



Scientific Services

*Computational Sciences
The Jackson Laboratory*



Computational Sciences Department
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JCMS Pedigree Tracker

Quick Start Guide

Download JCMS Pedigree Tracker

The Jackson Laboratory Colony Management System Pedigree software (JPT) is a Java application utilizing Java SE 6.

After the application is installed, you may run it from your **Start** menu or from the **JCMS Pedigree Tracker** icon on your desktop.

Statement of Principle

This software was developed with support from the NIH and the Howard Hughes Medical Institute and is made available to the research community in support of the colony management of mouse models used in the biological sciences. For over seventy years, scientists at The Jackson Laboratory have been conducting mouse-based biomedical research. As a result, we have accumulated a tremendous wealth of information related to husbandry, genetics and biology associated with selecting and using laboratory mice in research. We also obtain new knowledge as we provide custom mouse breeding and related support services that is used in our research and the development of additional mouse models. The cumulative knowledge of The Laboratory is shared with researchers around the world through our scientific presentations, technical information services, Web-accessible databases, printed literature and publications, and training programs.

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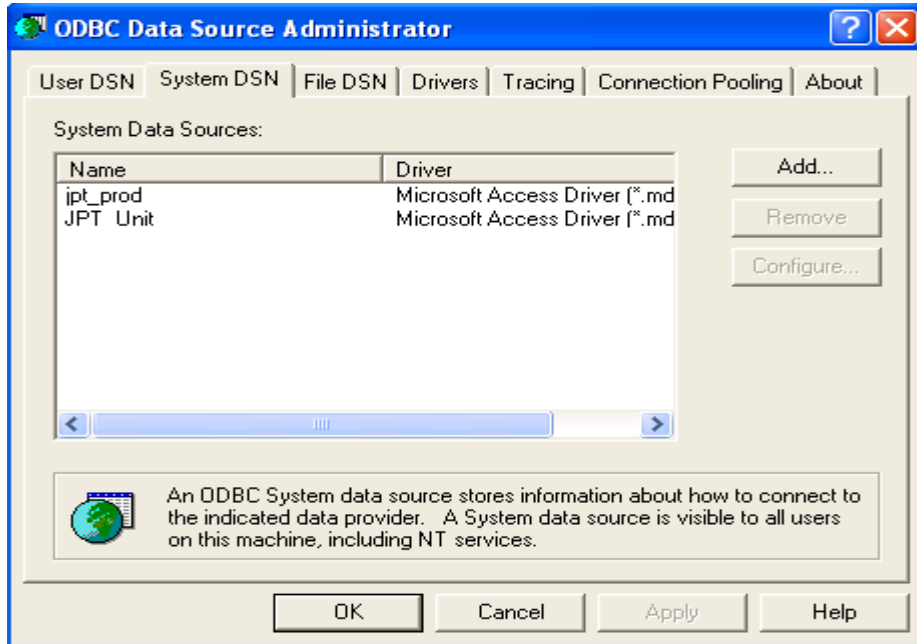
Introduction:

The JCMS Pedigree Tracker is an application that will connect to an existing JCMS application and will allow the user to navigate up and down the implied hierarchy that is represented in the Mouse, Litter and Mating tables. It is built as a separate application but it is intended to be utilized with a JCMS database.

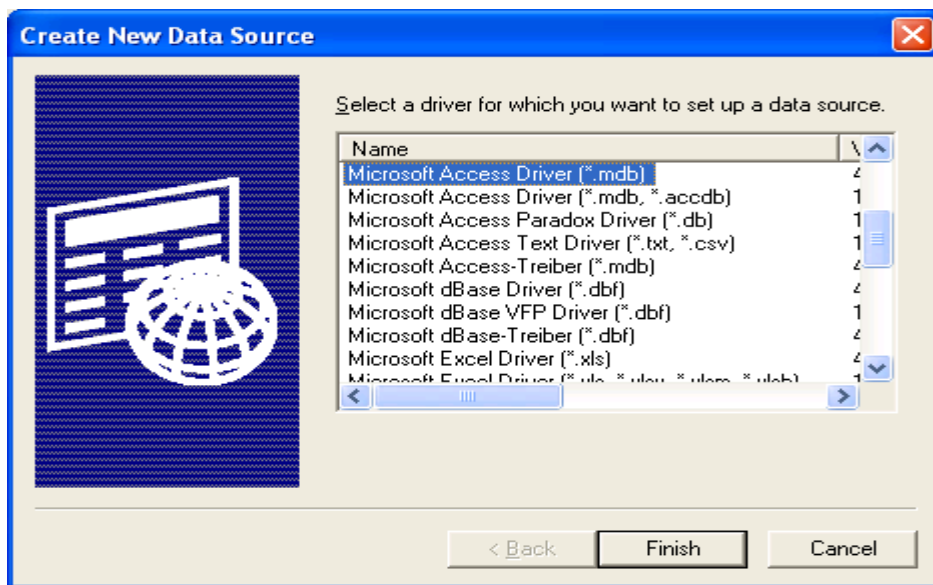
The application requires Java SE 6 and a JCMS database to connect to. The application will connect to both a Microsoft Access JCMS database or a MySQL JCMS database.

