



## **Bugs Before Time: Prehistoric Insects and Their Relatives**

**by Leah Horton**

by Cathy Camper

Illustrated by Steve Kirk

Simon & Schuster, 2002, 40 p.

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Cockroaches as big as your shoe! Sea scorpions as long as a couch! Dragonflies with wingspans almost a yard across! A millipede about six feet long! These are just a few of the amazing facts presented in **Bugs Before Time: Prehistoric Insects and Their Relatives**. This book, while written for children, will certainly offer even adult readers new, surprising, and even spine-tingling information about the creepy-crawly history of arthropods.

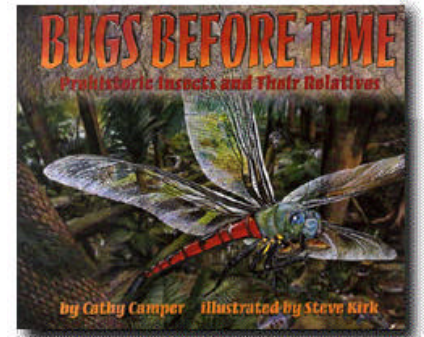
**Bugs Before Time** is full of wonderful scientific information, including a description of the arthropod class, how to distinguish insects from other arthropods, how fossils are formed, how scientists use fossils to decipher information about prehistoric bugs, and how studying ancient insects has application for life on earth today. For example, by studying both current and ancient bugs, scientists hope to build robots that can explore terrains that we humans cannot currently visit, such as the planet Mars.

One section of the book that I found especially beneficial was the section dealing with theories of how insect flight evolved. This portion of the book accurately depicts the process of science:

hypothesizing, theorizing, and experimenting. The world and ancient world are full of questions without answers; however, those answers may one day be discovered through the process of science. There-

fore, this book could certainly be an aid to teachers trying to explain the process of science and to encourage their students to be actively involved in doing science.

While **Bugs Before Time** certainly has lots of interesting and valuable information, it also contains a few weaknesses. There does not seem to be much rhyme or reason to the organization of the book. For example, the book opens with a discussion of ancient cockroaches, jumps to a discussion of how fossils are formed, then on to eurypterids (not in the insect class), back to insect evolution, on to more examples of insects and non-insects, the theories of insect flight, more bug examples, and finally ends with a discussion of geologic time. A more logical order and flow of



information would certainly aid in the enjoyment of the book, as well as retention of the information by developing logical connections between ancient insects, their relatives, how these ancient creatures are studied, and how they compare to modern insects and other arthropods.

Another possible weakness is the degree of difficulty of some of the content and the recommended age level of the book (5-9 year olds). The book is fairly lengthy and will likely be too advanced for most 5 and 6-year olds. The illustrations are excellent, but by themselves will likely not hold the attention of younger audiences. However, the layout of the book facilitates enjoyment by a range of age levels. Arranged in an almost a "scrapbook-style" format, each page (see Fig. 1) opening highlights the main text in a gray box, which for the most part is simply written and easily understandable. For older children or even

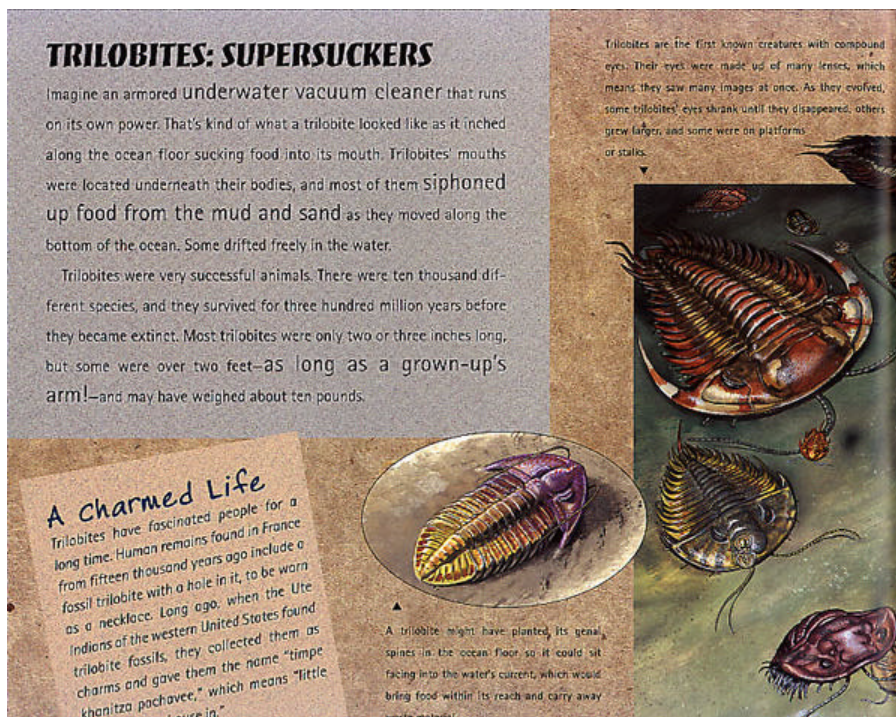


Figure 1. Pages are arranged in a "scrapbook-style" format, with text sections designed for younger and older readers.

adults, more advanced information is available around the central illustration on each opening.

For her first children's book, I believe Cathy Camper has done an excellent job with **Bugs Before Time: Prehistoric Insects and Their Relatives**. I would recommend the book for elementary and even middle school libraries, with a target grade range from second grade to sixth grade.