Consed Installation Instructions for

Mac OS X

# Installing X11

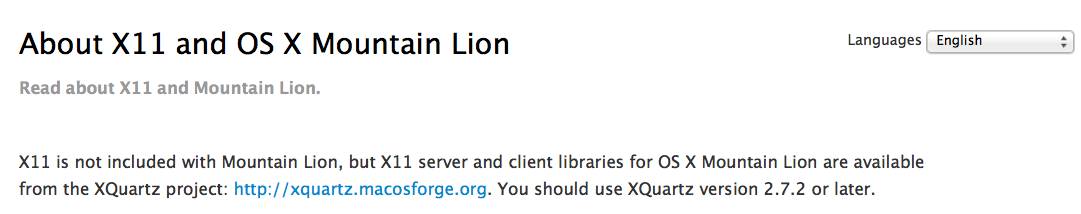
1. Because *Consed* relies on an application called X11, you will need to verify that X11 is installed on your Mac prior to installing *Consed*.
   1. Open a Finder window and go to the **Applications** folder and then double click on the **Utilities** folder
   2. You should find the *X11* application inside this folder. Double click on *X11* icon to launch the *X11* program

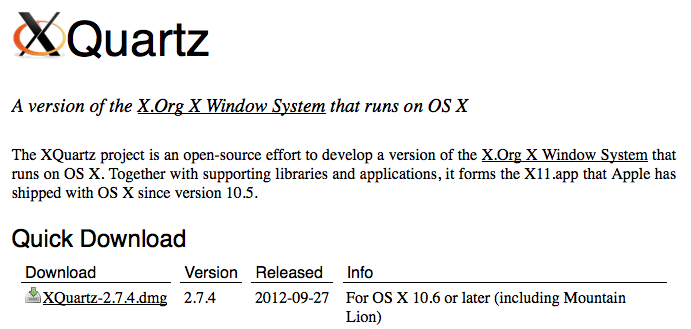
1. The X11 application is installed on Mac OS 10.5, 10.6, and 10.7 by default. In these versions, an xterm will appear and you can skip the rest of this section and continue with the Installing Consed section (see page 3).
2. On Mac OS 10.8, you will see a dialog box with instructions on how to install X11.



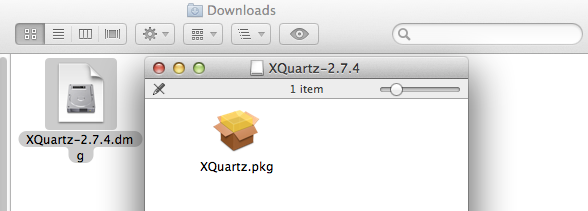
1. Installing X11 on Mac OS 10.8
   1. Click on the “Install” button on the X11 dialog box. This will open a web browser and navigate to the Apple Knowledge Base article on how to install X11 on Mac OS 10.8 (<http://support.apple.com/kb/HT5293>)



* 1. Click on the XQuartz project link (<http://xquartz.macosforge.org/>)
  2. Click on the link to the most recent release (i.e. XQuartz-2.7.4.dmg) of XQuartz under the “Quick Download” section

