Representing plant and animal distributions in a GIS

Data

These public domain data are all for the state of Montana in the USA. The following files are included:

- **blue_grouse**: ESRI ASCII raster file with distribution of the blue grouse (see bluegrouse_metadata.htm for more details. A code of 0 indicates areas outside the blue grouse range, whilst a code of 1 indicates areas within the blue grouse range)
- **antelope**: polygon vector shape file with distribution of an antelope species throughout the state (see antelope_metadata.htm for more details)
- **elevmontana**: ESRI float format raster file with elevation data for Montana (not used in this exercise)
- **landcover**: ESRI ASCII raster file with distribution of land cover throughout the state (see landcover_metadata.doc for more details). The numeric codes used in this raster grid signify different types of land cover as follows:

code   0 : no data
code   1 : tundra
code   2 : barren
code   3 : conifer/mixed forest
code   4 : coniferous forest
code   5 : coniferous woodland
code   6 : cropland
code   7 : cropland/forest
code   8 : cropland/grassland
code   9 : cropland/woodland
code   10 : cropland/woodlots
code   11 : desert shrubs
code   12 : desert shrubs/grass
code   13 : desert shrubs/woodland
code   14 : grass/shrubs/woodland
code   15 : grassland
code   16 : grassland/cropland
code   17 : grassland/pasture
code   18 : grassland/woodland
code   19 : mixed forest
code   20 : mixed forest / crop
code   21 : mixed hardwoods
code   22 : northern forest
code   23 : northwest conifer
code   24 : northwest forest
code   25 : rocky mtn mixed forest

code   26 : savanna
code   27 : subalpine forest
code   28 : subalpine forest/tundra
code   29 : water
code   30 : western conifer
code   31 : western deciduous
code   32 : western mixed forest
code   33 : western pine forest
code   34 : western woodlands
code   35 : woodland/crop/pasture
code   36 : woodland/pasture

Instructions

Review the blue grouse and antelope data in particular and decide whether they would be suitable for investigating the types of habitat that these animals prefer. In doing this, look at the meta-data and display the map layers themselves.

Note that in order to view the raster data, you will need to import the data into ArcView. This can be achieved as follows:
- Within the ArcToolBox, for the float format data, choose *conversion tools*, then *to raster* and then *float to raster*. From here, the process should be straightforward.
- For the ASCII format data sets, again choose *conversion tools*, then *to raster* and then *ASCII to raster*. Note that you should leave the *output data type* set to *integer*.