**ARCTIC VIEWER INSTRUCTIONS**

The Arctic Viewer is an Internet mapping application built using ArcIMS ® by Environmental Systems Research institute (ESRI). The first time you use call up the viewer on your computer you may have to install a java runtime applet.  For instructions on loading the applet can be found at the following URL:

http://www.ccnmtl.columbia.edu/projects/poles/ in the help area and if you click on MapViewer.

The viewer has a set of functions that will let you view, query and classify a large variety of geographic data. The Arctic Viewer is an IMS project that has a preloaded set of data related to Nansen's expedition to the North Pole. You will be able to trace the course of his expedition making queries along the way to discover some of the environmental conditions the explorers faced during their journey.

To get familiar with using the viewer, review the tools explained below for navigating and querying the map. Once you become familiar with getting around you can start to experiment with creating your own customized projects by adding and classifying new datasets.

Good luck and happy exploring!

<p align="center">**THE ARCTIC VIEWER INTERFACE**</p>
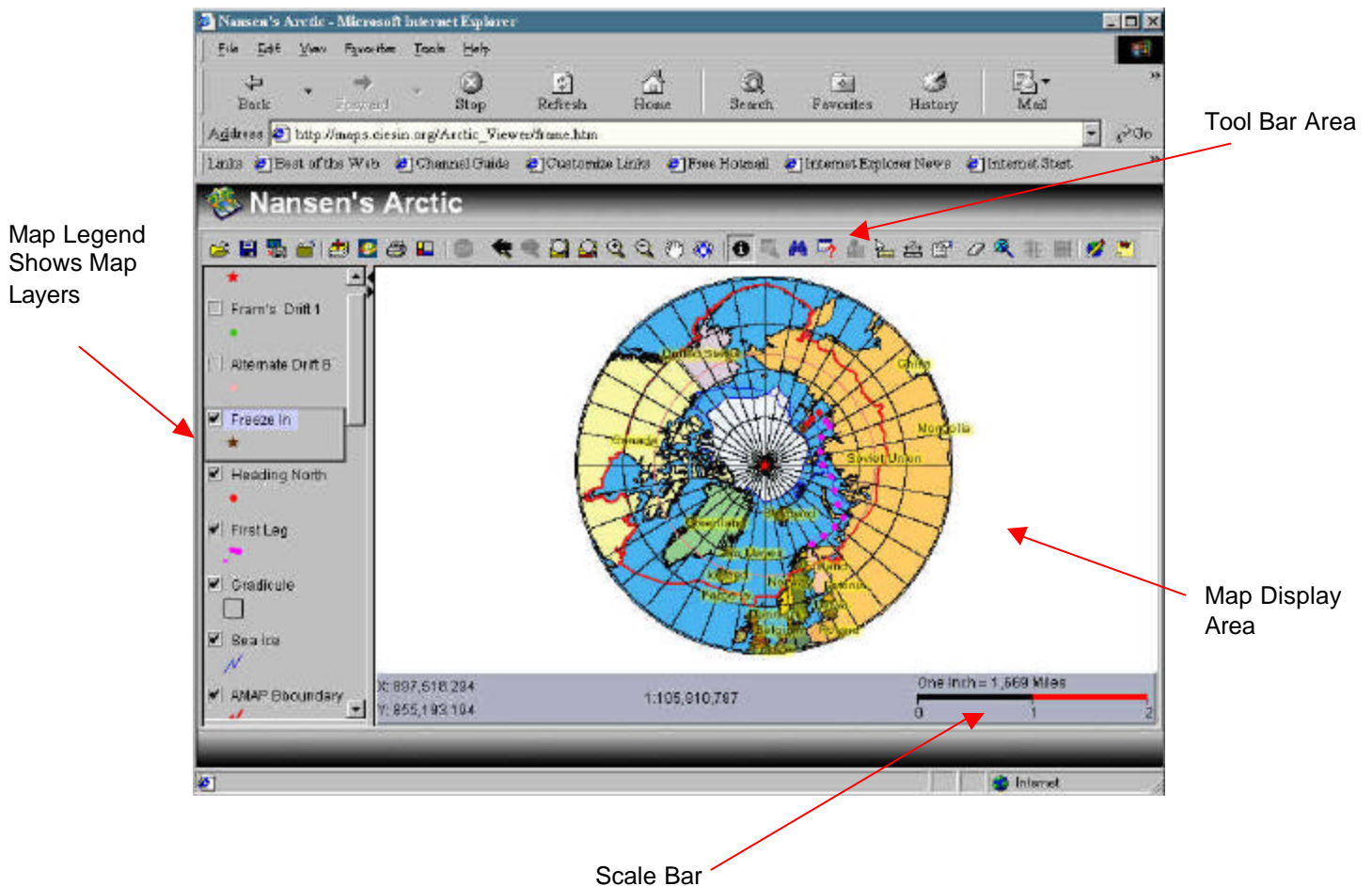
**TOOLS FOR MANIPULATING THE VIEW OF THE MAP**

