QGIS Point Class Assigner Plugin User's Guide

Version 1.0 (April 2015)

1. About the Point Class Assigner Plugin

This QGIS plugin is designed to improve the work flow when identifying cover types under a point and adding that information to a point vector file's attribute table. The resulting point file can be used to train or validate a classified map. The plugin was developed and tested using QGIS 2.4.

2. Installing the Point Class Assigner Plugin

The plugin is distributed on GitHub and can be downloaded as a ".zip" file by clicking on the "Download ZIP button on this page: https://github.com/persts/QGISPlugin-PointClassAssigner. First uncompress the "zip" file and place the resulting directory and all of its contents to the .qgis2/python/plugins directory. In windows this is usually located under the user's home directory. You will need to edit the directory name to remove the two "-" characters. For example, you could rename the directory from "QGISPlugin-PointClassAssigner-master" to "PointClassAssigner".

To activate the plugin start QGIS then open Plugins => Manage and Install Plugins and click on the "Installed" icon on the left side of the "Plugins" window then look for "PointClassAssigner" and click on the square to the left of the plugin name so an "X" appears in the check-box. Close the Plugin window.

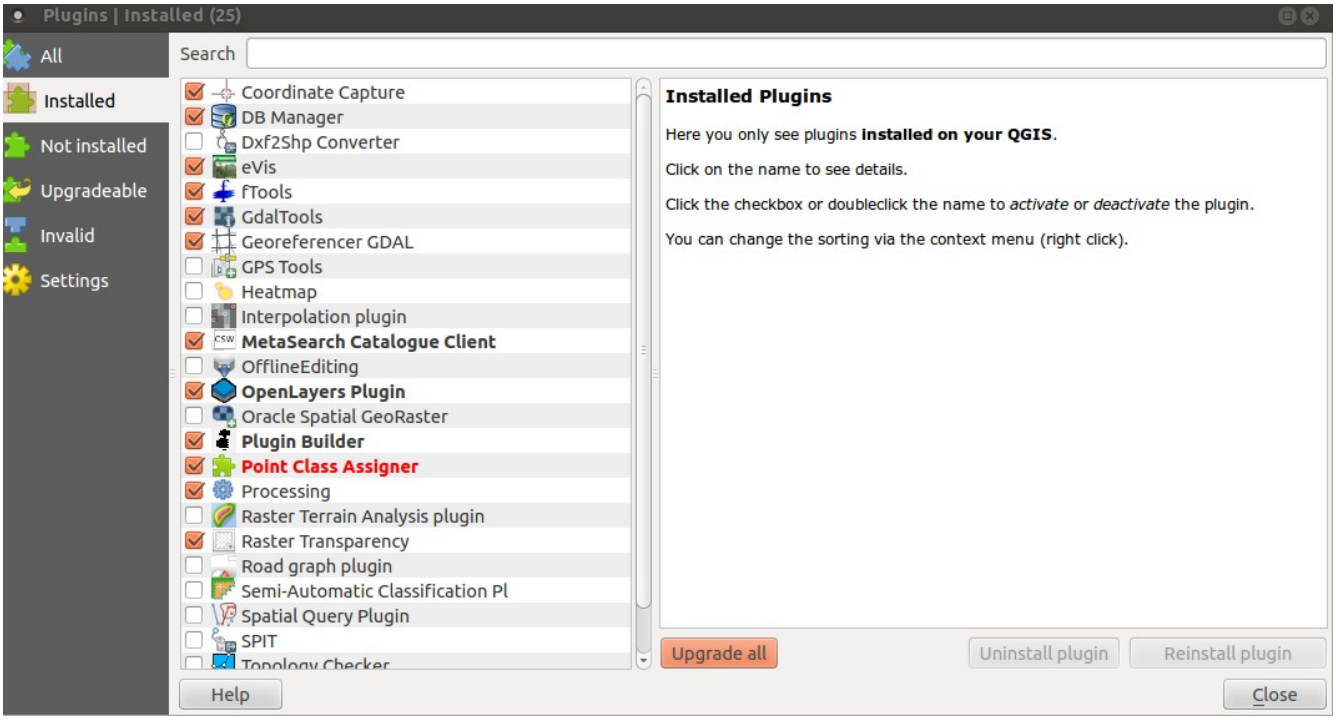

Figure 1: QGIS Plugin interface

3. Running the Point Class Assigner Plugin

Before starting the plugin you need to have a point vector file loaded in QGIS. In most cases you will also want to have an image that will be used to provide the cover information necessary to describe the area under and around the point. The image can come from a file on your computer or you can use the QGIS OpenLayers Plugin to use an online map such as Google or Bing maps.

