

## Conservation of Atlantic humpback dolphin (*Souza teuszii* Kükenenthal, 1892) in South Cameroon (West-Africa)."

By  
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### Summary

The present project is a follow-up to the 2011 CMS/UNEP project that led to the re-discovery of the Cameroon dolphin (*Souza teuszii*) in its type range state, after a complete absence of records in Cameroon for over a century. In period, a total of 156.41 km (1,029 min) of nearshore waters of southern Cameroon were visually surveyed using an outboard-powered canoe and 102.59 km (2,443 min) on foot, with 215 min of stationary observations. In 2016, another 109.1 km (1058 min) were surveyed with canoe and 74.3 km (1,966 min) on foot in the same Campo-Londji study area. Surprisingly, despite the very intensive search effort, no live dolphins or other aquatic mammals were encountered. In view of the intensive re-sampling, we suggest it is highly unlikely that any nearshore occurring community of Cameroon dolphins or common bottlenose dolphins (*Tursiops truncatus*) could have escaped our attention, and we believe it safe to conclude that none were present during the monitoring periods in 2016.

This reinforces the earlier suspicion that the abundance of *S. teuszii* in Cameroon may be alarmingly low or, highly unlikely, that perhaps seasonal south-north movements occur. The probability of any offshore occurrence of *S. teuszii* is negligible. The fact that no live cetaceans were seen, while new evidence pointed to four freshly dead cetaceans (2 bottlenose dolphins, 1 unidentified delphinid; 1 sperm whale) used for human consumption, raises the question to what extent bycatch and, potentially, hunting of dolphins, may be a direct cause for the low abundance of Cameroon dolphins, coastal bottlenose dolphins and other inshore occurring cetacean species.

New evidence of sperm whale (*Physeter macrocephalus*) presence is presented and includes skeletal remains found near Londji in February 2016 (but stranded ca. 2010). A freshly dead sperm whale stranded at Debunsha in the Southwest Region in February 2016. Reportedly the carcass was butchered for marine bushmeat. Sperm whale strandings seem to occur fairly frequently in Cameroon. These are at least the fourth and fifth specimen records in Cameroon. Causes of death are unclear, except for one net-entangled whale, but more anthropogenic mortality, and in particular vessel collisions, are suspected. Virtually nothing is known on stock identity, regional distribution, natural history and abundance.

In November 2015, a calf humpback whale (*Megaptera novaeangliae*) stranded at Bolondo within the coastal boundaries of the Douala-Edéa Wildlife Reserve. The carcass washed ashore in advanced decomposition and was buried. This is the second calf of this species recorded in Cameroon during months of the Southern Hemisphere breeding period (August-November), leading us to propose the hypothesis these are humpback whales belonging to an unidentified population of the Southern Hemisphere which enter the shallow waters of Cameroon's coast for calving and breeding during the austral winter months, as is the case in neighbouring nations.

We trialed rocky outcrops near Londji as vantage points for stationary land-based observations. An exploratory effort should be made to evaluate their suitability to monitor humpback whales, Cameroon dolphins, bottlenose dolphins and any other nearshore occurring cetacean species. Information on sea turtles was collected opportunistically which demonstrated that the use of turtle meat and eggs as marine bushmeat, continues unabated.

Among recommendations stand out: (i) continue and expand dedicated and opportunistic surveying for Cameroon dolphins in coastal waters; (ii) promote the organisation of a bi-national marine protected area between Cameroon and Equatorial Guinea; (iii) promote the installment of a national aquatic mammal reference collection to serve both scientific and educational purposes;

(iv) regular strandings of sperm whales in Cameroon show that the mortality rate, several suspected due to anthropogenic origin, is significant. Data on distribution, stock structure and abundance of sperm whales in the Gulf of Guinea need to be collected. Research may start with a region-wide review of stranding data and specimens; (v) the involvement of university students in aquatic mammal research and field work, presently minimal, should be promoted, as done during the current project; (vi) considering the low encounter rate of cetaceans in Cameroon's nearshore waters, it may be cost-effective to apply the citizen-science concept by enlisting a number of selected small-scale fishermen as incidental data collectors following training (simplified protocol) and after providing basic cameras or smartphones.

The lack of sightings emphasizes again the low abundance of Cameroon dolphins in southern Cameroon waters, and in particular in February-April period. Combined with the frequent consumption of marine bushmeat in Cameroon, and the potential for undocumented by-catches, increased concern is expressed about the species' long-term survival.