1 Configure an Access Database:

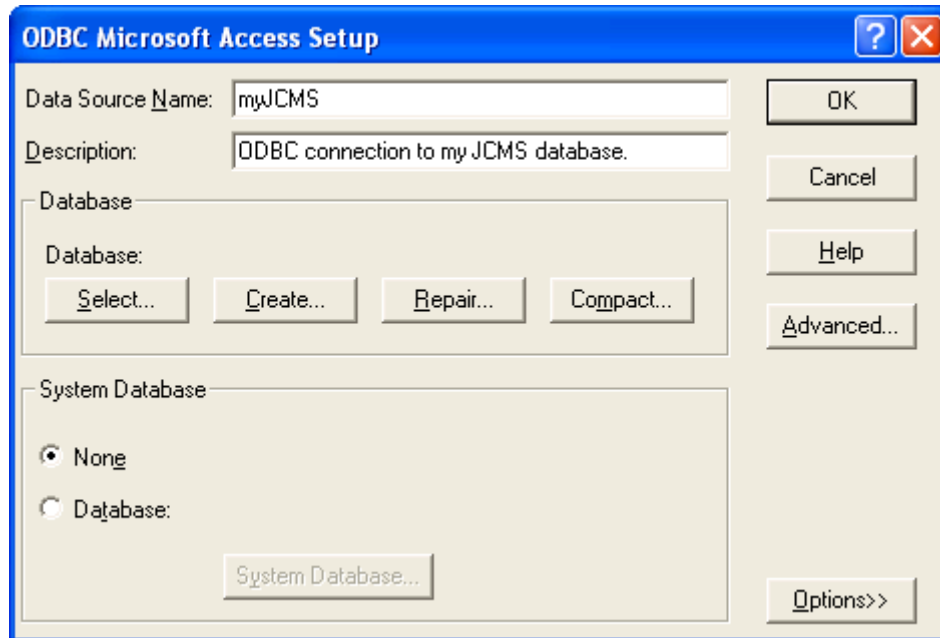
In order to connect the JPT application to a Microsoft Access Database an ODBC DSN will need to be created for your system. To do this go to the windows control panel under "Administrative Tools" open the "Data Sources (ODBC)" utility.



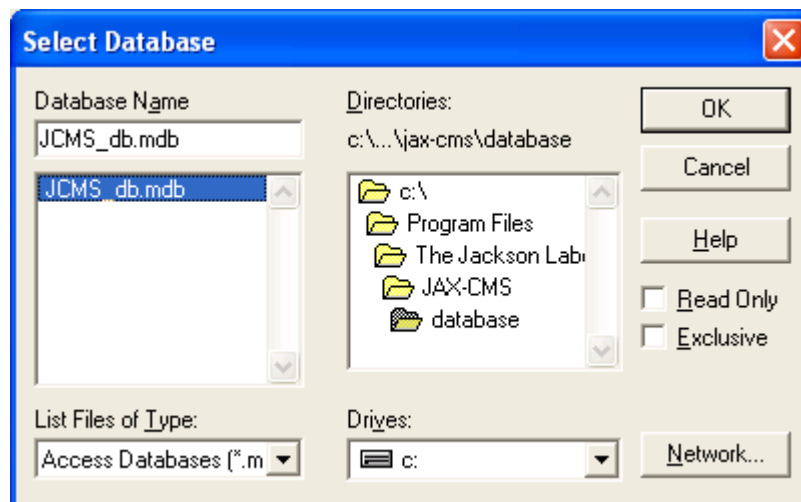
Click Add!



Select Microsoft Access Driver and click Finish.



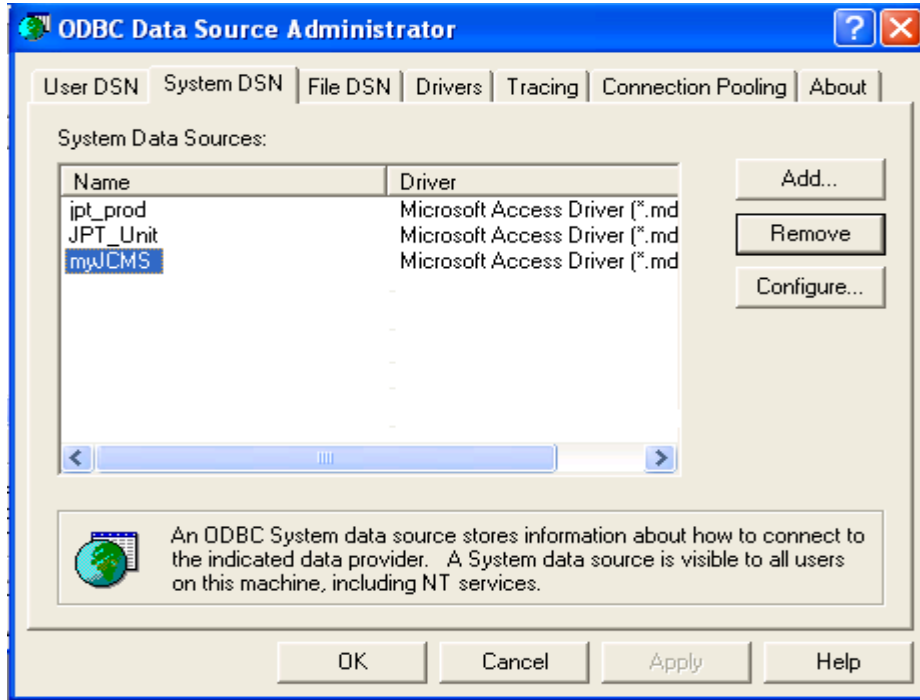
Click Select.



