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A SECOND RECORD OF A UROGENITAL SINUS UROLITH IN THE SAND TIGER SHARK (*Odontaspis taurus*)

The renal physiology of sharks is poorly known (Shuttleworth 1988). Uroliths are known from a variety of vertebrates (Walsh and Murru 1987). Only one incidence, a 9 g urolith, has been recorded in sharks, that being in a sand tiger held captive at Sea World, Florida for 3.5 years (Walsh and Murru 1987). I now report a second occurrence of a urolith from a healthy 2.3 m, 114.75 kg male sand tiger caught 16 December 1989 due east of Cape Lookout, North Carolina at Lat. 34°43'N, Long. 75°46'W, water depth 65.7 m. No food was in the stomach. Tissues surrounding the urolith were not abraded. Nothing can be said regarding whether the shark experienced any impaired renal function.

A large urolith of 44.4 g was discovered while cleaning the urogenital sinus of the sand tiger (Fig. 1). Dimensions of the concretion were: longest length 61.5 mm, next longest length 60.2 mm, maximum width 32.9 mm, and depth 29.0 mm. The whitish distal outer knobs measured 12.1 mm (left) and 10.8 mm (right) respectively. The white dorsal apron measured 21.0×17.1 mm. The groove separating the two whitish knobs was 26.0 mm long. The urolith was positioned horizontally in the urogenital sinus with the small end facing forward.

Dawson (1964, 1966, 1971) and Dawson and Heal (1971) as well as the worldwide literature have not reported large uroliths in any wild shark. Walsh and Murru (1987) found their captive sand tiger urolith was composed of 80% cryptocrystalline to fine orthorhombic crystals of magnesium ammonium phosphate hexahydrate (Struvite) and 15% was a random mixing of micro-crystalline calcium phosphate. No attempt was made to section or alter the cream colored urolith

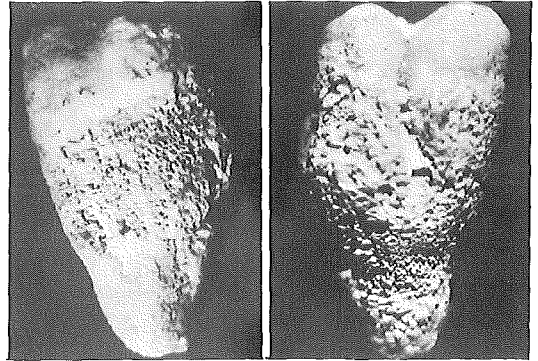


Figure 1. Urolith from urogenital sinus of sand tiger shark.

as the fisherman who discovered it desired its return. It is assumed its composition was similar to that noted by Walsh and Murru (1987). Occurrence of the urolith documents that sharks, although known for their resistance to disease and bodily dysfunction, can occasionally fall victim to ailments that could affect their well-being.

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