**Zoom In**

There are a two ways to use this functionality:

1. Go somewhere on the map and press the left mouse button. The map zoom will zoom in. The center of the new map is wherever on the map you clicked the mouse button.

2. Press the mouse button somewhere on the map, hold it down, and drag a box. When you let go of the mouse button the new map extent will be the area defined by the box. When zooming out, the area defined by the box becomes the new map extent.
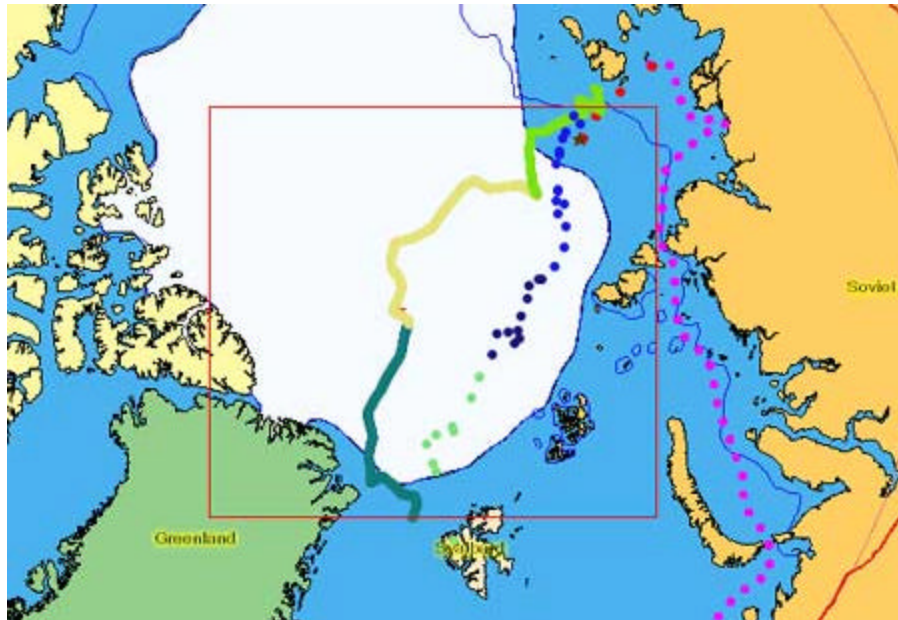


**Zoom Out**

Same as above only going in the other direction.

**Zoom Full Extent**

The *Zoom to Full Extent* button zooms out to the maximum extent of map.

**Zoom Active Layer**

This tool will zoom the map to the extent of the active layer currently selected in the Legend on the left side of the map.

