centrations of this nitrogenous compound. Teleosts, on the other hand, have very low plasma and tissue concentrations of TMAO. In a teleost (the salmon) Benoit (1945) has shown that TMAO is exogenous in origin: TMAO was found in tissue only after food containing TMAO was fed. No data are available for the origin of TMAO in elasmobranchs.

A preliminary experiment was done to determine the constancy of the TMAO in the dogfish plasma. Five freshly caught dogfish in good condition were placed in a live car. Small blood samples were drawn at weekly intervals. It is presumed that no food was available to these fish in captivity. Of the 5 dogfish, one survived 14 days; one, 28 days; two, 34 days; and one was still alive at the end of the summer, 41 days after capture. All fish showed gross evidence of weight loss, but no accurate measurements of weight changes were made. There was no marked change in the plasma (TMAO) during captivity. The surviving fish maintained a mean plasma concentration of 76 ± 4 μMol/ml. This compares well with a mean plasma (TMAO) of 74 ± 2 μMol/ml. in 23 freshly caught dogfish.

It should be noted that if the kidney is the only route of TMAO excretion in the dogfish, and assuming a maximum loss of 10% of the total amount of TMAO filtered, a maximum of 20-25% of the estimated total TMAO in the dogfish could have been lost. The muscle of dogfish has been reported (Benoit) to contain 140 μMol. TMAO/Gm. and thus might serve as a reservoir for TMAO lost from the plasma during this period of starvation.

This study was carried out in a laboratory maintained by the New York University College of Medicine.

The Effect of Phlorozin on the Oxidative Metabolism of Certain Fish Kidneys

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Studies have previously shown that phlorizin profoundly depresses the oxidative metabolism of rat and guinea pig homogenates. This compound, however, did not effect oxidative metabolism of kidney homogenates of flounder, goosefish and dogfish.

The Secretion of Hypertonic Salt Solutions In Marine Birds

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It has often been suggested that marine birds must drink sea water in order to cover their normal needs for water. This problem was investigated, using young cormorants as experimental animals.