Navigate to your JCMS install directory and select the JCMS_db.mdb file.

Click OK.

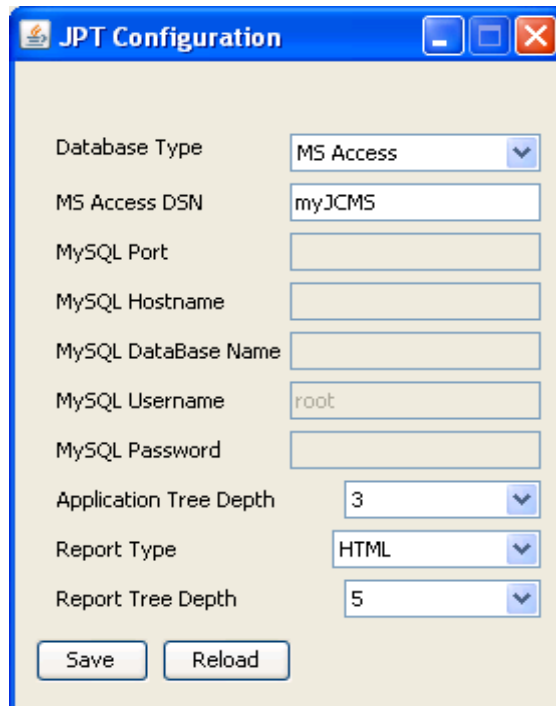
Click OK again.



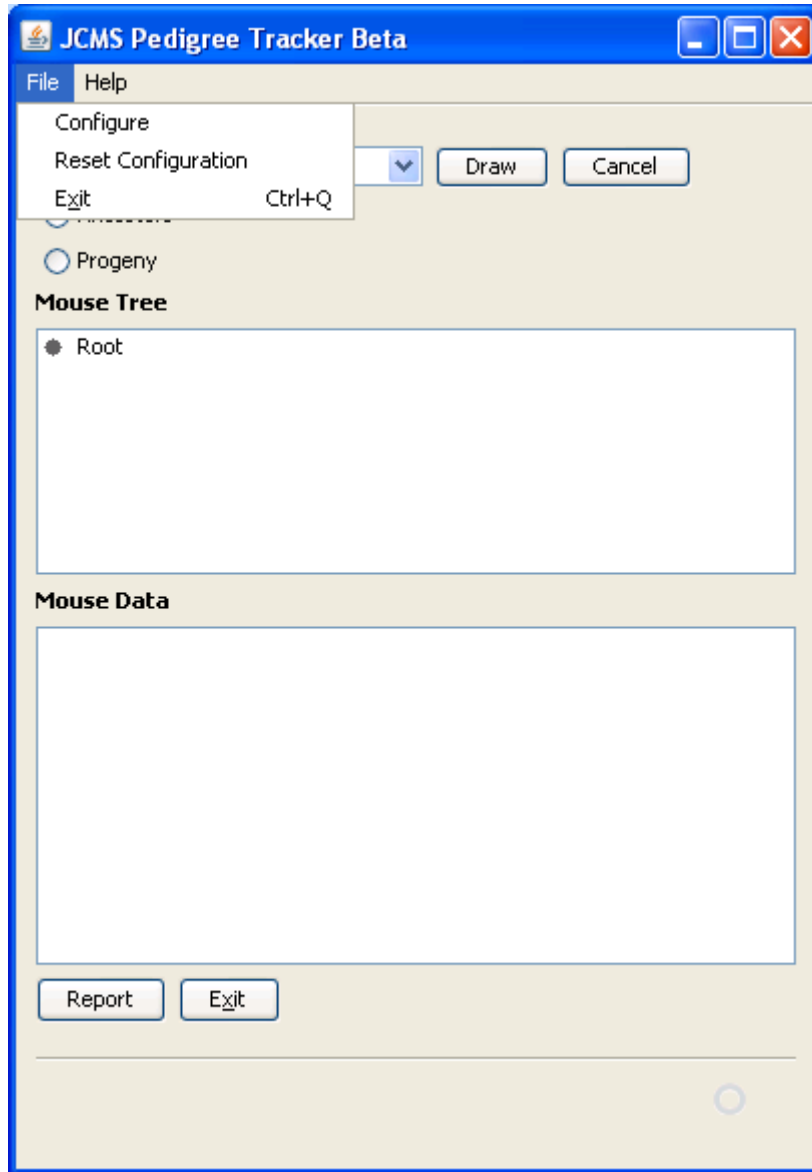
Now you have configured you MS Access DSN name, “myJCMS”. To use this launch the JPT application and under the File menu click Configuration!

Select the Database Type “MS Access” and supply “myJCMS” for the MS Access DSN.

Click Save and click the X box in the upper right hand corner.



Back at the main program window, select File -> Reset Configuration. The jpt is now configured and utilizing the configuration you created.



2 Configuring a MySQL database

Open the configuration form under the File -> Configuration menu.

The screenshot shows the 'JPT Configuration' dialog box with the following settings:

- Database Type: MySQL
- MS Access DSN: (empty)
- MySQL Port: 3306
- MySQL Hostname: localhost
- MySQL DataBase Name: jcms_db
- MySQL Username: root
- MySQL Password: (masked with dots)
- Application Tree Depth: 3
- Report Type: HTML
- Report Tree Depth: 6

Buttons at the bottom: Save, Reload

Configure Port Number, Hostname, Database Name, Username to access the database and their password. When you utilize localhost as the hostname that implies you are using the database on your local machine. If you are attempting to connect to a MySQL database on another computer, you will follow the same steps but provide the computer name for the hostname. The example below is attempting to connect to a computer know as amy. If at any time you forget your setting and would like them to default back to the value when you start simply press, "Reload".

