Section 4 - Species Management Exercises

The goal of these exercises is to describe using the basic functionality of FFI Species Management.

FFI uses information provided in the NRCS PLANTS database (https://plants.usda.gov/) as the "master list" for recording plant species data. The PLANTS database includes scientific name, common name, species symbol code, taxonomic serial number (TSN). lifeform, lifecycle and other information for the more than 80,000 records managed in PLANTS. When recording a species in FFI it will be entered via a dropdown list in the protocol *Species* field. You don't want to have to scroll through more than 80,000 records in the *Species* dropdown every time you enter a new species so you will create a "local species list" that includes only the species you are likely to encounter when monitoring. The local species list is a subset of the NRCS PLANTS master list that you build by selecting records from the master list and it is dynamic – it will be modified over time as you encounter new species and replace species symbols to keep up with species name changes made by taxonomists. Local species lists are saved at the Administrative Unit level so, if you have more than one Administrative Unit in your database, you will have a local species list for each one. The Species Management exercises describe how to populate the local species list in your Administrative Unit.

In these exercises you will:
1) Add Species from the master list (PLANTS) into the FFI local species list
2) Edit Local Species
3) Add User Species and a "placeholder"
4) Add Unknowns
5) Create Picklists

Exercise 1: Add Species from Master (PLANTS) List

Before you do any data entry you must create a **local species list**. The local species list may include one or all of the following:

- Plant symbol codes assigned by the Natural Resources Conservation Service (NRCS) PLANTS database,
- User codes you make up yourself
- "Unknown" codes

The local species list you create will be based on local knowledge or from a survey of the field data forms. New species can be added to the local list as they are encountered later.

Species Management Exercises

 1.1 Log into the *FFI_Class* database you created in Database Setup exercise, click on the **Species Management** navigation bar at the lower left. A progress bar may display briefly as the master species list is loaded and then the **Species Management Details** window will open.
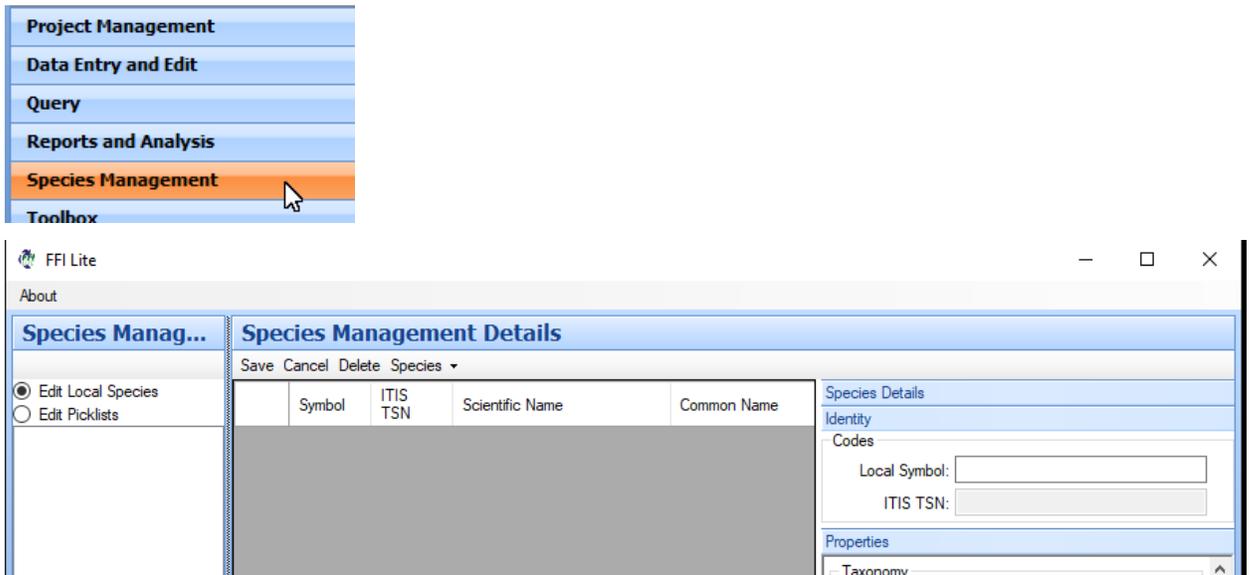
1.2 In the **Species Management Details** window, select **Species>Add from Master list**.
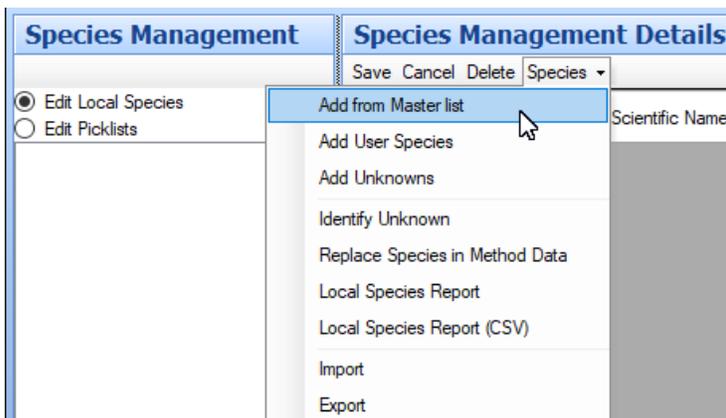
1.3 The **Local Species Creator** form opens. You can select species either by scrolling through the complete PLANTS list or by filtering the list.

