos nesting seen 7/16 AM AT COTTAGES PER LANCE
7/16 Raked Rewards South to north. Thursday photos see EMAILS

9 7/17 Checked all sites - no pae Hatch Friday 4 stops during 4-5 PM NO TRACKS

10 10 Miles from Home to Tinker Gate. 7/18 Sat. 4:15 - 6 PM Raked 7/19 (11) SUN. 4:15 - 6 PM Raked 7/20 (12) Monday 3:45 - 4:45 High CAT & maybe 10 pig foot prints

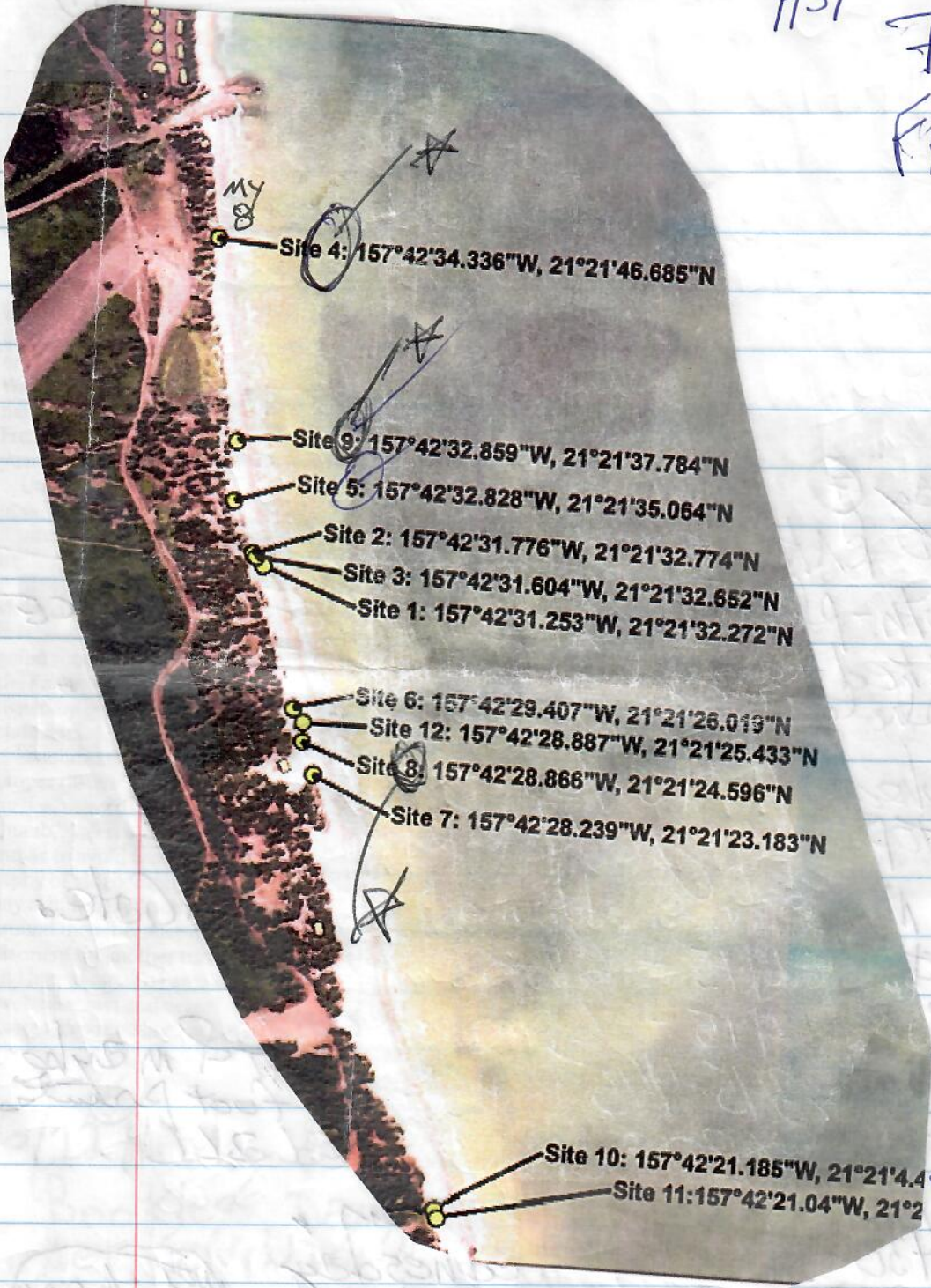
13 7/21 Tuesday 4:30 - 6 PM Raked all Met Karen Bryan. 7/22 (14) 4:30 - 5:45 PM Wednesday

7/23 (15) checked Raked all but (NOT Southern MOST) 7/24 Friday (16) pre emergence seen 6 PM TAMMY PARALEGAL AND

7/25 (17) 9 - 9:45 AM 5:15 - 6 PM Debbie + 2 7/26 SUNDAY 1:45 - 2:15 PM

HST

7/29/12
FAFA



NOT
AC

BELLOWS

(19) Monday photos Karen Bryan

7/27 4:30 - 6pm First check post Hurricane
all sites checked, ALL washovers

except #3 counting N. to S,
MCBTA #5 on MCBTA #8 site 4 that produced
12-18" Saurito
Rods falling over hatchlings

Tuesday FLAG

7/28 RAIN - Didnt GO

7/29 Wednesday - 4:30 - 5:30 pm

7/30 Thursday 4:50 - 5:50 pm
(4 PM TALK WITH LANCE DAIN KEITH) FLAGGED S.

7/31 Friday ALL RAKER PERIMETER N-44-1

8/1/20 Saturday drove there and back
Lots of beach goers everywhere FEW MASKS

8/2 Sunday Didnt GO. Premerence #2-3
8/3 Monday 2:30 PM CRAB HOLE #9

15 8/4 TUESDAY WALKED BEACH N -> S cluster
of 4, 4:30 - 5:30 pm

16 8/6 Thursday hatchling tracks 8th enclosure N -> S
went to restroom see Karen Bryan MCBTA #8 (12)

8/7 Friday DID NOT GO

17 8/8 Sat. Beaches Closed COVID - just drove thru
2pm Return from Vol T

18 8/10 Monday Checked/Raked all except northernmost

8/11/20 Tuesday No GO - PAUL for dinner

19 8/12 wed. Walked beach N to H-4 group

8/13 DIDNT GO

20 8/19 wed. Walked and photoed N to S. to P. 95

1914
Thursday

478-900 / Tech Seal

July 12, 2020 TO LANIAKEA on beach for 10 min.
PHOTOS. NO BASKERS - 5-6 shiny backs seen on
LIMESTONE bench. 3 with NO BASKS, one w Name Tag
couldnt see other 2 sitting in chairs.

July 15 Drove counterclockwise Oahu -
Wednesday stopped at Valley of the Temples
Aupuni (photos) Kupala Ranch
collected 2 fecal pellets, Laniakea 45 min
photos - Monk Seal 150" NO BASKERS
but several on beach rock - photos

People 6 ft. Turtles 10 ft.

7/17 (7) from 9:37 TO 9:47
10-11 AM HAWAII MA

NO Turtles but Kupala team saw one
shallow I saw seal come in back door then swim
parallel to beach

7/29 Darrielle Withiams presentation
800-815 AM 6 AM INTRO,
+ 12 noon Co-Author Meet

Bellows
31 x 10 miles

310 620 miles

310 46 Hours

Permit POINTS

(95)

50 CFR

Permit not needed
for threatened species

223,206 sea turtles

222,301 sea turtles

Cultural Sec. 106 Conservation

(31) Bellows 330 - 430 PM

10/21/2020 Wed. Walked from guardhouse
to Restrooms 3 photos on smart phone. Had been
raining - no sign of anything.

6/11 TO 10/21/2020 31 Day Visits
2 hours each + 1 hour RT Drive Time
= 93 hours, 630 miles RT total

From: Christensen CIV Dain L <dain.christensen@usmc.mil>
 Sent: Monday, August 3, 2020 7:50 PM
 To: honu world <itsahonuworlدينhawaii@hotmail.com>
 Cc: Bookless CIV Lance S <lance.bookless1@usmc.mil>; Roberts CIV Keith A <keith.roberts1@usmc.mil>
 Subject: RE: August 1st Saturday

George,

Good looking out for your safety. It is getting pretty scary out there. Kevin called me this morning (03 Aug 2020) and informed us of a successful emergence at site 9 (FWS Bellows_14). Right on time, as today is its 60 mark according to our data set. He also mentioned that there may be another emergence cone at MCTAB but could not recall which presumed nest. I suspect the southern most nests 10 & 11 because they too are at the 60 day mark. Now that the weekend has passed and the public should be gone, could you get your expert eyes on it and let us know if there is an actual emergence cone and what nest it is? I saw on the doodle poll you plan to be out there this evening.

We really do appreciate all of your work. Stay safe out there and let us know if you need anything.

REVISED AGENDA, PICES-2020 SB Mtg. Day 3: Oct 9/10. Conference call #3: 180 mins.

PICES 2020 SB, Oct 9/10, Day 3: Revised Conference call #3: 180mins

#	Item	Presenter, # mins	Item time (mins)	Total Time (mins)	Details / Action, etc.
*	Conduct of Call		5	5	
14	Special Project Reports	SEAturtle update: Sastri	10 mins or less	15	- SEAturtle: update, Akash Sastri, per Taewon Kim
15	ECOPS mentorship framework	Ciguatera intro: Makino Trainer / Bograd	10 mins or less 5	25 30	- Ciguatera - Project report, presenter: Makino - SB / FUTURE update on ECOP / PICES mentorship framework
16	PICES-2021 Update & SB Session ranking	Batten - update SB rank sessions	60	90	- PICES-2021 Qingdao: Update - SB to review and rank session proposals for PICES-2021 - spreadsheet provided. - Note: FUTURE-SSC's UNDOS SG must be included in SG votes.

PICES SB 10-9-20

MAR 9
MABIK
KASH

12
11
10
9
10/10
Re

8) TUESDAY

9-29-2020

HANAUMA 1030-11³⁰AM

SEE START HANAUMA P.06

97

No turtles seen. Lots of GLARE. 10-15 BK & Red FLOATS clustered in Witch's Brew. Backdoor left buoy moved to the right. still moved 10/9/20

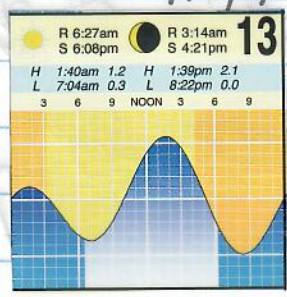
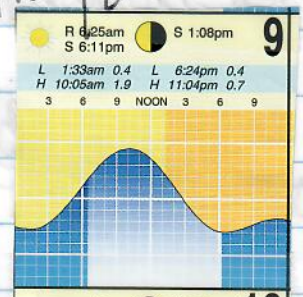
10-9-2020 Friday 11AM - 1230PM

9) Higher Tide GLARE from an high when arrived - GONE LATER
No turtles seen. Kulei Team saw one small. Walked to overhang tree 11:47AM saw Adult "PATROLLING" Seal Pass overhang tree. Looked for turtles & feces - NONE seen

10) 10/13/2020 1125AM - 1242pm

TUESDAY No turtles seen - watched from several overlook high places. Sarah saw one small turtle 28AM Backdoor.

Friday 2020



11

Tuesday 10/20/2020

1040 - 1145 Nothing seen BUT DID see seal on ledge to the left. SARAH SAWS NO TURTLES

12

1140 - 1245pm 10-20-20 Nothing. Sarah said seal on rock ledge where I can't see because of bushes.

STANDARD? 40" x 90"

Recently installed

10-14-2020 3-4pm 27 A-1 Valley of the Temples photos & Measurements

Measurements: BALAZS 4-Corners Bronze on MARBLE
39" width Marble-to-MARBLE

ABEJON photo NAMES double Bronze on Marble = 48" long x 18" wide

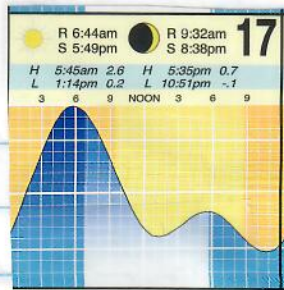
LEONG photo NAMES Double 39" long x 17" wide marble

Klein photo NAMES Double 40" x 17.5" marble

POPO photo 32" wide Bronze
DeBartle Full Length Bronze

JAGRAM photo 40" by 17" = Marble Bronze = 36" x 13"

11/17 HANAUMA JAPAN
TUESDAY 1045 - 12:00 PM FILMING
Nothing seen by me nor by
SARAH DIVERS,



99
NOVEMBER
2020



Aloha! Linda & George
Mahalo Nui Loa for
remembering my day.



Wish I could go backwards with eggs,
but can't. So, I have to keep going up,
forward in No's. The 19th will be a
97 year old Ti Ti. Moving slowly and
doing whatever I can and if no car, no
need. So far, doing okay. Staying home
most of the day, since Feb. Only go
for Dr. appointments, groceries, meds and to
the Post office - Also have car back to go to
down to whenever - Mahalo again!

Your kindness is greatly appreciated
With warmest Aloha!
Jeanette

AUGUST 2020

Local Business

Honu ea are 'truly local,' study finds

Most Hawaiian hawksbill sea turtles spend their entire lives in the islands

By **Mindy Pennybacker**
mpennybacker@staradvertiser.com

Not to be confused with the mellow Hawaiian green sea turtle known as honu, the elusive honu ea, or Hawaiian hawksbill sea turtle, is federally endangered and far less frequently seen.

Smaller than honu, which are vegetarians, adult honu ea have an average shell length of 2-1/2 to 3 feet, and their narrow head and beaklike jaws allow them to pry their prey — sponges, anemones,

squid and shrimp — from crevices in coral reefs.

They're named after ea, or the fungal infection thrush, which Hawaiians treated with medicine made from their shells.

Sibling species in the genus Cheloniidae, green and hawksbill sea turtles are found in tropical and subtropical waters around the world, but populations of Hawaiian green sea turtles, classified as threatened here but endangered elsewhere, are gradually increasing due to conservation efforts in the islands, where they outnumber Hawaiian hawksbills about 100 to 1, according to the National Oceanic and Atmospheric Administration, which has been gathering data on



NOAA

both species in Hawaii for more than 30 years.

"A total nesting female honu ea population of around 150 to 200 individuals is a good estimate, (although) we see fewer than 15 females nesting annually across the

Their narrow heads and beaklike jaws allow Hawaiian hawksbill sea turtles to capture prey from crevices in coral reefs.

entire archipelago," said Alexander R. Gaos, a research ecologist in the Marine Turtle Biology & Assessment Program of the NOAA Pacific Islands Fisheries Science Center. He added that most sea turtle population counts are based on nesting females.

