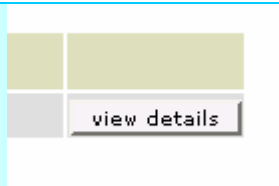


Directions for using the *Atlas of Paleocene Planktonic Foraminifera* and the *Mesozoic Planktonic Foraminifera Taxonomic Dictionary* on the CHRONOS Website.

Go to the CHRONOS website at http://www.chronos.org/	
Choose the Tool and Data Portal. Click on it.	
Click on the "Resources" tab.	
On a toolbar right below the Resources, tab, choose "For MicroPaleo Group"	
On a toolbar right below the Resources tab, choose "Foraminiferal Databases."	
Explore the differences in morphology and size between forams that existed during the Cretaceous Period and those that lived during the Paleogene Period. First, examine the shells, or "tests" of foraminifera living in the uppermost Cretaceous Period. For these organisms, consult the <i>Mesozoic Planktonic Foraminifera Taxonomic Dictionary</i> . This resource is located on this page. Click on it.	
A page of forms appears. Use the top form, which is a "Quick Search." Type in the species name of foraminifera of interest from the Cretaceous. You may obtain species names by using the MicroPaleo tool to make bar graphs and noting the species as described in another set of directions. However, here are two Cretaceous species that work.	
First, try typing in "fruticosa" for <i>Racemiguembelina fruticosa</i> and click "submit." A new page will appear.	

On the left side of the page is a box labeled "view details." Click on this box.



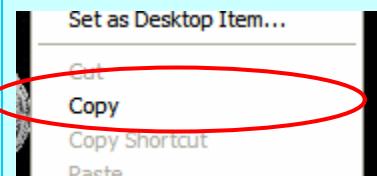
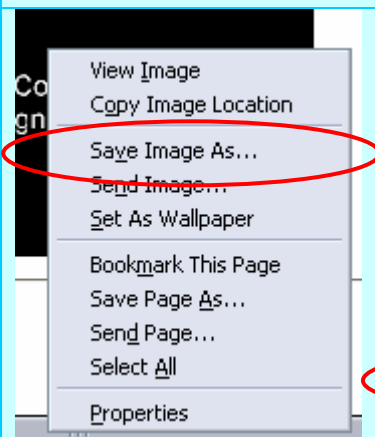
A new page will appear. If you scroll down this page, you will see some beautiful photographs of tests (shells) of these organisms. Make note of the ornamentation or elaborateness of the tests and their size (diameter).

The photographs are not included here because you should discover them for yourself.

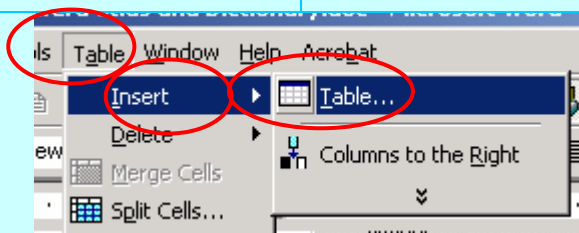
Then you might try retrieving photographs of another Cretaceous foram by typing in "mayaroensis" for Abathomphalus mayaroensis.

Try other species that are not listed here.

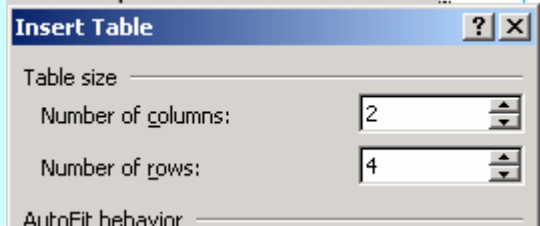
There are two ways to capture images of these forams. One way is to place your cursor over the image and **right-click with your mouse** (This is if you have a PC). If you are using a recent Macintosh, you place the cursor over the image and **hold down the "control" key as you click**. A window will appear. Choose "Save Image As..." or "Copy," depending upon the software your computer has. If you choose "save Image As," another window will appear and you can browse to determine the place (on your hard drive or on a disk) that the jpeg file will be saved. Otherwise, you can just copy and paste the image without saving it as a file.