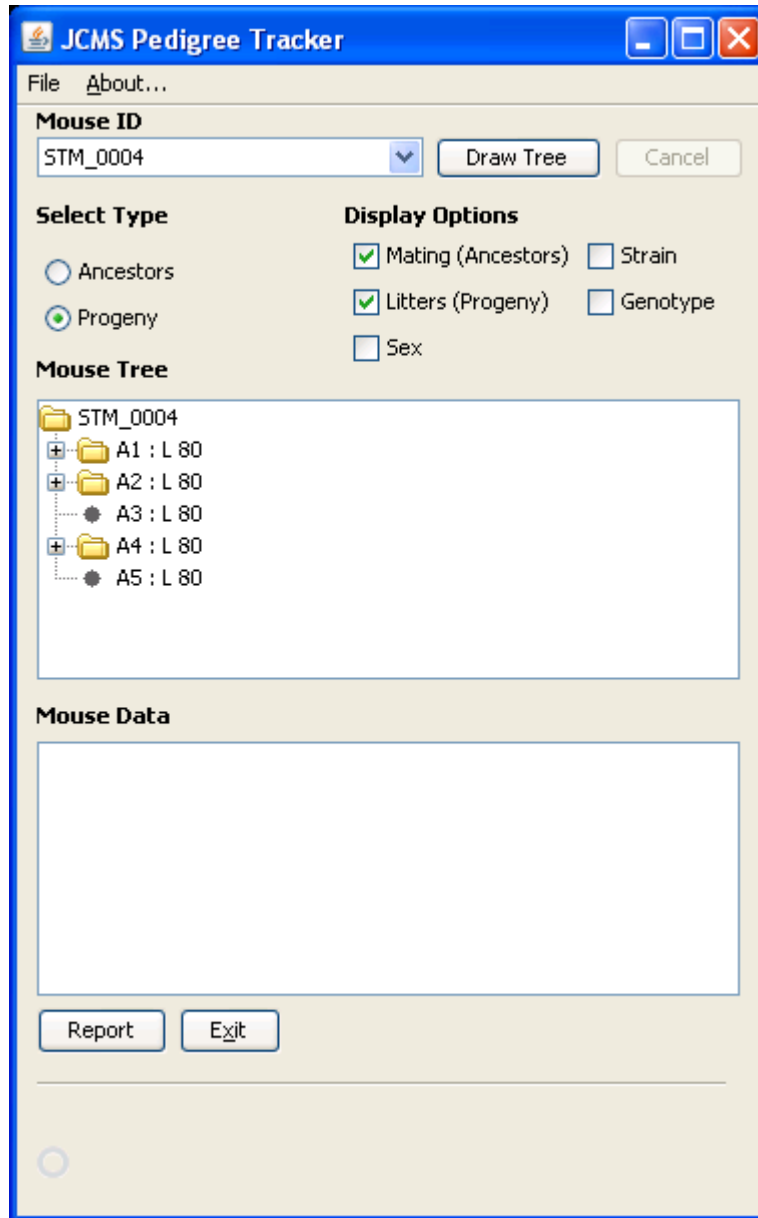
The screenshot shows the 'JPT Configuration' dialog box with the following settings:

- Database Type: MySQL
- MS Access DSN: (empty)
- MySQL Port: 3306
- MySQL Hostname: amy
- MySQL DataBase Name: jcms_db
- MySQL Username: root
- MySQL Password: (masked with dots)
- Application Tree Depth: 3
- Report Type: HTML
- Report Tree Depth: 6