Gaos is lead author of a recent study, published in the journal Conservation Genetics in June, that found that most honu ea are not

Please see HONU EA, B3

HONU EA

Continued from B1

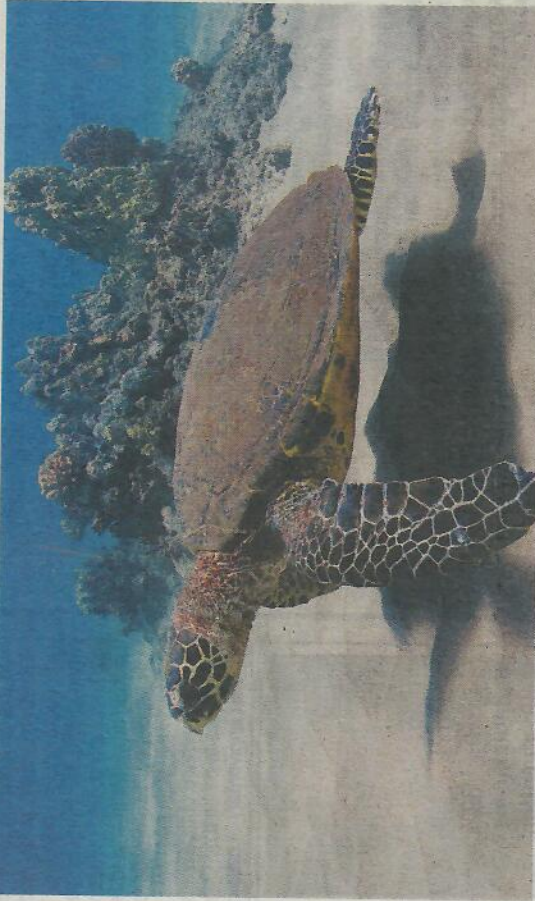
only born but spend their entire lives in the islands, "making them true Hawaii locals," he said.

Based on comparisons of mitochondrial DNA, the authors concluded that Hawaiian hawksbills constitute a distinct and isolated nesting colony in the Central North Pacific Ocean, having evolved "specific genetic mutations that make them different from other nest populations."

The study also revealed that long ago, Hawaii likely served as a "steppingstone" for hawksbills as they spread across the Pacific.

The scientists added the distinctiveness of honu ea "can be good news for wildlife managers because conserving species that migrate across international borders can be complicated."

However, they said, this means the honu ea population could also be more vulnerable to local threats



COURTESY DON MCGLEISH / NOAA FISHERIES

The honu ea was covered under the U.S. Endangered Species Conservation Act in 1970 and is now protected by the Convention on International Trade of Endangered Species. They used to be killed for their beautiful shells. However, their flesh is "deadly poisonous."

Hawksbills have an estimated worldwide population of 20,000 to 23,000 nesting females.

Hawaii's may be one of the smallest nesting hawksbill populations in the world, Gaos said, but it is the largest in the U.S. Pacific Ocean "and the only known nesting colony in the

see, as "hawksbills do like isolated beaches and there are plenty of beaches around Hawaii where monitoring doesn't occur and nesting could be happening," Gaos said.

But even if new nesting beaches are found, he said,

honu ea will remain rare and continue to face serious conservation challenges, including mongoose, feral cat and rat predation; fishing gear entanglement in nearshore feeding habitats; and development and climate change alteration of nesting and feeding habitats.

But one threat hawksbills do not face is that of being eaten, as their flesh is "deadly poisonous" and declared kapu by Native Hawaiians, said scientist George Balazs, who retired after 34 years in NOAA's Sea Turtle Research Program.

Balazs is a co-author of the study with Gaos, Erin L. LaCasella, Lauren Kurpita, Stacy Hargrove, Cheryl King, Hannah Bernard, T. Todd Jones and Peter H. Dutton.

"The aii (ruling class) treasured hawksbill plates for the adornment of sacred kahili (feather standards)," Balazs said.

For more information on honu and honu ea, visit GeorgeHBalazs.com.

105

GREEN TURTLES RELEASED 9/23/2020



Maui Ocean Center photo

Maui Ocean Center Head Aquarist Nadine Nagata and Hawaiian green sea turtle Hohonu get their last moment together before Hohonu entered the Pacific Ocean off Maui on Thursday. Five endangered green sea turtles, hatched at Sea Life Park and raised at the Maui Ocean Center, were released into the waters off Maui on Thursday. It was a bittersweet goodbye for Maui Ocean Center curators who cared for the honu at the Maalaea center. The partnership with Sea Life Park began in 1998, and the Maui Ocean Center has released 83 green sea turtles into the wild. For more on the turtle release, see Page A3.

New seaweed smothering remote reef

7-8-2020
HSA

Algae are covering and killing coral in the Northwestern Hawaiian Islands

By Caleb Jones
Associated Press

Researchers say a recently discovered species of seaweed is killing large patches of coral on once-pristine reefs and is rapidly spreading across one of the most remote and protected ocean environments on earth.

A study from the University of Hawaii and others says the seaweed is spreading more rapidly than anything they've seen in the Northwestern Hawaiian Islands, a nature reserve that stretches more than 1,300 miles north of the main Hawaiian Islands.

The study was published Tuesday in the journal PLOS ONE.



PHOTOS COURTESY COLLEGE OF CHARLESTON VIA AP / AUG. 4, 2019

A new species of seaweed is blanketing coral reef at Pearl and Hermes Atoll in the Northwestern Hawaiian Islands, where the rapid spread of algae is a rare occurrence. The new species breaks off and rolls like tumbleweed, forming thick mats of vegetation.

"All of our dive gear, all of our boats, everything got saturated with bleach," said Randall Kosaki, NOAA research coordinator at the marine monument and expedition lead for the earlier surveys.

"If something like this got back to Waikiki or anywhere in the main Hawaiian Islands, it would be an ecological disaster but also an economic disaster," Kosaki said. "You can imagine what that would do to tourism to have an algae like this overgrowing the reefs."

VIEWS & VOICES

OUR VIEW

OFF THE NEWS

Turtles get breather from gawkers

Tourists — when they do come back — hardly need another reason to break rules. So folks worried about the crowds at Laniakea Beach gawking at the turtles there want to keep them away. Now COVID-19 has presented a path for tackling an ongoing traffic problem at the North Shore site.

Residents want to close the beach or, pandemic-style, allow people to cross the sand but not linger or congregate. There's a petition online (chng.it/TtxDpzRd). Of course, when tourist crowds might reappear is an open question.

*Eye as the light of morning
like the beauteous
dawn unfold,
With your radiant lives
adorning all the
world in hues
of gold.*

*Years are coming, years are going,
all things change
and pass away.
But the light of love is growing
stronger, surer,
day by day. 1939*

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view & voices

LETTERS TO THE EDITOR

Scientist sees Turtle Beach as potential virus hotspot

By Mindy Pennybacker
mpennybacker@staradvertiser.com

As Hawaii cases of the novel coronavirus continued to surge last week, Honolulu Mayor Kirk Caldwell said he was considering re-closing bars and gyms, and the state Department of Health announced that bars and restaurants that violated sanitary and social distancing requirements would be closed until they complied.

Meanwhile, veteran tur-



JAMM AQUINO / JACUINO@STARADVERTISER.COM

A green sea turtle identified as "Sapphire" by researchers hauled out onto the sand on Thursday at Laniakea Beach on Oahu's North Shore.

tle scientist George Balazs is asking the city and state to close what he warns is another high-risk venue: Laniakea, aka Turtle Beach, a wildly popular tourist attraction on Oahu's North

Please see **BEACH, A10**

Prepping for tourists headed to Turtle Beach

For nearly 50 years I've studied Hawaii's sea turtles to sustainably promote their conservation. Never once during all that time did I ever dream that turtles would be a factor in transmitting a deadly disease between people. But that's exactly what can and likely will happen at the tiny cove of Turtle Beach at Laniakea on Oahu's North Shore.

When tourism reopens, many hundreds of people a day will again crowd and mix there close together from all over the U.S. to see turtles sleeping on the sand — and in the process, once again create the traffic jams and pedestrian jaywalking nightmares so familiar to residents of the region.

The time is now to prep for the prevention of chaos and to ensure social distancing. Turtle Beach should be closed, at least for a six-month trial period. Provide a marked right-of-way path to and from the sea for surfers and other ocean users. But keep the rest of the beach a turtles-only zone.

George H. Balazs
Hawaii Kai

By Timothy Hurley
thurley@staradvertiser.com

5-26-20

On a lonely stretch of ocean in the Northwest Hawaiian Islands sits an unremarkable pair of guano-covered rocky islets that belie the behemoth hidden beneath them.

Below the reef that surrounds Gardner Pinnacles is a shield volcano that University of Hawaii-Manoa scientists have proclaimed the largest in the world.

That determination, announced in a newly published study, means that Mauna Loa is no longer considered the world's largest shield volcano.

In fact, the massive Puhahonu Volcano, at 171 miles long and 56 miles wide, is nearly twice the size of Mauna Loa and is nearly as large as the Big Island itself, which was formed by the work of five volcanoes.

A shield volcano is a wide volcano formed by fast-moving lava flows that build a broad profile over time, resembling a warrior's shield lying on the ground. Many of the largest volcanoes on Earth are shield volcanoes, including all the ones in Hawaii.

A team of volcanologists and ocean explorers from UH Manoa's School of Ocean and Earth Science and Technology surveyed the ocean floor and used modeling to figure out the enormous size of Puhahonu, which in the Hawaiian language means "turtle rising for breath."

Gardner Pinnacles sits some 500 miles from Honolulu in the northwest chain between French Frigate Shoals and Maro Reef.

Rising 170 feet above the ocean, the rocky peaks are the visible remnants of Puhahonu, which eroded over 12 million to 14 million years into what it is today.

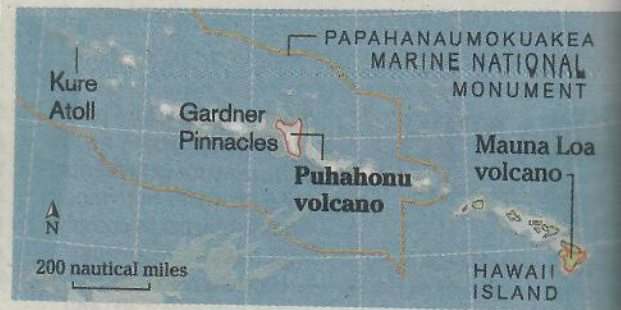
The eroding mass below the waves is so big that it is causing Earth's crust to sink, according to the study, called "Puhahonu Volcano: Earth's Biggest and Hottest Shield Volcano."

A 1974 study using limited survey data described the volcano as the largest in the world. But that study ended up being discounted after further studies concluded that Mauna Loa was bigger, using measurements that included the base of the volcano below the sea-floor and that were not

Please see VOLCANO, B6

WORLD'S LARGEST VOLCANO

Researchers at the University of Hawaii at Manoa have determined that the volcano at Gardner Pinnacles, known in Hawaiian as Puhahonu, is the world's largest shield volcano. The five-year study used updated surveying and modeling methods to figure out that it is nearly twice the size of Mauna Loa, the volcano previously thought to be the largest.



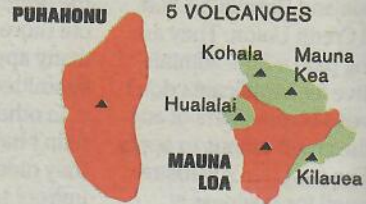
Puhahonu island

1 VOLCANO

- >> 171 miles long
- >> 56 miles wide
- >> Rises about 170 feet above sea level

Hawaii island

5 VOLCANOES



Source: UH School of Ocean and Earth Science and Technology

STAR-ADVERTISER

*You are coming, you are going,
all things change
and pass away.
But the light of love is growing
stronger, purer,
day by day. 1939*

VOLCANO

Continued from B1

considered in 1974.

Using surveying and modeling methods similar to those used for the latest measurement of Mauna Loa, the new study's authors confirm that Puhahonu is indeed the largest.

Michael Garcia, lead author of the study and retired UH professor of earth sciences, said the rediscovery of the gargantuan volcano occurred during a 2015 ocean voyage to the northwest islands, when the Schmidt Ocean Institute allowed UH researchers to survey the ocean floor of the Papahānaumokuākea Marine National Monument from its research vessel.

Garcia said the size of the obscure volcano was an exciting surprise.

"It just points out that we

still don't know much about the ocean floor even near Hawaii," he said. "We know more about the surface of Mars than what's below the surface of the ocean. The ocean is hiding much still."

Puhahonu is now just a 5-acre island with the smallest land area of any of the Northwestern Hawaiian Islands. But the surrounding reef is the largest in the entire chain at 944 square miles and is home to some of the highest recorded numbers of fish species in the archipelago.

It may be small and isolated, but the island has a surprisingly number of insects and seabirds, though only one species of plant, the succulent sea purslane.

The UH study not only found Puhahonu to be the biggest volcano, but the world's hottest. An analysis of rocks collected from the



We know more about the surface of Mars than what's below the surface of the ocean. The ocean is hiding much still."

Michael Garcia
Retired UH professor of earth science and lead author of "Puhahonu Volcano: Earth's Biggest and Hottest Shield Volcano"

volcano in 1976 and brought to Manoa determined the magma temperature at about 1,700 degrees Celsius, or 3,092 Fahrenheit.

"That's the hottest temperature recorded for lava in

the last 65 million years," he said.

It makes sense, he said, because the hotter the magma, the greater the volume of lava production and the bigger the volcano.

Some volcanologists think hot spots that produce volcano chains like Hawaii end up cooling over 1 million to 2 million years before dying out.

But this study suggests that hot spots can undergo pulses, with a small pulse creating the Midway cluster of now extinct volcanoes followed by another, much bigger one to create Puhahonu, Garcia said.

It proves that Hawaii volcanoes have been erupting some of the hottest magma on Earth for millions of years, he said.

The study was funded by the National Science Foundation, Schmidt Ocean Institute and University of Hawaii.

THE MAUI NEWS - Wednesday, September 23, 2020 - A3

Five green sea turtles are released by Maui Ocean Center

The Maui News

Five endangered green sea turtles, hatched at Sea Life Park Hawaii on Oahu and raised at the Maui Ocean Center, were released into the wild in the waters off Maui on Thursday.

Ku'uipo, Kilakila, Hohonu, Maka'ala and 'Auli'i were carried down the Ali'i Nui catamaran steps into the ocean. For Maui Ocean Center's curators, who have fed, cleaned and cared for the honu, it was a bittersweet moment as they bid farewell to the turtles, the center news release said.

Since establishing its partnership with Sea Life Park Hawaii in 1998, Maui Ocean Center has raised and released 83 Hawaiian green sea turtles.

The turtles were released with Passive Integrated Transponder Tags as well as "MOC" and a number marked on their shell for identification purposes. Maui Ocean Center encourages the public to keep an eye out for these turtles.