The point file will have sample points and that can be created using the tool of your choice. Both QGIS and R have flexible tools to create sample point layers that meet specific project requirements.

To start the plugin click on Plugins => PointClassAssigner => PointClassAssigner and if you have a point layer displayed you will see the “PointClassAssigner Configuration” window.

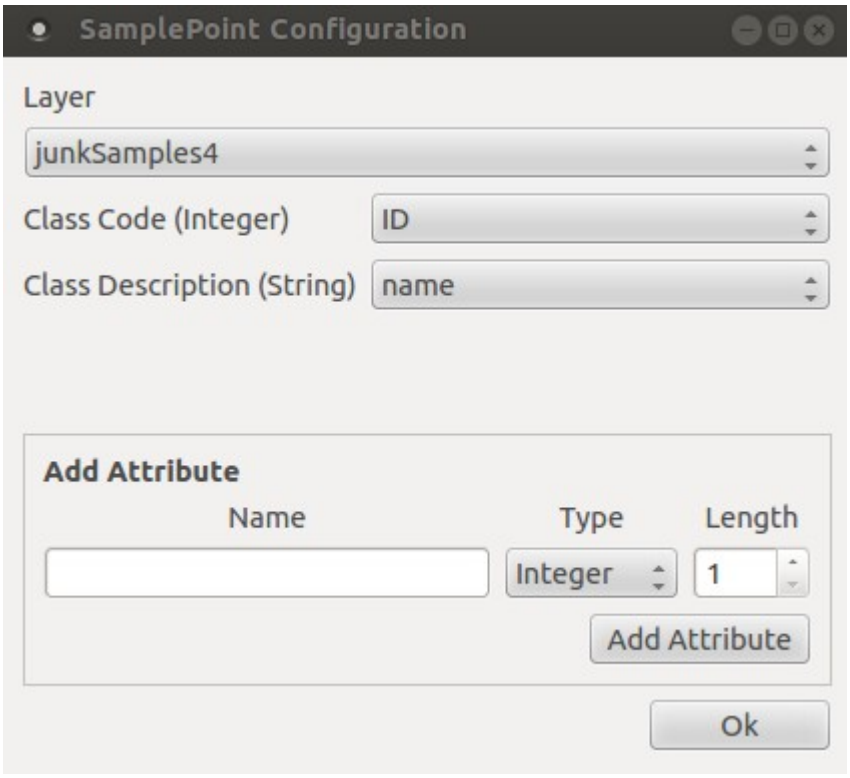

Figure 2: Point Class Assigner configuration window

In most cases the user will want to enter an integer “Class Code” and a text “Class Description” to describe each point. The class code is used by the computer to associate each point with a class and the text description is helpful for users to read the attribute table. If the point file does not have an integer and text field defined for this purpose the PointClassAssigner

Configuration window has an “Add Attribute” section so you can add attribute fields.

To add an attribute field name type in the name in the “Name” text box then select either “Integer” or “String” from the “Type” drop-down menu and enter the maximum length for the field. Integers from 0 to 9 have a length of 1 and 10 to 99 have a length of 2. For a string the “length” is maximum number of characters you would want to enter in that field. For example, “non-forest” has a length of 10. When the information is entered click on the “Add Attribute” button and then the attribute name will appear in the appropriate drop-down menu for “Class Code” or “Class Description”.

Verify that the correct values are selected from the “Class Code” or “Class Description” drop-down

menus then click the “OK” button. This will open the Attribute Editor window which is the interface you will use to enter attributes for each point.