NOTE: Click on any column heading to order that column alphabetically. Drag and drop column headings to change the order in which the columns appear.

1.4 Add a species. To add species by filtering, enter your filter criteria: *Scientific Name* or *Common Name*, NRCS plant *Symbol*, or taxonomic serial number (*TSN*). To add the first record to the local species list, type *symphoricarpos%* in the **Scientific Name** field. The wildcard symbol (%) expands the search to include all species of the genus Symphoricarpos. Click **Apply Filter** and click the row for *SYAL* to highlight it. Click **Add** to add the species to the FFI local species list.
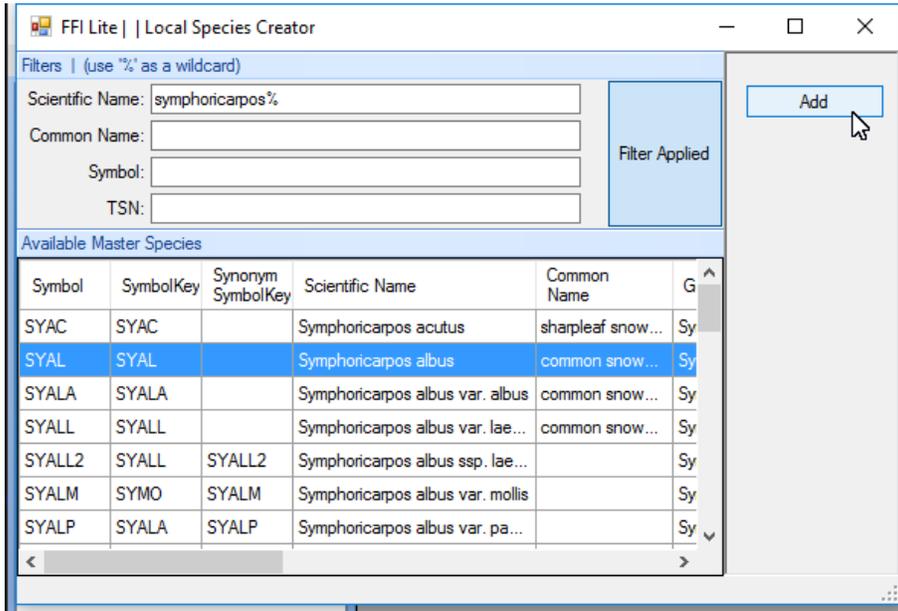
1.5 The record for *SYAL* is removed from the **Local Species Creator** and is added in the **Species Management Details** pane.

