## **Station 46042 (LLNR 297) - MONTEREY -**27NM WNW of Monterey, CA

As of 0400z, 11/25/23, buoy has gone adrift The buoy was recovered on 12/15/23

ESTABLISHED 1964

The marine and weather buoy located offshore in Monterey Bay which many divers, boaters and fishing folks rely on for ocean conditions went adrift on November 23, 2023. It was found and recovered on December 12. The buoy is currently awaiting the update to its older outdated sensors and reporting system in addition to a hull exchange. There are no reports on the estimated time as to when it will be placed back into service.

The National Oceanic and Atmospheric Administration's (NOAA) National Data Buoy Center (NDBC) operates a network of over 100 marine weather observation buoys. These buoys presently use a wave observation system named the Digital Directional Wave Module (DDWM). The DDWM uses commercial motion sensors contained in a single package and processing boards that are now obsolete.



Therefore, the NDBC completed an engineering effort to replace these obsolete components with a new wave observation system named Ocean

Wave Linux (OWL). The OWL replaces the DDWM's nine axis motion sensor with a compatible device. The OWL produces the same observations as the DDWM but with much less power consumption and with modern Commercial Off The Shelf (COTS) available components.

The DDWM is contained in a single tube named WAVCEAN-16, which





### Neither rain nor shine nor gloom of day keeps the Flipper Dippers from diving

From left, Ken Agur, Tristan Chutka, Grace Chi, Barbara Davis, Sim Upadhyayula, Tom Gardner (along with *Carl Tuttle* who took the photo) huddle in the rain and contemplated getting into their gear for a S3 (Second Saturday Scuba) dive at the Breakwater on April 13th. The group eventually used cars, trucks and the bathroom to get out of the rain and into their gear. They went out along the pipeline to the Metridium field and then back parallel to the beach. Vis was a hazy 10-15 foot and the water temperature about 50 degrees. After some discussions they all felt too cold to venture back into the water for a second dive. BUT WAIT! THERE'S MORE! As the previous Saturday's U/W Easter Egg Hunt was canceled, the group took turns with a closed-eye-grab of the eggs out of a bag. See page 4 to see who the winners were!

is a payload in the NDBC's Self-Contained Ocean Observation Payload (SCOOP). WAVCEAN-16 physically contains the Wave and Ocean (which measures sea surface temperature) modules. After extensive, successful field trials, the OWL components replaced the DDWM components. This effectively created a new tube or product. The tube named new isWAVCEAN-18.

Let's hope Station 46042 is repaired and back on duty soon! 😂

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## President's Corner

Hi All!

Thile poor conditions meant we had to cancel the 15th Annual Underwater Easter Egg Hunt on April 6th, we were able to hold an above-water event the following weekend. See the article on page 4 to see who the winners were. And a big THANKS! goes out to Tom *Gardner* for organizing the events.

It's been great seeing so many Dippers in the water lately. We had 8 divers attend the March S3 dive and 7 at the rainy and cold April S3 dive. Then we followed that up with 10 divers on April 20th in fabulous conditions at North Monastery Beach. We're a dive club and we love diving!

For May, I'm looking forward to our S3 dive at Point Lobos on May 11th! This usually includes a nice potluck lunch alongside some of our nondiving buddies who go hiking while we dive.

And don't forget the club camping trip to Henry Cowell Redwoods State Park for Memorial Day weekend. A good time will be had by all! See the calendar on page 7 for more information about this fun event.

The SCUBA Show is June 1st and 2nd in Los Angeles this year. This is a great opportunity to check out the hundreds of exhibitors, see the latest gear, attend seminars, and learn about great travel opportunities!

I look forward to seeing you all in the water soon.

Let's go diving! - Barbara

## It's National Nevada Day!

In 2012, the USS Nevada (SSBN 733) was boarded by a rogue team of elite seals that tried to take over the submarine. The crew of the Nevada managed to repel the seals (harmlessly) before the marine mammals did any damage.