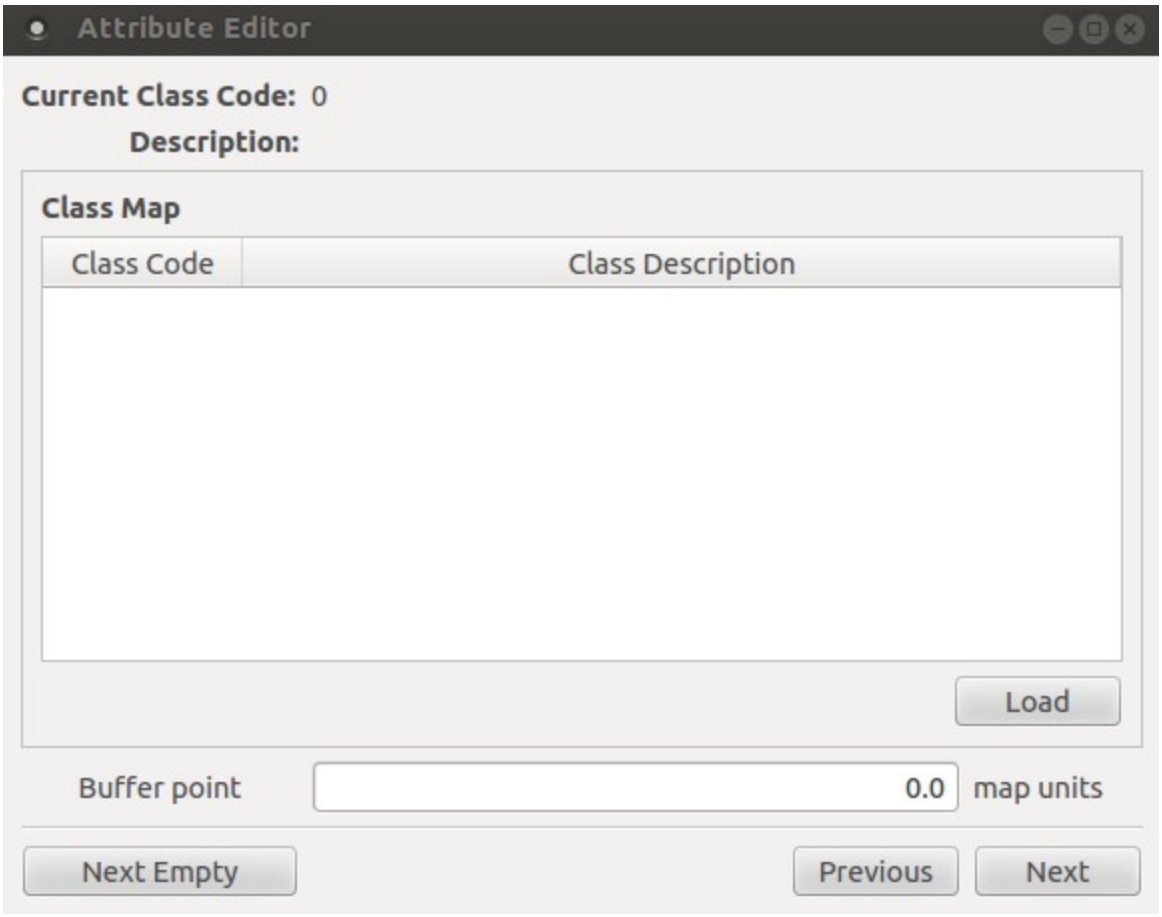

Figure 3: Point Class Assigner attribute editor window

Once the plugin is running the first step is to load a text file that has the attribute mapping information for each Class Code and Class Description. The file should be an ASCII text file with the format:

class code, class description. Here is an example for three classes:

1,forest

2,non-forest

3,water

To load the text file click on the “Load” button and then select the text file with the class codes and class label.

