

MKMRS

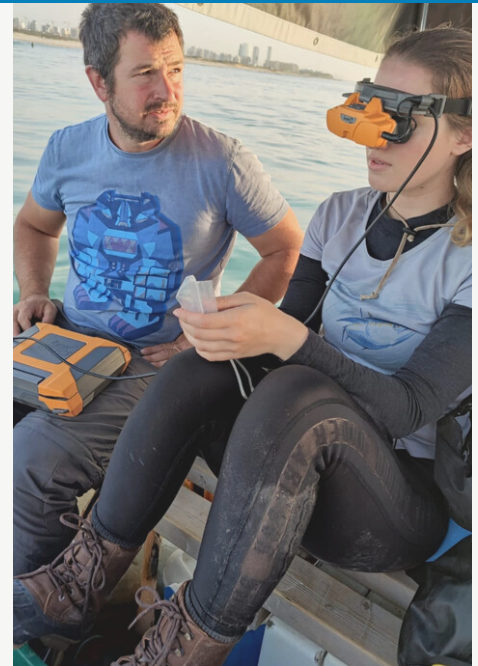
חוקרי וסגל תחנת מוריס קאהן לחקר הים מאחלים לכולכם חזרה
לשגרה בטוחה ומוצלחת.



Photos: Yaly Mevorach, MSc student on a dolphin survey



Debra Ramon, PhD researcher, cleans up the coast



Dr Leigh Livne learns the hand-free goggles of the EVO II ultrasound as part of her research on shark reproduction.

Here's what you should know:

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Mr Morris Kahn and Mr Benjie Kahn visit MKMRS

from Dan Tchernov

Just before the national holiday of Pesach, both Morris and his son Benjie Kahn visited the station to hear about our activities from the past year and a half, since before the pandemic shuttered our doorways.

It was a relaxed, but informative visit, with Professor Michael D. Krom presenting his research on the nutrient limitation of the Eastern Mediterranean Sea, and Dr Aviad Scheinin summarising the various research activities of his Apex Predator Lab. After touring the new building and Dive Centre in Sdot Yam, the day capitulated in the future of the station and defining the most important questions to ask in the coming years, in order to inform decision-makers on how best to approach the multiplicity of impacts facing our region.

IN MEMORY OF DR SHIMRIT PERKOL-FINKEL

The second SPOT tag (Smart Position and Temperature) was attached in early March to a female dusky shark, 2.9 m total length. The tag (see photos to the right and left) is used to track the horizontal movements of the sharks and will send us locations when the shark's dorsal fin breaches the surface. The 65th tagged shark was named 'Shimrit', after the recent passing of Dr Shimrit Perkol-Finkel - marine biologist and co-founder of EConcrete.



Unfortunately, only 2 satellites were passing overhead the last time Shimrit surfaced, so triangulation was not possible. The shark was also acoustically tagged, as part of the ongoing long-term shark research project of the APL. We hope to obtain crucial information from this SPOT tag, in the summer, in order to better preserve shark species in the Mediterranean.



Dr Perkol-Finkel is survived by 3 children and her husband. Among her many achievements in the industry of ecological construction, she was named in the 2020 "Vital Voices: 100 Women Using Their Power to Empower" book, the We Empower awardee in 2018 (an award focused on highlighting the advances of the UN Sustainable Development Goals by women), and the winner of the EU Prize for Women Innovators. She was also a key part of Israel's Marine Spatial Planning process, and her groundbreaking work will continue to restore and protect the world's marine ecosystems.

MKMRS is first on the scene to sample and identify beached whale

In late February, a deceased fin whale washed up to the Israeli shore, between Ashdod and Ashkelon. In stormy weather, Drs Danny Morick (head of Marine Pathology) and Aviad Scheinin (head of Apex Marine Predator Lab) went out to take the first samples of the whale. Later on, Dr Scheinin gave an interview to Dudu Erez of כאן תרבות, regarding the fin whale carcass that washed up onto the beach during the tar pollution event that covered the Israeli shore, and the possible link between the death of the whale and the infection. The full interview can be viewed on our [Facebook page here](#).

*The drone photography in the interview was taken by Dr Aviad Scheinin
Stills photo: Shlomit Shavit*



Whales are humanity's canary in the coal mine... as ocean pollution level's increase, marine mammals like whales will be the first to go.