If a sighting is made, the public is asked to report the date, time, ID number and location to Maui Ocean Center by phone at 270-7075, by email at info@mauiocencenter.com or through social media, for tracking purposes.

Maui Ocean Center continues to care for six 1-year-old Hawaiian green sea turtles, and anticipates more hatchlings in the future, which will eventually be exhibited at Maui Ocean Center's Turtle Lagoon. All

turtles are provided by Sea Life Park Hawaii through the Hawaiian Green Sea Turtle Educational Loan Program.

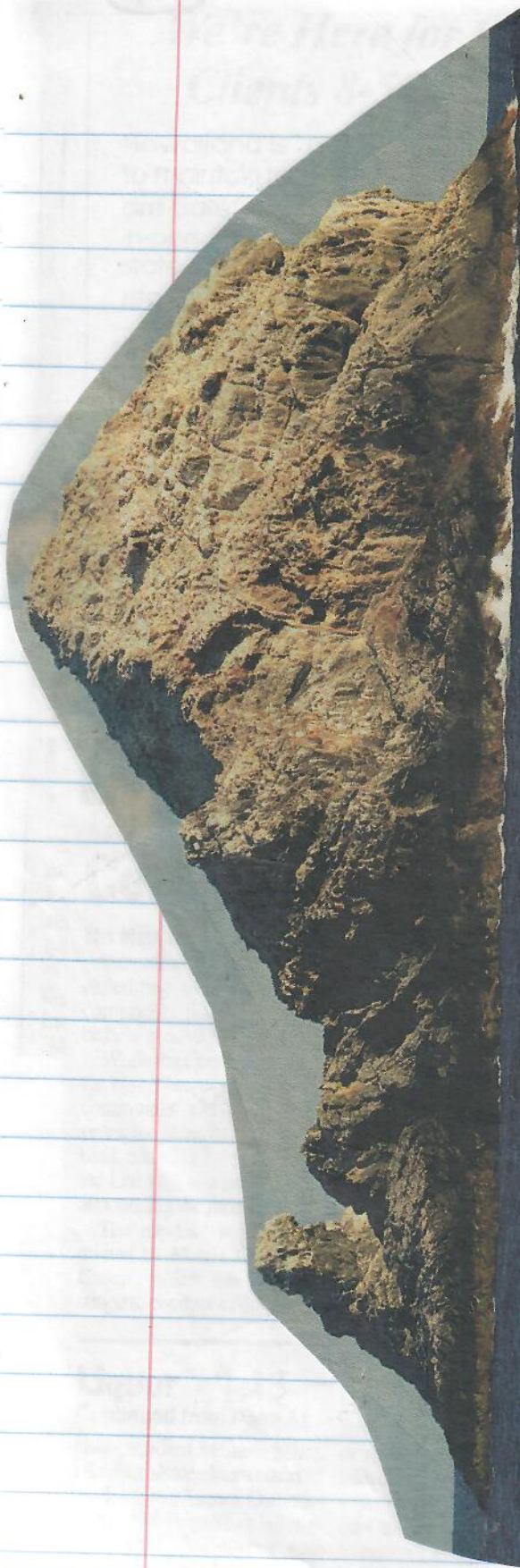
Hawaiian green sea turtles, or honu, are native to Hawaii. They are the largest hard-shelled sea turtle in the world, reaching lengths of 4 feet and weighing over 300 pounds. Out of the seven types of sea turtle, the Hawaiian green sea turtle is the most common in Hawaii, the Maui Ocean Center said.

Sea Life Park Hawaii is home to a colony of adult Hawaiian green sea turtles that produce approximately 200 to 800 sea turtles each year, all of which are released into the ocean. Some of these turtles, like the ones at Maui Ocean Center, Sea Life Park Hawaii,

and other collaborating institutions, are released at a later age to provide an educational opportunity for those who visit these institutions.

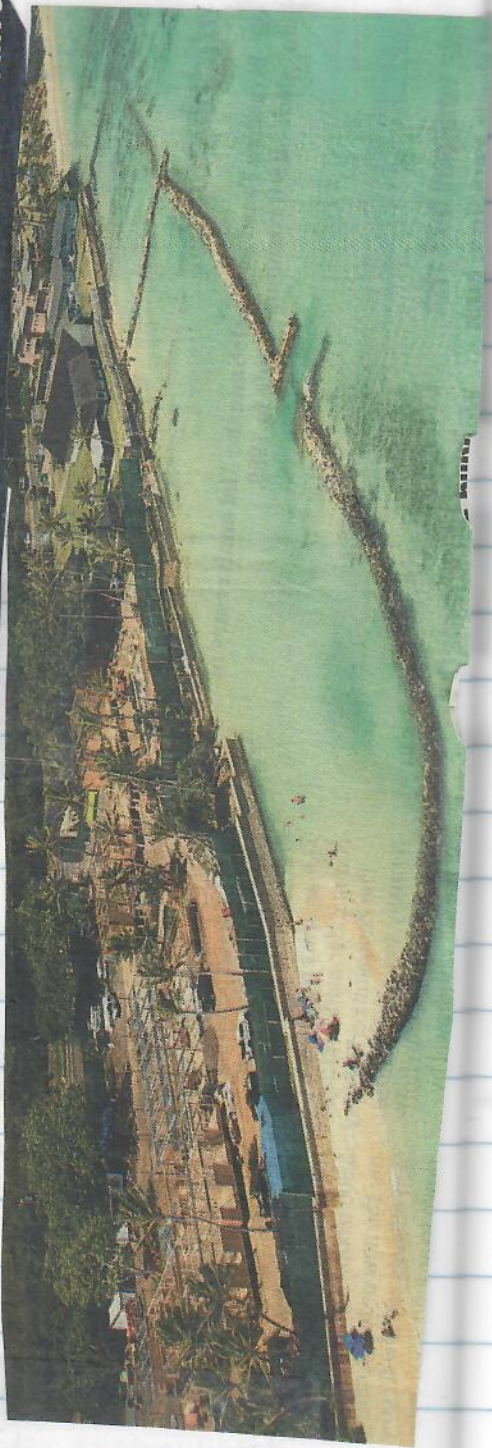
This program is authorized by the U.S. Fish and Wildlife Service, conducted under the scientific advice of the National Oceanic and Atmospheric Administration-Pacific Islands Fisheries Science Center, and permitted by state Department of Land and Natural Resources and Division of Aquatic Resources.

When the hatchlings reach the ages of 2 to 3 years old, under the authority and approval of the U.S. Fish and Wildlife Service, they are released into Hawaiian waters at a location approved by the agencies.



HIDDEN BELOW THE SURFACE

Puhahonu, which is 99% underwater, tops Mauna Loa as the world's largest shield volcano



Elephant Seal, Eagle Come Unique Visitors

113
1978
H5-B

By Helen Altonn
Star-Bulletin Writer

Two unique creatures recently turned up in the Hawaiian Island chain — one traveling at least 3,500 miles by sea and another arriving by air, possibly from the Siberia region.

They are an elephant seal, discovered on Midway, and a sea eagle which apparently was blown onto Kure Atoll by a storm.

Hawaii has native monk seals but the elephant seal is the first identified in the Hawaiian Islands since 1825, said George H. Balazs, University of Hawaii research biologist.

A golden eagle was spotted flying over Kauai in 1967 and was reported still soaring there in 1976. But no sea eagles have been sighted in Hawaii until now.

BALAZS IS AN authority on turtles and has been conducting a three-year survey of the turtle population in Hawaiian waters, including the remote Leeward chain.

He happened to be on Midway last month for his research project and was told a seal had come up on the beach.

He said it's very rare to see any seal on the Navy-occupied island, but this one stayed 10 days.

It was thought at first to be a monk seal, but Balazs saw that it was an immigrant elephant seal when Gary Means, honorary game warden on Midway, took him to look at it.

Balazs said an early sailing explorer reported seeing "sea elephants and sea leopards" at Pearl and Hermes Reef and Kure Island in the last century "but most people thought it was a mistake or misidentification

"WITH THIS report (of the Midway seal) I wonder if he did make a mistake?" Balazs said.

He said elephant seals don't get their name because of their size, although males can get up to a couple tons. The name comes from their upper nose, which gets very long and curls over, he explained.

"But the female doesn't get near that big and doesn't have that nose," Balazs said.

The Midway seal was a northern species, which breed in the Channel Islands off California and at Guada-

lupe off Baja, Calif.

She was a young female and appeared in good shape, although she had some superficial wounds, Balazs said. "She was sleeping on the beach most of the time there. She seemed to be exhausted and was getting a long sleep."

HE SAID THE seal had a tag with numbers on it and he called John Naughton, biologist with the National Marine Fisheries Service in Honolulu, in hopes of finding out where it had originated.

Naughton checked with the Northwest Fisheries Center in Seattle and learned the seal had been tagged by the center's biologists at San Miguel Island in February 1977.

Their reaction was, "Oh, wow!" Naughton said.

"The only strays they have gotten from tag returns have been off the Aleutians . . . But this was a young female (on Midway) — maybe they are more adventuresome," he said.

He said elephant seals at one time may have ranged throughout the Pacific. "They were very docile and could have been exterminated rapidly."

ELEPHANT SEALS were slaughtered for oil in the 1800s and their population fell to as few as 20 animals.

But Naughton said the population has been growing under federal protection and the animals may be ranging to their original islands.

"It would be extremely interesting if it (the Midway seal) gets back to its rookery (at San Miguel). It would be an indication she knew what she was doing, and wasn't just lost," he said.

Just before leaving for Midway, Balazs received a call from the commander of the Coast Guard Loran Station on Kure with the startling information that "an eagle took up residency there in early February."

So he went on to Kure from Midway to get a look at it and continue his work on turtles.

HE CAME HOME and went to the books to try and identify the eagle. He believes it's an immature Steller's sea eagle, which breeds on the coastal area of the Bering and Okhotsk Seas and in Kamchatka in Siberia, and is distinguished by a yellow bill.

from Far Away

Arrive by Air,

He said the Kure visitor has a prominent yellow beak and yellow, featherless legs.

He said it was probably blown off track during a storm because Coast Guard officials said it was soggy and beat up when it landed on Kure.

But he said it appears to have recovered nicely from its harrowing journey — and is feasting on gooney birds (black-footed and Laysan albatrosses).

"IT'S ALMOST like an eagle paradise for him," Balazs commented. He said thousands of gooneys are on Kure now breeding and raising their young.

"If the eagle stays alive during the next six months or so, somebody ought to think seriously about what's going on," he said, questioning the effects of the eagle's diet on the gooney bird population.

Kure Atoll is part of the City-County of Honolulu and technically under the jurisdiction of the state Department of Land and Natural Resources.

Balazs reported the eagle to Ron Walker, state wildlife chief, and will provide him with information and photographs so he can try to identify it positively.

Adding to the excitement of the elephant seal and eagle, Balazs cap-



HAWAII'S NEW RESIDENT—A sea eagle has comfortably settled on Kure Atoll, dining on the gooney birds. —Photos by George Balazs.



VISITOR FROM AFAR—An elephant seal snoozes on the beach at Midway after wandering from its colony at San Miguel Island off California.

115



BRUCE ASATO / BASATO@STARADVERTISER.COM

Serenade to loved ones 5-4-2020
HSA

Ilima De La Cruz of Pearl City sat Sunday next to the grave markers of her parents, Annie Keikiali'i Cabato and Basilio Balanza Cabato, at Diamond Head Memorial Park. De La Cruz said she enjoys the peacefulness at the memorial park and often brings along her ukulele to serenade her parents and others around them. She also was there to observe her parents' wedding anniversary, which is today.

PLEASE RETURN TO GEORGE BALAZS

Star-Bulletin

by Sea

Section
C

tured six green turtles on Midway and nine on Kure, and in each batch was a turtle which had been tagged in his research to monitor their travels and growth rate.

"I was very fortunate," he said. His research is funded by the state marine affairs coordinator and the National Sea Grant Program.

Honolulu

Wednesday, March 15, 1978

Honolulu Star-Bull. - 2020

Prepping for tourists headed to Turtle Beach

For nearly 50 years I've studied Hawaii's sea turtles to sustainably promote their conservation. Never once during all that time did I ever dream that turtles would be a factor in transmitting a deadly disease between people. But that's exactly what can and likely will happen at the tiny cove of Turtle Beach at Laniakea on Oahu's North Shore.

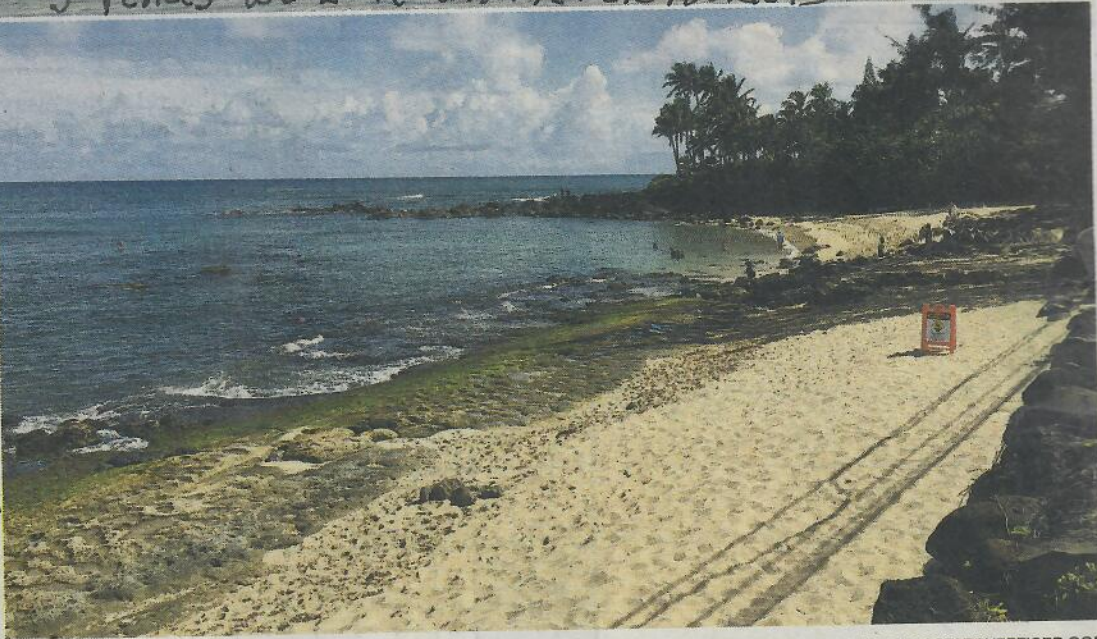
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The time is now to prep for the prevention of chaos and to ensure social distancing. Turtle Beach should be closed, at least for a six-month trial period. Provide a marked right-of-way path to and from the sea for surfers and other ocean users. But keep the rest of the beach a turtles-only zone.