Species Management Exercises

1.6 <u>Add a genus record</u>. The master list contains records for some genera. Delete *symphoricarpos%,* enter *picea%* in the **Scientific Name** field and click **Apply Filter**. If a record is present for the genera, it will be in the list but may be hard to find because of all the records that match the search. Click the **Scientific Name** column heading name to sort the column and the genus record will move to the top of the list (a triangle is added on the right side of the column header when the column is sorted).
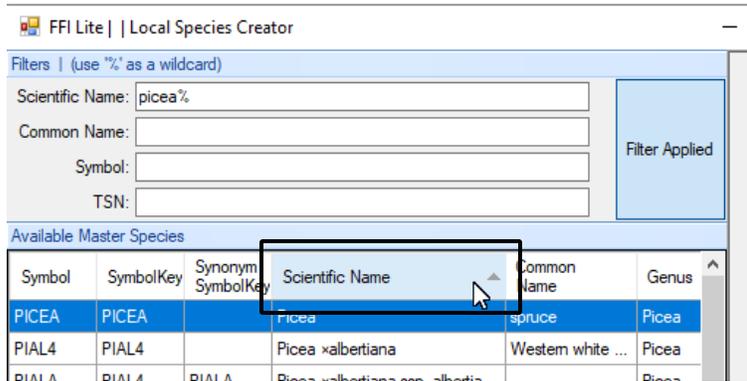
1.7 If it is not already highlighted, click the row for *Picea* and click **Add**.
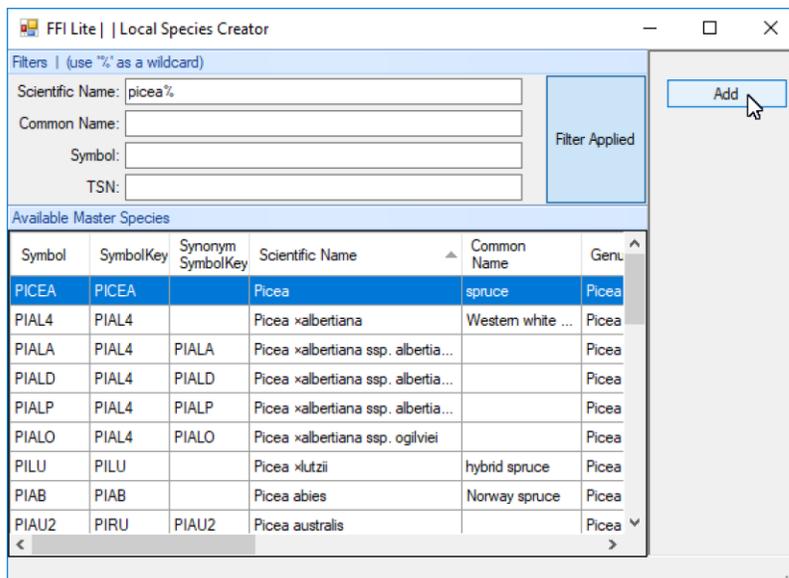
1.8 Add a non-genus identifier. The PLANTS database contains a series of codes, prefaced with the number *2*, for non-genus groupings of species and for substrates. Delete *picea%* from the **Scientific Name** field and the list will re-sort with the non-genus records at the top (or sort the **Symbol** column to move them into view). Scroll down (or search the **Symbol**) to find *2FORB*, highlight the record and click **Add**.
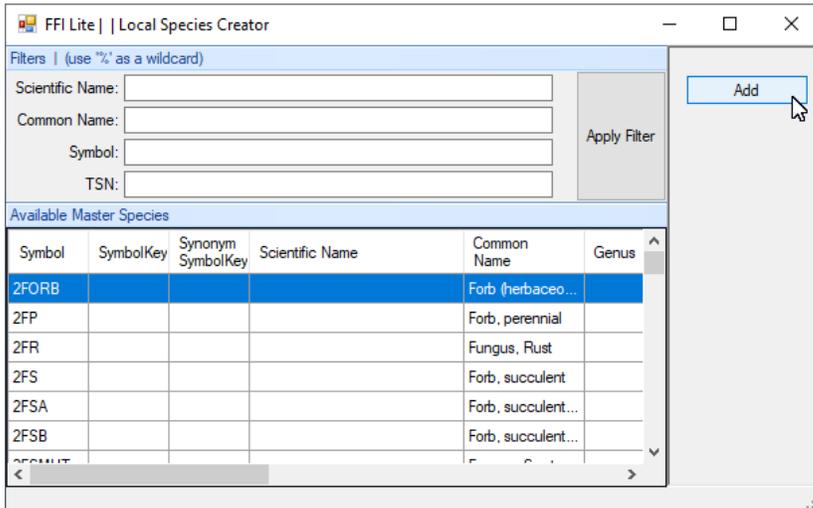

1.9 Experiment with filtering and sorting using the **Symbol** filter field as you add the remaining symbol codes for this exercise:

  PIPO, PSME, ARUV, VAGL, BERE, ARTR2, CEBI2, JUOC, AGSP, 2GRAM

NOTE: The PLANTS database contains over 80,000 records. Pick your filter criteria with care and be prepared to wait a moment or two for the command to be executed.