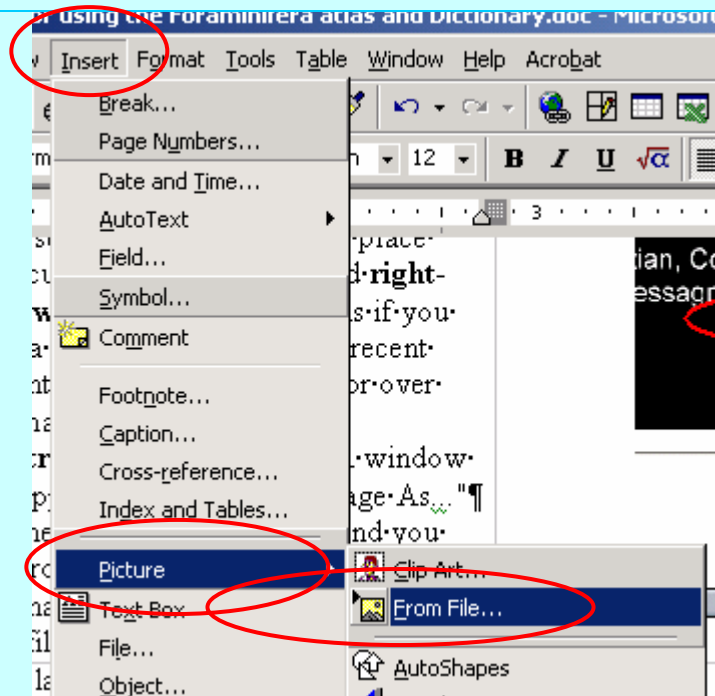
Place the picture into a table so that its position is anchored on the page and so that you can write in the cell beside it. The images and explanations on this page were actually placed in a table. To make a table, go to "Table" on the top tool bar. Then choose "Insert" and "Table".



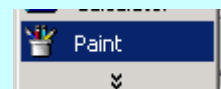
A new window will appear. Choose the number of columns and rows that you need. Usually 2 columns works well. Then press "OK" at the bottom of the window.



Place your cursor in the part of the table where you want to place the picture. Choose "Insert" on the top tool bar, then "Picture" and then "From File". Then browse to find the jpeg file on your hard drive or on a disk and insert it into the document.

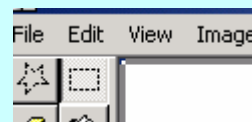



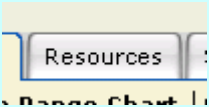
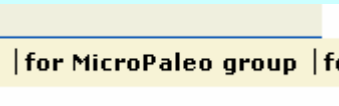
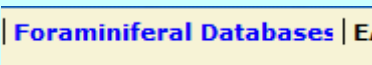



The second way to capture images off the Internet is to use the "Print Screen" key on your computer keyboard. This will copy the entire screen image onto the computer's clipboard memory. Then open an image drawing/editing program like "Paint" and paste the image.

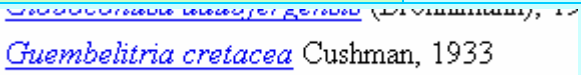



Usually, you get a message saying the image in the clipboard is larger than the bitmap. Say "Yes" because you do want to enlarge the bit map.

Then select a rectangle of the image that you want to insert into a Word file. Use the "Control" key and the "X" key to cut the image piece and then use "Control" and "V" to paste it where you want it. This was the method used in making these directions.



<p>Now that you have captured some images of Cretaceous foraminifera and have noted the sizes of their tests (shells), explore the morphology of a species of foraminifera that lived during the earliest Paleogene and had its first appearance immediately after the Cretaceous-Paleogene boundary. To find a photograph of this foram, go to the <i>Atlas of Paleocene Planktonic Foraminifera</i>.</p>	
<p>Go to the CHRONOS website at http://www.chronos.org/</p>	
<p>Choose the Tool and Data Portal. Click on it.</p>	
<p>Click on the "Resources" tab.</p>	
<p>On a toolbar right below the Resources tab, choose "For MicroPaleo Group"</p>	
<p>On a toolbar right below the Resources tab, choose Foraminiferal Databases.</p>	
<p>Then choose "about Foraminifera."</p>	
<p>On this page, choose the <i>HTML Atlas of Paleocene Planktonic Foraminifera</i>.</p>	
<p>A new page will appear. Near the bottom of the page, click on "Complete List of Species."</p>	
<p>Scroll down and choose <i>Parvularugoglobigerina eugubina</i></p>	
<p>Click on the name and a new page will appear. Choose "Larger images" to see larger photographs of the organism's test.</p>	

Now look at a foram that survived the end-Cretaceous. Return to the page for the <i>Atlas of Paleocene Planktonic Foraminifera</i> . Choose the "Complete List of Species."	
Scroll down and choose <i>Guembelitra</i> cretacea from the list.	
On the new page, choose "Larger Images."	
Now that you are familiar with finding images of forams using these two resources, explore the other features of these two resources to see what other information is available.	You may also want to explore the morphologies of other forams.
<p>Finally, create a page in Word (or with similar word processing software) that compares the degree of ornamentation and morphology of forams before and after the Cretaceous-Paleogene boundary. This should contain images of forams to illustrate your points and should address changes in both morphology and size. Finally, speculate on the causes of the changes you have documented.</p>	