



# MKMRS Newsletter

H. Nativ - Morris Kahn Marine Research Station

Issue 4 | October 2019

## *Announcements*

It's a busy autumn for the station, with two major events being held at the station in November and December. We hosted Mr Peter Kadas and his wife in late October, and they were very happy with our progress!

On November 12, the station is hosting its namesake benefactor, Mr Morris Kahn and his team. We are excited to showcase our achievements and inaugurate a new addition to the campus, the Marine Blue Technologies building. The University of Haifa President, Roy Robin will personally open the building alongside Prof. Tchernov and Prof. Berman-Frank.

On December 18<sup>th</sup>, the station is hosting a one-day, open seminar to review the progress of the station, and keynote speaker Dr Neil Hammerschlag of the University of Miami has been invited to discuss his exciting research and join us for shark tagging!

## *Inside This Issue*

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A spotlight on Marine Chemistry lab assistant, Ms. Tal Ben Ezra, and updates from the Top Predator Lab!

**PG. 3**

AAUS diving news, and surveying to support protected areas in Israel

**PG. 4**

Recent publications from our station

## It's Shark Season!

This year we are working with Hadera municipality to promote shark tourism as a public outreach opportunity near the Hadera desalination station. The 4<sup>th</sup> season of tagging in the winter is about to begin, and we are working closely with the NPA to better connect and educate the interested public on these wonderful creatures!

The guitarfish project which started during 2017 and continues today (2018) studies the common guitarfish (*Rhinobatos rhinobatos*) and the Blackchin guitarfish (*Glaucostegus cemiculus*). These species have a relatively wide range in the Atlantic and all Mediterranean countries with greater abundance in the southern and eastern Mediterranean countries (Newell et al. 2016). These species are currently considered endangered throughout their entire distribution, according to the International Union for Conservation of Nature (IUCN) red list. They inhabit sandy habitats with a wide range of depths, and seasonally use coastal areas and bays for mating, pupping, and foraging (Farrugia, Espinoza, and Lowe 2011); areas that are susceptible to increasing anthropogenic pressures and overfishing. However, there are no species-specific conservation measures currently in place, and only limited information is available regarding their abundance, migration patterns, and nursery locations; a situation that will only exacerbate their dwindling numbers.



## Spotlight On: Ms. Tal Ben-Ezra Marine Chemistry Lab Assistant



I studied and worked as a dog trainer in California for a few years, then completed my bachelor's degree from Ruppin Academic Center in Michmoret. Now working on my master's thesis with the University of Haifa in the biogeochemistry lab of Kibbutz Sdot-Yam. I am supervised of Prof. Mike Krom and Dr Daniel Sher.

Ever since I was a child I was in love with the sea. When I studied in Michmoret, I got to know it much better, along with the realizing the importance of understanding the unique system of the EMS and the Israeli shore and its protection.

My thesis is going to be about nutrient cycling in the EMS and especially the Israeli shelf dynamics. I love working on the bridge between the chemistry and biology of the system, looking at the smallest parts of the system like nutrients, and getting a view of the large and complicated processes that drive the biology and vice versa.

**"Fishes live in the sea, as men do a-land;  
the great ones eat up the little ones."**

**-Shakespeare-**



A fun day out for the Top Predators team – ACCOBAMS surveying!

## Number 1 in AAUS diving activity!

Update from Eran Rozen, Dive Centre Manager



In the past year, the dive centre in Sdot Yam logged 2,057 dives, with 139 Technical dives and 118 CCR dives. Overall, we took the top spot with 159,320 minutes of dive time.

Very big thank you and admiration for Mr Eran Rozen of the Leon H. Charney School of Marine Sciences, we appreciate all your hard work in certifying new divers!

## Hard Rock Survey – establishing a new protected ecosystem in Southern Israel with the NPA

We are continuing our important work surveying the rocky reefs in Ashkelon, Ashdod, Sdot Yam, and Achziv. We sample at 45, 25, and 10 m depths. The information we collect is helping to determine the large shifts in species diversity and abundance between the season, and aiding in the push for protected areas. Studies have shown that these protected areas are having a positive impact on our fish!



## Publications

- Gutner-Hoch, E., Martins, R., Maia, F., Oliveira, T., **Shpigel, M.**, Weis, M., Tedim, J., Benayahu, Y. 2018. Toxicity of engineered micro- and nano-materials with antifouling properties to the brine shrimp *Artemia salina* and embryonic stages of the sea urchin *Paracentrotus lividus* (submitted, JEMBE)
- Herbert, R.J., **Krom, M.D.**, Carslaw, K.S., Stockdale, A., Mortimer, R.J.G., Benning, L.G., Pringle, K. and Browse, J., 2018. The effect of atmospheric acid processing on the global deposition of bioavailable phosphorus from dust. *Global Biogeochemical Cycles*.
- Notarbartolo di Sciara G., Kerem D., Smeenk C., Rudolph P., Cesario A., Costa M., Elasar M., Feingold D., Fumagalli M., Goffman O., Hadar N., Mebrathu Y.T., **Scheinin A.** (2017) Cetaceans of the Red Sea. CMS Technical Series 33, 86 pp.
- **Shpigel, M.**, Guttman, L., Ben-Ezra, D., Yu, H., Chen, S. 2018. Is *Ulva* sp. able to be an efficient biofilter for mariculture effluents? (*in submission*, J. of applied Phycology).
- **Shpigel, M.**, Shauli, L., Odintsov V., Harpaz, S., Ben-Ezra, D., 2018. *Ulva lactuca* biofilter from a land-based Integrated Multi Trophic Aquaculture (IMTA) system as a sole food source for the tropical sea urchin *Tripneustes gratilla elatensis*. *Aquaculture*, 496, 221-231.
- **Shpigel, M.**, Ben-Ezra, D., Shauli, L., and Erez, J. 2018. Effect of diets and light regimes on calcification and somatic growth of the sea urchin *Tripneustes gratilla elatensis*. (*in submission*, *Aquaculture*).
- Yeruham, E., Abelson, A., Rilov, G. , Ben Ezra, D., **Shpigel, M.** 2018. Energy budget of cultured *Paracentrotus lividus* under different temperatures (*in submission*, *Aquaculture*).



Photo source: Dr Aviad Scheinin, IMMRC and MKMRS

*This is the fourth quarterly review of the Morris Kahn Marine Research Station's progress this year. We thank you for your kind generosity and support as our marine research and objectives take shape!*

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