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Title   Knowledge base on coral Systematics of the Mascarene archipelago : a species list and two identification tools

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Abstract
Expertise in Systematics is at a turning point: it is becoming rare. For future biodiversity studies relying on species identification, environmental officers and researchers will only be left with monographic descriptions and collections in museums. This is the reason why a knowledge base on the zooxanthellate scleractinian corals of the Mascarene Archipelago is being developed. This project offers results for both biologists/taxonomists and students/divers/MPA-teams. Those main results are the following one.

First, we have compiled a list of scleractinian coral species cited from the Mascarene Archipelago based on Faure (1982). We have only listed the names for which a specimen sampled in the Mascarene Archipelago is lodged in a collection (n°, sampling location, collector, location of the collection). For the distribution, we used bibliographic references. 14 families, 53 genera and 190 species are mentioned.

Then, two online computer-based applications offers the ability to identify genera and species. The first identification tool, called Xper² and developed by the LIS (Informatic and Systematics Laboratory) in Paris, is used for the identifications from the order to the genera. The second identification tool, named IKBS (Iterative Knowledge Base System) and developed by the IREMIA (Institute for Research in Applied Mathematics and Computer Science) in La Réunion, is used for the identifications from families to species. We have done the work for *Astrocoeniidae*, *Pocilloporidae*, *Acroporidae* (only *Acropora + Isopora*) , *Psammocoridae*, *Siderastreidae* (owns *Psammocoridae* as a genera), *Fungiidae*, *Poritidae*, *Faviidae Faviinae*, *Faviidae Montastreinae*, *Mussidae*.

Finally, our web site offers an easy-to-use, worldwide, bilingual (English and French) interface to access the results and Scleractinia facts (biology, ecology, conservation, etc).

We have planed to start a new phase (fourth) of the project to add the last families, fully translate the web site in english and extend the Xper² identification to all the western Indian Ocean genera.