George H. Balazs
Hawaii Kai

WAIKIKI, MATSUMOTO SHAVE ICE, IOLANI A

5 PLACES WE LOVE WITH FEWER TOURISTS



JOHN BERGER / JBERGER@STARDVERTISER.COM

LANIAKEA BEACH

Laniakea (promoted in tourist-oriented websites online as "Turtle Beach") on Oahu's North Shore is famous for its beautiful beach, for surfing, and for the opportunity to watch sea turtles from a respectful distance. It is infamous in equal measure for its lack of adequate parking, and for the people who recklessly cross Farrington Highway without regard for oncoming traffic. What a difference a lockdown makes. Two recent visits — one on a Saturday afternoon; one on a Sunday morning — found the beach almost empty. There were a couple of people fishing, and no surfers or practitioners of other water sports. Parking spaces were available right across the highway.

7-5-20

1 May 89 Friday - Breakfast at NW
Depart ~ 8 AM for N. Kona
Pololu Valley - Kaloa Park - Kapaau -
Hawi.

Searched for site of 9/6/75
Virginia Goldstein = "Kukuipahu" Heiau
Jane Silverman. see Ross Candy Sites Sec 1
Jean Martin DNR Historic

Leaving Hawi going south, turn left on
dirt road immediately after "Puaka Ranch".
This is "old cannery road" (to cattle
holding area (?) on left, immediately thereafter
cross road (also dirt) on left have double gate
gate chained. Walk along road, and past cover
second gate (single-swing hinge). Continue
walking ~ 1/2 mile at most. Electric pole # 71
is at about midpoint. Beautiful pasture
land with numerous "islands" from where
rocks were cleared and piled when old
cannery field was first made.

5/19⁸⁹ (continued) After coming to first clump of
pine trees on left, continue a
short distance to row of pine trees of
left along fence (barbed wire). Immediately
outside of fence site exists -
rectangular area, bounded by barbed
wire. Not more than 50 yards from the
dirt road. Petro. found finally
at 12 noon. Several photos taken!

HAWAII



LEE CATALUNA HS-A

4-22-2020

The silver lining in this very dark cloud

Folks must be reaching up into the cobwebby garage rafters and digging into backyard storage sheds to retrieve long-idle fishing gear, because fishermen are out on the shorelines, looking busy and looking happy.

Maybe it's part of the recent turning back to old subsistence ways, like victory gardens and homemade bread and brushing up on sewing skills to make cloth masks.

Maybe it's just a ruse to be able to stand on the beach without Kirk Caldwell coming by and yelling at you to get off the sand.

But certainly part of the reason so many Oahu residents are out fishing along the beaches is because they can. If you were to drive around the island just to take a look at what Oahu is like without approximately 226,000 visitors a day, you'd see people fishing where there usually isn't room for a scoop net, let alone a pole and a line. (According to Gov. Ige's most recent proclamation, people can fish for food, but no groups of two or more people can fish together unless they're all part of the same household.)

And there's another old-fashioned thing you can do now: You can take a leisurely ride around the island. You can pack up the kids and go holoholo like in the old days when there weren't regular weekend traffic jams and hundreds of rental cars parked haphazardly on the shoulders around beach parks. You can stop by a local plate lunch place, buy some takeout food while obeying social distancing and have a picnic in the car under the tree. (You can't park at the beach under the current

Please see CATALUNA, B4

CATALUNA

Continued from B1

rules, but you can park outside the parking lot on the grass, apparently.)

If you were to holoholo around the island, you would see things you haven't seen in decades. Hawaii residents are enjoying the ocean. If you think everyone is at home on the couch, you should (safely) get outside and look around. People who live here are in the water in Waikiki and paddling around Kailua Beach and reveling in the

uncrowded waves at Sandy Beach and Makapuu. Even the water looks relieved of a burden, somehow more sparkling and blue.

Maybe enough time has passed and it's OK to say it out loud now, though certainly many are already thinking it: This terrible time has quite a silver lining, and Hawaii is really nice without the weight of 10 million visitors a year. It's like the Hawaii of generations ago. Ironically, it's like the image of Hawaii that is sold to tourists to get them to come here, because naturally, the ads never show the reality of

traffic and packed beaches.

Community spread is being controlled by all of us good citizens doing our part, which we have proved we can do. The uncontrolled danger now is the virus flying in on a plane or cruising in on a ship.

Hawaii could open up more safely if it didn't mean opening the state to an influx of travelers. Hawaii could get back to business much sooner if Hawaii's main business weren't tourism.

Reach Lee Cataluna at 529-4315 or lcataluna@staradvertiser.com.

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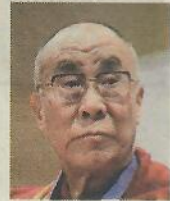
6-10-20
SPOTLIGHT

Dalai Lama cuts first album

NEW YORK >> Stressed out while working at a bank in New Zealand, Junelle Kunin began searching for music paired with teachings from the Dalai Lama to calm herself down and allow herself to focus.

But she couldn't find it online.

That's when the musician and practicing Buddhist proposed an idea to The Office of His Holiness the Dalai Lama: Let's make an album fusing music with mantras and chants from the Tibetan spiritual leader.



Dalai Lama

She was politely turned down.

But on a trip to India — where Kunin says she typically gets a chance to meet the Dalai Lama — she asked again, this time writing a letter and handing it to one of his assistants.

Five years later, "Inner World" is born. The album featuring teachings and mantras by the Dalai Lama set to music will be released July 6, his 85th birthday.

"I'd never heard him speak like this. He really was so excited. ... He actually proceeded to explain to me how important music is," Kunin said. "He leaned forward and his eyes were sparkling, and his fingers were rubbing together and he (talked) about how music can help people in a way that he can't; it can transcend differences and return us to our true nature and our good-heartedness."

The 11-track project will be released in conjunction with a companion booklet.

Abraham and Junelle Kunin worked on the Dalai Lama's first album for five years.

1979 89 812

PROPERTY OF THE NATIONAL PALACE MUSEUM



Ritual vessels, oracle bones and objects of daily use are among the artifacts currently on display at a special exhibition on the Shang Dynasty at the National Palace Museum.

NATIONAL PALACE MUSEUM

'Aunty' Elaine K. Kaopuiki, Lanai kumu hula, dies at 70

12-1-99

By HAROLD MORSE
Star-Bulletin

Kumu Hula "Aunty" Elaine Kauwenaole Kaopuiki of Lanai City, who taught hula more than 40 years and staunchly maintained her rights as a native Hawaiian, died Saturday in Straub Hospital in Honolulu. She was 70.

Born at Koele, Lanai, where she belonged to Kalokahi Oka Malamalama Church, she was one of the fourth generation of the Kauwenaole family knowledgeable in Hawaiian lore and the history of Lanai.

In 1973, she was a member of a group that traveled to Washington, D.C., to support introduction of a reparations bill in Congress.

Her Halau "Na Hula O Lai Kealoha" was known statewide. A member of a number of Hawaiian organizations, she was a quilter, weaver and maker of kolohala leis from pheasant feathers.

Her artistic creations also included lauhala weaving, seed-lei making and ukulele making, which went with her love of music and singing.

Friends regarded her as a renaissance woman of Lanai who was responsible for the reintroduction of the hula, and who was an inspiration to generations of women to follow her example.

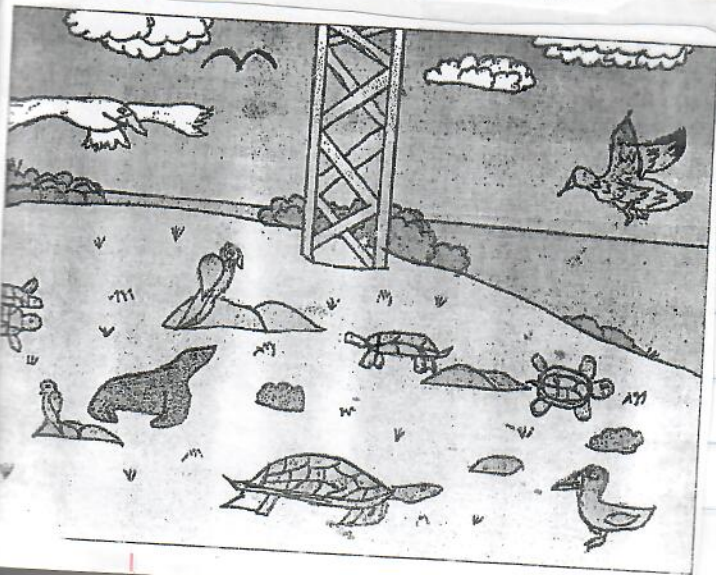
She is survived by husband Samuel; son Owen; daughter Mapuana Soriano; sister Arline Eaton; hanaï son Sol Kahoohalahala; four grandchildren, and numerous nephews and nieces.

Services will be at 7 p.m. tomorrow at Waiola Church in Lahaina, Maui. Call after 4 p.m. Services also take place at 7 p.m. Friday at the ILWU Hall in Lanai City, Lanai. Call after 11 a.m. The funeral will be at 11 a.m. Saturday at Kalokahi Oka Malamalama Church. Call after 8 a.m. Burial will follow in Lanai Veterans Cemetery. The family encourages the wearing of Kihei and aloha attire.

French Frigate Shoals--25th Anniversary

Official 25th Anniversary Poem

by Derek M., Age 11



Drawing by Rubina P., Age 11

You built this Land of Trust
Love isolated measured by time
Wish I could help
More work needs to be done
Creatures and humans coexist
Help us learn
Waves upon the shore
Turtle Guardians
Serve and protect
You do it willingly
French Frigate Shoals

Hawaiian music icon Alfred Apaka remembered 60 years after his death

By John Berger
jberger@staradvertiser.com

1/26/20
20

Recording artist Jeff Apaka will be thinking about his father this Friday — and with good reason. Friday marks the 60th anniversary of the day his father, Hawaiian music superstar Alfred Apaka, died unexpectedly at the age of 40 while playing a morning game of handball at the Central YMCA. Jeff had been on the mainland attending school; he was 13.

When Alfred Apaka died, he was at the height of his career in Hawaii and seemed on the verge of national stardom as well. Apaka was the headline entertainer and entertainment director of what

was then Kaiser's Hawaiian Village (now Hilton Hawaiian Village), and the biggest Hawaiian star in the business. He was also a successful national recording artist, appeared regularly on Webley Edwards' internationally syndicated radio show, "Hawaii Calls," and counted Bob Hope and Bing Crosby as two of his biggest promoters on the mainland.

His ability to impeccably sing both tenor and baritone was displayed in his recording of the Hawaiian standard "Lei Aloha Lei Makamae." Apaka was one of the greatest Hawaiian male vocalists of the 20th century.

Kaiser had founded a record label to release an al-

bum, "Broadway Wears A Lei," to show mainland audiences that Apaka could sing mainstream American pop music and show tunes with same strength and commercial appeal that drove his Hawaiian and hapa haole repertoire. At the time of his death, a pilot for a national network Alfred Apaka television show had been picked up by a sponsor.

Buried at Diamond Head Memorial Park, Apaka's memorial tomb was refurbished earlier this month. New marble and a new cement walk were installed, and the lettering and decorative bronze maile lei was refurbished.

Jeff Apaka plans to visit Thursday.

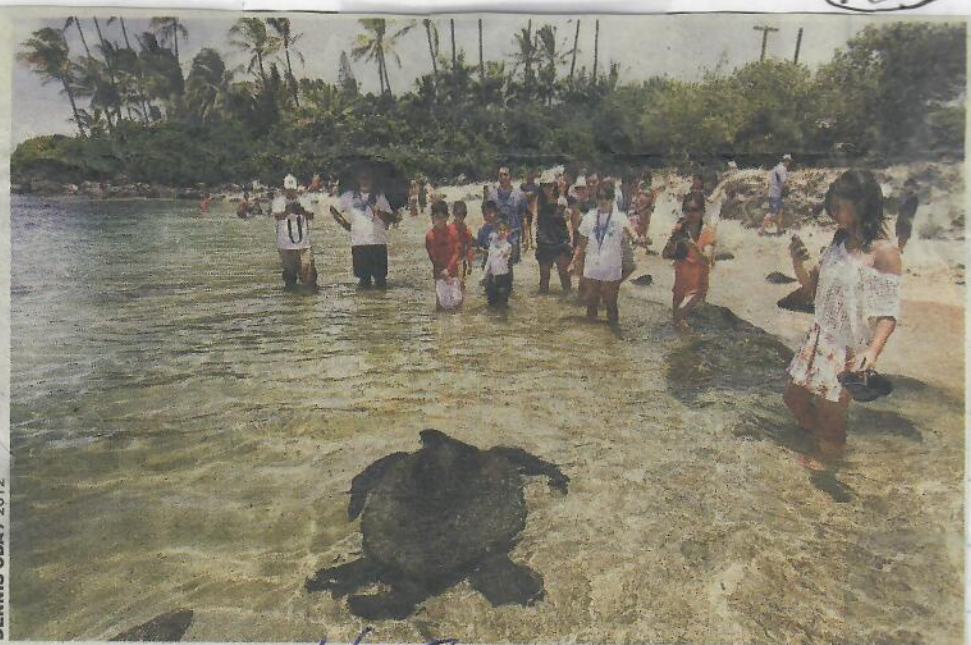
GEORGE F. LEE / GLEE@STARADVE



COURTESY JEFF APAKA

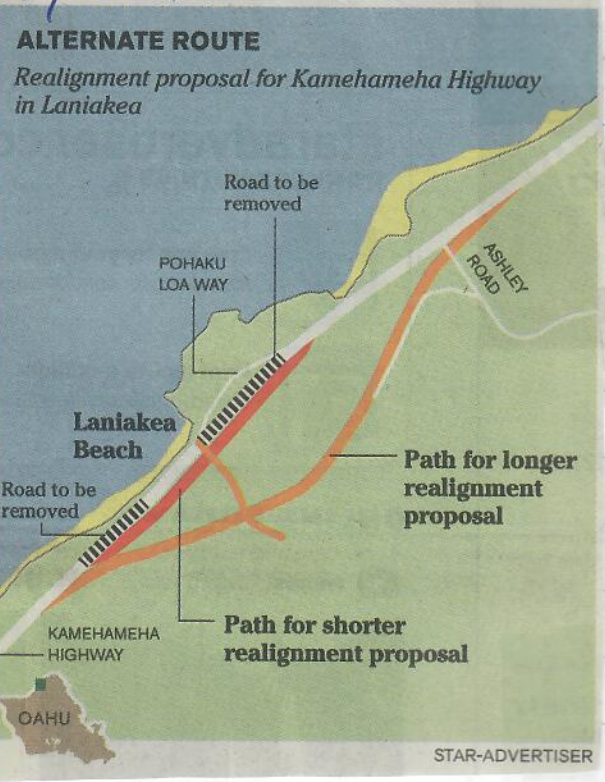
Alfred Apaka, pictured with his wife, Edna Blake Apaka, was the headline entertainer at Kaiser's Hawaiian Village (now Hilton Hawaiian Village).

