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Beach pollution threatens sea turtle population

Sea turtles seeking to hatch their eggs on Haifa's Carmel beach come up against dirt, concrete walls and metal dumpsters

By [David Ratner](#)

Itzik Korkos, an employee of the Israel Nature and National Parks Protection Authority, received an unusual night-time assignment Monday - to assist a brown sea turtle lay her eggs on the Carmel beach in Haifa. Korkos was summoned after NPA inspectors noticed signs of distress left by the turtle in the sand on the neglected section of beach between the Maxim restaurant and the Carmel Beach Towers apartment complex.

The two wide furrows left by her fins and signs of digging indicated that the turtle had tried to come up onto the beach during the night to lay her eggs, but without success. The turtle, which began her life on that very same beach, was apparently hoping to find a clean strip of sand like the one in which she hatched - but found only dirt, asphalt and a trash dumpster.

An inspector notified Dotan Rotem, the regional biologist, who relayed the information to Yaniv Levy, from the Israeli Sea Turtle Rescue Center. Rotem and Levy sent Korkos to the site to keep away curious passersby, who might try to help the turtle instead of letting nature take its course. Levy knew, however, the chances the turtle would actually lay her eggs were slim.

"With respect to natural egg-laying," says Levy, "green and brown sea turtles in Israel have been practically annihilated. Along the approximately 190 kilometers of Israel's coast, there are only about 8 green turtles and 40-50 brown ones. Every year about 100 dead turtles are washed up onto the beaches, mostly due to injuries caused by humans."

Still, Levy and Rotem hoped for a miracle - that the turtle would try again to find a site for her eggs. Their miracle did not happen. Korkos waited alone on the promenade and looked around him in despair. For a slow and defenseless turtle, approaching a place like this is not a simple task. First, she has to get past the row of fishing boats that cast their nets at night. If she manages to overcome the high waves that buffet the beach, she has to pass under the rope been stretched across

the beach due to the lifeguards' strike.

Then another surprise awaits her: a strip of dirty sand bordered by a concrete wall, an asphalt road and a graveled lot used for prostitution. For the brown turtle from Carmel Beach all this was apparently too much. Perhaps the concrete wall or the filth that made it impossible for her to start digging a nest made her quit. Or maybe she was frightened by the lights from the cars or the trance music and the laser lights emanating from the club on the ground floor of the nearby towers.

One thing clear is that after three days of fruitless attempts the turtle gave up and returned to the sea. There, according to Levy, she probably released her 80 eggs, which were destroyed immediately by the salty water. In order to understand the persistence of the turtle to return to this inhospitable beach, one has to understand the sea turtles' nesting mechanism.

Mysterious life cycle

A green or brown sea turtle starts its life as an egg, laid in a nest dug in the sand. After 60 days, the eggs hatch and the turtles rush to the sea, where they begin their life cycle, parts of which are still a mystery to researchers. Some time between the age of 10 and 30 years the green and brown turtles reach sexual maturity. Levy explains that only a small percentage of the turtles that hatch survive to this stage, at which time their nesting mechanism, imprinted in them while they grew inside their eggs, is aroused. They navigate to exactly the beach where they hatched - guided by the earth's magnetic pull (green turtles return to within one meter of the exact spot where they hatched; brown turtles "miss" by a few dozen meters). The goal is to procreate and then lay eggs. Brown turtles lay twice a year; green turtles once every three years.

The brown turtle that tried to come up onto the Carmel Beach last weekend hatched there some time between the 1940s and the 1980s, and therefore tried to return there. Judging by the desperate digging and crawling signs, she tried to get to the spot currently occupied by a giant metal dumpster.

Reports by NPA inspectors explain the hopelessness of the attempts by turtles to return to lay in the place dictated to them by nature.

"Since the middle of May I have received 29 reports by inspectors regarding attempts by turtles to lay their eggs on the beaches between Mikhmoret and Tel Aviv," says Levy. "Of these 29, only nine were successful."

Five years ago the Israeli Sea Turtle Rescue Center opened in Mikhmoret. The Mevo'ot Yam school donated the buildings; Mikhmoret's Maritime College provides volunteers. The project, started in 1993 at the initiative of biologist Zeev Kuller, has two main

goals: rescuing and treating injured turtles washed up on the beach; and the establishment of a core breeding group so that in the long term more sea turtles will return to Israel's beaches.

For 10 years now the inspectors have been collecting all the eggs from the turtle nests along the beaches. The eggs are concentrated in five nature reserves, in the hope that when the turtles reach sexual maturity they will return to the nature reserves' beaches, thus increasing their chances of survival. In addition, every year 15 turtles are kept to be raised in captivity - and when they lay eggs, these will be buried in artificial nests in the reserves.

"I will no longer be here to see hundreds of turtles returning to Israel's beaches," concludes Levy, but perhaps my grandchildren will."