Nevada Day is celebrated on the last Friday in October every

year. It's the day to commemorate Nevada's statehood as the 36th state to join the union, and only the second state to do so during the Civil War.

This holiday is dedicated to celebrating the resilience of Nevadans throughout their years of hardship and paying respect to the people responsible for their admission to the United States. 3





# Flipper Dippers

www.SJFlipperDippers.com Follow and Like Us on Facebook

### **PRESIDENT**

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408-656-6390

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Sim Upadhyayula 669-286-9796

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### **RAFFLE**

o Position Open o

### **REFRESHMENTS**

o Position Open o

### STAR ACHIEVEMENT

Jackie Gardner

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### TROPHY COMPETITION

John Snyder

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We'll be having our in-person General Meeting this month. If you come please bring a refreshment to share! We'll have a live Skype connection for those who still prefer to meet virtually.

### RAFFLE NEWS

Stay tuned for an upcoming Christmas in July BBQ and picnic with another great Raffle!

### MEMBERSHIP

### Ken Agur

We're a dive club and we're diving! If you're looking for a dive buddy look no further. See the Club's website for more information on becoming a member. (Membership Requirements).

**Happy Birthday!** These Dippers are completing their annual trip around the

Sun this month: **Ken** Iron Diver **Agur** and **Barbara Zweig**.



## Hello to all Dive Clubs & Divers in CenCal

At one time, most north central California dive clubs had a few or many CenCal members. That time is gone. But, with the loss of other dive-related councils in California, CenCal only remains to represent skin/scuba divers in the state.

And CenCal NEEDS support! CenCal started 65 years ago. It is a non profit tax exempt California corporation. CenCal fought BIG access issues. CenCal supported the Coastal Act and solved access issues: folks can now access and dive Lovers Point, Monastery Beach, the Breakwater, Sea Ranch, Stillwater Cove along 17 Mile Drive, Carmel River Beach and many other locations along our coast.

But, the Pandemic hit diving very very hard but social media hit hard too. Dive clubs meet monthly, dive once or twice a month, share boat trips – meetings allow shared experiences and dive and big fish stories. But, we now share daily, AND the Pandemic shut down club meetings for 2+ years.

Current issues for divers are now marine ecology: abalone survival, kelp restoration, invasive sea urchins, and sea otters. CenCal is keeping track of and following these issues, actions and activities. But the issues are massive (some world wide) complex, complicated. Loss of abalone altered the economy and closed dive stores. Urchins create huge kelp loss.

So, CenCal is struggling as are the clubs. Yearly dues are still \$15 – or two MacDonalds meals. And, dues also support the Annual \$2,000 CenCal Diving & Aquatic Studies Scholarship.

It is extremely easy to join CenCal – via website (cencal.org) or send a check, made to CenCal: CenCal, PO Box 1727, Sonoma CA 95476.

Questions? email: 3mcircle@gmail.com Phone: 650 224 8353

Carol Rose

CenCal Secretary 😂





### **CDFW: License App for Mobile Devices**

The California Department of Fish and Wildlife (CDFW) is pleased to announce the launch of the CDFW License App for mobile devices. The new application allows residents and nonresidents to display California sport fishing licenses and validations on their mobile phones and other mobile devices in lieu of a physical license.

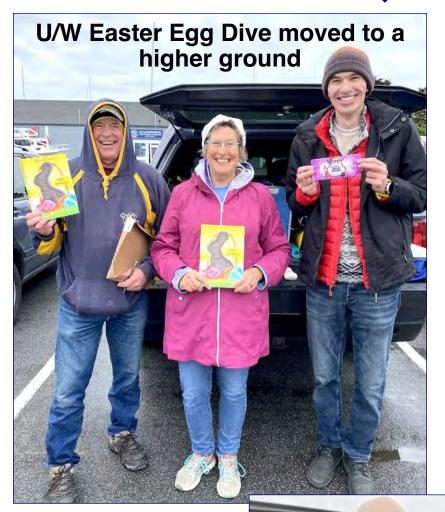
Users may also download and view various CDFW online resources, including hunting and fishing regulations booklets, the Fish Planting Schedule and access the Online License Sales and Services website.

