Install NEURON on Mac

The example here is for El Capitan (10.11) but anything >= OSX 10.7 is fine.

Install NEURON.
Install XQuartz if neurondemo does not work.
Install "XCode command line tools".
Install Python 2.7 distribution.
   Or use the one that comes with your mac.

Test NEURON + Python.
Test MPI parallel from terminal.

git comes with "command line tools"
Install NEURON on Mac
64bit dmg
Open the downloaded dmg
and drag NEURON-7.4 folder into /Applications
The first time you run NEURON ...
the OS thinks the provenance is questionable.
Open "System Preferences". Select "Security and Privacy"
turn off the blocking
Now it will run
you’ll have to Ok a few other programs as well.
But success only if you have XQuartz installed.
Ignore if neurondemo was successful
Otherwise download XQuartz

The XQuartz project is an open-source effort to develop a version of the X.Org X Window System that runs on OS X. Together with supporting libraries and applications, it forms the X11.app that Apple shipped with OS X versions 10.5 through 10.7.

Quick Download

<table>
<thead>
<tr>
<th>Download</th>
<th>Version</th>
<th>Released</th>
<th>Info</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="XQuartz-2.7.8.dmg" alt="XQuartz-2.7.8.dmg" /></td>
<td>2.7.8</td>
<td>2015-10-17</td>
<td>For OS X 10.6.3 or later (including El Capitan)</td>
</tr>
</tbody>
</table>

License Info

An XQuartz installation consists of many individual pieces of software which have various licenses. The X.Org software components’ licenses are discussed on the X.Org Foundation Licenses page. The quartz-wm window manager included with the XQuartz distribution uses the [Apple Public Source License Version 2](https://developer.apple.com/library/mac/#documentation/Cocoa/Conceptual/ApplePublicSourceLicense/ APSLVersion2.html).
Open the dmg
and launch the XQuartz installer.
it can take a few minutes
Press OK, but something to remember ...
XQuartz is installed
but now log out and log back in.
Now neurondemo should be successful. 
exit via NEURONMainMenu/File/Quit
Command Line Tools depend on OSX version
El Capitan is 10.11
Free, but need to sign in to Apple
Anyone can be a Developer
Double click on the correct one ... and the download URL will be displayed.
Open and install in the usual way.
Python and easy_install come with the mac but...
this is an easy way to get OpenMPI and Mayavi

Anaconda for OS X

<table>
<thead>
<tr>
<th>PYTHON 2.7</th>
<th>PYTHON 3.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>MacOS X 64-bit Graphical installer&lt;br&gt;(274 MB; OS X 10.7 or higher)</td>
<td>MacOS X 64-bit Graphical installer&lt;br&gt;(267 MB; OS X 10.7 or higher)</td>
</tr>
<tr>
<td>MacOS X 64-bit Command-Line installer&lt;br&gt;(299 MB; OS X 10.5 or higher)</td>
<td>MacOS X 64-bit Command-Line installer&lt;br&gt;(255 MB; OS X 10.5 or higher)</td>
</tr>
</tbody>
</table>

OS X Anaconda Installation

1. Download the installer.
2. Double click the .pkg file and follow the instructions on the screen.
So what do we have?
Scipy, matplotlib, but not mayavi...
conda install mayavi
and now mayavi can be imported.
Test a few things by opening a Terminal window.  
/Applications/Utilities/Terminal
With PYTHONPATH, Python can import neuron
/Applications/NEURON−7.4/nrn/lib/python
nrnpyenv.sh helps with environment variables
copy/paste allows nrniv to find anaconda packages.
"conda install mpi4py" also installs openmpi
Add the exports to your $HOME/.bash_profile
MPI works.