INSTRUCTIONS – CENTRAL APPALACHIAN SPREADSHEET

This spreadsheet is a subset of a larger data set that contains a compilation of climate change vulnerability scores for over 700 species in the Appalachian LCC. These scores were developed by a number of researchers from several independent works that all used the NatureServe Climate Change Vulnerability Index. The assessment area for each of these projects was different; some were state-based (Byers and Norris 2011 – WV; Furedi et al. 2011 – PA; Ring et al. 2013 – NJ; Schlesinger et al. 2011 – NY; Walk et al. 2011 – IL), while others focused on a portion of the LCC (Bruno et al. 2012 - portions of the Cumberland / Southern Blue Ridge and Interior Low Plateau subregions; Carroll 2011 – Southern Appalachian Mountains; Sneddon et al. 2015 – entire LCC assessed by subregion).

Each spreadsheet has a number of fields –

> scientific and common names

> conservation status rank

> higher taxonomy

> hyperlink to NatureServe Explorer, for more info on the species

> two other ad hoc search fields

> major habitat

> columns by state, and a column for all assessments done in the Central Appalachian region of the LCC.

These are the vulnerability ranks, in the columns denoting states:

Extremely Vulnerable (EV)

Highly Vulnerable (HV)

Moderately Vulnerable (MV)

Presumed Stable (PS)

Increase Likely (IL) (not the postal code for Illinois)

Some ranks are different in different states; we reported both ranks in the Subregion column.

Some ranks are in parentheses (see explanation under Vulnerability Ranks below)

Searching for subsets of information:

See the filter buttons. You can use these in two ways:

> * You can sort by any of the columns on the spreadsheet: click on the arrow of the column you want to sort; SORT ASCENDING OR SORT DESCENDING. Notice   the little up arrow in the filter box; this indicates that you have sorted on this column in ascending order.

> * You can filter your results: click on the "filter" choice: you see a list of all the values in that column. If you want to see all the species that were assessed as   Extremely Vulnerable in

Pennsylvania, you uncheck "select all", then check "EV" and hit "enter" to activate the filter. Note the little funnel, this tells you that   you which column you have filtered on. This is helpful when you want to do an additional filter: let's say all the G5 species that are Extremely Vulnerable. Do   the same thing on the NatureServe global rank column, and choose "G5".

Make sure you select "clear filters from" in all the columns you filtered before starting your next filter. If you don't, you won't get the right selection.

Look at column H: this indicates the major habitat the species occupies. Note that "aquatic" indicates only species that live below the water surface for their entire life cycle. Diving beetles, amphibians, emergent wetland plants, are all considered "terrestrial". If you want to filter on all the cave species, filter for "subterranean".

You can filter by higher taxonomy: only plants, only animals (column A); only mammals (column C), etc. You can also click on filter to see all the choices in that column.

Natural group 1 and 2: I added these for some groups of species that might be desired, but do not group together by taxonomy. For example, you can filter on "fishes" or "trees" or "herps". There is some redundancy with the taxonomic columns; "Birds" in the natural groups column and "Aves" in the class column will give you the same results.

Vulnerability ranks:

You will note that some ranks are in parentheses. These indicate that an assessment was not done in that state, but that the result was extrapolated from a state in the subregion where an assessment <u>was</u> done. We did not extrapolate the results of species from all states where assessments were done, however. For example, New York, New Jersey, and Virginia had assessments done, but they make up a small area of the subregion, so their results may not be representative of the subregion. West Virginia and Pennsylvania, however, make up a large portion of the subregion, and we felt that the results of those species occurring in other states in the subregion could reasonably be extrapolated. However, we indicated this by parentheses because we have a somewhat lower confidence in those results.

You will also note that sometimes the rank differs between Pennsylvania and West Virginia; the differences may reflect true variations in conditions, or they may reflect variations in interpreting some of the factors in the CCVI, or the species is on the threshold between two ranks, or a combination of all three. In these cases, we report both ranks in the adjoining states and in the subregion as a whole. In a few cases, however, some ranks are contradictory (PS in one state, HV in an adjacent state); these should be scrutinized carefully to determine the discrepancies. These are indicated in the Total column in italics with an asterisk.

Definitions: (Young et al. 2011)

Extremely Vulnerable: Abundance and/or range extent within geographical area assessed extremely likely to substantially decrease or disappear by 2050.

Highly Vulnerable: Abundance and/or range extent within geographical area assessed likely to decrease significantly by 2050.

Moderately Vulnerable: Abundance and/or range extent within geographical area

Not Vulnerable/Presumed Stable: Available evidence does not suggest that abundance and/or range extent within the geographical area assessed will change

(increase/decrease) substantially by 2050. Actual range boundaries may change.

Not Vulnerable/Increase Likely: Available evidence suggests that abundance and/or range extent within geographical area assessed is likely to increase by 2050.

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