1.10 When you are finished adding symbol codes, click the X in the upper right of the **Local Species Creator** window. Click **Save**.
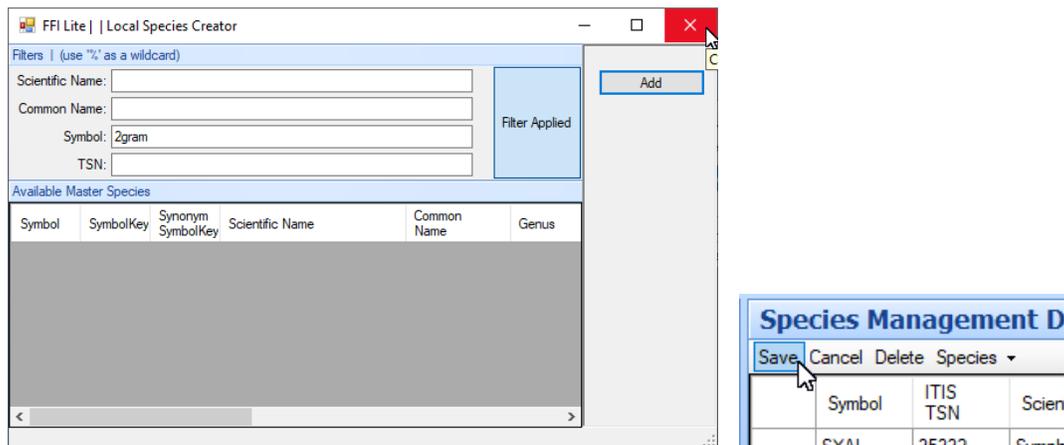
Species Management Exercises

Exercise 2: Edit Local Species

You can edit certain attributes for species added from the master list.

2.1   In the Species Management Details window, select *BERE*, the species to be edited. *BERE* is not the PLANTS preferred symbol code, therefore, **Common Name, Lifecycle** and **Lifeform** are not populated. Under **Local Characteristics**, enter *Oregon grape* as the **Common** Name, set **Lifecycle** to *Perennial* and **Preferred Lifeform** to *Subshrub*. Click **Save**.


The Local Characteristics can be set to something different than what is included in the master list. This allows you to do things like change the Potential Lifeform from *Tree* to *Shrub*. Unfortunately, you cannot have entries for one species with two lifeforms. If this is desired, consider using a User Species code (described in the next exercise) that clearly indicates the lifeform. You may edit the local characteristics at any time (before or after data collection) and they will stay up-to-date in the data entry screens. At analysis time, it will be important to be sure your local characteristics are populated because you may want to group or filter by them – for example, to calculate cover by lifeform, you must have the Preferred Lifeform populated for all the species you want included in the report.

Species Management Exercises

Exercise 3: Add User Species

You can easily add species that occur locally but that are not found in the PLANTS master list. Also, you may prefer to create your own identifiers that represent substrates, (e.g., *Gravel*), genera (e.g., *Salix*), or other groupings (e.g., *Fern*), instead of using those provided in the master list.