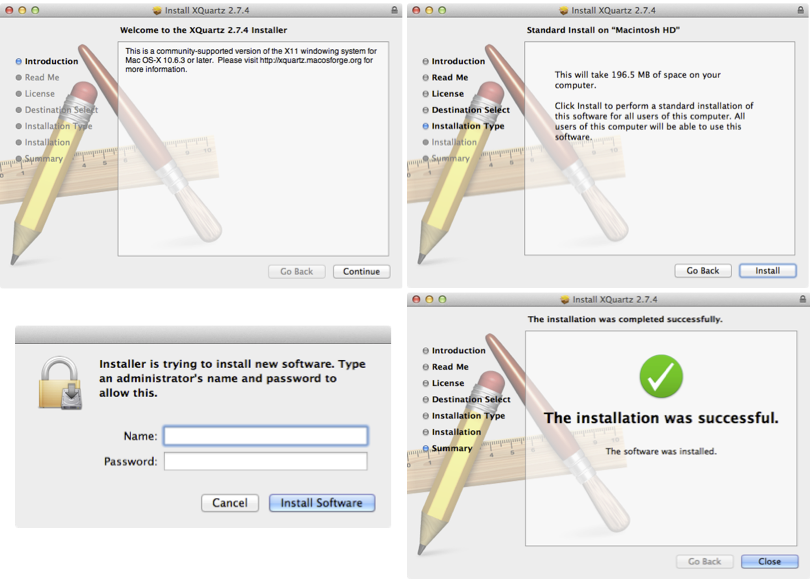


* 1. Navigate to the directory where you have saved the package
     1. By default, most web browsers will save the file in your **Downloads** folder or on your **Desktop**
     2. Note that some web browsers (e.g. Safari) will mount the disk image automatically after the download is complete
  2. If the disk image did not mount automatically, double-click on the *XQuartz-2.7.4.dmg* file. A new drive called **XQuartz-2.7.4** will appear which contains the installation package **XQuartz.pkg**



* 1. Double click on the **XQuartz.pkg** package to launch the installer. Follow the instructions to install X11.

**Note that you will need to enter the credentials for your administrator’s account to install the package**



* 1. **Restart your computer** once the XQuartz application has been installed successfully

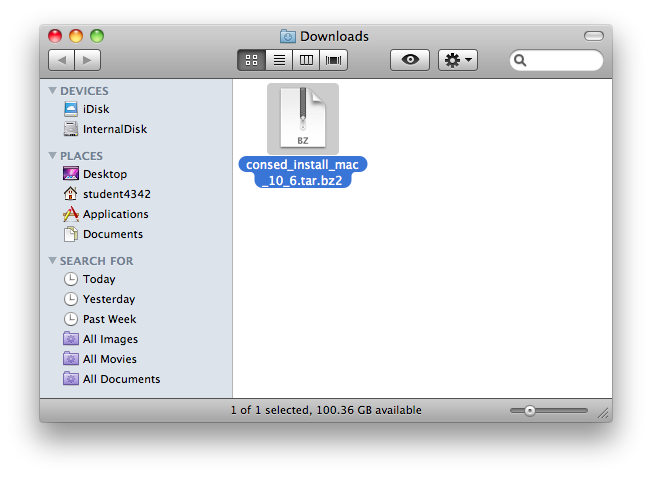
# Installing Consed

1. Open a web browser and download the *Consed* installation package at:

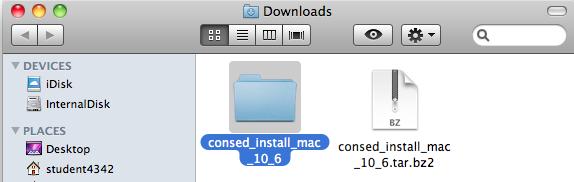
<http://gander.wustl.edu/~chris/consed_osx_package/gep06/consed_25_install_mac_10_6.tar.bz2>

1. Navigate to the directory where you have saved the package

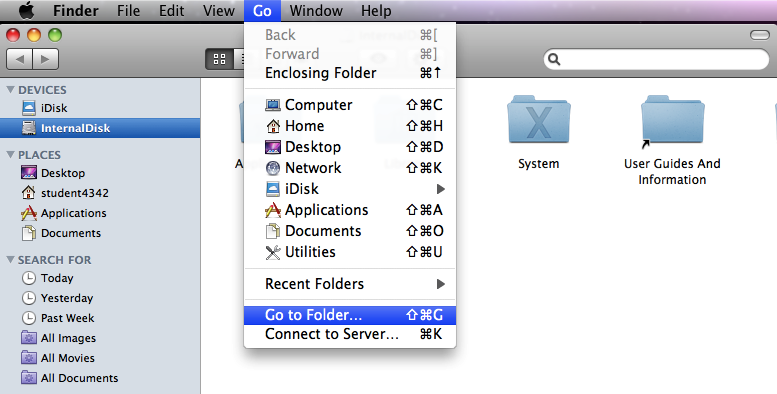
* 1. By default, most web browsers will save the file in your **Downloads** folder or on your **Desktop**



