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Chelodina mccordi is a small freshwater turtle native to the islands of Roti and Timor in Indonesia. They are considered critically endangered according to the IUCN Red List due primarily to habitat loss and overcollection. Current conservation efforts aim to breed and release them into existing native populations to improve genetic pool quality and heterozygosity, although captive populations are extremely limited. Our study aims to determine the level of relatedness between six *C. mccordi* individuals held at the Audubon Zoo in New Orleans. Genetic markers indicate which individuals are siblings; this information will allow the Zoo to efficiently manage turtle breeding pairs to yield desired genetic diversity. DNA was extracted from each sample (n=6) and the nuclear marker R35x1 (RNA fingerprint protein 35, exon 1) was amplified. PCR product was sequenced using Sanger sequencing and 1,060 base pairs were recovered after assembly, multiple sequence alignment, and trimming. Across the entire alignment, individuals differed at only 4 sites with no clear pattern of relatedness. Based on these results, there is not enough variation in the exon region that was sequenced to confidently confirm the sibling status. Future directions of this project will involve sequencing a more variable intron region or using a Restriction Fragment Length Polymorphism (RFLP) method, if necessary. This research was carried out with financial support from the West Liberty University Biology and Zoo Science department.

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