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## MYCOBACTERIAL INFECTIONS IN REPTILES

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### ABSTRACT

From 3,880 reptile accessions, 28 mycobacterial positive reptiles were identified (0.7%). This is similar to the published incidence (0.1 to 0.5%)<sup>1</sup> and supports mycobacterium as a sporadic infection in reptiles.

Snakes (n=19) comprised the majority of cases (*Gonyosoma frenatum*, garter snake, *Thamnophis* species, kingsnake, *Lampropeltis* species, tentacled, *Erpeton tentaculatum*, Haitian tree boa, *Epicrates gracilis*, emerald tree boa, *Corallus caninus*, horned adder, *Bitis caudalis*, rattlesnakes, *Crotalus scutulatus* and *C. atrox*), with four chelonians (Fly river turtle, *Carettochelys insculpta*, Blanding's turtle, *Emydoidea blandingii*, red bellied turtle, *Pseudemys rubriventris*, and Russian tortoise, *Testudo horsfieldii*) and five lizards (bearded dragons, *Pogona vitticeps*, veiled chameleon, *Chamaeleo calytratus*, and common green iguanas, *Iguana iguana*).

Three of the four chelonians had disseminated disease. One presented with a granuloma on the tongue. *Mycobacterium marinum* was isolated from the Fly river turtle. *Mycobacterium haemophilum* was isolated from the Russian tortoise. Two of the lizards (bearded dragon and iguana) presented with oropharyngeal lesions. The other three lizards had disseminated disease. *Mycobacterium chelonae* was identified in the veiled chameleon and an iguana. One bearded dragon had *M. marinum* and one iguana, *Mycobacterium kumamotoense*. All snakes had disseminated disease. *Mycobacterium kansasii* was the isolate from *Gonyosoma frenatum* and *M. chelonae* was present in the Mojave and Western rattlesnakes.

The most commonly reported mycobacterium isolates from reptiles are *M. marinum*, *M. chelonae*, *M. haemophilum*, and *M. kansasii*.<sup>1,2</sup> We identified four isolates of *M. chelonae*, two *M. marinum*, and one each *M. kumamotoense*, *M. kansasii*, and *M. haemophilum*.

### LITERATURE CITED

1. Jacobson ER. 2007. Bacterial Disease of Reptiles. In Jacobson ER (Ed): Infectious Diseases and Pathology of Reptiles: Color Atlas and Text. CRC Press, Boca Raton, FL:468-469.
2. Soldati G, Lu ZH, Vaughan L, Polkinghorne A, Zimmermann DR, Huder JB, Pospischil A. 2004. Detection of mycobacteria and chlamydiae in granulomatous inflammation of reptiles: a retrospective study. Vet Pathol, 41(4):388-397.