1. Double click on this file to expand the *Consed* installation package
   1. A new folder called **consed\_install\_mac\_10\_6** will appear

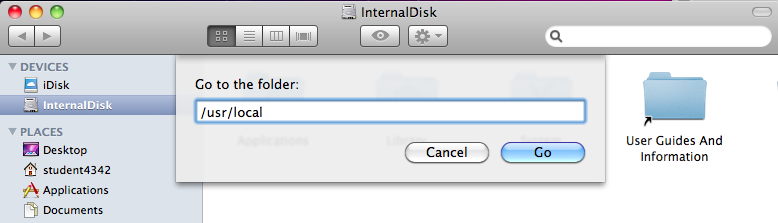


1. Open a new Finder window and select “Go” -> “Go to Folder” on the main menu bar

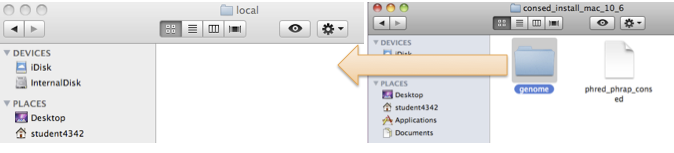


1. Copy and paste the following path into the dialog box and then click on the “Go” button

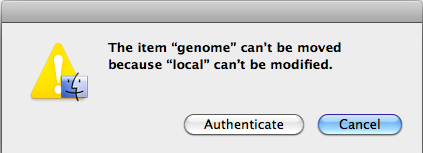
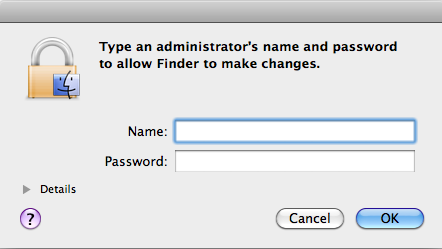
/usr/local



1. You should now have two Finder windows open: the first window contains the folder with the *Consed* installation package and the second window with an empty folder called **local**.
2. Double click on the consed\_install\_mac\_10\_6 folder, you should find a folder called **genome.** Drag the **genome** folder from the consed\_install\_mac\_10\_6 directory to the **local** folder.

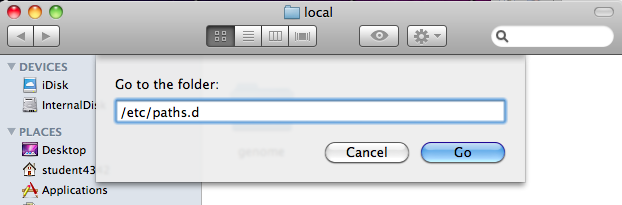


1. Because the */usr/local* folder is a protected folder in Mac OS X, you will need to click on the **Authenticate** button and then enter the username and password of your **administrator account** in order to copy the genome folder into */usr/local*

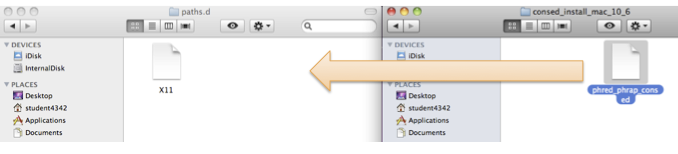
 

1. If all goes well, the genome folder should appear in the */usr/local* folder.
2. *Consed* is now installed on your computer. However, in order to allow us to more easily access *Consed* from the command line, we will setup a shortcut to *Consed*.
3. Select the Finder window for the */usr/local* folder and select “Go” -> “Go to Folder” in the menu bar again. Copy and paste the following into dialog box and click “Go”