Users can download the application on their mobile devices through the Apple App Store or Google Play Store or by accessing the direct download links from CDFW's License App web page.

Following the successful rollout of the CDFW License App, hunting licenses and related hunting validations will be added to the mobile display options as early as mid-2024.

More information about the app and Frequently Asked Questions (FAQs) can be found on the CDFW's License App web page, which includes video tutorials covering the app's various functionalities: wildlife.ca.gov/LicenseApp







So Mother Nature couldn't chase away these Easter Egg hunters even though the hunt was moved a week. Each person took turns drawing a numbered egg out of a bag. After the eggs were picked, the numbers were added together and winners were declared. Winners are winners by the luck of the draw including, above from left, Carl Tuttle 3rd place, Barbara Davis 2nd place and Tristan Chutka 1st place!

Everyone who showed up and participated was a winner including Ken Agur, right, Tom Gardner, far right, and Grace Chi, top right. Happy go lucky winners picked from a number of prizes including different size chocolate bunnies and different flavors of Peeps candies. Unfortunately Sim Upadhyayula had to leave early and missed out in the hunt.

### **And the Winners Are:**

1st: Tristan – 160 points 2nd: Barbara – 131 points 3rd: Carl - 116 points 4th: Ken -106 points 5th: Tom – 95 points 6th: Grace -58 points









After the April 13th S3 (Second Saturday Scuba) Dive was a rainy and cold event, conditions started looking much better the following week. Word went out for a dive on April 20th at North Monastery Beach and Dippers responded! Jackie Gardner took photos of the divers including above, from left, Tom Gardner, Grace Chi, Barbara Davis, Carl Tuttle, Jeff Rowland, Howard Timoney, Tristan Chutka, Sim Upadhyayula, Ken Agur and Cedric Wright. The sun came out and made for a great day. Underwater vis was anywhere from 15-25 foot and the water temperature was around 52 degrees – depending on who you asked. Most did a second dive and we all met at the Crossroads BBQ for lunch and reports of sighting some big lingcod, cabazon, a sea hare and other critters. Ah, yes . . . YOU should have gone diving!





## A Breakwater Dive Report

Dippers *Barbara Davis* and *Howard Timoney* took advantage of some great mid-week conditions and headed down to the Breakwater on Thursday, April 18th. While the ocean was not quite as flat as for the S3 dive the previous Saturday, the sunny skies and warmer temperatures helped a lot in dealing with the chilly waters of Monterey. (That, and Howard's giant jug of hot water!)

Our first dive was along the pipe out to the metridiums. While the nearshore visibility had decreased compared to Saturday, the viz out at the metridiums was awesome! Up to

30 feet in some areas. We were able to swim to several patches of metridiums and reach a max depth of 55 feet during our 56-minute dive. We had a cormorant join us, along with some sea lions, lots of crabs, and a new to us nudi-



branch (Armina californica).

For our second dive, we swam out along the wall. It was somewhat green and murky at the surface, but the viz opened up quite a bit at the bottom. We saw several lingcod on our swim out and then floated midwater to enjoy the antics of a bunch of sea lions. We also saw several different types of nudibranch eggs. As we swam back to the beach, we had a second group of sea lions join us near a buried anchor in about 7 feet of water. We reached a max depth of 42 feet on this 60-minute dive.

After our dives we enjoyed a nice lunch at Hula's Island Grill. All-in-all, another great day of diving in Monterey.