3.1 Select **Add User Species** in the **Species** pull-down menu.
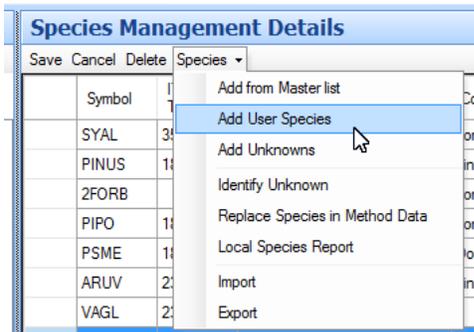
3.2 A new row with the **Symbol** set *XXXX* is added at the end of the local list.
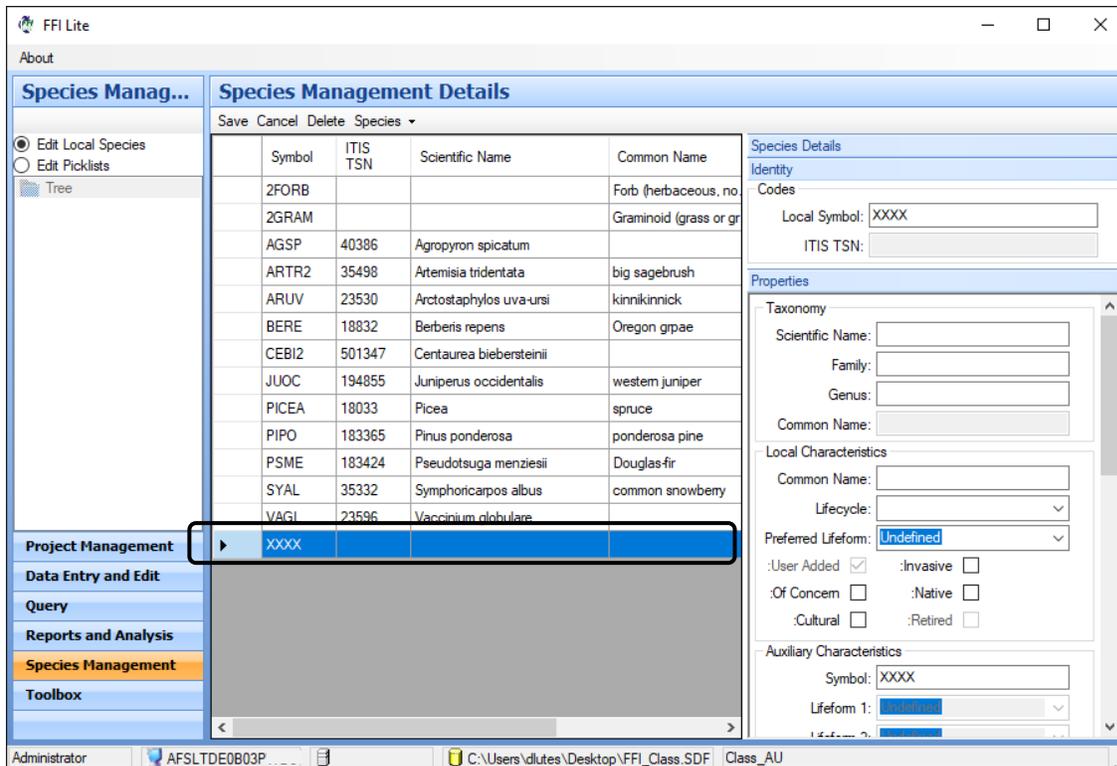
Species Management Exercises