Buttons at the bottom: Save, Reload

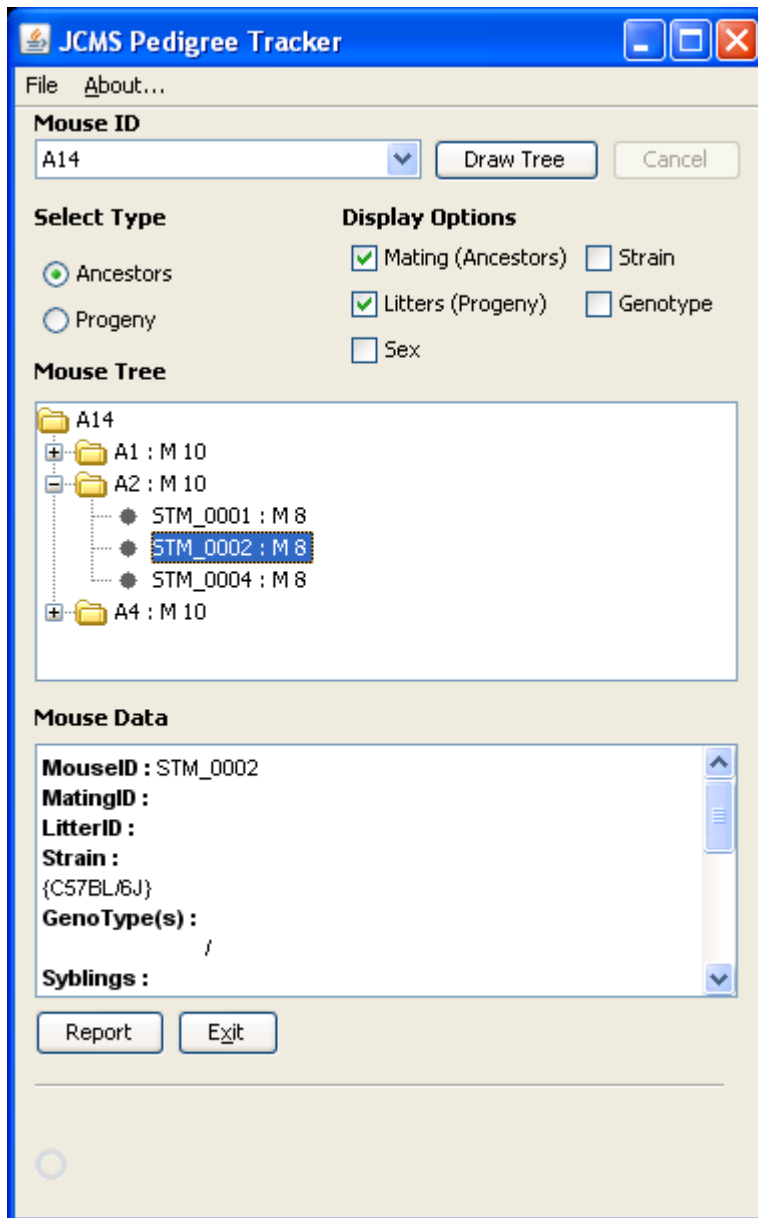
3 Search for mice

Select a mouse from the Mouse ID pull down list.



Select Progeny Radio Button.

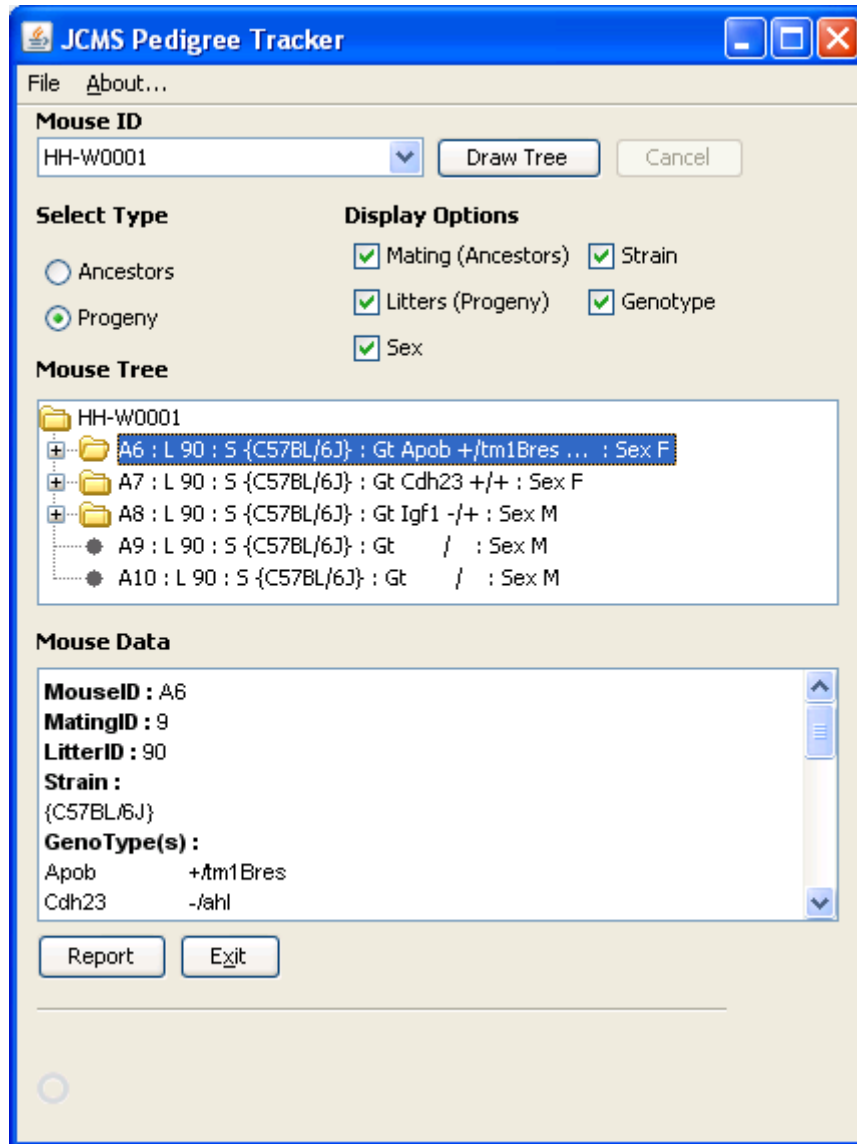
Click the Draw button.



Notice that the resulting Nodes are comprised of the MouseID and Litter ID.