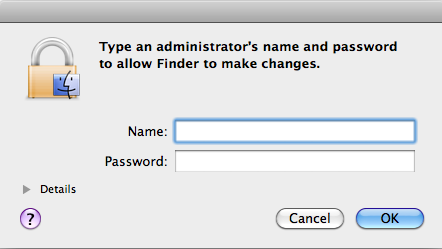
/etc/paths.d



1. A folder called **paths.d** will appear which contains a single file called **X11**. Select the **phred\_phrap\_consed** file in the consed\_install\_mac\_10\_6 folder and move it to the *paths.d* folder



1. Like the */usr/local* folder, */etc/paths.d* is a protected folder in Mac OS X. You will need to click on the **Authenticate** button and then enter the username and password for your **administrator account** in order to copy the *phred\_phrap\_consed* file into */etc/paths.d*

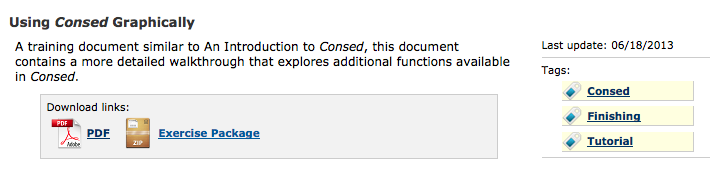


# Verify the Consed Installation

The *Consed* installation is now complete. Next we will download a sequence improvement project from the GEP web site so that we can use it to test our *Consed* installation.

1. Open a web browser and download the sequence improvement package for the *Using Consed Graphically* tutorial at:

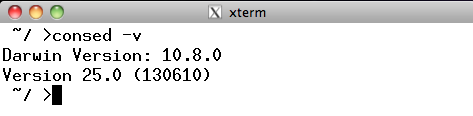
<http://gep.wustl.edu/curriculum/course_materials_WU/sequence_improvement/tutorials_and_walkthroughs>



1. Once the download is complete, double click on the file to expand the package. Move the folder (called **Standard3**) to your home directory.
   1. The home directory is the same as your account name by default.
   2. The home directory is called **student4342** in this tutorial.
2. Before we can launch *Consed*, we need to first launch the *X11* program.
   1. Navigate to the **Utilities** folder and double click on the **X11** application (as shown on page 1).
      1. You might want to drag the X11 application into the Dock to enable easier access to this application in the future.
3. When you open *X11*, a new *xterm* should appear. Type the following into the *xterm* to verify that you can access *Consed*:

consed –v

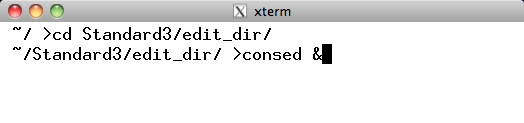
This command should report the version of *Consed* that has been installed (version 25.0 in this case). Note that the “**Darwin Version**” line will be different depending on your version of Mac OS X.



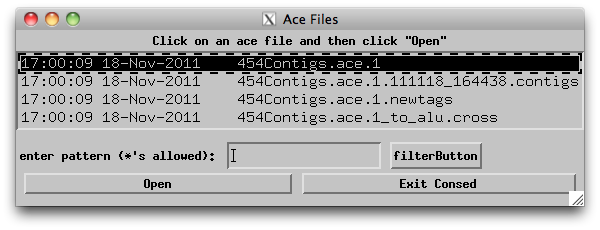
1. Next we will try to open a *Consed* project. Assuming that the Standard3 project is in your home directory (as described above), type the following into the xterm to open the project:

cd Standard3/edit\_dir/

consed &



1. If all goes well, *Consed* should launch and we can open the **454Contigs.ace.1** file



At this point, I will recommend going over the entire *Using Consed Graphically* exercise to verify that *Consed* has been installed correctly. In particular, I would verify that you can open and edit traces, run *cross\_match* in Assembly View, do tear and joins and run MiniAssembly. Detailed instructions on how to accomplish these tasks are described in the *Using Consed Graphically* tutorial.