## Pan

Click on this tool and the move your cursor to the map window. The cursor changes to the hand icon. By clicking and dragging you can move the map up, down, left or right.
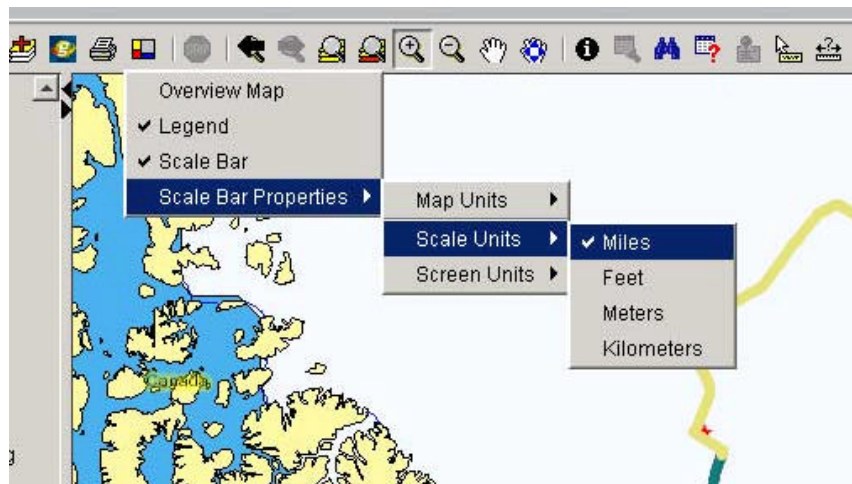
## Pan One Direction

Clicking on this tool automatically move the map in the preset chosen direction. To select the preset direction, press and hold down this button and select the direction for the pan.
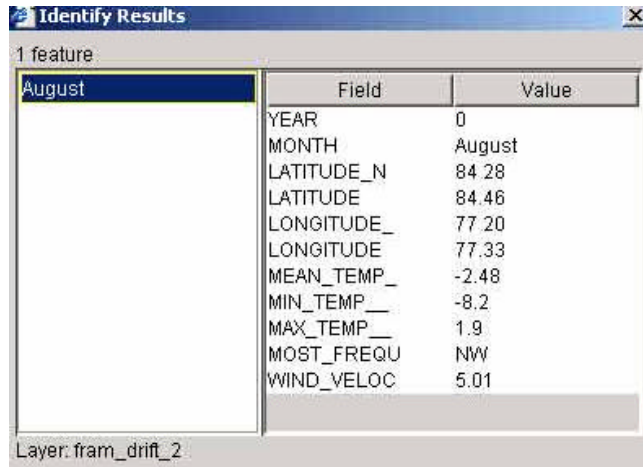
## Viewer Elements

You can use this tool to add/remove the scale bar and the legend and to change the units of the scale.

**TOOLS FOR COLLECTING DATA**

**❶ Identify**

The *Identify* tool allows you to get information about a point on the map by clicking on it. Select the layer on the Legend that contains the data type you wish to get information about. Then select the *Identify* tool.  Then click on the map at the point where you want to gather information. An attribute box will pop up if there is data available at that point. Below is a sample from one of the points along the Nansen Fram Drift track.
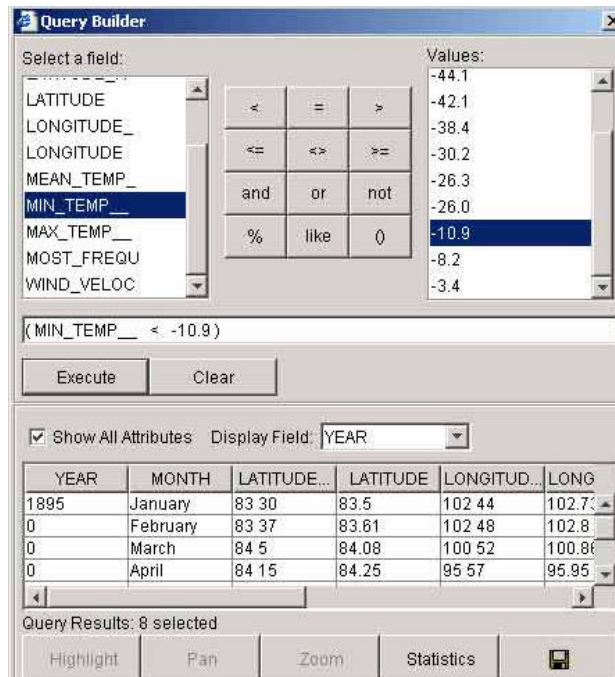


