

Fine Scale Occupancy Assessment

- In Chesapeake Bay Watershed*:
 - 3,003 catchments: Allopatric Brook Trout Populations
 - 1,716 catchments: Sympatric Populations (with Brown or Rainbow Trout)
 - 1,966 catchments: Only Exotic Trout Species

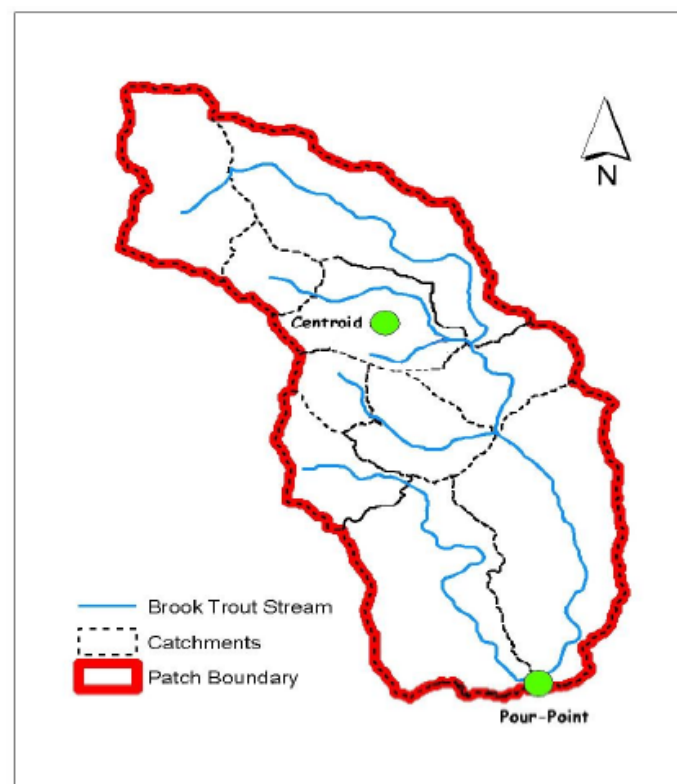
* excluding NY

Identification of Brook Trout "Patches"

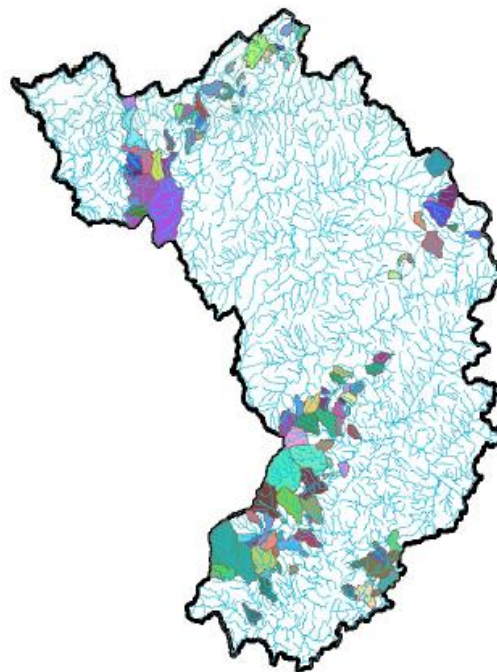
- "Patch"= a group of contiguous catchments occupied by wild brook trout.
- Patches not connected physically
 - Dams, warm water habitat, downstream invasive species
- Assumed to be genetically isolated populations



