

Second autopsy and update for the mass stranding of Cuvier's beaked whales in SE Crete, Greece.

From: ARION <arion@ARION.ORG.GR>;

Dear colleagues,

There is a tragedy with the mass strandings of Cuvier's beaked whales which occur in SE Crete, since the 1st of April. The female Cuvier's beaked whale (*Ziphius cavirostris* sp.) which was stranded dead on 3/4/2014 at Kastri, Heraklion Crete, Greece, was also pregnant! While necropsy started by the district veterinarian and under Dr. Anastasia's Komnenou guidance, a fetus of a female Cuvier's beaked whale, of 1,20 cm length, was revealed in front the soaking eyes of the Veterinarian. It was a tragic moment. Therefore, there was not one but two deaths which are recorded for this incident. (please see the pictures at www.facebook.com/ARION.org). During the last week, there is a lot of harm towards the Cuvier's beaked whales in Southern Crete with already four dead animals. In Greece, *Ziphius cavirostris*' population, behaviour, feeding areas, reproduction and lifespan are not completely studied. This is a parameter that we stress towards their immediate protection and conservation for these animals, Dr Aimilia Drougas, ARION's scientific coordinator, commended. The mother was still in gestation and did not make delivering her baby. This is a serious collateral loss and relevant authorities should implement immediate protection measures for the Cuvier's beaked whales' population. From relevant literature, Cuvier's Beaked Whale calves are usually, born at about 2.70 m in length (Heyning 2002; Mead 1984) and their physical maturity is reached at between 5.9 m and 6.13 m (Ross 2006). Also, their mating and calving season is reported to be all year round, as no seasonal pattern is evident. Dr. Aimilia Drougas said that the calving areas are not known for Greek waters as well as, the gestation period and calving interval for Cuvier's Beaked Whales are unknown, but in other beaked whales species the interval is expected to be one calf every few years, leading to a slow reproductive capacity.

ARION will evaluate all the findings after receiving the results from the histopathological analysis of the tissue and internal organ samples which have been gathered from the necropsies. The analysis is accomplished at the Veterinary Medicine of AUTH laboratories. For further details, on the laboratory results please contact Dr. Anastasia Komnenou at natakomn@vet.auth.gr. The tri-lateral war drill exercises of Greece, Israel and NATO's navy using sonars are expected to finish on the 10th of April, according to the Hellenic Navy's formal announcement. Although, the covered area has been moved 100 km southern of Crete, after the alert given by the focal point of ACCOBAMS in Greece, atypical strandings are still reported in this area. It is known that Ziphiidae ear drums are affected from the low frequency sonars by air embolism.

Given the seriousness of the situation and because we have historically had other similar mass strandings of Cuvier's beaked whales on coasts of western and southern Greece, the incident is being monitored by the Faculty of Veterinary Medicine of Aristotle University of Thessaloniki, the Hellenic Marine Research Centre, the Institute of Cetacean Research Pelagos and the Cetacean Rescue and Rehabilitation Research Center -ARION.

Local authorities and local residents and ARION's volunteers of Southern Crete, have been alerted to stand by and immediately notify the port authorities and the above organizations, in case other marine mammals strand on the coast of the broader region. For your information, we attach two pictures taken from the stranded dead mother and her fetus Cuvier's beaked whales who stranded dead at Kastri, Heraklion, SE Crete on 3/4/2014. You may find additional pictures at our social network, for the stranded animals. For ARION, Aimilia Drougas and Natasa Komnenou

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Dear all,

Following the many tens of e-mails that we received, we would like to express our gratitude for your interest and support and answer some of your questions with an update, now that more data are available. The atypical mass stranding spanned 2 days (1st and 2nd April) and involved five single stranding events involving 3, 2, 1, 1 and 1 individuals. According to the analysis conducted so far, a minimum of five (but analysis is on going) and a maximum of seven individuals were recorded (two single standing events concerned the same individual and the two individuals of another event cannot be identified).The distance between the western and eastern stranding locations for the strandings of the 1st April was 16.5 km in straight line. The single stranding of the 2nd of April occurred 4.1 km further west of the western stranding location of the 1st of April. (While writing this message and according to preliminary information from the local port-police authorities, three more reports of three different stranding events became available. They occurred the 3rd or 4th, the 5th and 6th April and all involved single animals. The two first concerned live animals re-floated and the last one (today 6th April) a dead animal still being on the beach. All of them occurred at a distance of less than 1 km between each other and took place in a location about 48 km west of the stranding event of the 2nd of April. These news are very important and indicate that the impact of the exercise may concern a very large sea area.)

Two of the stranded whales died (all others were re-floated and not seen so far) and necropsies were performed on both of them (the whale that was disposed according to our first message was recovered). The necropsies were conducted under the guidance of Dr. Anastasia Komnenou, Veterinary School of Aristotle University of Thessaloniki. Please address any questions regarding the necropsies and the histopathological findings directly to her. At least one of the photos of the stranding event is amazing and can greatly contribute to the conservation of beaked whales. Therefore, we thought that sharing it with the entire cetological community can help our common goal to protect the beaked whales from navy sonar and anthropogenic sound in general. Please feel free to upload and distribute the photo as attached to raise public awareness or for educational purposes (you have no right of use for commercial purposes).

All best,

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