

Scorpion Identification

Written by Administrator
Monday, 01 October 2012 13:20 -

· *What is an identification key?*

· The identification key is a device that taxonomists use to help them identify unknown organisms. Ideally, the key provides text and/or diagrams to guide the user through a branching hierarchy of morphological character states, or attributes, which are compared to the unknown specimen in a sequential fashion. The key is comprised of a series of branching nodes. At each node, the user determines which of two or more attributes most closely resembles the attributes of the unknown specimen. A matching attribute directs the user along one of the branches to the next node. The user compares attributes and continues from node to node until the end of a branch is reached. At this point, the user will have an identification. The keys presented here are dichotomous, meaning that each node will have only two branches.

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Pitfalls of Identification Keys

1. There is only one way to reach a correct identification. Mistakes or misinterpretations at any node will result in incorrect identifications.
2. Figures are generally diagrammatic in nature and require interpretation in order to apply them to actual specimens.
3. A high level of understanding of nomenclature, morphology, anatomy, and distribution of the organisms under study is usually required for successful identification.
4. Accuracy is directly related to the user's skill at interpreting morphological characters and variation. These keys are generally not designed for novices.

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5. Not all taxa, especially at the species level, can be identified in this way. Some species are morphologically indistinguishable. These cryptic species can only be separated by chemical methods.

How do I use an identification key?

1. Have your specimen ready for identification. Microscope set up. Lights on. Specimen positioned for observation.

2. The key is comprised of numerous separate couplets. Each couplet presents two narrative descriptions of specific morphological characters as well as associated diagrams.

3. Read each couplet very carefully. Compare the described attributes with the corresponding structures on your unknown specimen.

4. Decide which of the two choices in the couplet best match your unknown specimen.

5. Click on the hypertext link of the matching description (either a "Go to Couplet..." link or a taxon-name link).

6. A "Go to Couplet..." link will take you to the next couplet where you will repeat the identification process.

7. A taxon-name link indicates that you have completed the identification process. Clicking on the hypertext will link you with additional information about that taxon.

8. If you make a mistake and need to back up, click on the "[Go Back]" hypertext link. This will take you back to the previous couplet in your identification.

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9. If you are totally lost and confused, and wish to start over again, click on the "[Start Over]" hypertext link. This will bring you back to the main page for that key.

A Few Pointers

1. Scorpions can be very difficult to identify, especially to species. If it were easy, everybody would do it and there just wouldn't be any use for people like me. If you go in thinking that an identification is going to be easy, you're going to get frustrated twice as fast as you normally would. Take your time.
2. These keys are highly technical in nature. You're going to have to learn some scorpion terminology and morphology. I've set up a glossary and diagrams to help you with this aspect, but there's no getting around it.
3. You'll need some specialized equipment. A dissecting microscope is the best tool for the job. Some of the characters you need to see for identification are very small. However, a powerful hand lens and a lot of practice will suffice for most genus-level identifications. A good illuminator or microscope light is also a must. A pair of fine, jewelers forceps and a wide, low, fingerbowl will round out your identification setup.
4. These keys are designed for identifying DEAD scorpions preserved in alcohol. Live scorpions can be identified if they can be subdued or anesthetized. Dead, dried scorpions are nearly unidentifiable.