DENNIS ODA / 2012



1/25/2020

Laniakea Beach, also known as Turtle Beach, attracts crowds of people wanting to see Hawaiian green sea turtles swim near the shore. The turtles are known to crawl ashore, and provide a unique experience and photo opportunities to onlookers. At top, people cross Kamehameha Highway along Laniakea Beach, which causes heavy traffic and places the pedestrians at risk.



2 HIGHWAY REALIGNMENT OPTIONS

- >> **Small shift.** A smaller realignment of the highway a minimum of 40 feet inland, at an estimated cost of \$6 million to \$10 million. Estimated completion in fall/winter 2022.
- >> **Big shift.** A larger realignment of the highway about 1,000 feet inland, at an estimated cost of \$35 million to \$40 million. Estimated completion in summer 2025 or 2026.

Source: HDOT

New algae threatening coral

Study pinpoints problem only at Kaneohe Bay so far

By Curtis Lum

ADVISER WINDWARD BUREAU

KANEOHE — A pesky foreign alga that was accidentally introduced into Kaneohe Bay by scientists has shown signs of smothering live coral and causing other adverse effects.

The findings are part of a study of how *Kappaplaycus striatum* is affecting marine life in the bay. University of Hawaii botany student Monica Woo began the study six months ago as part of her graduate thesis.

State officials hope her study will help them find ways to stop the spread of the alga.

Kappaplaycus striatum was brought to Hawaii from the Philippines in 1971 by a scientist at the University of Hawaii Institute of Marine Biology on Coconut Island to determine its possible commercial benefits.

The research showed that the alga could be used as a fertilizer and in food products, Woo said, and it has since become a multimillion-

dollar industry worldwide.

Kappaplaycus has not taken off commercially in Hawaii, but it has established itself as a major problem in Kaneohe Bay, spreading from the bay's southern end near Coconut Island to the northern area off Kahaluu.

"It wasn't really until five to 10 years (after the experiments) that the alga actually became a noticeable problem," Woo said.

She said the *Kappaplaycus* is blanketing many coral reefs and denying them light.

Many marine animals depend on coral for food and shelter, Woo said, and if the coral dies, so will these creatures.

Woo said the alga is prevalent because it has no natural predators and can survive in various environments. Luckily, she said, it has not established itself outside of Kaneohe Bay.

Her study has also showed that pieces of *Kappaplaycus* as small as .05 gram can produce new plants. Unlike most seaweeds, *Kappaplaycus* does not require pollination to reproduce, she said.

Dave Gulko, a coral researcher with the Department of Land and Natural

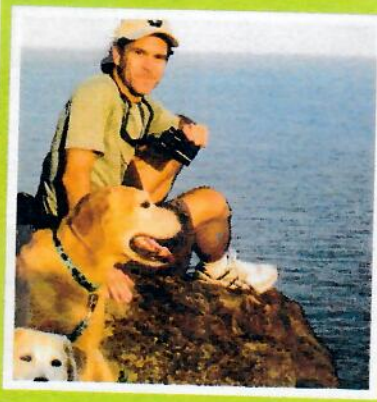
Resources, said the state hopes to use the results of Woo's study to come up with ways to properly collect the alga.

"One of the things that we want to reap from Monica's study is to find out what the minimum fragmentation sizes are so if there are uses identified, we can come up with ways to collect this alga so that it does not further the spread," Gulko said.

"In the collection process, if people are breaking off small bits, we could be exacerbating the problem instead of decreasing it."

Woo will continue her study through the summer in hopes to having suggestions on managing the alga soon.

Don't rest until you have either a mine or a business of your own.



3-10-2020

Please join us for a special evening to honor and celebrate **Dr. Joe Herzog's** contributions to the veterinary and education communities. Dr. Joe has been a longtime veterinarian in Hawai'i, caring for creatures great and small. He has impacted the lives of both high school and college students as an educator at Windward Community College in the Early College and Veterinary Technology programs.

RAT

Ambitious and sincere, you can be generous with your money. Compatible with the dragon and the monkey.



Your opposite is the horse.

1924	1936	1948
1960	1972	1984
1996	2008	2020

OX OR BUFFALO

A leader, you are bright, patient, and cheerful. Compatible with the snake and the rooster. *Your opposite is the sheep.*



1925	1937	1949
1961	1973	1985
1997	2009	2021

TIGER

Forthright and sensitive, you possess great courage. Compatible with the horse and the dog. *Your opposite is the monkey.*



1926	1938	1950
1962	1974	1986
1998	2010	2022

RABBIT OR HARE

Talented and affectionate, you are a seeker of tranquility. Compatible with the sheep and the pig. Your opposite is the rooster.



1927	1939	1951
1963	1975	1987
1999	2011	2023

DRAGON

Robust and passionate, your life is filled with complexity. Compatible with the monkey and the rat. *Your opposite is the dog.*



1928	1940	1952
1964	1976	1988
2000	2012	2024

SNAKE

Strong-willed and intense, you display great wisdom. Compatible with the rooster and the ox. *Your opposite is the pig.*



1929	1941	1953
1965	1977	1989
2001	2013	2025

HORSE

Physically attractive and popular, you like the company of others.

Compatible with the tiger and the dog. *Your opposite is the rat.*



1930	1942	1954
1966	1978	1990
2002	2014	2026

SHEEP OR GOAT

Aesthetic and stylish, you enjoy being a private person.

Compatible with the pig and the rabbit. *Your opposite is the ox.*



1931	1943	1955
1967	1979	1991
2003	2015	2027

MONKEY

Persuasive, skillful, and intelligent, you strive to excel.

Compatible with the dragon and the rat. *Your opposite is the tiger.*



1932	1944	1956
1968	1980	1992
2004	2016	2028

ROOSTER OR COCK

Seeking wisdom and truth, you have a pioneering spirit. Compatible with the snake and the ox. *Your opposite is the rabbit.*



1933	1945	1957
1969	1981	1993
2005	2017	2029

DOG

Generous and loyal, you have the ability to work well with others. Compatible with the horse and the tiger. *Your opposite is the dragon.*



1934	1946	1958
1970	1982	1994
2006	2018	2030

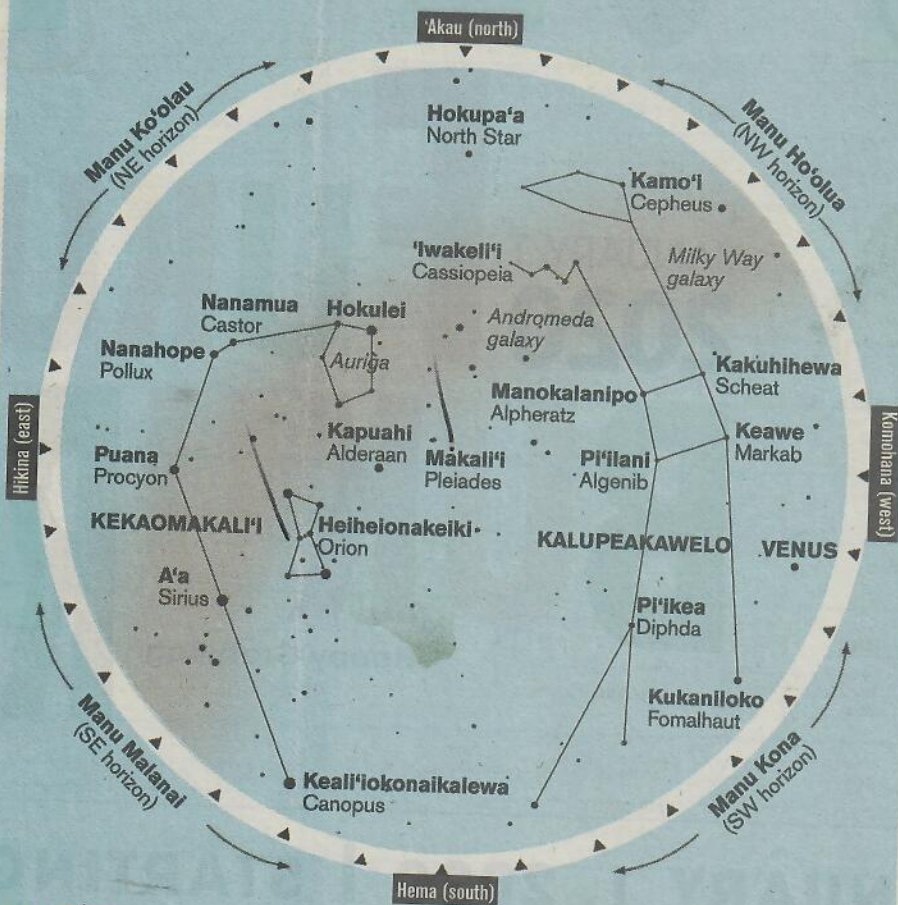
PIG OR BOAR

Gallant and noble, your friends will remain at your side. Compatible with the rabbit and the sheep. *Your opposite is the snake.*



1935	1947	1959
1971	1983	1995
2007	2019	2031

IANUALI (JANUARY) SKIES AT 8 P.M.



HIGHLIGHTS

- >> **Featured Starline:** Our January through March featured starline returns us to Kekaomakali'i, The Bailer of Makali'i. Makali'i is the asterism, Pleiades, in Greek mythology it means the Seven Divine Sisters of Pleione. This starline depicts an image of a bailer to scoop out water filling the bottom of a canoe. We trace the outline of the bailer beginning with the star Capella, Hokulei (Wreath of Stars), in the constellation Auriga, the Goat Herder. Hokulei, is an excellent marker on our star compass as it rises northeast and sets northwest.
- >> **Venus:** During main stargazing hours the incredibly bright planet Venus will be visible in the southwest. Venus is the third brightest object we ever see in the sky, after the Sun and Full Moon.

January moon phases



This star chart is oriented for an observer looking up and facing south. In this orientation, the Hikina (east) horizon is on the left and the Komohana (west) horizon is on the right.

Source: Polynesian Voyaging Society Archives

'IMILOA
Astronomy Center of Hawaii

Date: Mon, 21 Sep 2009 09:12:34 -1000
From: Bill Puleloa <billp@wave.hicv.net>
To: George H. Balazs <gbalazs@honlab.nmfs.hawaii.edu>
Subject: Re: "Peace Corps" at East Molokai

PUKOO. I used to help deliver meals to the PCVs being inducted at this site, so I remember it well. These volunteers were brought to Molokai for "cultural" training before being shipped off to Micronesia. Little did I know at that time I'd wind up with some of them in Majuro twenty years later! One guy, Ralph Waltz from Wisconsin, eventually married a girl from Bikini and moved into the house next to me on Majuro. Our kids grew up with each other and to this day we still maintain a relationship. Funny how things work out in life isn't it?
Bill

On Sep 21, 2009, at 7:09 AM, George H. Balazs wrote:

- >
- > Bill, what's the Hawaiian place name for the location called (or at least used
- > to be called) "Peace Corps" at the east end? Many years ago lots of turtles
- > showed up being taken there in the DLNR (Hawaii State Fish and Game)
- > commercial catch record. Always wondered exactly where that region was
- > located. Peace Corps training area in the late 1960's? Aloha, George

Bill
2009
Peace Corps

CALL OF THE OPEN ROAD

**The Open Road is calling --
The Call of The Open Road.
It reaches down within the heart,
To touch the hidden code.**

**For each of us have longings,
To search for adventure's end;
But none of us shall find it --
For there is no end -- my friend.**

**Be it the blazing highway,
That goes forever on --
With side trails all along the way,
And maiden siren's songs.**

**The lure is there, to those who dare,
Who seek the hidden roads;
For we know not where they ever lead,
Or the dangers they may bode.**

**The wind that's blowing in our face,
From sea or mountain rim;
Reminds us of adventure --
And the threads of life that's thin.**

**For nothing ere' is certain,
When we take the open trail;
For just beyond the far off hill --
May lie dangers and travail.**

**Courage -- yes, it's needed --
And guts and fortitude;
For those who seek the Open Road,
And find adventures too.**

**Dedicated to those brave adventurers --
Who know The Call of The Open Road
And Life's Great Adventure.**

CULTURE

TH
ADV 6/20/98

Hawaiians value green sea turtles

It is absolutely stunning in this age of awareness to read the remarks of two letter writers regarding the cultural taking of green sea turtles.

It appears both perceive modern Hawaiians as mindless, wanton killers hell-bent on slaughtering and causing the extinction of the honu. Nothing can be further from the truth. Most of us are responsible people who deeply cherish the natural resources left to us by our ancestors.

Our role as stewards of the land and sea is a deeply ingrained tenet of our culture. Please be assured we fully understand that the elimination of the honu from our waters is not in our best interest. So much so, that many of us have taken active roles and dedicated part of our lives to help facilitate the resurgence of sea turtles.

Make no mistake, the perpetuation of the species is of utmost importance to us Hawaiians. Thus, come the time when the population of turtles is judged

131

stable enough to tolerate a limited harvest, we ask simply to be allowed to resume our millennia-old relationship with this cultural entity.

If you think the uniqueness of our Hawaiian culture is of some value to the state, then you must be willing to allow it to occur. It is unprincipled to restrict Native Hawaiians to only Merrie Monarch festivals and Kamehameha Day parades because you've decreed these practices acceptable. It is not fair for you to pigeonhole us into a box for your convenience.

Just as Native Hawaiians over the centuries have accepted you and all your idiosyncrasies, so, too, we ask to be accepted — here in this, our very own home.

Bill Puleloa
Kaunakakai, Molokai

THE HOLY STRAND
— French Frigate Shoals —

*There's an Atoll out there with a Holy Strand,
Encircled by a cobalt sea.
It's a special quiet, pristine place,
Where the Soul and heart is free.*

*The sea and sky can make one cry,
For the beauty that touches within.
The solitude and changing moods,
In your memory will never go dim.*

*The afternoon rains, return the same,
When the storm clouds shadow the reefs.
Fresh is the air, that none could dare —
To describe the sea beneath.*

*It's not hard to believe that you can see,
That this place is frozen in time.
It has never changed since the world began,
As it stands in Eternal Time.*

*And as we rest upon the shore,
In thought, or physical form;
We can sense Divinity's Infinite Touch,
When the world was first fresh born.*

*So walk with me, beside the sea,
On this far off coral sand;
And enjoy the beauty ever near —
As we walk The Holy Strand.*

*Dedicated: To those special visitors who were Blessed
to experience the beauty of Nature's untouched bounty
and wellness, at French Frigate Shoals in the far off Central Pacific.*

H. Emmett Finch
Malibu, California,

May 1, 1998, Copyright, H. Emmett Finch, Malibu Ca., (310) 457-7895

PAGE 81

*HELLO GEORGE!
I Hope you like it.*

71:50 OCT 107 490
TO: GEORGE BALAN,
ONE OF THE BRAVE
ADVENTURERS,
Hon. Harry Sumner

【恭賀新禧】

Wish You A Happy & Prosperous New Year



George & Linda :

Happy Chinese New Year!

