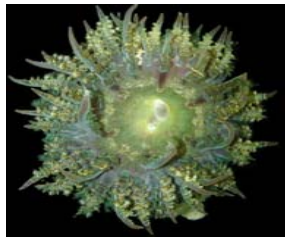


Polychotomous Identification Key For Sea Anemones Using Nematocyst Data

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Nematocysts

- Complex intracellular stinging capsules
- Used in defense and prey capture by members of the Phylum Cnidaria



Approximately 30 µm long

Approximately 200 µm long

- Species of the order Actiniaria (sea anemones) differ in types and sizes of nematocyst in various tissues, making nematocyst data useful in the identification of specimens

Seeking Nematocyst Data for Sea Anemones

In the past, individuals seeking sea anemone nematocyst data had to search tediously through publications. More recently, individuals have been able to access nematocyst data via Dr. Daphne Fautin's database.

Research Objectives

- Simplify the process of determining which species have particular nematocyst combinations
- Provide scientists and the public easier access to nematocyst data
- Provide a way for users to access further information about species of interest

Software

I have organized nematocyst data from publications dating back to the late 1800's into an IDnature guide, which is the user interface for the online polychotomous identification key program 20q.

Who Am I?

Is it possible to identify this specimen given the nematocyst information below?

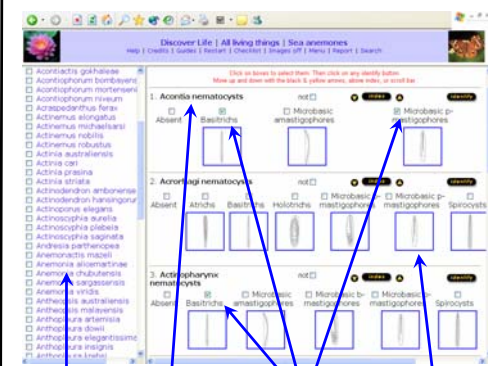


Nematocyst data obtained from specimen

Tissue	Nematocyst Type	Length Range
Acontia	Basitrichs	32.4 - 45.1 µm
	Microbasic p-mastigophores	52.3 - 61.2 µm
Actinopharynx	Basitrichs	8.4 - 27.1 µm

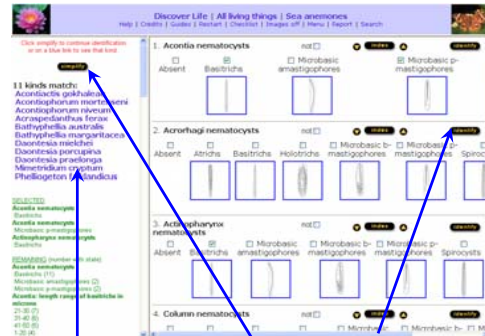
Online identification key

- **Step 1:** Select the types of nematocysts for each tissue type.



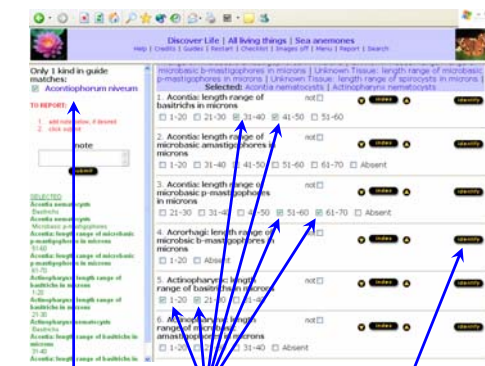
List of species Tissue type Nematocyst types Nematocyst Picture

- **Step 2:** Press the **Identify key** and you will obtain a list of species that match the criteria entered. Pressing the **simplify key** will allow for the selection of length ranges.



Matching species Simplify key Identify key

- **Step 3:** Select all applicable length ranges then press the **Identify key**. This will create a list of species that match the criteria entered.



Identified species Selected length ranges Identify key

- The only species that matches all of the selected criteria is *Acontiphorum niveum*

- **Step 4:** Selecting the species name brings the user to a page containing detailed information.



Link to Hexacorallians of the World

Conclusion

This identification key has led to an attractive and efficient way to search nematocyst data. It allows scientists and the public to search easily through over a hundred years of nematocyst data by simply pushing a couple of buttons. And the species links allow the user to do further research on species of interest.

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