## Smart vest turns fish into underwater spies

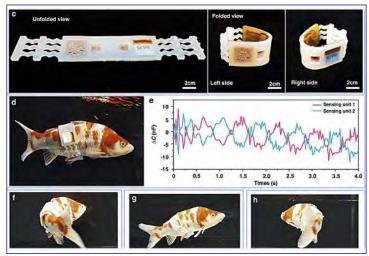
Story by Science X staff

Traditional techniques for observing fish behavior, largely dependent on vision-based systems, face substantial limitations, such as a confined range of observation and a limited duration of operation underwater. In response to these challenges, a research team from the National University of Defense Technology has pioneered a wearable electronic device that adeptly captures disturbances in the water flow caused by the movements of fish.

This innovative "smart vest" designed for fish, utilizes an advanced MXene hydrogel known for its remarkable sensitivity to changes in water pressure. The device features a pair of pseudocapacitive pressure-sensing units, offering a robust and noninvasive approach for the in-depth study of aquatic behaviors. This smart vest is detailed in an article published in Microsystems & Nanoengineering.

This vest is designed to precisely capture the subtle nuances of fish movement, offering a window into their natural behaviors without interference. The heart of the vest's technology is its innovative hydrogel electrodes, which ingeniously combine MXene nanosheets with holey-reduced graphene oxide, further enhanced by ionic liquids.

This blend not only boosts the electrodes' sensitivity to



Microsystems & Nanoengineering

minute movements but also ensures their longevity in aquatic environments, overcoming traditional barriers of underwater research tools.

The breakthrough lies in the vest's ability to detect the flow field disturbances created by fish as they navigate their watery realms. Whether a fish turns, speeds up, or dips, the vest's pseudocapacitive pressure-sensing units register these actions with unparalleled precision.

Dr. Jiafei Hu, the lead researcher from the National University of Defense Technology, said, "This wearable device significantly advances aquatic research. It transcends the constraints of traditional systems and paves the way for comprehensive studies on fish behavior and their ecological interactions."

The introduction of the underwater vest signifies a major advancement in research methodologies, enabling precise, real-time insights into fish behaviors and their environmental dynamics. Its implications for environmental conservation, aquatic ecosystem studies, and the development of sophisticated monitoring technologies are profound and far-reaching. •

### Fined for Touching a Whaleshark

Under current

A foreign diver who reached out and touched the tailfin of a whale shark near the Richelieu Rock in Thailand in March was videoed, and it was used as evidence against them. Apparently, the dive leader told the divers ahead of time not to touch the animals but was ignored, so he reported the violator to authorities. Thailand's Wildlife Preservation and Protection Act prohibits hunting or any action that harms protected animals, with imprisonment of up to four years and a fine of up to \$1,100. The penalty imposed on the diver has not been disclosed to the public, but Big Brother is watching you.

## Symphonic Reef Sounds Settle Coral Larvae

Undercurrent

Underwater speakers that broadcast the hustle and bustle of thriving coral could bring life back to damaged reefs that are in danger of becoming ocean grave yards. Researchers from Woods Hole Institute, working in the U.S. Virgin Islands, found that coral larvae were up to seven times more likely to settle at a struggling reef when they played recordings of the snaps, groans, grunts, and scratches – the symphony of a healthy ecosystem.

## DIVE & ACTIVITY CALENDAR

SIM UPADHYAYULA



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May 2024

### WEDNESDAY, MAY 1 **BUSINESS MEETING: 7:30pm**

The meeting will be held virtually via Skype. All members are invited to attend. Please email Carl Tuttle if you need the link to join. Bring your own food, drinks, and internet connection and we'll discuss ideas for upcoming dives and events.

### **SATURDAY, MAY 4** NO SCHEDULED DIVE

### **SATURDAY MAY 11** SECOND SATURDAY SCUBA (S3) PT. LOBOS SCUBA DIVE

Coordinator: Carl Tuttle, (408-829-3660, tutcomms@sbcglobal.net). We have 5 Teams with space available. Meet at the entrance before 8AM. Be sure to bring your reservation confirmation and YOUR "C" Card! Let Carl know if you are looking to join in, or if you've signed up and are not going to make it as we may have some folks who want to dive.