My family and I all appreciate you always
take care about us.

Wish you all happiness and health in the
new year.

Yaru & 協誌

**Mahalo to Susan Scott
for 33 years of columns**

I was saddened and surprised by the sudden departure of columnist Susan Scott last week ("Citizen scientists needed to track kolea in Hawaii," Star-Advertiser, Ocean Watch, March 28).

I have enjoyed reading her articles, especially those dealing with the kolea birds. Those articles reminded me of Honolulu Advertiser journalist Bob Krauss, who often wrote about the dear kolea as well.

Scott's final column for the Star-Advertiser was a great reminder of the resiliency and fortitude of the kolea — much like the times we are weathering now. I'd like to thank her, and your paper, for 33 years of dedication to reporting about the importance and beauty of Hawaii's nature.

Mahalo and aloha. A hui hou, Susan!

Vera Arita
Mililani

APRIL 3, 2020

CULTURE

ADV 4/20/98

Hawaiians value green sea turtles

It is absolutely stunning in this age of awareness to read the remarks of two letter writers regarding the cultural taking of green sea turtles.

It appears both perceive modern Hawaiians as mindless, wanton killers hell-bent on slaughtering and causing the extinction of the honu. Nothing can be further from the truth. Most of us are responsible people who deeply cherish the natural resources left to us by our ancestors.

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stable enough to tolerate a limited harvest, we ask simply to be allowed to resume our millennia-old relationship with this cultural entity.

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Bill Puleloa
Kaunakakai, Molokai

Dear George and BALAZS FAMILY ♡♡

We wish all of you a
Merry Christmas ✨

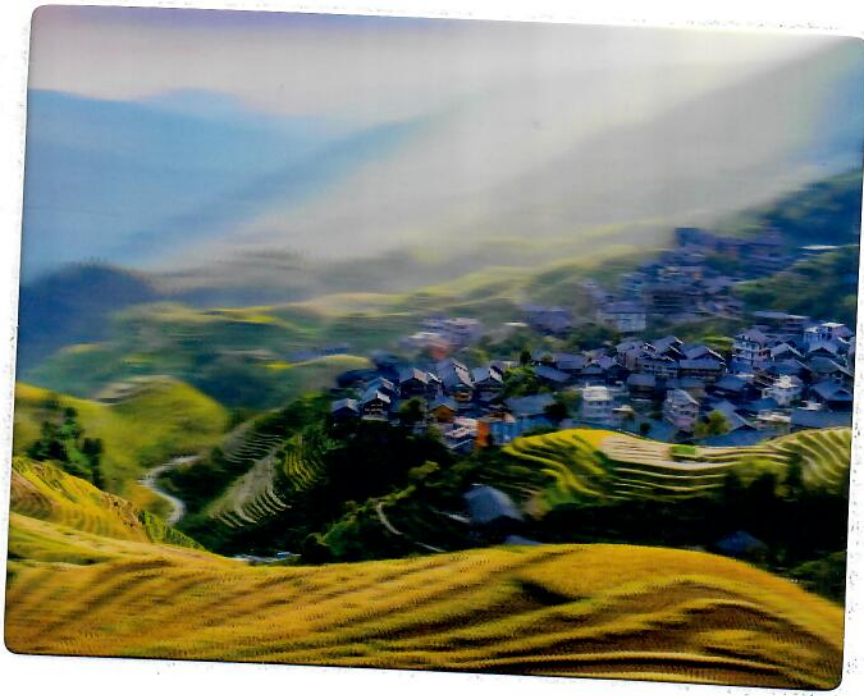
&

Happy New Year ✨

Sincerely,

Huang Family &

Vanessa 2019.12.20



第一缕晨光倾泻到山岗上
 朦胧间万物展颜
 我听到流水淙淙鸡犬相鸣



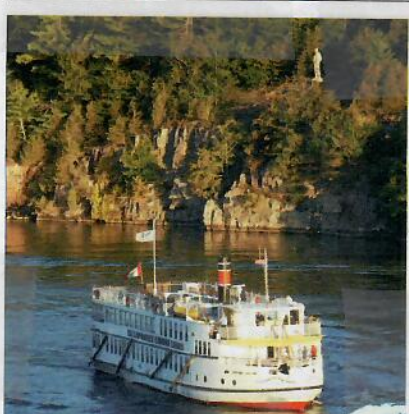
135

Dear uncle George



How are you?
I hope you are fine.
I hope you have a good
christmas holiday.

Love and hug Lili & Miyuki



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Lili & Miyuki SAKURAI
4-5, oi-cho, Naka-ku
Nagoya, 460-0015
JAPAN



Maria Zitney, left, Alexander Gaos, Lindsey Bull and Alexandra Reineger, right, of NOAA, and Sarah Wagner and Ben Zitney were called on to investigate the finding at Kailua Beach.

and will nest at a random area," said Gaos, who researched how Kauai may have been a steppingstone for turtles colonizing parts of the Eastern Pacific. "For me this is kind of a glimpse of how that process might have occurred. You get the random ridley turtle nest, some babies survive and some come back."

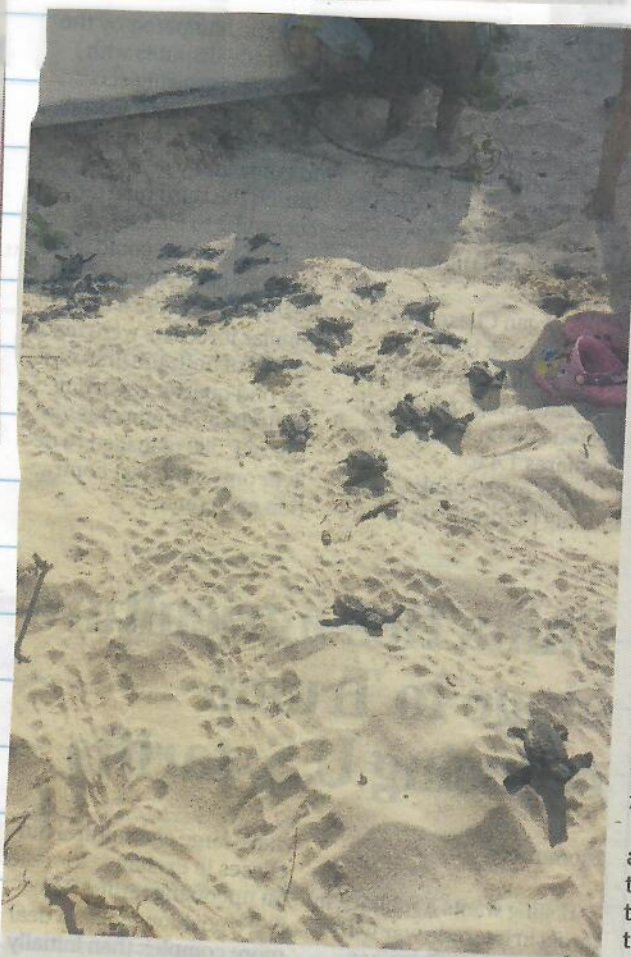
The other records of olive ridley turtle nests documented in Hawaii include two on Oahu, one on Maui and two on Hawaii island.

Olive ridley turtles are listed as threatened under the U.S. Endangered Species Act, and vulnerable on the International Union for Conser-

vation of Nature's Red List.

Gaos said if it were not for these two visitors, this rare discovery may never have come to light. He encour-

ages the public to report nesting events as well as marine animal emergencies to NOAA's statewide hotline at 888-256-9840.



NOAA FISHERIES PHOTOS

Approximately 30 olive ridley hatchlings crawl to the sea after emerging from under a towel at Kailua Beach Park.

NEST

Continued from B1

nest at random locations.

She likely laid her nest during the night, when the beach was mostly empty. Coming out of the ocean, the mother turtle leaves a track behind, but afterward the beach appears flat, and it would have been difficult to locate the nest visually, especially with high foot traffic. The eggs incubate for about a month and a half.

For the next few years, the hatchlings will spend their lives out in the open ocean, feeding on small invertebrates at the ocean's surface, where they are most at risk of ingesting microplastics or getting entangled in fishing gear.

Few survive to adulthood, according to Gaos, but if they do, they typically return to the beaches where they were born to nest. They do not reach sexual maturity, however, for another 20 to 25 years.

"Every once in a while you get a turtle that roams

August 2019 Basking Narrative

2019

JOE MURPHY

August returned us to our normal downturn pattern in basking over the course of a calendar year with fewer turtles appearing on the beach than last month. That said, the 63 basking occurrences we did have made this August the most active since 2013, the last August our beloved Brutus basked at Laniakea. While we were down 8 appearances from July (71), our increase of 2 over last August still managed to put us 20 basking occurrences ahead of last year at this time.

In August, there were 7 days when no turtle came out of the water. In fact, this is the 3rd time in a row we've had an empty beach on 7 days in August. Over the past 12 months, we've had at least 1 turtle haul out on 74.5% of the days.

During August there were 13 different named turtles that hauled out onto the beach to bask. That is 1 more than last month and 3 fewer than last August. This month we had no unidentifiable turtle visit.

Our "top three" baskers for August were Makana with 10 appearances, Punahele with 7 and Maka Nui with 6.

August had multiple turtles out 16 different times with August 4th and 10th experiencing the greatest exodus from the water with 7 different honu hauling out onto the beach on each of those days.

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Viewing Hawai'i Wildlife

Ocean recreation in Hawai'i can include encounters with marine wildlife. For their protection and your safety, view them responsibly!

Sea turtles, monk seals, dolphins and whales are wild animals and protected under state and federal laws.

Responsible Viewing

- View from a distance. Use binoculars or your camera's zoom for a close up.
- Do not disturb sea turtles or monk seals sleeping on the beach.
- Never touch, chase, or feed. Animals are wild, unpredictable and protected.
- Limit viewing time to a few minutes.
- Never swim with spinner dolphins — they rest and nurture their young during the day.
- View dolphins and whales from a boat or from shore.

Viewing Distances

- **Sea turtles**
View from at least 10 feet (3 meters) — on land and in water.
- **Hawaiian monk seals**
Stay behind any signs or barriers.
Stay back 50 feet (15 meters), if no barrier
- **Dolphins**
Stay back at least 50 yards (45 meters).
- **Humpback whales**
Do not approach within 100 yards — federal law.

Reporting

NOAA Statewide Hotline for Marine Animal Emergencies (sea turtles/seals/dolphins/whales): **1-888-256-9840**

For illegal or suspicious activity:

1-800-853-1964 or (808) 643-DLNR (3567)

Email photos and video to: RespectWildlife@noaa.gov



NOAA FISHERIES

National Marine Fisheries Service
Pacific Islands Regional Office

Waianae Coast to remember Jack Latchum

Today I saw many grown men cry, including myself. Along with my state representative, Merwyn Jones, and other friends from the Waianae Coast, I attended the memorial service for Chief Warrant Officer John R. Latchum Jr. at Wheeler Army Airfield.

Even though I am deaf and I could not understand the words to the prayers, reflections and music, I could feel

nitely feel the emotions and the aloha our military ohana had for their fallen comrade. It was a very moving memorial service.

I was really impressed at all the aloha I saw there. Yes, our military brothers and sisters did themselves proud by making us feel as though we were part of their military ohana. Maj. Gen. James Hill should be very proud of his command. He has some very beautiful,

caring people in his command. Lastly, I had the privilege to meet, hug and pay my respects to Jack Latchum's widow, Wendy. What a beautiful young lady, so full of dignity and grace during a very difficult time in her young life. I know I speak for my friends on the Waianae Coast and the rest of our community when I say I'm so very, very sorry, Wendy, at what happened to Jack in our community. I can

assure you that you have the enthusiastic support and prayers of thousands of my friends and neighbors. God bless and keep you and yours.

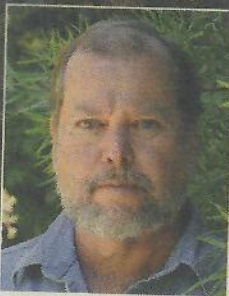
We will be holding a candlelight vigil memorial service for Jack Latchum at sunset on Father's Day, June 21, at Pokai Bay/Army West Camp. The public is invited.

Art Frank
Member
Waianae Carees

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Kiro
By Tim
turley@
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STUDYING THE HEIAU OF SOUTHEAST MAUI

ALL THAT REMAINS



COURTESY PHOTO

Patrick Kirch

11-4-2019 HSA

PHOTOS COURTESY PATRICK KIRCH

Archaeologist and University of Hawaii anthropology teacher Patrick Kirch discovered the ruins of 78 temples on Maui that he, his research associates and his students documented in his latest book, "Heiau, 'Aina, Lani: The Hawaiian Temple System in Ancient Kahikinui and Kaupo, Maui" (University of Hawai'i Press). Kirch wrote the book with co-author Clive Ruggles.

By Timothy Hurley
thurley@staradvertiser.com

Editor's note: This story first appeared Sunday in the Star-Advertiser's Maui edition.

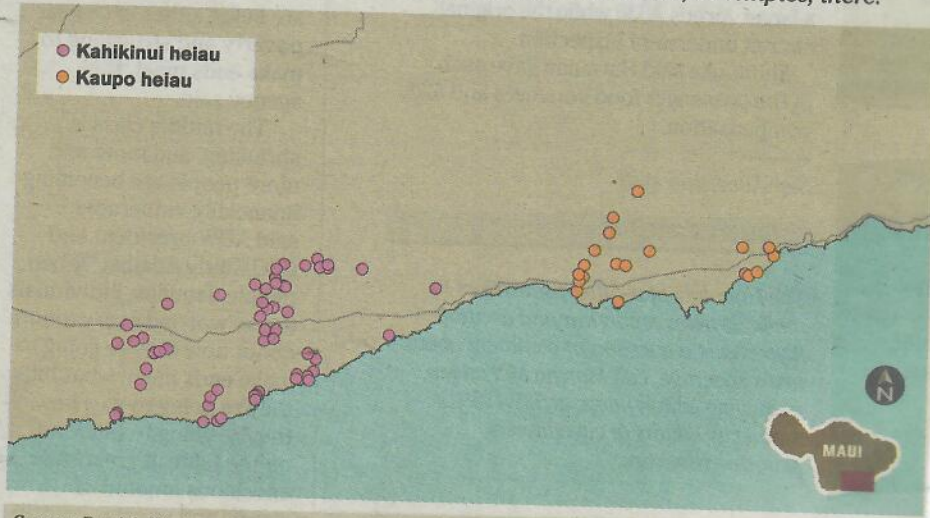
It's hard to imagine the barren landscape of Kahikinui and Kaupo in Southeast Maui being home to a large population, but that's how it was for hundreds of years as Native Hawaiian farmers transformed a region into what has been described as the greatest continuous zone of dryland planting in the Hawaiian Islands.