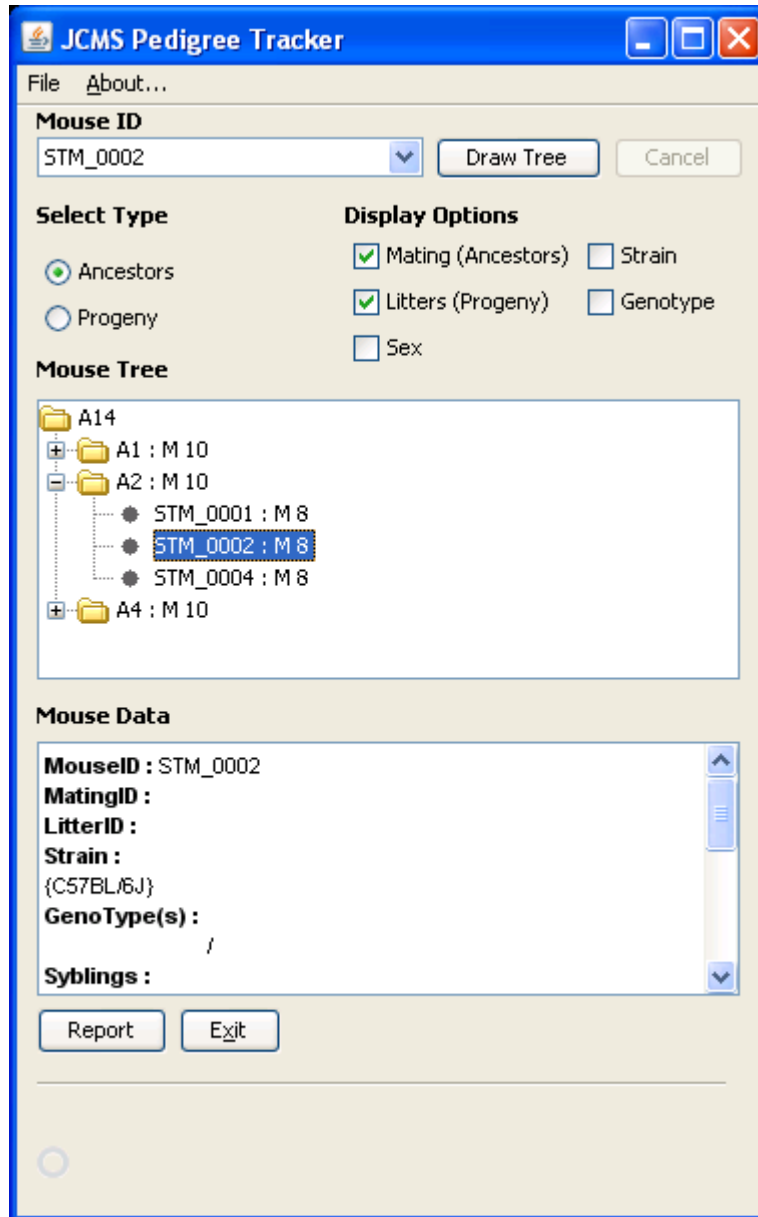
TreeNode = "MouseID: L LitterID"

To Retrieve Data for a mouse, select a node in the tree.



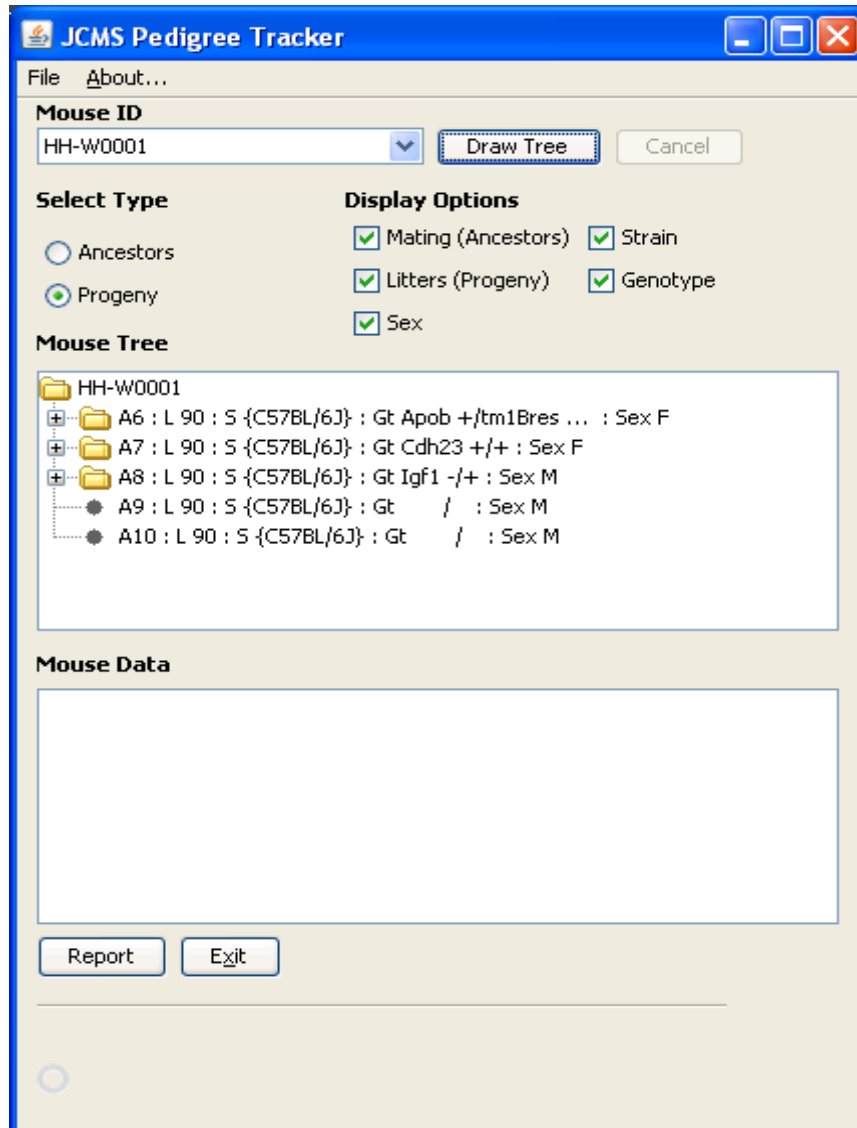
Review the data about the selected Mouse in the Mouse Data window.