3.3 Enter the **Local Symbol** *GRASS*. Set the **Common Name** to *Perennial Grass*, the **Lifecycle** to *Perennial*, the **Preferred Lifeform** to *Graminoid*, and the **Symbol** (under **Auxiliary Characteristics**) to *GRASS*. Click **Save**.
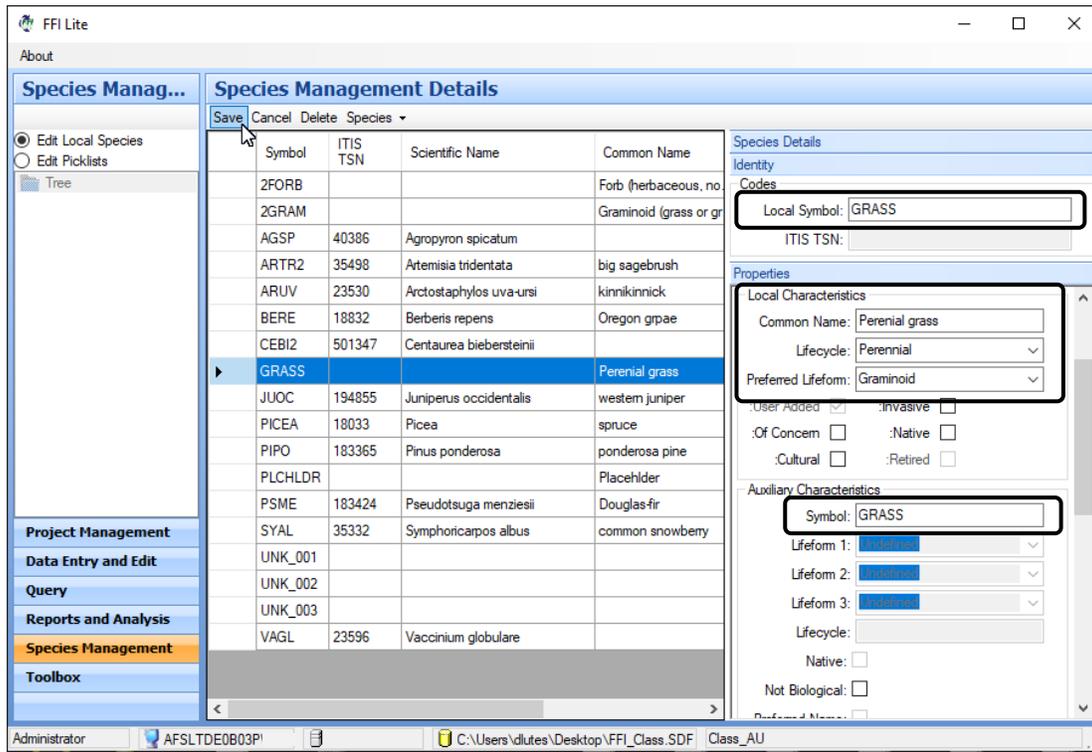
NOTE: It is good practice to add a "placeholder" user species symbol code. This code is used when you are entering data and realize, in the middle of the record, that a species code on your data sheet hasn't been added to the local species list. When this happens, you can select the placeholder code in the protocol, finish entering the record and save it. Then immediately go into Species Management*, add the correct species code, go back to* Data Entry and Edit *and replace the placeholder with the correct species code. You can use any symbol code you want but it should be sufficiently different from other symbols in your local list that you won't use it by mistake. The image below shows the code* PLCHLDR *with the scientific and common name entered as* Placeholder*.*

Exercise 4: Add Unknowns

An 'unknown' is a symbol that can be used to record a species you cannot identify in the field. The symbol can be updated to the correct symbol when the plant has been identified. FFI lets you easily create unknowns and update the symbol when the plant has been identified.

4.1 In the **Species Management** window, select **Species>Add Unknowns**.
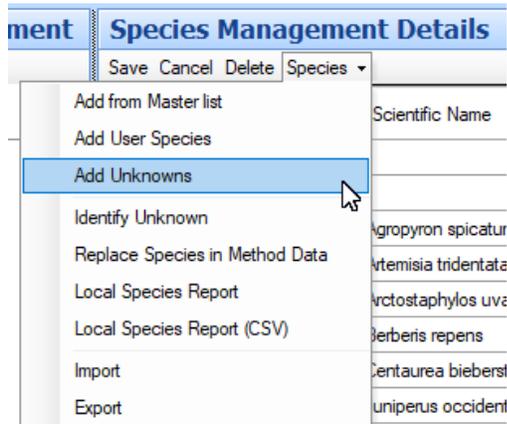
4.2 In the **Add Unknowns** pop-up window, enter *1* for the **First number** and *3* for the **Count**. Click **OK**.
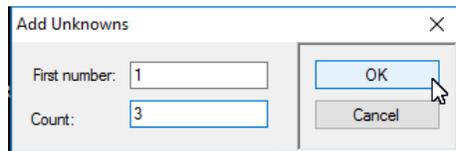

*NOTE: If you accidentally add too many unknowns, click **Cancel** on the main species form and start over.*