The vast, wind-swept region that lies in the rain shadow of Haleakala was left for cattle ranchers after the last of the indigenous occupants in Kahikinui, by then reduced in number from disease and out-migration, had abandoned their home sites and sweet potato fields by the 1890s.

It was this lonely landscape, undisturbed by

DISTRIBUTION OF HEIAU

The now-barren landscape of Kahikinui and Kaupo in Southeast Maui was once home to a large population of Native Hawaiians. Surveys by archaeologist Patrick Kirch and his associates rediscovered the remains of 78 heiau, or temples, there.



Source: Patrick Kirch, professor of anthropology, University of Hawaii, and chancellor's professor emeritus, University of California, Berkeley

STAR-ADVERTISER

modern development, that lured archaeologist Patrick Kirch and his students to the area.

"Kahikinui is just about as dry as you can get. It's pretty harsh. But the place is cov-

ered in archaeological sites. It was a pretty dense population," Kirch said.

In his latest book, "Heiau, 'Aina, Lani: The Hawaiian Temple System in Ancient Kahikinui and Kaupo, Maui"

(University of Hawai'i Press), Kirch and co-author Clive Ruggles describe nearly two decades of research in which he, his students and research

Please see HEIAU, B5

HEIAU

Continued from B1

associates rediscovered the remains of 78 temples.

Born and reared in Manoa, Kirch, now a University of Hawaii anthropology professor, was familiar with the area because as a teenager he had joined a Bishop Museum team to study Kahikinui in 1966.

The project was the first settlement-pattern survey in Hawaii, recording more than 500 archaeological sites over a two-month field season. Peter Chapman led the survey but became ill and never completed his Stanford dissertation on the results.

Kirch went on to become head of archaeology at the Bishop Museum and a professor of anthropology at the University of Washington and the University of California, Berkeley. Along the way, he became a leading expert on Hawaiian and Polynesian archaeology and the author of 20 books.

'A long-term project'

Having never thrown away the data from the 1966 survey, Kirch thought for years about returning to Kahikinui to finish the work started back then.

While doing field research for one of his books, he and his wife drove into Kahikinui in 1994 and met the Hawaiians of Ka 'Ohana o Kahikinui, who were occupying the ruins of St. Ynes Church as part of a campaign to get the state Department of Hawaiian Home Lands to open up the land again to Hawaiian habitation.

valleys with permanent streams for irrigation.

The population then began to expand into the drier leeward areas, including the slopes of Kahikinui and Kaupo. Although not as fertile, the volcanic soil of

finished adze were common.

"There's no separation between the religion and the economy. It's all tied together," he said.

Astronomical orientations

Kirch said the heiau were important places for passing down orders to the people and for organizing utilization of the agricultural landscape.

The orientation of the heiau were significant, he said, and the study produced digitally generated horizon profiles to study their placement in relation to the sky.

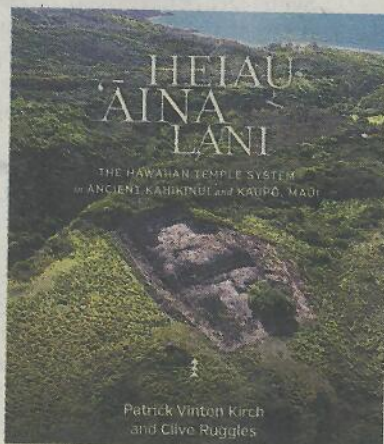
"We think they were choosing locations for the view that they see from that site," he said.

The Hawaiians used the stars not only for navigation,

but for what they could tell them about the planting season, he said.

Lots of heiau were found to be oriented to the rising of Makalii (Pleiades) constellation and may have been dedicated to the god Lono. The rising of Makalii was the sign observed by the priests to mark the beginning of the makahiki season, sacred to Lono. As the deity of dryland agriculture and the sweet potato, Lono was important in these areas, he said.

A number of heiau were oriented to the north, pointing to the rim of Haleakala, and may have been dedicated to the war god Ku. The highlands were the realm of Ku, source of koa logs for canoes and the red and yellow feathers for capes and cloaks. Many of



COURTESY PATRICK KIRCH

The cover of Patrick Kirch and Clive Ruggles' new book shows Loaloa, a luakini heiau for human sacrifice that is associated with Maui alii nui Kekaulike.

these leeward slopes produced decent yields of sweet potato and dryland taro. This not only allowed the population to grow, Kirch said, but provided a surplus the chiefs could use to fuel their political aspirations.

In his latest book, Kirch describes and maps all 78 temples in great detail, using a variety of old and new field methods and technologies. These included hand surveying with a magnetic compass, a clinometer for measuring elevation and slope, centuries-old plane-table mapping and electronic/optical theodolite total station instruments.

"This book isn't meant for a Saturday afternoon read. Some of my books are, but this one is pretty dense," he said.

Kirch decided then and there that Maui would be his next project. And he would end up showing the DHHL board ancient habitation sites and heiau there during a site visit. The board eventually agreed to a program allowing 99-year leases on 20-acre lots for those who wanted to live off the grid.

Meanwhile, Kirch and his students developed close friendships with the Hawaiian families in the area who helped them search out archaeological sites and clear them of thorny lantana.

"Initially I thought I would be able to accomplish my goals in just two or three field sessions, but each time I was drawn more deeply into that dramatic landscape. The more I learned, the more new questions arose," Kirch wrote in his 2015 book, "Unearthing the Polynesian Past."

"It took a year to get organized," Kirch said in a recent interview. "But in '95 I began working in Kahikinui, and it led to 20 years of work there, several National Science Foundation grants, and I ended up having four Ph.D. students write doctoral dissertations on aspects of the work out there — a long-term project."

Vital role in society

By 1400, four centuries after the archipelago was discovered by Polynesian voyagers, the Hawaiian population was well established in the most ecologically favorable regions, especially

The study of heiau dropped out of favor in the second half of the 20th century as radiocarbon dating was introduced and archaeologists turned to excavation of artifacts to reveal settlement patterns.

"Heiau began to take a back seat, and this has been the case throughout the last 40 or 50 years. In general, people stopped studying heiau, so it's kind of odd. One of the aims we have of this book is to put heiau back at the center of Hawaiian archaeology. They are absolutely critical to understanding Hawaiian culture and society," Kirch said.

In use until 1819, when the kapu system ended, the heiau of Southeast Maui don't fit into one pattern, and vary in size and shape. Some are square or U-shaped enclosures; others, elongated double enclosures. There are platform or terraced heiau and fishing and agricultural shrines, as well as a notched panana, or "sighting wall," that was possibly used for star navigation.

Kirch said an updated and more precise dating system using corals revealed that most of the heiau were built between 1550 to 1700, a period when the Maui kingdom was consolidated under Piilani and his son, Kiha.

Test pits within the heiau revealed various kinds of "male-craft" activities, he said. Fishhooks and worked bone, basalt preforms and

these north-facing heiau were not exactly true north, he said, but were oriented to a big, red cinder cone sitting on a ridgeline.

The Hawaiian calendar was a lunar calendar, essential for planting and fishing, and it was important to calibrate that calendar to keep it in sync with the solar year, Kirch said. The first visibility of Makalii at sunset was the sign used by the priests to determine the onset of the four-month-long makahiki season in the fall.

The summer season in Kahikinui and Kaupo is extremely dry.

"It was absolutely essential to keep your lunar calendar in sync," Kirch said. "You have to have your sweet potato planting calibrated really quite precisely when you know your Kona rains will come, have your meals prepared and so on. This calendar is essential."

The population of Kahikinui and Kaupo eventually dwindled due to disease and out-migration. But the final blow in Kahikinui, Kirch said, came from the leasing of land by the Hawaiian government to a rancher named Pico, who ran a herd of several thousand cattle over the landscape, trampling the sweet potato fields of the Hawaiian farmers.

While Kirch's research in Kahikinui and Kaupo has pretty much come to an end, he said the area still contains a treasure trove of archaeological sites worth exploring.

- John Thierist
- Kalani Fronda
- Kawika Au
- Laura Purdy
- Luann Casey
- Mark Wani
- Ralph Inouye
- William M...

POSTMARK

Dear Uncle George and Linda. 10-21-2019

How are you? I'm doing good, although there is even more work to do and look after during and after those public activities. Things escalate after October as a new legislation of 'anti-masking' was implemented. More people took to street, nearly every day. (We have holiday since 5/10-7/10) Some shops are severely damaged, mostly are from China. We don't even know how things would develop.

Rm 2403, BLK D, LUK YEUNG
SUN TSUAN, Tsuen Wan, Hong Kong



As MTR services, which is the major way of transport, suspended due to damages.

People are angry as they think the MTR should make the CCTV footage public.

文字 / 影像 羅乃莹

It's because it's suspected people was killed that day.

Attached please find a postcard from Guitin. I went there with my parents and aunts in August. The photo is Longji Rice Terrace (I didn't go there as my relatives doesn't want a physical demanding trip.) It's beautiful. This postcard's photo is a kind of game of our childhood. Hope you'd like them.

設身處地，是提醒我們有些時候，實踐要慢慢來，不離不棄，不埋怨不計較，放下自己的看法。
——〈設身處地〉·《我們彼此連繫》

Hop Scotch

Best regards,
Aeri

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Task Force.

Task Force

- Amya Miller
- Brian Emmons
- Carol Philips
- Carolyn Sandis
- Chris Gardner
- Dale Moore
- Diane Anderson
- Dorian Eversole
- Douglas Cole

4/12/2020

WORLD

EARTH WEEK: DIARY OF A CHANGING WORLD
For week ending Friday

Snake-free



China's ban on the sale of wild animals because of the coronavirus crisis has nearly wiped out the local economy of an area known for breeding snakes for food. While experts say the disease probably didn't emerge directly from snakes, Reuters reports factory and backyard snake farms around Zisiqiao village in Zhejiang province are no longer in business. The farms had been a key source of the reptiles for restaurants and traditional medicine. Intensive snake farming has resulted in an increase in the transmission of parasites and various infectious diseases, according to a recent Wuhan University study.

Task Force Purpose:

The project Task Force was formed to advise, inform, and work with the State Department of Transportation planning team during project development, including the environmental review. Environmental Assessment (EA), process.

Topics the Task Force will address include:

- Project purpose and need (what is important to and needed by the community)
- Highway and community context (what makes the area special)
- Development and screening of alternatives (what could be built)
- Develop mitigation measures (ways to lessen project impacts)

The Task Force

The State of Hawai'i Department of Transportation would like to say, "Mahalo!" to all who applied to serve on the Task Force. The selection of members was based on creating a balance of interests and perspectives within the Task Force. The following applicants have been chosen for the project Task Force.

Task Force Members:

- Mya Miller
- Alan Emmons
- Carol Philips
- Carolyn Sandison
- Chris Gardner
- Lee Moore
- Jane Anderson
- Alan Eversole
- Douglas Cole

- State Representative Richard Fale (Hawai'i House District 47)
- John Desoto
- John Thielst
- Kalani Fronda
- Kawika Au
- Laura Purdy
- Luann Casey
- Mark Ward
- Ralph Inouye
- William Martin

VIEWS & VOICES

LETTERS TO THE EDITOR

Stretch of Kaneohe Bay contaminated by PCBs

Residents are warned not to eat fish or shellfish from waters along a stretch of Kaneohe Bay near Yacht Club Street.

Signs posted by the state Department of Health also warn that swimming could be a health risk in that part of the bay.

Testing of sediments in a Kaneohe Bay inlet showed low levels of polychlorinated biphenyls (PCBs), the DOH said.

They were 1.9 parts per million above the 1 part per million federal action level for PCBs found in soil.

The department closed the area near Yacht Club Street to investigate the extent of the problem.

Testing of fish and seaweed samples and sediments is continuing.

Health officials are looking into possible sources of the contamination but believe the PCBs flowed into the ocean through a storm drain near a leaking PCB transformer that had been behind a nearby Safeway Supermarket.

66-4-99
6-24-99
HSSB

Kahuku bears brunt of giant wind turbines

The granting of permits to install eight enormous monster wind turbines in the small town of Kahuku should never have happened. Many people tried to stop this before the permits were granted, but were ignored.

Kahuku residents already have sacrificed their town's visual beauty by hosting their fair share of wind turbines. As the protesters have repeatedly said, they support clean energy.

But who among us would not protest these giant, 500-foot-tall noisy turbines if they were installed right next to our homes and schools? Everyone would. It's industrial visual blight, plain and simple. And possibly a potential health issue.

They are just way too close to people. Solar panels are a much better choice. If the company really wants to be a good neighbor, it would agree to move them way, way, way back, like a mile or more away from people.

The deception by First Wind of our North Shore community a few years ago caused the visual blight overlooking the historic Waimea Valley.

I stand with the protesters on this.

Diane Anderson
Haleiwa

Safeway notified the DOE after learning of the leak and removed the transformer. It hired consultants to clean up the contaminated site and sample other areas to determine the extent of the contamination.

The Environmental Protection Agency considers PCBs to be probable human carcinogens.

However, it may take years of regularly eating contaminated fish and shellfish to build up levels of chemicals of health concern, the DOH said.

