RESUMO SIMPLES - OUTRAS ÁREAS TEMÁTICAS

INVESTIGATION AND MORPHOLOGICAL AND MOLECULAR CHARACTERIZATION OF PARASITES FROM SNAKE'S RESPIRATORY TRACT UNDER IN SITU AND EX SITU CONDITIONS IN BRAZIL

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Wild snakes received by wildlife triage and rehabilitation centers in Brazil frequently harbor respiratory endoparasites capable of compromising their well-being, hindering conservation efforts, and posing risks to human and animal health. The increasing illegal removal of animals from the wild, coupled with close contact with domestic species and humans, reinforces the need for updated and systematic parasitological investigations. This study aims to research, diagnose, and identify endoparasites of the respiratory tract of snakes from zoobotanical parks, scientific and commercial breeding facilities, wildlife sanctuaries, and triage centers (CETAS and CRAS) in the Southeast region of Brazil, including individuals originating from both in situ and ex situ environments. Collection will be performed during clinical evaluation and bronchoscopy of live animals, with secure physical restraint and appropriate

sedation protocols. When present, endoparasites will be removed using basket forceps and stored in RNA preservative solution for laboratory processing. Morphological identification will be conducted using specific dichotomous keys for arthropods, possibly including potassium hydroxide clarification for better visualization of diagnostic structures. Molecular analyses will involve DNA extraction using the Chelex and salting-out methods, followed by PCR amplification of the mitochondrial cox1 gene using universal primers applicable to pentastomid detection. The amplified products will be examined by electrophoresis, purified, sequenced using the Sanger method, and phylogenetically analyzed for taxonomic confirmation. Positive and negative controls will be used in all reactions to ensure analytical accuracy. When pertinent, morphometric variables of the parasites will be subjected to statistical analysis using ANOVA and Tukey's test. All procedures will follow the guidelines of CEUA/UFRRJ and ICMBio/Sisbio for the use of wild animals. The expected outcome is the expansion of knowledge about the diversity, prevalence, and abundance of respiratory endoparasites in snakes, the detection of unusual or previously undescribed taxa, and the elucidation of possible transmission routes related to feeding management or environmental conditions. The data obtained will provide support for sanitary management protocols, prevention strategies, and improvement of conservation practices, as well as strengthen the understanding of One Health aspects involving reptiles, the environment, and humans. The study will also contribute to academic training, student development, and scientific production in specialized events and journals.

Palavras-chave: endoparasites; arthropods; reptiles; taxonomy; pcr.