

released by CREA, and were tracked by VHF telemetry from late July to the end of November 2011. The release area is within the Pacaya Samiria National Reserve (PSNR) and includes El Dorado Lake and adjacent water sources. Post release tracking allowed evaluation of the manatees' adaptation into free-living conditions. Behavior was recorded following *ad libitum* sampling methods, and daytime habitat use was determined considering available habitats (floating vegetation, open water, marginal vegetation) and manatees' locations recorded in each habitat. We obtained 140 locations during 80 search hours (approx.). Females showed greater residence time than males, which migrated out of the lake. According to usage vs. availability analysis, females selectively used the habitats in the basin, preferring floating vegetation ($\bar{t}_i = -1,667$) followed by open water ($\bar{t}_i = 0,667$) and lastly marginal vegetation ($\bar{t}_i = 1$). No relationship between sighting hour and sighting location (habitat type) was found ($X^2 = 3,813$, $P = 0,432$). Most idling behaviors were registered in areas with floating macrophytes and open water was mainly used for traveling. Environmental variation was recorded during the study period - water surface temperature ($F = 6,31$; $p = 0,003$); pH ($F = 31,89$; $p = 0,000$) - but environmental variables associated with manatee locations were not associated with occupancy. The data recorded (movements, habitat use) corresponded to previous reports for the species in natural habitats, and suggests that these rescued manatees responded well to free-living conditions after release. We recommend carrying on with the efforts of rescue, rehabilitation and release of manatees, as this work strengthens the strategy for their conservation.

OCCURRENCE OF MANATEES IN AREAS OF HIGH HUMAN IMPACT IN THE SURROUNDINGS OF BELÉM, AMAZON ESTUARY. Leão Miranda, Tayna^{1*}; Ramos, Iara¹; Melo Alves Dos Santos, Gabriel¹; Lúcia Figueiredo Rodrigues, Angélica¹; Luisa Da Silva, Maria¹ & Sena, Leonardo¹. ¹BioMA/UFPa (Biologia e Conservação de Mamíferos Aquáticos da Amazônia/Universidade Federal do Pará). tayleaomi@gmail.com*

The Amazonian manatee (*Trichechus inunguis*) is widely distributed in the Amazon Basin, where local populations may use it as an alternative source of food. This species is considered vulnerable by the IUCN, and there are records of the hunting of manatees in the urban zone of Belém, the capital of the Pará State, Brazil. Thus, anthropogenic factors such as habitat degradation, overpopulation, and hunting pressure might be the main threats to Amazonian manatees close to this city. Our aim was to investigate the occurrence and the human perception of *T. inunguis* in Belém and surrounding areas. In order to gather ethno-ecological information we used semi-structured interviews with 21 people, including fishermen and other residents that are or were involved with fishery activities, from Icoaraci, Cotijuba, Outeiro (Belém), Arapiranga and Jutuba (Barcarena). We visited possible foraging refuges and characterized the environment where manatees could possibly occur, and collected vestiges of feeding on plants that were reported to have been recently visited by manatees. All interviewees confirmed the sighting of manatees predominantly black in color, and 23% of them also reported a ventral spot varying from white to yellow, which is characteristic of the Amazonian manatee. Concerning the ecology, respondents stated the animals prefer to feed in calm waters during the high tide, and are seen in higher frequency during the rainy season. Among the areas studied, Icoaraci, which has a prominent human impact, was the highest in frequency of reported sightings; in total, there were 15 sightings from 2013 to 2014, 66% of them from November to April (rainy season). Cotijuba showed the lowest frequency of reported sightings, restricted from February to March, reported by the interviewees as the reproduction season. The areas studied have common features, with a relatively high plant diversity, such as *Montrichardia linifera* (Schott, 1854), *Eichhornia crassipes* (Benoit Mure, 1879), and some grasses, e.g. *Eleocharis minima* (Pedersen & F. Mereles, 1837), which are described in the literature as part of the manatee diet. The areas of study are composed of an estuary with several small rivers and resting water areas, potential habitats for manatees. Boat traffic is intense, and even ferries and cargo ships are observed in those areas, factors which are known to disturb aquatic fauna, including manatees. Our results will shed light on the conservation of Amazonian manatees in highly impacted urban areas and will contribute to understanding the ecology of *Trichechus* spp. in the Amazonian estuary.