Double Click on a Mouse ID, this will populate the Mouse ID.



Select Ancestors radio button.

Click Draw



Notice A6 has “...” after its genotype signifying more than one Genotype is associated with A6. You will need to select that ID and view the genotypes in the Mouse Data window.

Mice A9 and A10, have not been genotyped and the genotype is left blank.

The mouse tree nodes for an Ancestors tree comprise of the mouse ID and the Mating ID.

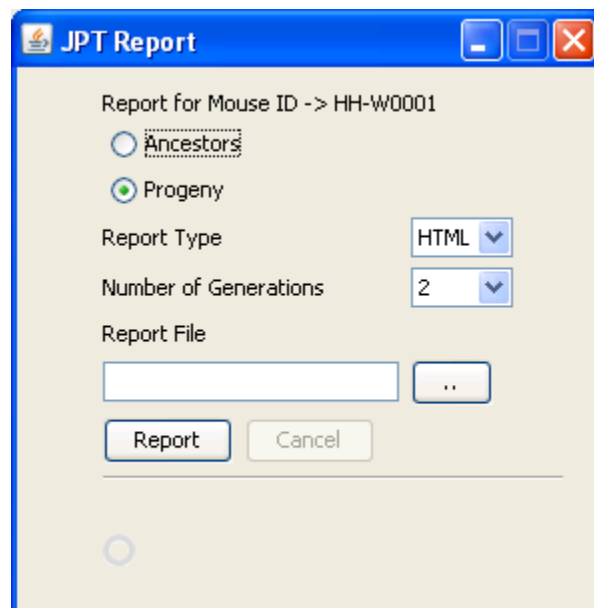
TreeNode = MouseID : M MatingID

To create reports click the report button.

The report will be for the mouse ID currently in the Mouse ID Drop down list.

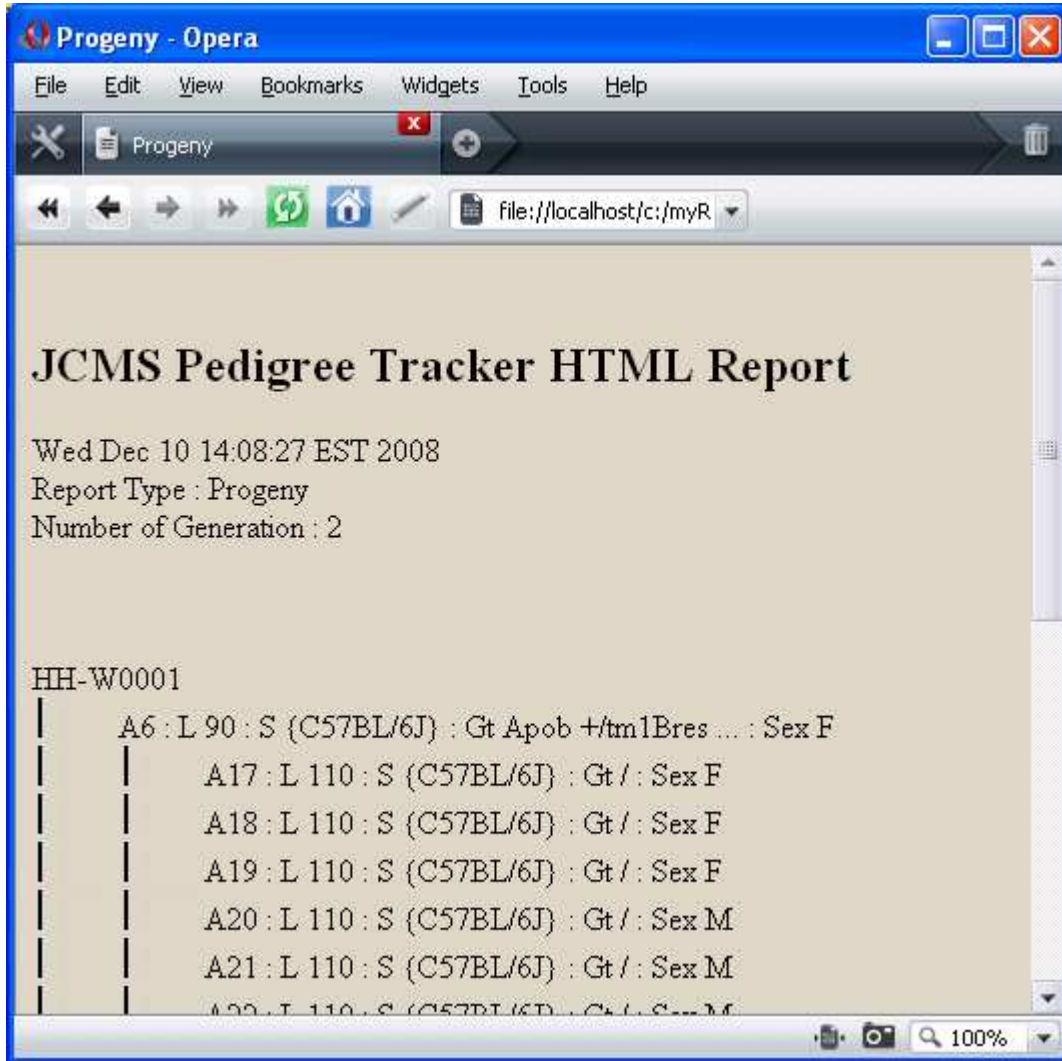
Select options and provide a file to write to.