### **SATURDAY, MAY 18** NO SCHEDULED DIVE

**MON-SUN, MAY 20-26** MEMORIAL DAY WEEK AT HENRY COWELL REDWOODS STATE PARK CAMPGROUND

Coordinator: Join Barbara Davis, (408-656-6390, email: bjdscuba123@gmail.com) and the rest of

## **GENERAL MEETING WEDNESDAY, MAY 15**

The in-person General Meeting will be held at 7:30 PM at the Knights of Columbus Santa Maria Hall 2211 Shamrock Dr., Campbell.

The **virtual meeting** will continue to be hosted via Skype.

Please contact **Carl Tuttle** for more details on the in-person meeting or a link to the virtual Skype meeting.

Celebrate 59 Years of the San Jose Flipper Dippers!

**Entertainment:** 

- Social Hour
- Dive Plans and More



the Flipper Dippers for camping at Henry Cowell Redwoods State Park Campground (2591 Gram Hill Rd., Santa Cruz). Dippers have 3 sites for the week and are open to sharing camping space. The Dippers are planning on hiking, mountain biking, and sharing food, drink, and stories around the campfire. Contact Barbara regarding sharing space or if you just

want to join in on the fun for a day. Spaces are limited to 2 vehicles, but additional parking is available. Plan is for a bike ride and lunch on Saturday in Santa Cruz in place of the 4th Sunday Cycle.



MONDAY, MAY 27 MEMORIAL DAY

### **UPCOMING IN JUNE**

- 07 Business Meeting
- 10 Second Saturday Scuba - Boat Dive
- 21 General Meeting
- 25 4th Sunday Cycle



### Sherman's Lagoon by Jim Toomey for April 12, 2024 WHY HAGN'T CAP'N CRUNCH BEEN PROMOTED BY NOW? I'M JUST QUESTIONING SHOULD I BE DOING MORE IN LIFE? WHAT'S THE MEANING OF I'VE BEEN WONDERING YOU OKAY. MEGAN? LIKE? ABOUT A LOT OF STUFF, TOO. ALL THIS? RIGHT.

## NOAA is Offering a \$20,000 Reward Undercurrent

For information about who injured and killed an endangered sawfish, a fish few divers ever see, in the Florida Keys. The sawfish was missing its rostrum (the saw), which somebody cut off the night of January 30. While

the agency says you must include your name and contact information to qualify for the reward, tips can also be left anonymously if you don't need the money.

**NOTE:** All certified divers are encouraged to attend San Jose Flipper Dippers' dives.

Non-Club members will be required to show proof of certification to the dive coordinator prior to entering the water with our group. Please sign up for dives at the General Meeting or call the coordinator. This is needed in case of cancelation or changes.









### FIRST CLASS MAIL

## 2024 COMING EVENTS

May 1	Business Meeting	Are you looking for someone to dive with?
May 11	Second Saturday SCUBA Pt. Lobos	to dive with?
<b>May 15</b>	General Meeting	TO WITE WITE:
May 20-26	Memorial Day Week - Henry Cowell SP	The San Jose Flipper Dippers Dive
May 25	Fourth Sunday Cycle (FSC) on Saturday	Club is a great way to meet divers
June 7	Business Meeting	who are always having fun times.
June 10	Second Saturday SCUBA - Boat Dive	Come join us!
		00000
June 21	General Meeting	
June 25	Fourth Sunday Cycle (FSC)	
July 03	Business Meeting	
July 6	No License Fishing Day	
July 13	Second Saturday SCUBA	State Co.
July 17	General Meeting	
July 28	Fourth Sunday Cycle (FSC)	
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**Watch This Space - Much More To Come!** 

See the Club's Website for the full Calendar