**Query**

Clicking on this tool open a dialogue box that lets you construct a query on the active theme.  For example, you can query Nansen's Fram's Drift track to find all places where the minimum temperature was below -10 degrees as shown below:

 **Measure**

This tool lets you measure distances on the map.  Choose the tool. It will ask you to select a unit of measurement.
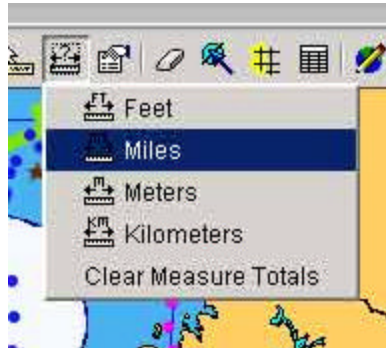


Then move the cursor to the map view.  Left mouse click at the start point, move to the next point and click again.  The distance measurement will appear at the top left portion of the map view.  In the example below, you can see the distance from the pole to the closest Nansen data point is 90.43 miles.
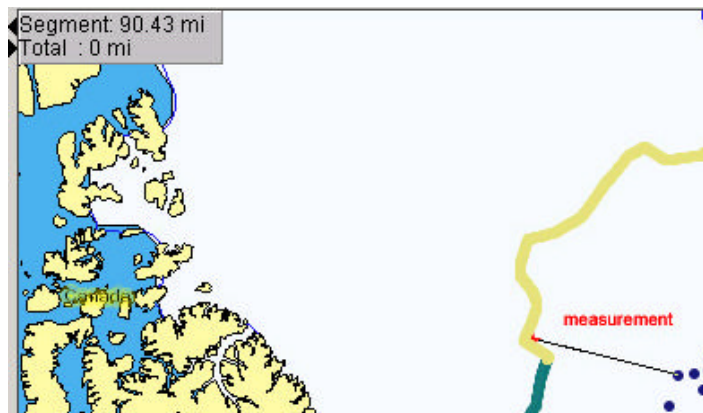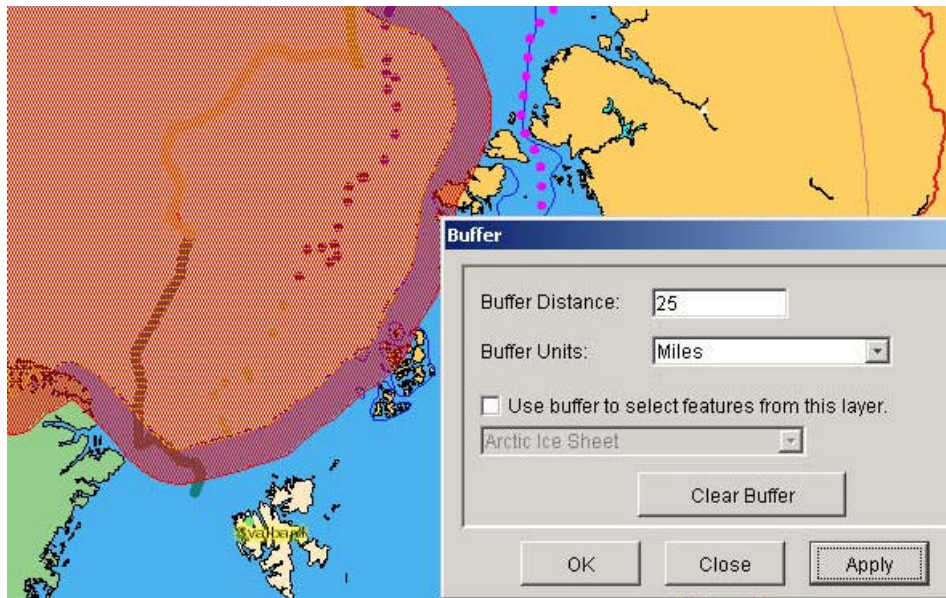
**Select Features**

