

马来穿山甲救护、驯养以及繁育关键技术研究

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摘要:【目的】马来穿山甲 (*Manis javanica*) 是全球濒危物种之一, 其数量因非法贸易和栖息地破坏急剧减少。保护和恢复马来穿山甲的种群势在必行。本研究致力于深入探索马来穿山甲的救护、驯养以及繁育的关键技术, 为其保护提供科学依据和技术支持。【方法】本研究围绕救护、驯养和繁育等三个关键领域进行探讨。首先, 针对接收罚没非法走私的马来穿山甲, 优化进场隔离、建档、分类、圈舍、诱食、灌喂以及治疗等一套救护技术流程。其次, 以在广西林科院穿山甲救护繁育基地自然交配繁殖出生的幼仔为研究对象, 对幼仔 1 ~ 140 日龄的生长发育数据进行收集和分析。最后, 通过长期的、大规模的 360 度红外监控录像, 统计及分析该物种的重要繁殖学参数。【结果】创新出一套人工诱食、灌喂、疾病诊疗等救护技术流程, 形成有效的救护喂养方法, 救护成活率显著提高, 存活时间明显延长, 解决了罚没的马来穿山甲救护成活率低、难以维持饲养的技术难题; 依据幼崽纯母乳喂养体重峰值出现在 130 天左右, 确定适宜开始诱食时间 (日龄 90-130 天), 适宜断奶期 (日龄 130-160 天); 攻克了马来穿山甲繁育技术, 突破性繁育出子三代, 建成可自我维持繁育的马来穿山甲人工圈养种群; 首次系统性揭示马来穿山甲的繁殖生物学特性, 明确马来穿山甲的交配行为、交配模式以及成熟周期、发情周期、产后发情规律、怀孕期、生产周期、胎产数、出生性比、泌乳期、哺乳期、性头尾长度成熟与体重成熟年龄等重要繁殖关键参数, 深化了对马来穿山甲繁殖生物学的认知。【结论】本研究系统地解决了马来穿山甲在救护、驯养和繁育过程中的多个关键技术问题, 提出了一套综合性的保护策略。这些技术和方法不仅有效提高了马来穿山甲在人工环境中的存活和繁殖成功率, 还为野外种群的恢复提供了重要参考。未来的研究应继续深化这些技术的应用, 进一步提高繁育成功率和幼仔成活率, 为马来穿山甲的全面保护和种群恢复奠定坚实基础。

关键词: 马来穿山甲; 救护技术; 繁育关键参数

Study on key techniques of rescue, domestication, and breeding of Malayan pangolins

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Abstract: 【Objective】The Malayan pangolin (*Manis javanica*) is one of the most endangered species worldwide, with populations decimated by illegal trade and habitat destruction. Protecting and restoring Malayan pangolin populations is imperative. This study aims to explore key rescue, domestication, and breeding technologies for Malayan pangolins, providing scientific basis and technical support for their conservation. 【Method】This study focused on three key areas: rescue, domestication, and reproduction. First, a set of rescue techniques, including entrance isolation, documentation, classification, enclosure, enticement, tube feeding, and treatment, was optimized for confiscated illegal smuggled Malayan pangolins. Second, growth and development data of offspring from natural mating and reproduction in the Guangxi Forestry Research Institute Pangolin Rescue and Reproduction Base were collected and analyzed. Finally, extensive monitoring over a long period and large scale was used to statistically analyze important reproductive parameters of this species. 【Result】This study innovated a set of rescue technical processes, including artificial induced feeding, feeding, disease diagnosis and treatment, and formed an effective

rescue feeding method. The survival rate and duration of rescued Malayan pangolins significantly improved, solving technical problems of low survival rate. Based on peak pup weight after exclusive breastfeeding at around 130 days, appropriate feeding induction (90-130 days) and weaning periods (130-160 days) were determined. Malayan pangolin breeding technology was conquered, with three generational offspring bred in a breakthrough, establishing a self-sustaining captive population. For the first time, systematic revelation of reproductive biological characteristics and clarification of mating behavior, pattern, and important reproductive parameters such as maturity cycle, estrus cycle, postpartum estrus rule, pregnancy period, birth cycle, litter size, reproductive ratio, lactation period, sexual maturity age by head and tail length, and weight maturity age in Malayan pangolin occurred. This deepens understanding of Malayan pangolin reproductive biology.【Conclusion】This study systematically addressed numerous key technical issues related to the rescue, captivity, and breeding of the Malayan pangolin. A comprehensive protection strategy was proposed, which not only effectively improved the survival and reproductive success rate of the Malayan pangolin in artificial environments, but also provided crucial reference for the recovery of wild populations. Future research should continue to deepen the application of these technologies and methods, further enhancing the breeding success rate and neonate survival rate, laying a solid foundation for the comprehensive protection and population recovery of the Malayan pangolin.

Key words: Malayan pangolin; rescue technique; key parameters of breeding