

Linking the coelacanth (*Latimeria chalumnae*) to its oceanographic environment

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Little is known about the coelacanth (*Latimeria chalumnae*) habitat in the South West Indian Ocean. This is especially true in terms of the oceanography, which has received far less attention than oceans in many other parts of the world. Some observations in the vicinity of inhabited caves on the slopes of Grand Comoro have been published, and more recently a description of the ocean environment off the Maputaland shelf (Sodwana canyons) is becoming available. But for the rest of the discovery sites nothing is known. This study attempts to provide the first overview of the oceanographic habitat of the coelacanth in the West Indian Ocean (WIO) and is based on existing oceanographic data. A review of the physiology of the coelacanth suggests that shelf structure, temperature, dissolved oxygen and currents are probably the most relevant abiotic parameters that influence the behaviour and distribution of this animal. A search for existing oceanographic data yielded considerable XBT data but very little dissolved oxygen, salinity and nutrient data. The temperature data was compiled into vertical and horizontal sections, which were then matched to the shelf regions of the WIO. From the known locations of discoveries and the limited published knowledge, we extrapolate the first description (and possibly extent) of the temperature regime of the coelacanth habitat.