Click Report



Open the file you just wrote in a web browser.

Note the TreeNode items comprise the same information as in the Mouse Tree.



4 Trouble Shooting

4.1 Do not have permission to the database tables

The basic problem is the Admin user for access does not have permissions to your database tables. This problem quickly resolved by adding the permissions to all the tables in your database.

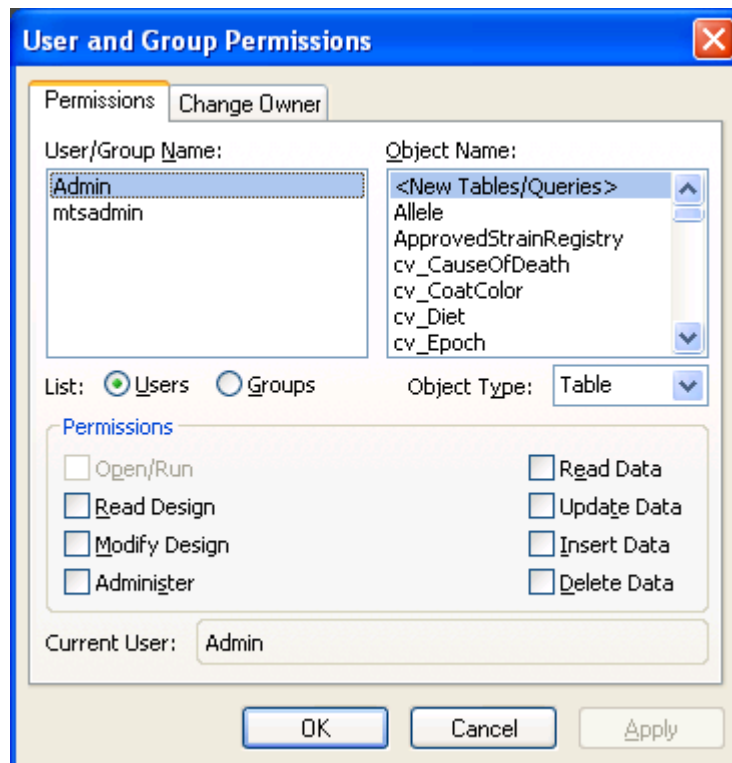
The following instructions are for Office 2007, they will work on Office 2003 but may have a different path the “Users and Group Permissions” dialog.

Navigate to your jcms_db.mdb database and open it.
Typically found in

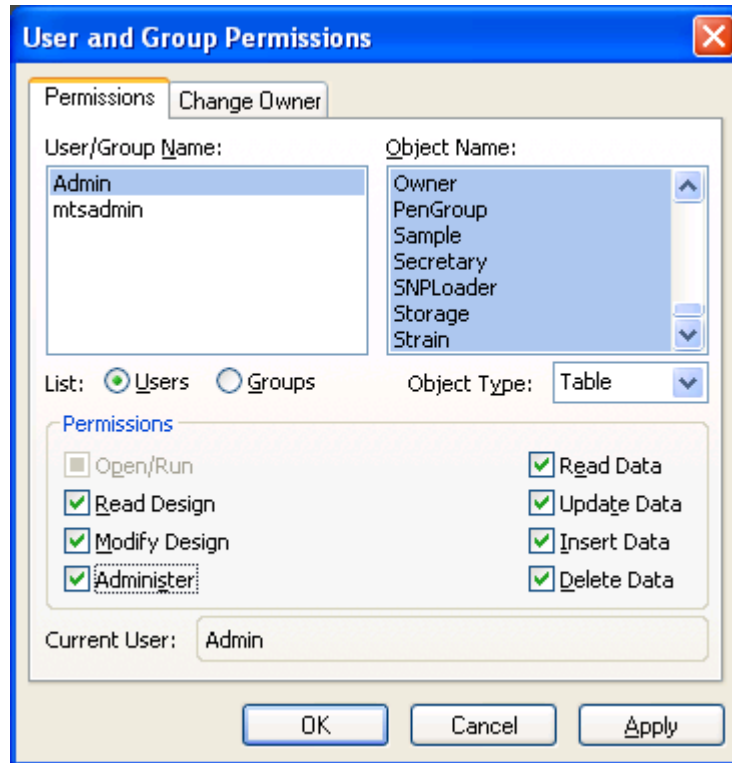
"C:\Program Files\The Jackson Laboratory\JAX-CMS\database"

When prompted for a user use Admin and the corresponding password.

Select the Database Tools Tab,
Then select “Users and Group Permissions”.



Select the Admin user
 Select all Objects
 Select all Permissions



Click Apply
 Close the Access database.

Open JPT and you should connect to the database this time.