Species Management Exercises

4.3 Your local species list should look similar to this:
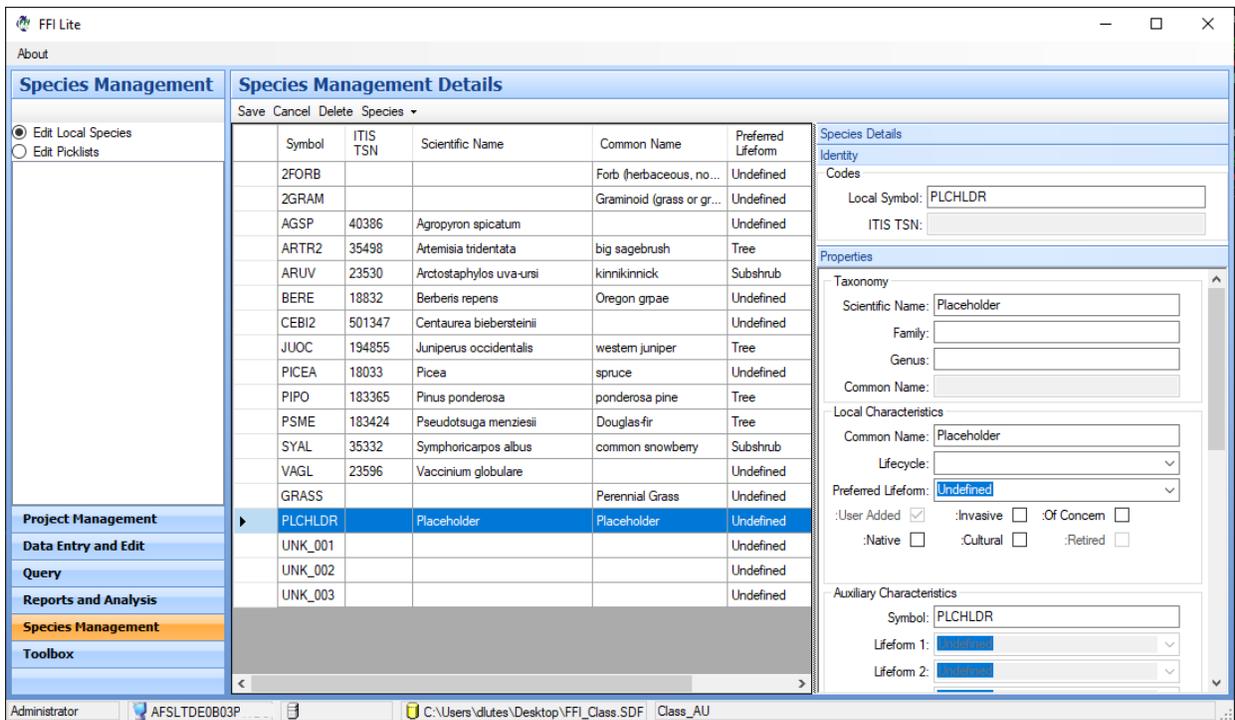
NOTE: The process of creating a local species list from scratch can be a little daunting. Remember you can add new species to the local species list at any time so don't feel like all species codes need to be entered right away. Start with the species you see most often. Also, if you know other FFI users in your area you can ask them to export their species list and then you can import it into your database. Both these functions are available on the Species menu in Species Management.
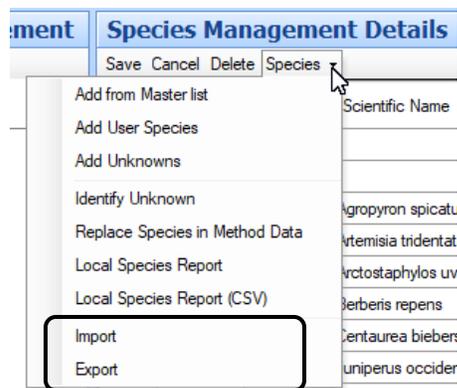
Exercise 5: Create Picklists

A picklist is a subset of the local species list and typically used to limit the number of species codes available in the *Species* and *Item* data entry fields. For example, you can create a picklist of only tree species to be used with the Trees protocols. You can create as many picklists as you can manage. FFI lets you easily create, manipulate, and delete picklists.

5.1   To reach the picklist functions, click the **Edit Picklists** radio button in the **Species Management** window.

(The screen looks a little odd the first time you do this because both panes go blank. After you create your picklists, they will display here.)

