

Drea’s Rehabilitation Journey: A Story About a Turtle’s Resilience and Cross-border Collaboration

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ARCHELON, the Sea Turtle Protection Society in Greece, works since 1983 for the study and conservation of sea turtles. A significant part of its work is the rehabilitation of injured and sick turtles that are found stranded along the Greek coastline. The establishment of ARCHELON’s Sea Turtle Rescue Centre (STRC) in 1994 in Glyfada, Greece, in cooperation with the local Municipality, and its continuing operation since then, provides the opportunity to assess threats that sea turtles encounter in their habitats. Injured sea turtles are located and transported to the STRC through the nationwide Sea Turtle Rescue Network initiated by ARCHELON in 1992 (Nantsou & Antipas 1992), which continues to operate with the authorised involvement of the Coast Guard (Panagopoulos et al. 2003) and concerned citizens.

During these three decades of rehabilitation work at the STRC, the anthropogenic impact is accountable for almost 95% of all cases of known admission cause (Margaritoulis et al. 2026 under review), a finding that is consistent with the results of other studies in the Mediterranean (Tomás et al. 2008, Casale et al. 2010). The majority of the turtles are admitted to the STRC due to intentional injuries, which are inflicted predominantly on the head, including the eyes (Nestoridou et al. 2018). Despite the extremely challenging rehabilitation process of these cases, many of these turtles are eventually being released. What is even more extraordinary is that some of these animals have subsequently been observed alive or even nesting (Margaritoulis et al. 2026 under review). This shows that rehabilitated turtles,

particularly those that have recovered from a head injury, can carry on with their ecological roles. Furthermore, different causes of injury or health issues than the ones upon first admittance, have led turtles to be re-admitted to the STRC or to be re-captured somewhere else in the Mediterranean (Margaritoulis et al. 2026 under review). In cases of the latter, it has been proven that the collaboration between different organisations is very beneficial for the protection of sea turtles (Corsini-Foka et al. 2016, Margaritoulis et al. 2024).

Here, a remarkable rehabilitation case is mentioned in which a turtle that made a full recovery from a head injury at the STRC was found again in need of care after more than two years in Egypt due to a different cause of injury. The importance of bi-national cooperation for successful sea turtle rehabilitation is also highlighted here.

Drea in Greece

On 19 May 2022, an adult female loggerhead (*Caretta caretta*) sea turtle was admitted to the STRC, due to a deliberately inflicted head injury. She was found offshore, the previous day, floating on the surface of the sea and unable to dive in Sagiada, Thesprotia, NW Greece and the STRC was informed. In collaboration with the Coast Guard, the turtle was rescued and kept overnight at the Coast Guard station (Fig.1) in order to be transported to Athens the next day by bus.





Figure 1. Drea being kept overnight at the Coast Guard station, after her rescue on 18 May 2022.

Following a six-hour bus journey, the animal arrived at the STRC. She had quick reflexes and a good overall body score. However, the head trauma required immediate topical treatment (Fig. 2). Due to the severity of the wound, the administration of fluids, antibiotic and painkiller started right away. The turtle was placed later in low water in a tank (1,000 litres) where she remained mainly on the surface of the water as she was experiencing buoyancy issues. An X-ray later that week showed that she was clear from foreign body ingestion and lung infection. The turtle was given the name 'Drea' by the STRC volunteers, and she already started to eat on the second week after her arrival, so there was no need to force feed her. She was able to eat when food was offered to her with forceps, but she was still unable to dive and eat on her own. Over the course of three months, Drea was receiving topical wound care treatments, either two or three times per week, as well as the aforementioned medication. Every wound treatment always started with the debridement of the necrotic and infected areas, followed by the disinfection of the wound. The procedure was concluded with the use of topical honey dressings, since honey has vitamins and minerals, as well as antimicrobial, anti-inflammatory and healing properties. While Drea's head wound was healing (Fig. 2), the turtle continued to eat very well, and her buoyancy had improved greatly as she was observed resting on the bottom of tank several times. In the meantime, the administration of the antibiotic and fluids concluded after five

weeks and of the painkiller after six weeks since her arrival at the Rescue Centre. Due to the overall great progress of Drea, on 24 September she was moved into one of the big tanks (12,000 litres) to assess her ability to dive and forage in a deeper and larger space. In less than two weeks, the turtle was able to dive and rest on the bottom of the tank without any incline, while her head wound had healed completely (Fig. 2). She also continued to eat very well on her own in the big tank, while she interacted with great interest with the environmental enrichment programme that she was provided with daily, which included devices such as a feeding ball and PVC pipe formations (Kasimati et al. 2024). The turtle was kept for four weeks in the big tank for further observations until she was cleared for release. During Drea's preparation for release, data on her outcome measurements were collected and metal tags were placed, one on each front flipper. A microchip (Trovan[®]) was also inserted in her front left flipper. A few days later, on 24 October 2022, her release took place in Palaia Fokaia, Attica (about 33 km from the Rescue Centre), 158 days after her arrival at the STRC.