9/

ACCOUNT ACTIVITY

Sept 2019

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Date of Transaction Merchant Name or Transaction I \$ Amount

PAYMENTS AND OTHER CREDITS

09/06 Payment ThankYou Image Check -876.16

PURCHASE

08/22 GOOGLE *Google Storage 855-856-3987 CA 2.08

08/25 (JOO)AWOHOMRAMADAHOTEL JEJOO 9.12

08/26 08/26 WON
11,000 X 0.000829090 (EXCHG RATE) 9.08

08/26 (JOO)AWOHOMRAMADAHOTEL JEJOO 18.16

08/26 08/27 WON
11,000 X 0.000825454 (EXCHG RATE) 61.91

08/25 MUJI 2324687 JEJU-SI 300.00

08/27 08/27 WON
75,000 X 0.000825466 (EXCHG RATE) 787.99

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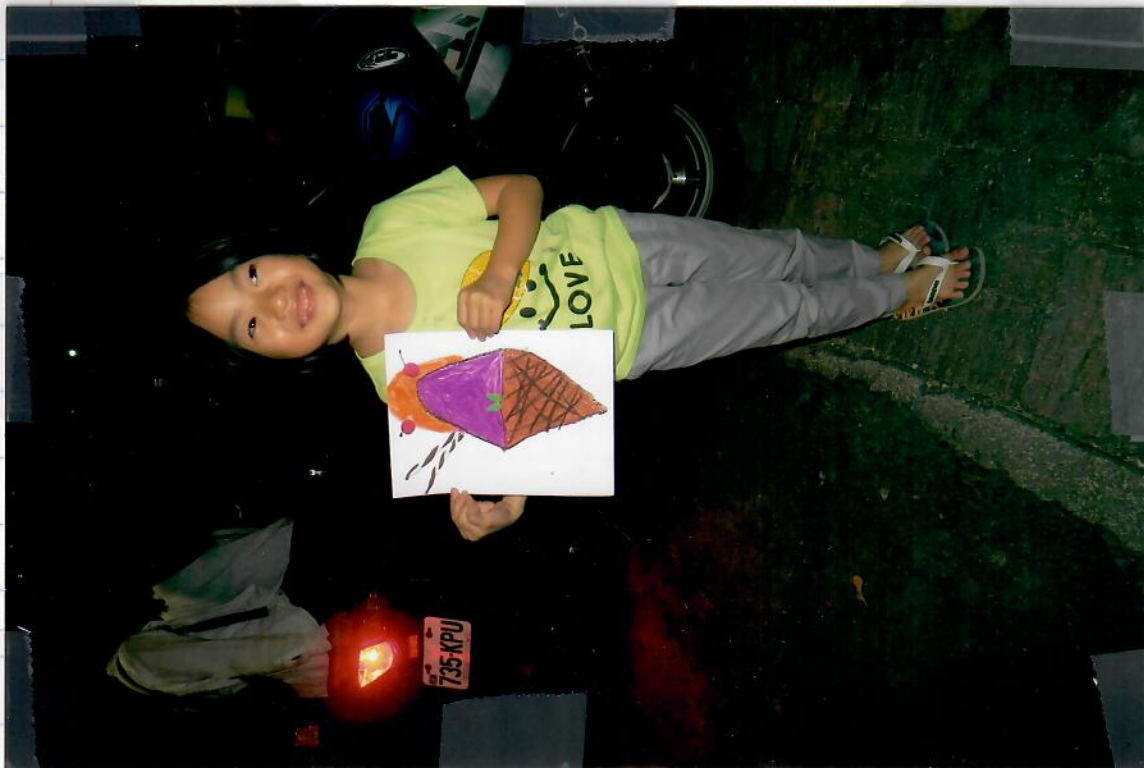
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FEES CHARGED

09/01 ANNUAL MEMBERSHIP FEE 95.00

TOTAL FEES FOR THIS PERIOD \$95.00

9/2019



Hong Kong's resistance offers crucial lessons for Taiwan

TAIPEI, TAIWAN >>

What happens on Hong Kong Island does not stay there. The ongoing tsunami of discontent washes over this island, which, like Hong Kong, is navigating the choppy waters of relations with the same large and menacing mainland neighbor. This nation — which is such psychologically, if not in diplomatic nomenclature — has a presidential election in January that seems certain to be influenced by alarm about Hong Kong's current unhappy experience with the legalistic fudge of "one country, two systems," which the incumbent president, Tsai Ing-wen, Taiwan's first female president, rejects.

Hong Kong is officially, if with increasing resentment, a "special administrative region" of the People's Republic of China (PRC). Taiwan is, officially and with varying de-

grees of pugnacity, the independent — and determined to stay that way — Republic of China (ROC). This is a reality the PRC denies with fluctuating, but currently intensifying, truculence.

The increase probably derives from the PRC's decreasing economic vigor. The regime, meaning the Chinese Communist Party (CCP), has presented this non-negotiable bargain to Hong Kong's 7.5 million subjects: You will be obedient and we will make you prosperous. Now, however, prosperity is becoming attenuated, partly because of the inevitable corruption that riddles thoroughly politicized economies, where every decision is political, partly because any government—"managed" economy will be badly managed, and partly because of the trade war between the world's two largest economies.



GEORGE F. WILL

Essentially no one here believes the PRC's economic statistics, which claim that China's growth has slowed but only to a still-brisk 6% rate. Officials here think the real rate could be 3% or even negative. And they discern an inverse relationship between the PRC's economic vigor and the regime's resort to bellicose nationalism to rally or distract the nation. So, Beijing presents Hong Kong's demonstrations against Beijing's encroachments on established liberties as an attempt to dismember China.

This year, which has featured PRC pressure to "mainlandize" Hong Kong, began for Taiwan with a



Jan. 2 speech in which PRC President Xi Jinping impudently addressed his supposed "Taiwan compatriots," who feel less like such because of Hong Kong events, among other reasons. Xi said "Chinese do not fight Chinese." They do, however, kidnap and torture them.

It is commonly but carelessly said that Xi is "president for life." Actually, although he got the two-term limit on PRC presidents removed, and although he holds other powerful offices, he still must be reelected by the small constituency of the upper reaches of the CCP. Xi seems obsessed, as the weak often are, with projecting strength. He has, however, many enemies from his anti-corruption campaign, and rising economic dissatisfaction, so he has an incentive to harp on China's "century of humiliation" — from the 1839 Opium War to Mao Zedong's 1949 victory in China's civil war.

It ended with Chiang Kai-shek's losing forces driven to this island, then known as

Formosa, a colony of Japan for the 50 years before the end of WWII. Here Chiang ruled as dictator through his political arm, the Kuomintang (KMT), until his death in 1975. Democracy began to be established in 1987, after one of the world's longest periods of martial law. Today, the KMT's presidential candidate, Han Kuo-yu, is a populist who — go figure — favors more Beijing-friendly policies. Terry Gou, founder of the gigantic Foxconn, one of Apple's principal suppliers, has, for now, opted not to run, perhaps because of gigantic conflicts of interest: With more than one million employees on the mainland, Foxconn is the largest private sector employer there. He illustrates the extent to which Taiwan and the mainland are economically melded: about 30% of Taiwan's exports go to the PRC, where per capita income is one-third that of Taiwan; roughly half a million Tai-

wanese work in the PRC.

Taiwan lives with a condition Hong Kong does not have: 1,500 PRC missiles pointed at it. Xi says Taiwan's unification with the PRC is "the great trend of history." Taiwan, however, represents resistance to two supposed historical inevitabilities.

During the Cold War, "Finlandization" denoted the process by which a small, civilized nation could be compelled to accommodate a large, coarse one. The fact of Taiwan refutes the theory that such accommodation is inevitable. And also refutes the theory that democracy must bring the kind of disorder that has come to Thailand and the Philippines.

People here are jauntily amused that a new film adaptation of Winnie the Pooh, along with images of the famous cartoon bear, were blocked by Xi's censors because people have noted a resemblance of the bear's face to Xi's. Some strongman

George F. Will writes for The Washington Post. Reach him at georgewill@washpost.com.





Strong signs of survival

PHOTOS COURTESY

Hawaiian monk seals and green sea turtles were observed by researchers this year at French Frigate Shoals in the Papahānaumokuākea Marine National Monument, about 1,500 miles northwest of Hawaii. More than a dozen field biologists conducted research on monk seals and sea turtles throughout the Northwestern Hawaii Islands since May.

Biologists find that monk seals and sea turtles are faring well in the Northwest isles

By Nina Wu
nwu@staradvertiser.com

9-8-2019

A team of researchers recently returned to Honolulu with positive news on Hawaiian marine life in the remote Papahānaumokuākea Marine National Monument 1,500 miles northwest of Hawaii.

Hawaiian monk seal pups were born and mostly appeared healthy, while a large population of green sea turtles was seen at Tern Island.

The National Oceanic and Atmospheric Administration's ship Oscar Elton Sette arrived in Honolulu Tuesday with more than a dozen field biologists who had been conducting research on Hawaiian monk seals and sea turtles at various isles since May.

Field researchers had set up camps at Kure Atoll, Pearl and Hermes Atoll, Lisianski Island, Laysan Island and French Frigate Shoals.

While there, they conducted daily seal surveys, tagged and measured recently weaned pups



Video is available at staradvertiser.com.

and disentangled some from nets and other marine debris.

This summer, they counted more than 140 Hawaiian monk seal pups in the Northwestern Hawaiian Islands, which has been the average for the past few seasons.

The team also made a surprise

Scientists are awaiting results of DNA tests to confirm whether a pair of pups that recently finished weaning and appear to be about the same age are twins, a rarity among Hawaiian monk seals.

discovery — Hawaiian monk seal mom GV18 appeared to have given birth to twins.

Researchers observed GV18 at Lisianski Island, nursing a pair of pups about the same size. The pups weaned about midway through the season, according to research ecologist Stacie

Dear Uncle George & Aunt Linda & Daisy !

and a happy new year!

Merry Xmas! It's the end of 2019, thanks for all the

(idk... does it count as "past"?)

love and support in the past year, and looking forward to create

lots of memories too in 2020! Hope to see you soon!

Miss you ALL! ☺

Best Wishes
Phyllis, Sylvia,
Louise & Jeff
Sonnie

SEALS

Continued from B1

Shoals, which sustained major damage after Hurricane Walaka passed through in October, wiping out a significant reef and washing away East Island.

Farry, who has been participating in the field camps since 1993, said East Island is now reforming into a much smaller isle. Historically, East Island was one of the largest pupping sites, and monk seals are still pupping there.

A three-person sea turtle field research team also set out for the French Frigate Shoals, where an estimated 96% of Hawaiian green sea turtles migrate to reproduce.

Marylou Staman, research technician with NOAA's Marine Turtle Biology and Assessment Program, said the team identified and numbered 583 individual green sea turtles this season.

One female turtle, nicknamed Motherload, was outfitted with a satellite tag on Oahu's North Shore be-

HELP NOAA RESEARCHERS

>> Report sightings of green sea turtles from the NWHI by taking a photo from at least 10 feet, record the date, time, number on shell, and location. Email to respectwildlife@noaa.gov and share photos to social media with #honucount2019.

>> Report sightings of sea turtles and monk seals in distress to NOAA's hotline at 888-256-9840.

fore she left for the Northwestern Hawaiian Islands so researchers could track where she laid eggs.

Motherload, or OA48, laid four large clutches on Tern Island, said Staman, and has already migrated back to her usual foraging grounds off of Oahu's North Shore.

Since East Island is no longer large enough, the team set up camp on Tern Island,

and used small boats to survey turtles on East Island.

The island was large enough to encourage nesting among turtles, said Staman, but king tides washed over parts of the isle, and some eggs were observed washing out of the berm.

The turtles identified in the NWHI are likely now swimming around the main Hawaiian isles, and the research team is inviting the public to help track them by the letter-and-number combinations painted in nontoxic white paint on their shells.

At the same time, researchers remind the public to keep a respectful distance from wildlife. Hawaiian monk seals are a critically endangered species, with only about 1,400 remaining in the wild. Hawaiian green sea turtles are classified as threatened.

Through the camps, researchers have been able to compile some of the longest-running datasets for species conservation. It was the 38th field season for Hawaiian monk seals, and the 47th field season for Hawaiian green sea turtles.

Robinson. They were on the thinner side but appeared healthy.

The team is eagerly awaiting DNA test results to confirm that the pair — a boy and girl — are twins. The birth of Hawaiian multiple monk seal pups is exceptionally rare, and occurs in only 0.1% of all births, according to researchers.

In addition to seal surveys, experts on NWHI research trips also relocate weaned pups to better spots to increase their chances of survival and help seals in need of medical assistance, said Shawn Farry, a biological research associate and field team leader at French Frigate Shoals.

On this trip, the team brought back four malnourished monk seal pups to get care at the Marine Mammal Center's Ke Ka Ola hospital in Kailua-Kona. Years of data have shown that weaned underweight pups have a low chance of survival, according to researchers.

The four female pups — two from Pearl and Hermes Reef and two from Lisianski Island — are now undergoing rehabilitation.

Researchers this year were also focused on assessing conditions at French Frigate

Please see SEALS, B5

On TMT issue, as it was on Kahoolawe dilemma, political.

The unsolved fight over Mauna Kea's Thirty Meter Telescope is dragging Gov. David Ige to an ignominious end — and greatly worrying Hawaii.

According to a new Honolulu Star-Advertiser poll, just 35% of Hawaii voters approve of Ige's job performance, while 56% said they disapprove of the work done by the Pearl City Democrat.

The poll was taken as the TMT dilemma nears its fourth month. By way of comparison, former Gov. Neil Abercrombie, who was upset by Ige in the 2014 election, had the nation's lowest gu-

ON POLITICS



RICHARD BORRECA

bernatorial approval rating of 30% back in 2011.

So it is not surprising that a politically bloodied Ige last week said, "The issue of building TMT is not a popularity contest." Ige should

know about exploring the nadir of performance ratings. Back in March 2018, two months after state officials incorrectly warned of an incoming ballistic missile, 49% said they disapproved of Ige's job performance.

Job approval and political skill run side by side in a politician's repertoire; skill gives you approval.

So can political chops solve the TMT quagmire? After years of solid public backing, the recent opinion poll shows Hawaii voters bailing on TMT.

In the face of dedicated resistance, the telescope is

now supported by half of Hawaii's voters. Just 18 months ago, it carried a 77% approval rating.

The last time Native Hawaiian activists played such an important role in state affairs was during the 1990s, when after 20 years of protests, they were battling the federal government to stop the bombing of Kahoolawe.

The politics of the day was that GOP U.S. Rep. Pat Saiiki was running against U.S. Sen. Daniel Akaka in 1990, and Saiiki was credited with talking President George H.W. Bush into halting the bombing after years of Republican

9/29/2019

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DENNIS ODA / DODA@STARADVERTISER.COM

Researchers aboard the NOAA vessel Oscar Elton Sette returned Tuesday from five months studying Hawaiian monk seals and green sea turtles at Papahānaumokuākea Marine National Monument. On the pier at Ford Island in Pearl Harbor with the research vessel in the background are Shawn Farry, left, biological research associate with the Hawaiian Monk Seal Research Program; Marylou Staman, research technician; Hope Ronco, biological research associate; Stacie Robinson, chief scientist; and Hector Casanova, commanding officer of the Oscar Elton Sette.

Resolution will take strong leaders

2019 HSA

insistence that the Hawaiian island was needed for national security. While Akaka was a steadfast opponent of the Kahoolawe bombing, politics stopped the bombs, although public opinion polls at the time gave neither Saiki nor Akaka credit for the halt.

If a political solution is to be found for TMT, it will take a lot more players to step up.

Colin Moore, director of the Public Policy Center at the University of Hawaii at Manoa, predicts getting resolution from groups such as

the state Legislature will be difficult.

"Politicians will almost certainly try to duck the TMT issue," Moore noted. "A divisive and emotional issue where public opinion is evenly split is the last thing any candidate wants to discuss."

The discussion, however, is going to be held and if some politicians do step up, it will define a new era of leadership. If no one does, we go on with same old, same old.

Richard Borreca writes on politics on Sundays. Reach him at 808onpolitics@gmail.com.

Handwritten notes on lined paper: "A. to CASU YASU" and a large checkmark.