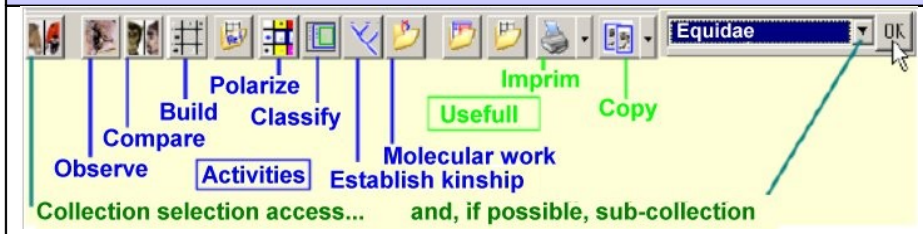
Icons for accessing activities and utilities



Construct a character matrix

Click on ***Build***. Select the species by clicking on them. Clicking again on the figure removes the selection **.** Choose the characters in the drop down menu.

Example of a character matrix

	Fingers number (hand)	Short lateral fingers	Na
Phenacodus	5	No	
Hyracotherium	4	No	
Palaeotherium	3	No	

For some groups, the search menu helps choose the species.

Complete the table by clicking in each box and using the information that appears at the lower right of the screen. Check your table. Correct if necessary.

Polarize and code the character states

After having constructed and validated a character matrix, click on the icon ***Polarize***. Choose an extragroup taxon to find the primitive states.

Example of coded matrix

	Navicular face	Enamel crest	Fingers number (hand)	B
Phenacodus	Rounded	Absent	5	
Hyracotherium	Flat	Straight	4	
Palaeotherium	Flat	Sinuous	3	
Mesohippus	Flat	Sinuous	3	
Anchitherium	Flat	Sinuous	3	
Archaeohippus	Flat	Sinuous	3	
Megahippus	Flat	Sinuous	3	

Fossils are in red, extragroup in blue

Color the primitive states like those of the extragroup, then color the derived states. Recheck at the end. If there is a problem, use the Help button. Lines and columns can be moved to best regroup the same-level states

Establish kinship, building a tree

Rearrange the tree branches

Click on the menu ***Establish kinship*** :
At first, no taxon is activated. Activate the taxa progressively (for example, by starting at the bottom) and use the character states (see figure to the right) to place the new taxon and build the tree.

Left click with the mouse on the branch to be moved. Without releasing the button, drag the branch to a new position. If this branching is possible, a cross or a pointing finger appears. It is also possible to change the arrangement of the branches without modifying the lineage.

Cancels the last operation.

Zoom in and zoom out.

Display captions on each branch (state of the selected character).

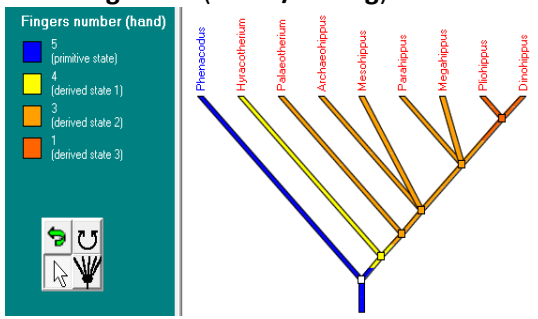
Permutates branches around a node. Click on this icon, then place it on a node and click again

Connects all branches to the same node.

Right click on that part of the screen selects the display lengths trees (number of changes they assume).

Character states

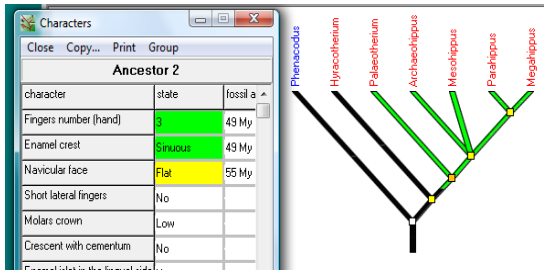
In **editing** mode (Mode**/editing**)



By clicking on a character in the matrix, the color code assigned to the character appears

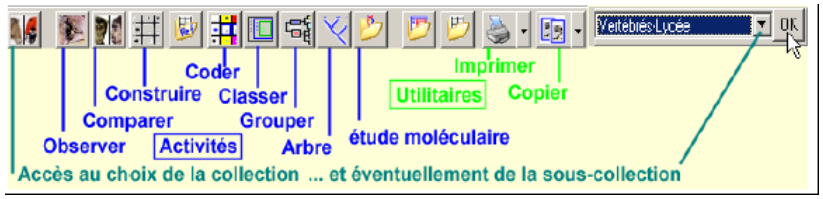
Tree verification

In **exploring** mode.
When one clicks on a node representing an ancestor, the list of its character states appears (as can be deduced from the tree drawn).



If the group of descendants shares a common derived state that is exclusive, the branches are green. Yellow: common derived non-exclusive states

The dates are those of the first fossil having this state.



- Access the collection menu… and possibly the subcollection
- Observe
- Compare
- Construct
- Polarize
- Classify
- Group
- Establish lineage
- Molecular study

Activities

- Print
- Copy

Utilities