Drea in Egypt

Drea was spotted for the first time two years after her release. On 26 October 2024, ARCHELON received reports via email from citizens about a turtle that was found on a beach in Ghazala, El Dabaa, Egypt, bearing ARCHELON's metal tags. Citizens also sent photos (Fig. 3) and videos of her. She had a good overall body condition, while it was evident that she had an old carapace injury, probably due to a boat collision. Moreover, it was apparent from the videos that this wound on the lower part of her carapace was completely healed and it did not seem to cause her any issues while swimming and diving. She definitely acquired that wound after her release in 2022. Based on the reports and answers to ARCHELON's questions, citizens only spotted Drea the moment she was returning to the sea and no reason for her being on the beach was determined.





Figure 2. Stages of healing progress on Drea’s head wound. The head trauma upon arrival (left picture), after a few topical wound care treatments (middle picture) and completely healed before her release (right picture).



Figure 3. Pictures of Drea being found on a beach in Ghazala, El Dabaa, Egypt in on 26 October 2024.

After this incident, Drea was found for a second time about three months later, on 1 February 2025. This time she was stranded in a beach in Alexandria, Egypt, and she was unable to return to the sea. Several citizens reported this information to ARCHELON and from pictures and videos they sent in, Drea looked quite weak and debilitated (Fig. 4). She was eventually rescued by the port authorities of Alexandria where she remained for some days until she was transported to Port Said at the Ashtoum ElGamil Sea Turtle Rescue Centre in the Ashtoum ElGamil Protected Area of the Egyptian Ministry of Environment. The team over there started Drea’s rehabilitation under ARCHELON’s instructions and guidance.



Figure 4. Drea rescued by the Port Authorities in Alexandria, Egypt, on 1 February 2025.



Over the coming weeks, ARCHELON's knowledge on the many aspects of rehabilitation and care were passed on to the team at Ashtoum ElGamil Sea Turtle Rescue Centre, such as the provision of medication, feeding techniques, reducing stress factors. Drea's progress could be monitored closely by ARCHELON through constant communication, exchange of information, and provision of pictures and videos. As Drea's condition was not improving, there was a pressing need for diagnostic tests. By the end of February, the opportunity to take an X-ray arose and Drea was transported to the Animal Health Research Institute in Port Said, Egypt. The radiograph revealed that Drea had ingested a hook that was located in the upper part of the oesophagus (Fig. 5).



Figure 5. An X-ray of Drea that revealed the hook ingestion deep in her mouth.

Beginning of April 2025, the team at Ashtoum ElGamil Sea Turtle Rescue Centre and Prof. Dr Ihab Helal from the Animal Health Research Institute collaborated in removing successfully the hook (Fig. 6). Over the next period, ARCHELON continued to provide instructions and recommendations on all aspects of sea turtle care and welfare, while the team on the ground was caring for Drea. After the hook removal, she began to have a rapid recovery as she started to dive and feed on her own. In couple of weeks' time, she was cleared for release, and two additional metal tags were placed on her front flippers. One hundred and eleven

days after her arrival at the Ashtoum ElGamil Sea Turtle Rescue Centre, Drea was released on 23 May 2025 in the Ashtoum ElGamil Protected Area, (Fig. 7), commemorating the previous day's celebrations for the International Day for Biological Diversity.



Figure 6. The successful hook removal procedure on Drea, in April 2025.



Figure 7. The release of Drea in the Ashtoum ElGamil Protected Area, in May 2025.





Figure 8. A synopsis of Drea's journey over the course of three years.

Conclusion

The present case shows the successful results of rescuing a threatened migratory species through regional cooperation. Sharing knowledge and experience is catalytic in achieving this. Provision of advice and guidance, as in Drea's case, can ameliorate the rehabilitation procedures and welfare practices for sea turtles in the region. It is also noteworthy that this single individual was found injured a total of three times, in different locations, over the course of three years (Fig. 8) and this fact highlights just how common anthropogenic impacts on sea turtles are. Drea's story is a powerful reminder of the numerous threats sea turtles face, but also of how resilient this species is. In addition, Drea's journey is a testament to the importance of the cross-border cooperation, as well as the citizens' contributions to the international rehabilitation network and to scientific research. In order to monitor, rehabilitate and protect this migratory species effectively, international collaboration is indispensable.

Acknowledgements

We thank in Greece and Egypt, the citizens who reported Drea's sightings and the Coast Guard officers for their help. Grateful appreciation to the volunteers at the STRC, as well as to the personnel of the Ashtoum ElGamil Sea Turtle Rescue Centre for caring for Drea. Special thanks to Prof. Dr Ihab Helal at the Animal Health Research Institute for his assistance on the

successful removal of the hook. Lastly, we thank the reviewer and the editor for their valuable input.

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