STRANDING OF A WEST INDIAN MANATEE (*Trichechus manatus*) ON THE NORTH COAST OF BRAZIL. Lima, Danielle^{1*}; Borges, João^{1,2}; Coutinho, Iranildo³; Guerra-Neto, Guilherme¹; Moreno, Eduardo¹; Sabioni, Luiz¹; Vergara-Parente, Jociery^{1,2,4} & Marmontel, Miriam¹. ¹Instituto de Desenvolvimento Sustentável Mamirauá, ²Fundação Mamíferos Aquáticos; ⁴Instituto de Tecnologia e Pesquisa ³Instituto Chico Mendes de Conservação da Biodiversidade (ICMBIO) - limadanielle@terra.com.br*

The stranding of West Indian manatee calves is one of the most serious threats to the species in Brazil. In the northeast coast, this factor is responsible for 25% of the mortality records and relates especially to the degradation of mangroves, considered optimal habitat for reproduction and parental care. However, the stranding of manatees in northern

Brazil, where the vegetation is abundant, is rare and the causal factors are poorly described scientifically. Considering the importance of the topic and the lack of information, this study aimed to report the stranding and the successful rescue of a baby manatee in the state of Amapá, in the extreme north of the country. In September 2013, local residents and firefighters of ESEC Maracá-Jipioca rescued a manatee calf (male, CT: 1 m, P: 19 kg) found stranded alive on the river Amapazinho, in the Coastal Estuarine Sector of Amapá State. In compliance with the guidelines of the Stranding Network and Information of Aquatic Mammals of Brazil, active institutions in the region provided technical input to ensure the survival and physical integrity of the animal, thus promoting the success of the rescue. Since then, the calf has been kept in the center of wild animals (Cetas / IBAMA) of the federal government, under multi-institutional technical advice. In order to obtain information about possible influencing factors of this stranding, because the area is in one of the most conserved and least populated stretches of the Brazilian coast, locals and fishermen in the region (n = 37) were interviewed in an opportunistic way between September 2013 and July 2014. From the reports and environmental analysis, it was considered unlikely that (1) there was a deliberate killing of the adult female, as this practice has not been recorded in the area for six years; (2) there was an absence of habitats conducive to calving, given the abundance of pristine areas in Amapá coast. The region is subject to macro tides (9.7 m) and is under the influence of a tidal bore (“pororoca” - waves up to 5 m and speeds between 10 and 18 km/h), which suggests the possibility the stranding was caused by such natural factors. All responders related this stranding to a spring tide (“maré de sizígia”), known as tide-living, which took place in the days before the event. Possibly the amplitude of the waves and the speed of the tide caused the calf to strand, even though the region can be considered fully in terms of favorable habitat for manatee reproduction, as well as parental care.

PEDIGREE MONITORING OF MANATEES IN CAPTIVITY AT CMA/ICMBIO IN BRAZIL PROVIDE EVIDENCE OF INBREEDING. Luna, Fabia^{1*}; Nourisson, Coralie²; Hunter, Margaret^{3,4}; Davis, Michelle⁵; Attademo, Fernanda¹; Bonde, Robert^{3,4}; De Oliveira Passavante, José Zanon⁶.
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In captivity, it is well known that manatees breed and reproduce relatively easily. Calves are rescued and individuals transferred from irregular captive conditions to the CMA/ICMBio, where they are kept together. Since 1996, breeding occurred with no captive breeding reproduction plans or genetic information to help select the appropriate breeding pairs. This may have resulted in inbreeding. For properly managed captive programs, maintaining the genetic diversity and limiting inbreeding will increase the likelihood that animals will adapt to new environments and reproductively viable. By doing this it will ensure that rehabilitated manatees are fit for release into the wild. Captive-born manatees at CMA/ICMBio are part of an ex-situ population that is exhibited for public education. As there are more manatees than is necessary for education purposes, some of them were previously released in areas to help encourage use of travel corridors and provide admixture between neighboring populations. For this study twenty manatees were analyzed with 27 microsatellites markers and pedigrees were reconstructed using ML-RELATE, COANCESTRY, and CERVUS. Almost all the manatees in captivity at CMA/ICMBio indicated some level of relatedness among them and inbreeding was identified. Some of them had high levels, as the number of founders at CMA/ICMBio has been small and reproduction between related offspring was allowed to occur. The presence of a dominant breeding male, who fathered several calves, resulted in half sibling relationships and greatly increased the inter-relatedness in the captive population. Only one case of reproduction between parent and offspring was detected and resulted in a stillborn, which may have been due to the high level of inbreeding. Nevertheless, some inconsistencies were observed, such as two calves not assigned as offspring to their known mothers. To obtain more confidence, more markers are necessary. The results of this study permitted managers to make decisions about the future of the captive manatees in Brazil. The actual captive population is too large to be managed properly and it is recommended that appropriate manatees be released, while others are transferred to new facilities. It is not recommended to release several siblings in the same areas to avoid the potential for inbreeding. To avoid captive manatee inbreeding, artificial hybridization (one captive is a known hybrid), and overpopulation in captivity, it is necessary to forbid reproduction in captivity, thereby separating males and females into different facilities in order to maintain a healthy captive population and prevent accidental breeding in the future.

MICROBIOTA BY YEAST IN NATURAL CAVITIES OF CAPTIVE SIRENIANS IN BRAZIL: RELEVANCE FOR ANIMAL AND ENVIRONMENTAL HEALTH. Luz Carvalho, Vitor^{1*}; De Souza Collares Maia Castelo-Branco De Souza, Débora²; Nogueira Brilhante, Raimunda Sâmia²; Da Costa Sidrim, José Júlio²; Lazzarini, Stella Maris³; Löffler Niemeyer Attademo, Fernanda⁴; Oliveira De