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HOLOCENE MEGAFaUNA IN BRAZIL: NEW RECORDS IN ITAPIPOCA (CEARÁ) AND MIRANDA (MATO GROSSO DO SUL)

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Quaternary megafauna are normally associated to the Pleistocene based on several geochronological methods (C14, ESR, among others). In the last years, a small amount of specimens have been dated from less than 11,700 years, revealing the survival of some megafaunal species (e.g. *Toxodon platensis*) until the Holocene. Furthermore, a bulk amount of paleoecological analyses have revealed ecological patterns for the Quaternary megamammal species. This work reports the survival of several megafaunal species until the Holocene in Itapipoca (Ceará State) and Miranda (Mato Grosso do Sul State), and provides new paleoecological data for this time interval, based on new ¹⁴C datings and $\delta^{13}\text{C}$ analysis, respectively. Seven specimens from a natural tank deposit at Jirau Paleontological Site (Itapipoca) and one from a fluvial deposit at Miranda were analyzed. The values obtained are the following: Itapipoca - *Eremotherium laurillardi* (PDR-01: age= 6,208-7,714 years cal BP and $\delta^{13}\text{C}$ = -11,94; PDR-02: age= 7,867-8,536 years cal BP and $\delta^{13}\text{C}$ = -11,46), *Smilodon populator* (PDR-03: age= 8,189-9,079 years cal BP and $\delta^{13}\text{C}$ = -11,44), *Toxodon platensis* (PDR-05: age= 8,049-9,270 years cal BP and $\delta^{13}\text{C}$ = -13,61), *Xenorhinotherium bahiense* (PDR-06: age= 3,493-4,217 years cal BP and $\delta^{13}\text{C}$ = -14,27), *Notiomastodon platensis* (PDR-07: age= 7,836-10,159 years cal BP and $\delta^{13}\text{C}$ = -9,39) and *Palaeolama major* (PDR-09: age= 3,353-4,231 years cal BP and $\delta^{13}\text{C}$ = -16,93); Miranda - *Eremotherium laurillardi* (PDR-11: age= 6,120-7,427 years cal BP and $\delta^{13}\text{C}$ = -9,36). Results obtained from $\delta^{13}\text{C}$ analysis indicate browser and mixed diets with large amount of C₃ plants. The value obtained for the carnivore *S. populator* suggests a diet composed by C₃ plants-feeder preys. Regarding the paleoenvironments, suggests a vegetational mosaic in the areas of Itapipoca and Miranda, with coexistence of forests and grasslands. Our ages are the youngest known in Brazilian Intertropical Region, and it is noteworthy that ages obtained for *X. bahiense* and *P. major* are the youngest ones known for megafauna in Americas. Finally, our data reinforce the Broken Zig-Zag hypothesis for

explaining the megafaunal extinction. In the case of Itaipoca, our results support that the "Megafauna Valley" may have been among the last redoubts of the megafauna in Americas. [FAPERJ: E-26/202.047/2020; E-26/200.828/2021; CNPq: 303596/2016-3]