Taxonomy revision and natural history of Viana regina (Morelet, 1849): Their exhibition and divulgation.

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Why it is important to study the taxonomy.....

- Although humans depend on many zoological species in our food, housing, medicines and other essential services, the science suggests that a much greater potential exists in the biosphere.

- With the adverse changes in the global environment, it requires more knowledge about the diversity of species. Much of this knowledge could come from the activities of taxonomists to discover, name and describe new species, to determine their characteristics, their relationship with other species and to use these data to build interactive systems of classifications and biological information.

- Taxonomic knowledge can provide scientists a correct knowledge to understand life and preserve nature for future generations.

The Big importance of Taxonomic knowledge.....

I. Human health:

Taxonomists recognize, differentiate and characterize harmless or harmful organisms (those that affect human health) that includes thousands of organisms such as bacteria, viruses, fungi, protozoa, round and flat worms, insects, mollusc, spiders, scorpions, snakes, others. Not enough to know that an organism is the cause of a disease, it is necessary to differentiate it from other species of their group.

II. Species with " economic value“:

The use of species with economic value provide with millions of dollars into the global economy. International agreements prescribe the use and management of various useful species, so it is increasingly important (for many countries) to inventory and study the resources of biodiversity. So if more species are known and correctly described, it will enable a better knowledge of their interaction with the environment and their distribution and could very well bring the country's economic development.

III. Medicines and drugs:

Many species in nature can serve as medicines, drugs, medicinal and cosmetic creams, etc.

IV. Fisheries:

The derivatives of the fishing industry are the major source of protein in the world. The differentiation of species of fish and other marine organisms is vital in the management of these resources and the selection of species for aquaculture.

V. Preservation of life on our planet:

With the explosive growth of human population, the system that sustains life on our planet is being seriously threatened by the global changes that are happening at an accelerated rate due to our use of natural resources in obtaining food, shelter, clothing and fuel, causing one of the major environmental impacts: the massive deforestation, pollution of air and water and more global warming.

Taxonomic knowledge plays a key role in monitoring environmental changes. The collections of specimens (of wild fauna and flora) provide us with a record of changes in biological communities and ecosystems, documenting environmental changes over time. These same libraries contain the primary scientific evidence on the existence and identification of different species, and have the most reliable information about the extinction of them.

VI. Ecotourism:

Many countries derive much of their income from tourism. Approximately 30% of that income is due to “nature tourism”, also known as "eco-tourism“, for example birds, butterflies, or mammals observers.

Taxonomic research contributes substantially in the ecotourism industry. Both taxonomic publications (reviews by groups of taxa identification keys, papers and inventories of species), and the use of specimens from the collections, provide the fundamental scientific background in the production of field guides (which serve to identify most conspicuous organisms), guidebooks, films, videos, documentaries and recordings of all kinds.

Phylum Mollusca

- This zoological group has an enormous importance because it is a decisive factor in the ecological balance of the ecosystems and contains a considerable number of species of direct interest for man (plague, vectors of illnesses, food, biological controls and bioindicators).



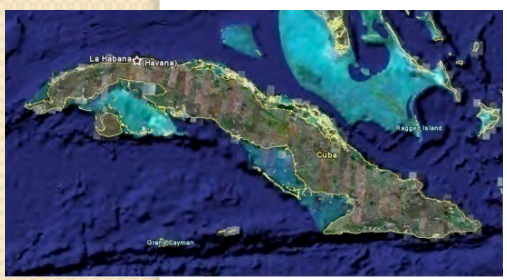



The Phylum Mollusca represents, after the arthropods, the most numerous group of the Animal Kingdom. The Cuban archipelago has 1300 species of mollusks and more than 105 subspecies. They have many characteristics like a high diversity of taxonomic forms, the abundance of their populations, the microlocalization of numerous species and most of the species are endemic (98%).

The Cuban archipelago is one of the few places in the world with bigger number of species and forms per area, competing with Hawaii and the Philippines.

The taxonomic studies of mollusks in Cuba are very scarce; most of them focus on ecology and biotechnology. That is because in Cuba few scientists are dedicated to mollusks and taxonomy in general. It is very important too, to add that the specialized literature in our country is very scarce and it is dispersed.

- *Viana regina* (Morelet, 1849) is an endemic species of Cuba, specifically of the western region of our country. It belongs to the third more numerous family, after the Urocoptidae and Annularidae. It is very charismatic species for their beautiful colours and their combination. The genus has one species and three subspecies, according to some authors. In my opinion this might be different, because in theory a subspecies exists when geographical isolation occurs in the nature. That's why I think we should revise in detail the genus, because maybe we have three true species and not three subspecies. For this study it is necessary to revise specialized literature about *Viana regina* and make molecular studies.



Viñales National Park

- Viñales National Park contains a large reserve of natural values, among which we can mention the endemic fauna, especially the land-shells, such as species *Viana regina*.
- The natural history of Cuba's Molluscs is poorly known like their life cycles, feeding and sexual behaviors.

Thanks to the help that I have received by the Belgian National Focal Point to the GTI, I was able to do the following things:

I'm reviewing the collections of terrestrial mollusks that are in the museum of RBINS.

I can revise specialized literature in the library of the RBINS.

I am making anatomical and molecular studies of my species.

I have received many consults by my tutor Dr T. BACKELJAU.

I have received a course of anatomy by Dr. J. Van Goethem.

This project will have impacts like:

- To give contributions to the taxonomic knowledge of the studied species, *Viana regina* (endemic species) and then will clear up certain descriptive type doubts.
- The Cuban terrestrial mollusc catalogue will be actualized and with this work I'm sure that other colleagues will feel motivated to make more taxonomic investigations.
- Contribution to the enrichment, exhibition and popularization of the Cuban biodiversity.
- These results will be published in national or international journals.
- The results of the investigation will be disclosed in the cultural sphere, by means of the assembly of exhibitions.


The end...