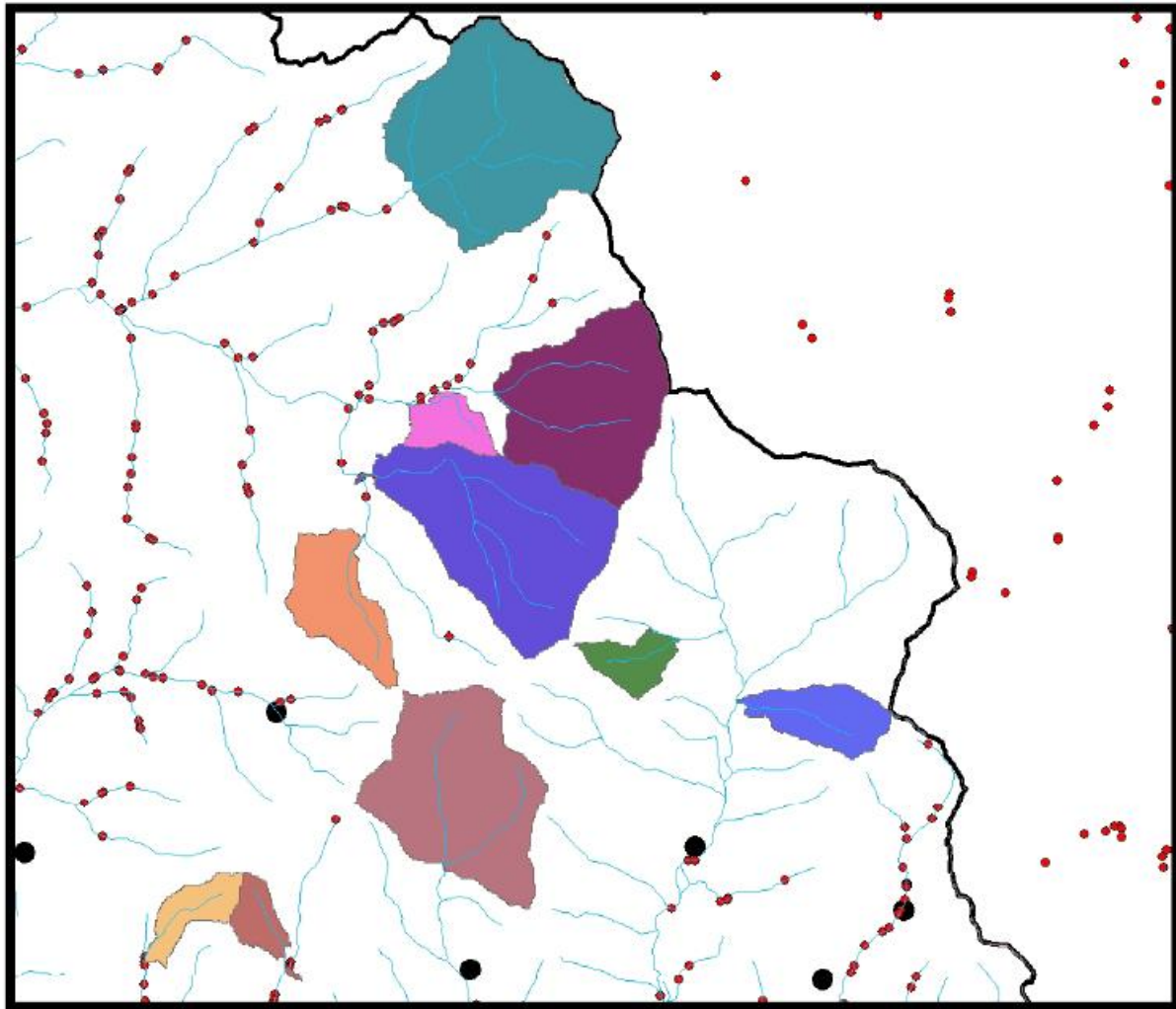
Eastern Brook Trout
JOINT VENTURE



Patches



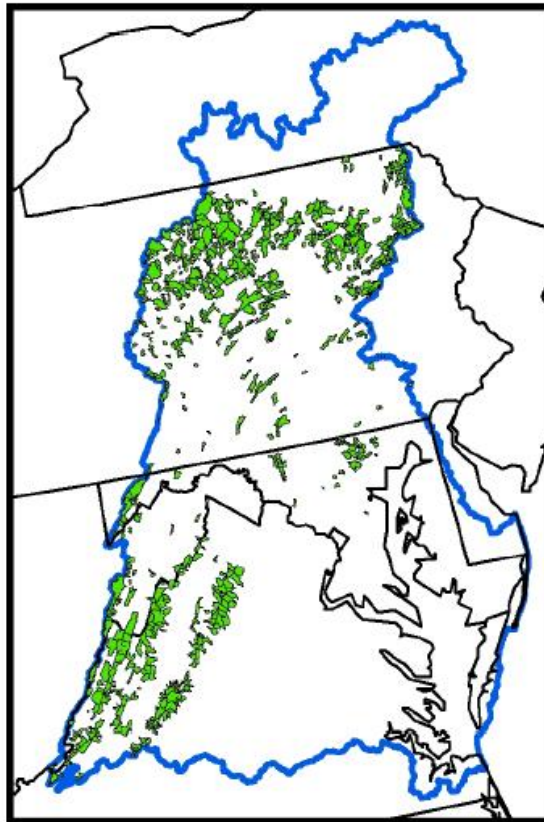
USDA Forest Service Fish and Aquatic Ecology Unit



Eastern Brook Trout
JOINT VENTURE

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Chesapeake Bay Brook trout Patches (n=868)



Patch Metrics

Spatial Metrics

- A. # of patches
- B. # of patches with increasing size/connectivity(additional upstream and downstream catchments with brook trout)
- C. # of patches decreasing in size/connectivity(loss of catchments)
- D. Average patch size of the entire resource
- E. # of patches with allopatric or sympatric(with brown or rainbow) populations