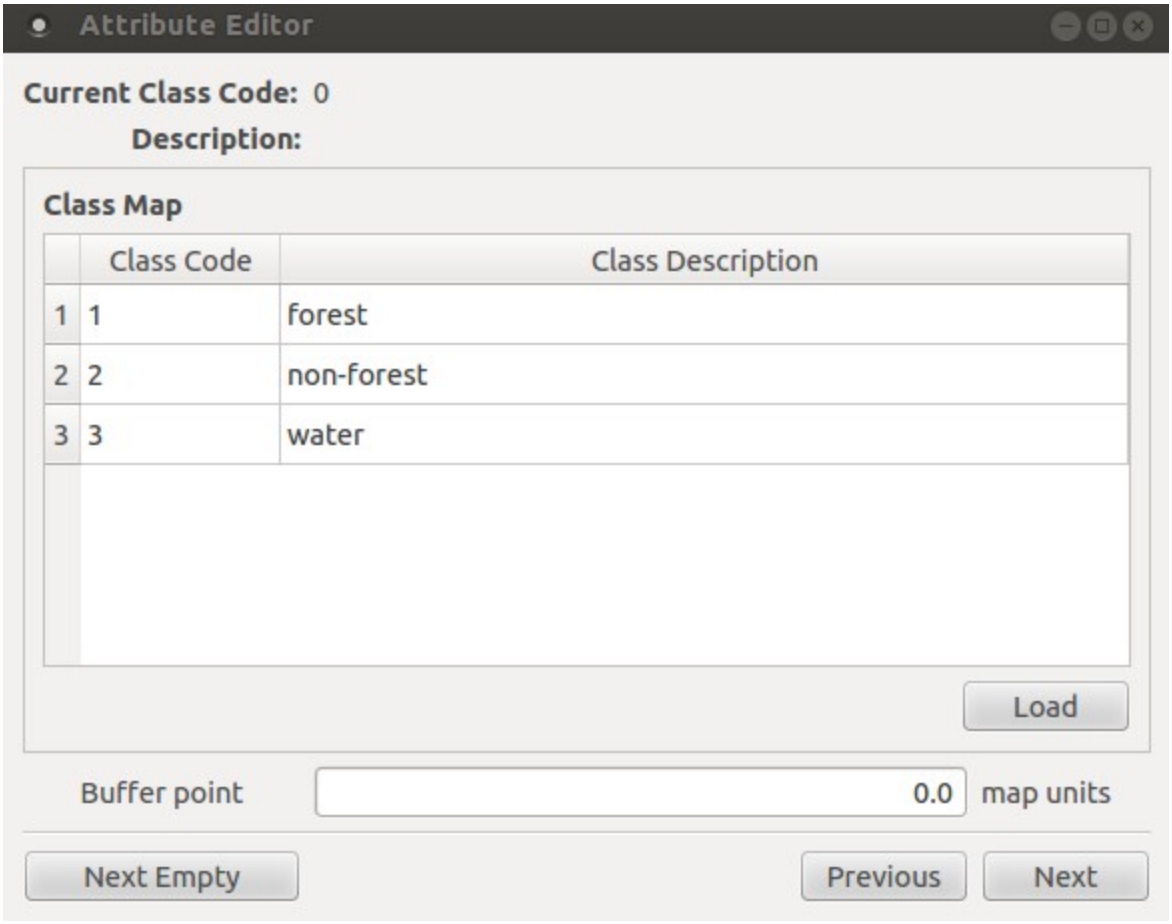

Figure 4: Point Class Assigner attribute editor window with class codes and class descriptions loaded

To begin tagging points with the correct attribute information click on the “Next” button if you want to start with the first point in the attribute table or click on the “Next Empty” button to go to the next point without a class code assigned. Using the “Next Empty” button is handy if you want to pick up where you left off from a previous session. The QGIS map view area will automatically change so the selected point is centered in the view and it will be highlighted with the selection color (default is yellow). You can zoom in or out using the scroll-wheel on your mouse and that zoom level will remain unchanged as you go from point to point. When the point you want to label is selected simply click on the relevant “Class Code” or “Class Description” in the “Class Map” pane and that will assign those values to the point. When a point is selected with “Class Description” in the “Class Map” information it will be displayed at the top of the “Attribute Editor” window. If that field has not been filled in no information for “Class Description” in the “Class Map” will be displayed.

You can also display a circular buffer around the point if you want to ensure a certain area around the point is all the same cover type. To add a buffer to the display enter the radius of the buffer in map units. For example, if you are working with latitude/longitude the units would be degrees (e.g., 0.001) and if you are working with a projected map the units will in most cases be meters (e.g., 100).

When you are finished tagging points you can close the plugin by clicking on the “X” in the upper-right corner of the “Attribute Editor” widow and all of your entries will be saved in the vector's attribute table.

4. Citations

If you cite this document we ask that you include the following information:

Horning, N. and Ersts,P.J. [Internet] QGIS Point Class Assigner Plugin User's Guide (version 1.0) Documentation. American Museum of Natural History, Center for Biodiversity and Conservation. Available from: ######## Accessed on *date*.

5. License

The Sample Point plugin is licensed under the GNU Public License version 2. At this time the source code for the Sample Point plugin is only available on request.