- Prof. Roger Payne, advisor to Project CETI

Dr Danny Morick is still analysing the samples, which were taken from the muscle, skin, mouth, and cloaca of the whale. No preliminary insights can be given at this time, especially in relation to the recent tar spill which continues to afflict our shores.

In a similar vein, PhD researcher Ms Debra Ramon was highlighted in [Ha'aretz](#) for her efforts and insights into the tar spill. Her research focuses on heavy metals and microplastics pollution of commercially-important species of the EMS.



Capture is cropped from drone footage taken by Dr Aviad Scheinin (MKMRS, Delphis NGO)

TWO HEALTHY DOLPHINS DIE AS A RESULT OF NETS



Photos by Gil Cohen Magen

Researchers from MKMRS Apex Predator Lab, and the NGO Delphis, performed a necropsy of two dolphins who met their untimely deaths as a result of unintentional capture in fishing gear along the Israeli coastline. The species caught were one of a bottlenose dolphin (*Tursiops truncatus*) and the common dolphin (*Delphinus delphis*). The latter, unlike its name, is listed as 'endangered' in the Mediterranean Sea. The common (*D. delphis*) dolphin we called Tricky, a young male first observed in 2018 and has since been an integral part of our local southern pod. We identified the smaller *T. truncatus* calf as that belonging to Galili, first sighted in 2011. And the day before the calf died, mother and calf were documented together in front of Ashdod by Guy Levian of the NPA. Today's autopsy results are even more upsetting, because the two dolphins met their deaths because of capture in gillnets, and were completely healthy.

The type of net that caught the dolphins extends vertically to the bottom, like a wall that stretches tens of meters; it is known in English as a gillnet. In the stomach of the common dolphin, fish and squids were found, while the calf's stomach was, sadly, full of milk. We are seeing the direct consequences of the controversial fishing permits allowed this year (see link), in the breeding season (typically there is a fishing ban for 60-90 days during the breeding season).

Sadly, a Loggerhead sea turtle (*Caretta caretta*) was also caught in the net, and is also defined as a protected species. The turtles are also prone to capture in breeding season, as they come to shallower waters. Both MKMRS and Delphis call to implement an amendment to turn over the decision to allow these permits during breeding season.

MKMRS reaches 60 publications!

Jan-March 2021

Rearte, T.A., Celis-Plá, P.S., Neori, A., Masojídek, J., Torzillo, G., Gómez-Serrano, C., Benavides, A.M.S., Álvarez-Gómez, F., Abdala-Díaz, R.T., Ranglová, K. and Caporgno, M., 2021. Photosynthetic performance of *Chlorella vulgaris* R117 mass culture is moderated by diurnal oxygen gradients in an outdoor thin layer cascade. *Algal Research*, 54, p.102176 <https://doi.org/10.1016/j.algal.2020.102176>

Ramon, D., Morick, D., Croot, P., Berzak, R., Scheinin, A., Tchernov, D., Davidovich, N. and Britzi, M., 2021. A survey of arsenic, mercury, cadmium, and lead residues in seafood (fish, crustaceans, and cephalopods) from the south-eastern Mediterranean Sea. *Journal of Food Science*, 86(3), pp.1153-1161.

Zirks, E., Krom, M., Schmiedl, G., Katz, T., Xiong, Y., Alcott, L.J., Poulton, S.W. and Goodman-Tchernov, B., 2021. Redox evolution and the development of oxygen minimum zones in the Eastern Mediterranean Levantine basin during the early Holocene. *Geochimica et Cosmochimica Acta*. <https://doi.org/10.1016/j.gca.2021.01.009>

Yuan, X., Krom, M.D., Zhang, M. and Chen, N., 2021. Human disturbance on phosphorus sources, processes and riverine export in a subtropical watershed. *Science of The Total Environment*, p.144658. <https://doi.org/10.1016/j.scitotenv.2020.144658>

Ferrier-Pagès, C.; Martinez, S.; Grover, R.; Cybulski, J.; Shemesh, E.; Tchernov, D. Tracing the Trophic Plasticity of the Coral–Dinoflagellate Symbiosis Using Amino Acid Compound-Specific Stable Isotope Analysis. *Microorganisms* 2021, 9, 182. <https://www.mdpi.com/2076-2607/9/1/182>

For questions or comments related to the content of this newsletter, please contact:

Dr Leigh Livne; sdotyam.scicoordinator@gmail.com

