Creating Your ForestGEO MySQL Database

In order to create a MySQL database specifically for your plot, you will need to have Apache and MySQL installed on your computer. If you need to download these systems you can do so by installing XAMPP.

XAMPP
XAMPP is a free, easy to install Apache distribution containing MariaDB (MySQL Fork), PHP, and Perl.

HOW TO: Install XAMPP on Your Computer

1. Download the latest version of XAMPP: https://www.apachefriends.org/index.html

2. After the download, execute the setup file by following the prompts of the XAMPP Setup Wizard.

3. Select the components to install. Apache, MySQL, PHP, and phpMyAdmin are required. All others are optional.

4. Select the location for installation. If you don't have a preference, keep it as default.

5. Continue moving through the prompts, and you'll reach the installation.

6. After installation, Windows users will receive a security alert. Click "Allow access."

7. Uncheck "Do you want to start the Control Panel now?" and hit "Finish."

8. Search for XAMPP on your computer and right click to select "Run as administrator."

9. Click on the check boxes under "Service" for Apache and for MySQL, then click "Yes" in the confirmation pop-up windows. This will install services for both servers, which will allow both servers to start automatically at reboot:

10. After installing services, click "Start" action buttons to start Apache and MySQL:

11. Open a browser and type "localhost." If XAMPP was installed properly, you will see the following page:

HOW TO: Install XAMPP on Your Computer (cont'd)

12. Click on "phpMyAdmin" to see your where you will find your database once it has been created.

> *NOTE*: For Windows users only: Do NOT use a case-sensitive name. To preserve the lettercase of database and table names:
>
> 1. Open your MySQL configuration file:
>   `[drive]\xampp\mysql\bin\my.ini`
>
> 2. Look up for:
>   `# The MySQL server [mysqld]`
>
> 3. Directly beneath # The MySQL server, add:
>   `lower_case_table_names = 2`
>
> 4. Save the file and restart MySQL service.

ctfsweb, a Setup Data Entry and Reporting Tool

ctfsweb is a web application written in MySQL, PHP, etc. that has been tailored to ForestGEO's needs. Some data managers will use it to enter data directly from paper field sheets. All data managers will use it to upload data from text files into the database, to screen for errors, and to create View tables – that is, to populate their MySQL databases.

HOW TO: Create Your MySQL Database and Install ctfsweb on Your Computer

* You can access the ctfsweb download package via this [link](#).

1. Create "db_webuser" database:
   a. Use phpMyAdmin to create a new database called "db_webuser."
   b. Use the "ctfsweb_webuser.sql" file included in the download package to create the required metadata tables. If you have a different user other than "root," please update the "DEFINER" information to the correct user:
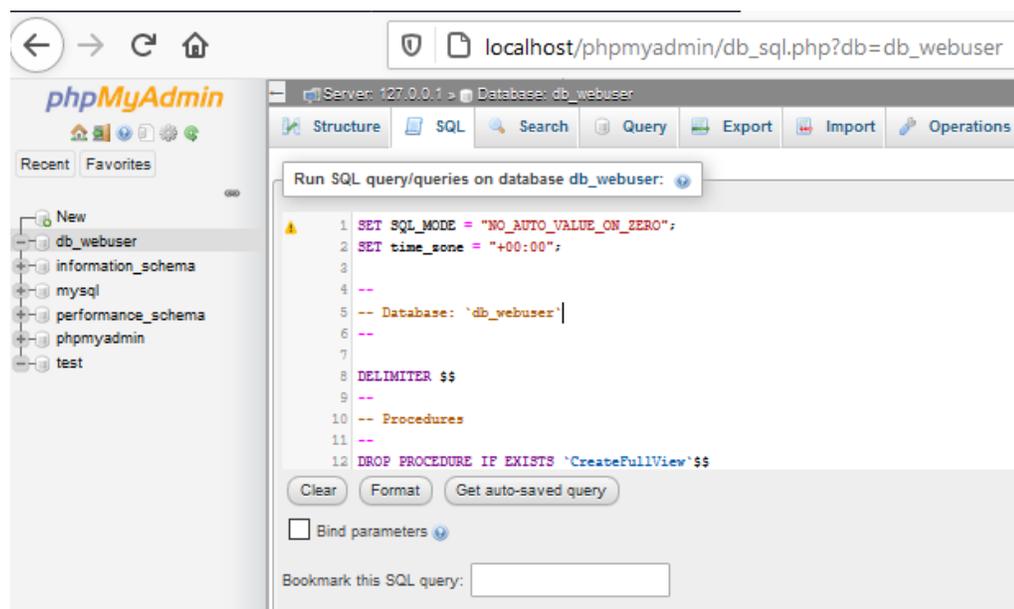
HOW TO: Create Your MySQL Database and Install ctfsweb on Your Computer (cont'd)

