

Investigating Great White Shark-Siphonostomatoid associations using digital imagery.

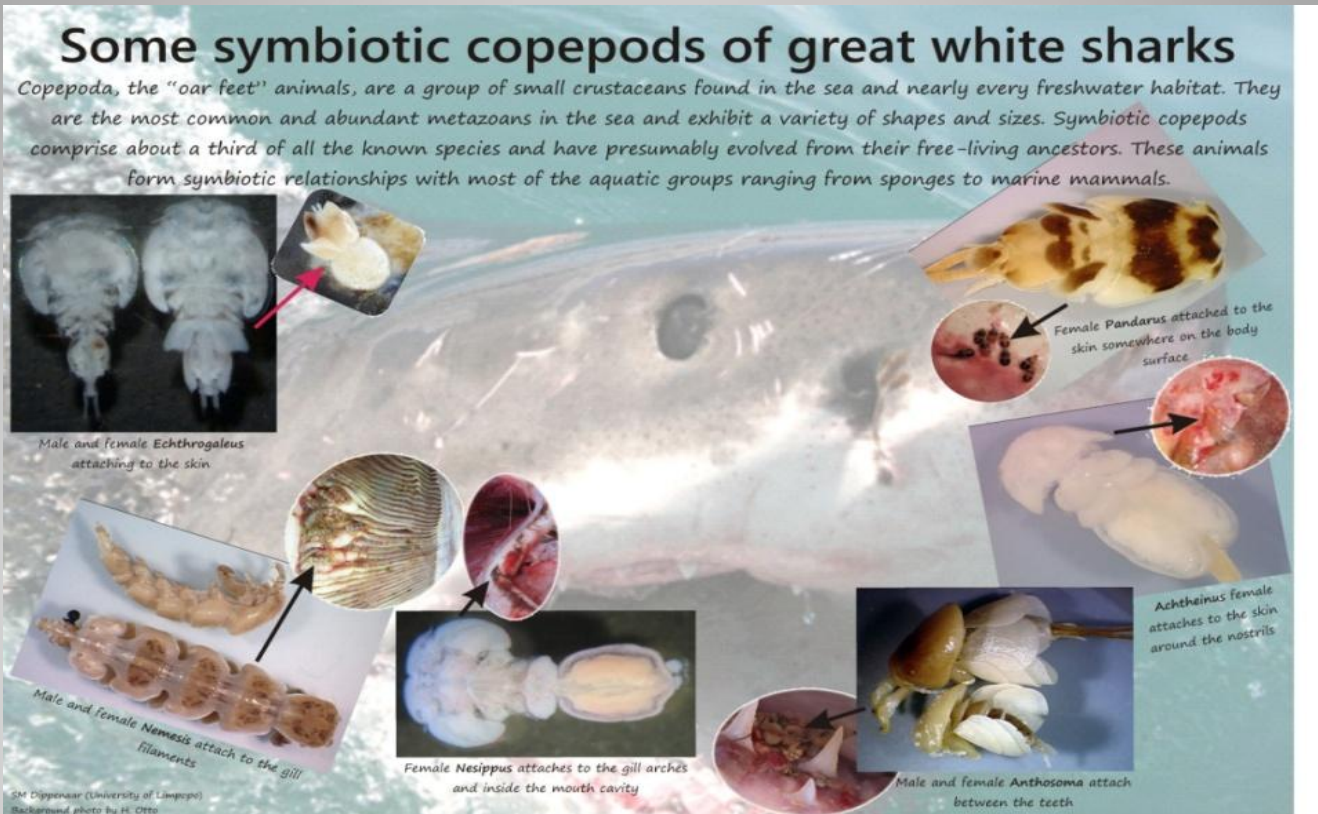
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Background.

Sharks provide a matrix of potential habitats for parasitic organisms. Siphonostomatoids are a group of parasites that are hypothesised to move freely around on the skin of infected great white sharks, feeding on mucus and the epidermal surface. Traditional field-based siphonostomatoid-great white shark associative studies require incapacitated host specimens, many of which are captured in nets/deceased.



Methods.

We are using digital imagery as an alternative non-invasive study method in order to visually identify and map the distribution of parasitic infestations on great white sharks in the Kleinbaai area. High quality, high resolution images of free-swimming great white sharks are collected when they approach our cage diving vessel. Images are examined and siphonostomatoid infestations are mapped according to which microhabitat on the shark's body they occupy, and quantify them in terms of the severity of the infestation.



Questions and possible outcomes.

1. Distribution on the body of the shark.
2. How species composition changes with the distribution of sharks across South Africa.
3. Does parasite load affect shark behaviour or influence general health e.g. compromising the shark's immune system and allowing viral and fungal infections to establish themselves.
4. Do sharks utilise estuarine areas as a fresh water outflow to rid themselves of parasites.
5. What percentage of sharks carry parasites.
6. Whether long term monitoring of parasitic load on great white sharks can be used as an indicator of environmental health.