**5.2**   On the **Picklists** menu, select **New**.
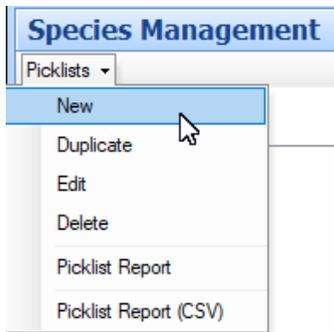
5.3   The **Picklist** properties form opens. Name the new picklist *Trees*. Click **Save & Close**.
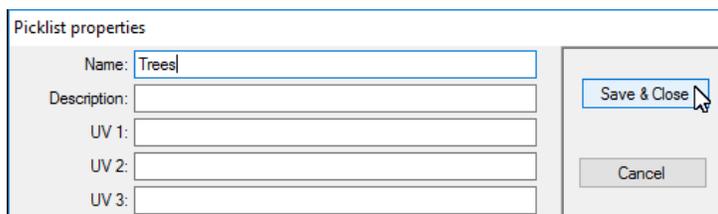
Species Management Exercises

5.4 The panes now display your new picklist, and lists of available and assigned species. Highlight the species *PIPO, PSME, JUOC*, and *PICEA* on the left one at a time and click the

> button to move them to the right. Click **Save**.
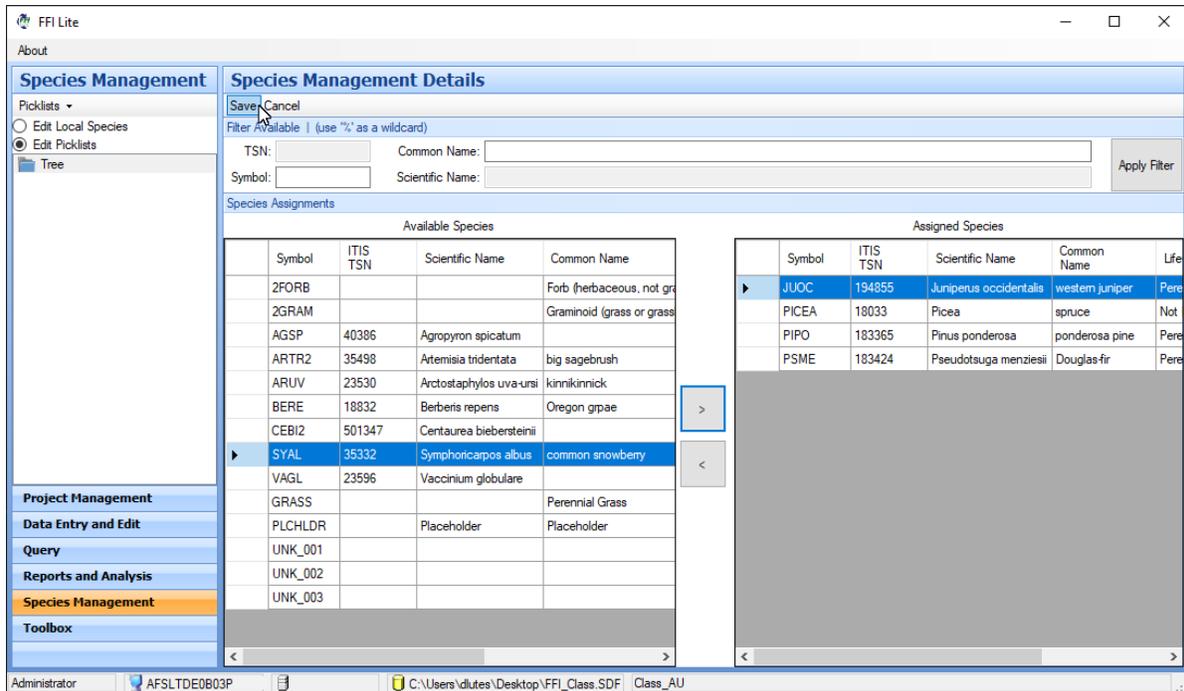
5.5 The Data Entry exercises will demonstrate the *Identify Unknown* and *Replace Species in Method Data* features of Species Management, and how to delete unused species symbol codes. See the **FFI User Guide** for a description of the other options on the Species menu.