2. Create the site database:
    a. Open a MySQL console:
        i. On your Desktop, click on "Start," then "Run." Or alternatively, go to the search box in the taskbar.
        ii. Type `cmd`, then click on "OK."
        iii. In the DOS window, navigate to the MySQL folder by typing `cd\xampp\bin\mysql`
        iv. Go into MySQL by typing `mysql -u root` (and if it asks for a password, just press [ENTER] – no password is needed).

NOTE: If you are an administrator of your computer, if the XAMPP directory is not in your DOS path, and if you want to be able to call up MySQL anywhere, carefully do the following:
    - Go to your System Settings.
    - Type `env` in the Search box.
    - Select: "Edit the system environment variables"
    - Click on "Environmental Variables" (in the bottom).
    - In "System Variables" in the second window, scroll to "Path"
    - To the end of the existing path, add `;C:\xampp\bin\mysql`

    b. Type the following in your open MySQL terminal, remembering that:
        i. the names of the databases and the tables are case-sensitive.
        ii. you will replace "current_yoursitename" with the name of your database, e.g. "current_bci."
    `MySQL > CREATE DATABASE current_yoursitename;`
    `MySQL > USE current_yoursitename;`

    c. If you already have a database that you dumped (i.e. backed up), source that file, inserting your path-to-file and your site name, noting that your path cannot contain spaces:
    `MySQL > SOURCE/path-to-file/yoursitename.sql;`

    d. If you are not migrating data from an old database structure, insert empty tables into the database using the script called "New_Database_Structure.sql:"
    `MySQL > SOURCE New_Database_Structure.sql;`

    Enter the complete taxonomic family and genus names according to the APG system into the Family and Genus tables:
    `MySQL > SOURCE Family.sql;`
    `MySQL > SOURCE Genus.sql;`

3. Copy the "ctfsweb" folder from the ctfsweb download package to "..\xampp\htdocs\"

4. Open the file "..\ctfsweb\application\config\database.php" to begin updating the database configuration file.

5. Do NOT EDIT the first set (db1) except for the username and password, if different.

6. Use the following set of code for each site database that you need to link with the system, replacing "db_bci" with the name of your database, and "bci" with the name of your site. This database name will be required in the next step to add to the list of databases. Replace the username (and password) if different from "root" (if you added a password).

    [code follows on next page]

HOW TO: Create Your MySQL Database and Install ctfsweb on Your Computer (cont'd)

6. Code, as described on previous page:

```
$db['db_bci'] = array(
        'dsn'   => '',
        'hostname' => 'localhost',
        'username' => 'root',
        'password' => '',
        'database' => 'bci',
        'dbdriver' => 'mysqli',
        'dbprefix' => '',
        'pconnect' => FALSE,
        'db_debug' => (ENVIRONMENT !== 'production'),
        'cache_on' => FALSE,
        'cachedir' => '',
        'char_set' => 'utf8',
        'dbcollat' => 'utf8_general_ci',
        'swap_pre' => '',
        'encrypt' => FALSE,
        'compress' => FALSE,
        'stricton' => FALSE,
        'failover' => array(),
        'save_queries' => TRUE
);
```

7. Copy the set of lines in "6" for each site database connection.

8. Open link: http://localhost/ctfsweb/index.php/admin

9. Use the password "local@admin" to login to the panel.

10. Add plot information:
    - <u>Plot Name</u>: This is the site/database name that will be displayed in the dropdown menu on the login panel.
    - <u>Database Name</u>: This is the name you used in step 6 in place of "db_bci."
    - <u>Version of Database</u>: Select "New." The "Old" version is not used anymore.

12. Add user information:
    - <u>Username</u>: Username for the login system. Use different username for different users.
    - <u>Password</u>: Password for the login system. Use different passwords for different users.
    - <u>Database Name</u>: Select the database name from the list of databases you added in step 11.