## Cecil County Big Tree Map

The Cecil County Big Tree Map software has been written to show locations of the registered and publicly-accessible Maryland Big Tree Program trees within Cecil County. It uses data from the MBTP website at mdbigtrees.org - tree identification numbers, species, championship status and GPS locations. A satellite image of the county is drawn where each tree location is identified by a colored pointer icon (red, blue, orange or white) and a label containing the Tree ID number. The different colors indicate current championship status for the individual trees - red for national champions, blue for state champs, orange for county champs, and white for big trees that are registered in the MBTP but are not presently champions of their species. More than one tree may be designated as County or State Champion, if the final scores are within 5 points.

## Tree List

Currently (May 2023) there are 286 registered MBTP trees in Cecil County; 108 of them are publiclyaccessible. A list of the Tree IDs, common names and championship status is located to the left of the county map, where champ status is in a right-hand column with cell background color consistent to current status. A page of identification information, registered measurement values, GPS location, year of measurement, and a picture of the tree can be accessed by clicking on the Number item (Tree ID number) in the left-hand column of the table; to return to the map, close the information page window. Another column is available, labelled 'Flag', which can be used to locate each tree on the map by clicking on the 'Show' button to enlarge the mapped tree pointer; a second click (on the 'Hide' button) will return the tree pointer to its original size. More than one tree at a time may be emphasized.

A Search feature (above the list of trees) can reduce the number of items in the table; by typing 'oak' in the Search box, all trees except oaks will be removed from the table. By typing 'hick', only items containing the letters h-i-c-k in sequence will be shown (usually only hickory trees). To return to the full list, either remove all letters and numbers from the Search box or click on the ' $x$ ' at the right edge of the Search window. The columns may be sorted alphabetically by clicking on the column title or sorted alphabetically-reversed by a second click. (The list is originally sorted numerically by the BT-ID numbers in the first column.)

Locations of all instances of a certain tree species may be easily seen on the map by alphabetically sorting the tree name column, then clicking 'Show' on all the target trees. All (publicly available) instances will then be shown as large pointers on the county map.

## Positioning Tree List / Map

A mouse roller wheel (or fingers on a touch-screen system) can be used for re-sizing (zooming in or out) of the map or examining the tree data list; also the ' + ' and ' - ' in the upper left corner of the map can zoom in or out of the shown geographical area. The county region shown on the screen may be altered by click-and-hold of the mouse (or a finger, if using an ipad or laptop). These features can show more-
detailed map locations of the trees or expanded geographical data. A small window containing GPS location of the mouse pointer (or finger touch location) is in the upper right-hand corner of the map.

## Menu Options

The tree-location pointers (and their associated Tree ID tags) may be removed from the map by using the Menu feature (upper left corner of the county map); click on the 'Show Menu' window and a menu of options will appear. The four types can be removed (and regained) individually by toggling the desired status type. This can enable better visualization of tree locations when several trees are positioned close to each other, or can remove the non-champ trees from the map when the user is concentrating only on champion trees.

## Distance Between Big Trees

A Distance Function is available to calculate the distance (in feet or miles) and direction (in degrees clockwise from North, as on a compass) between the GPS locations of a designated pair of Big Trees. The 'Distance' button below the map GPS location window can be activated by clicking on it. When activated, the Distance Window will show a bright green border around its edge. Another window underneath 'Distance' will show how many Big Trees have been highlighted (or flagged, via the 'Show' button in the Big Tree listing). To calculate the distance between BT's, two (and ONLY TWO) Big Trees must be flagged. If fewer or more than two trees are flagged, only the number of flagged trees will be shown under the 'Distance' window. When only two trees are highlighted, the calculated distance between the GPS locations will be shown as feet, or as miles when the distance is more than 3000 feet. The Distance Function is useful when searching for more than one tree within a small patch of woodland (usually when the distance is walkable). Direction of travel will always be calculated from the lowernumber Tree-ID to the higher number. The opposite direction (from higher Tree-ID to lower Tree-ID) will be calculated by clicking the 'Reverse' button. The distance will be 'as the crow flies' as if there are no obstructions along the way. When the distance is a few hundred yards or less, it may be useful in searching for the second tree. However, as the distance increases, it is less likely to be useful as geographical obstructions (gullies, swamps, steep hillsides, creeks, etc.) are encountered. When trees are miles apart, the distance may be useful as a generality, but again may be affected by availability of direct travel routes, bridges, private property boundaries, or other problems. The Distance Function may be disabled by a second click on the 'Distance' window.