This tool allows you to select features of map layers by drawing lines, circles, rectangles or polygons. Shown below is the rectangle selection tool choosing part of the Fram drift track.
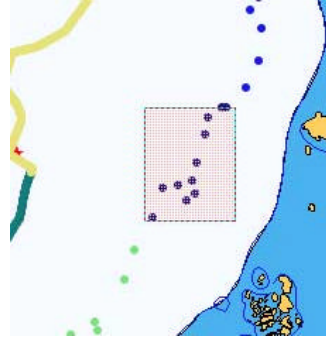


**Buffer Features**

After you have selected a feature you can use the buffer tool to draw buffers around the selected features. For example, you can select the Arctic Ice Sheet layer in the Legend, select the Ice layer using the Select Features tool and then use this tool to draw buffers of various widths to see how the surrounding islands would be affected by an increase in the extent of the ice sheet. Shown below is a 25 mile buffer extending the ice sheet.



**Clear Selections**

Clears the selection of any features.

**Attributes**

This tool displays the attributes of selected features.

**TOOL FOR ADDING/VIEWING NOTES**

**Map Notes**

This feature lets us put a virtual "post-it-note" at a selected location on the map and view other people's notes. Please be aware that you will not be able to use most of the functions on the

regular toolbar until you close the Map Note toolbar using the Stop button . When you hit stop, the system will ask you if you want to submit any new or changed information. Selecting yes will send what you did to the server and affect what all users see. Selecting no will not send any of the changes you've made.

**To view a note:**

You will see post-it notes on the map for each note placed by others. Click on the post-it note and it will show you the indicator shape the note maker placed on the map. Right click to read the note description.
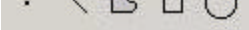
**To add/change a note:**

Click the Map Notes button.  A new tool bar will appear below the regular toolbar. Be patient as it may take some time to load.

To add a new note, press the New Map Note Layer Button . This will add a layer to the

menu.

Rename this layer to represent your note.  Place your name or initials in the name as well.

Next, press the Description Button .  A description box will pop up that you can type in. Hit the Edit button, then click in the box to get your cursor placed. Then type your description.

Next, choose the Point, Line, or one of the Shape Tools to draw on the map where you want your note to show up.

To change a note, select the note layer from the menu and use the same tools to change what is displayed.

Once you note is complete, you need to select the Submit button to send your note to the server so everyone else can see your note.

If you want to delete a note, select the Delete Layer button . Please be careful not to accidentally delete other people's notes. If you do delete a note by mistake, hit the Stop button

and select **NO** when it asks you if you want to submit your session. This will prevent the viewer from sending the server instructions to delete the note.

**EXPORTING, SAVING, AND PRINTING**

**Copy Map Image to File**

This tool will let you save and store the current view of the map as a jpeg graphic file. This could be very useful for inclusion in writing assignments.

**Save Project**

Use this tool to save the current view of map viewer – the viewer calls it a project. Then when you return to the viewer, you can open the project and it will set up the viewer as you saved it.

**Open Project**

This tool will let you navigate to and open an existing project

**Close Project**

Closes the current project.

**Print**

Prints the current map view.

**ADVANCED TOOLS**

 **Add Layers**

Click here to add new layers to your map. The dialogue window will let you connect to your home directory, a network directory or an Internet server holding spatial data sets.

 **Connect to Geography Network**

Click here to connect directly to the ESRI Geography Network to search for and download spatial datasets.

 **Map Tips**

This tool will enable the labels to appear on the map as you move your cursor over selected map features.  In the Arctic Viewer, there is a hidden layer that has place names for significant geographic features.  To see the labels click on the tool, select the "Labels" layer and chose the field called "name".  Then click on the "Set Map Tips" and close by hitting the "OK" button.  Now the names of important features will be displayed as you move your cursor around the map.

 **Layer Properties**

This tool calls up a dialogue box that will let you change the way a layer is classified, change the symbol color or type and rename the layer.

 **Edit Notes**

This feature lets us edit or add new features to existing layer files.