

Wallaya Phongphaew 2010: Differentiation of *Varanus* spp. in Thailand by Polymerase Chain Reaction-Restriction Fragment Length Polymorphism (PCR-RFLP). Master of Science (Veterinary Pathology), Major Field: Veterinary Pathology, Department of Pathology. Thesis Advisor: Associate Professor Theerapol Sirinarumitr, Ph.D. 70 pages.

The twenty two samples of monitor from Thailand were differentiated by using Polymerase Chain Reaction-Restriction Fragment Length Polymorphism (PCR-RFLP) technique, this study worked based on cytochrome b gene and 12S rRNA gene. The PCR products were approximate 376 and 450 bp respectively. The cytochrome b gene products were treated with BstXI, Bani, HpaII and EcoRI , the 12S rRNA gene products were treated with ApaI, BamHI and HaeIII to observe the different patterns, which specific to each monitor. The results from both genes analysis showed the different patterns among species, but the variations between subspecies were observed in cytochrome b gene only. These results suggested that the PCR-RFLP based on the cytochrome b gene could be used to differentiate the species and subspecies of monitors in Thailand, while the PCR-RFLP based on the 12S rRNA gene could not be differentiate at subspecies levels.

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Student's signature

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Thesis Advisor's signature