Vol. 4, No. 3
February 7, 2007

WETLANDS DEMYSTIFIED
Wetlands Defined, Part III
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In my last article I discussed some aspects of the palustrine wetlands habitat, which for now at least is the most common type of wetland found in Pomfret. Land development interests are becoming a challenge to this observation. These wetland communities, as defined by federal agencies and most states to include Massachusetts, are sometimes referred to as wooded swamps that may contain bodies of water in addition to upland wetland soils. As I will explain one could find such habitats as a brook (riverine) associated with a cedar swamp (palustrine) that ultimately ends in a large body of water (lacustrine). It should be appreciated that these complex environments are all interrelated. Wetlands identified by soil type are only a part of it all and cannot be differentiated as separate habitat the mix. Remember, however, that only those soils defined as poorly drained, very poorly drained, and alluvial and floodplain, which may or may not be saturated with water qualify as wetlands in our State. I emphasize that these soils, while defined as wetlands, may appear and be perfectly dry, and they may or may not support hydrophilic vegetation. Last month I mentioned two other habitats found to some degree in our area; namely, the lacustrine habitat, which includes lakes and reservoirs and the riverine environment, which refers to rivers, streams (which we call brooks), and their associated wetlands and aquatic beds.

Lacustrine systems result from depressions or dammed streams, lack trees, shrubs and persistent marshes and wet meadows. To qualify as a lacstrine habitat the area of deep open water must amount to at least 8 hectors or slightly over 4 acres. This habitat creates an environment that supports many wildlife species and what is especially dear to some, fish. Palustrine wetlands may also be found within the boundaries of the lacustrine complex. This habitat is important to not only fish, but to animals that feed on fish such as the great blue heron. Waterfowl such as the mallard depend on these foraging areas in addition to many amphibians and reptiles. Can anyone name such a habitat in Pomfret? Can a pond be a lake?

The riverine habitat system refers to flowing water within a well defined channel. Our Mashamoquet Brook is a good example. Remember that in Connecticut we would not consider a lake or stream a wetland, but rather we would define such areas as watercourses. Inevitably, however, these watercourses are associated with alluvial or floodplain soils which are defined as wetlands in Connecticut. Riverine systems with their riffle and pool complexes serve as important habitats for breeding and as feeding areas for fish such as our native brook trout.

Palustrine complexes are usually associated with these stream habitats as well. Trees and shrubs along these waterways greatly increase their value, especially as riparian buffers that provide wildlife important corridors for movement, feeding and breeding. In some parts of Connecticut these corridors are now the last refuge areas for animals displaced by development.

Any extensive discussion of these wetland habitats can become rather technical, certainly beyond the scope of these articles. Nonetheless, a fundamental understanding of these important ecosystems and how they relate to each other in terms of wetlands and watercourses is important. In order to protect wetlands and watercourses we all need to understand what they are and where they are, and believe me, I have hardly scratched the surface of this complex subject. It is confusing that wetlands are bodies of water to some authorities, and soils having little to do with bodies of water are defined as wetlands by others. Connecticut is unique in that the law only recognizes a qualified Soil Scientist (as defined under the law) to determine the actual boundaries of a wetland based on soil type alone. This is an important responsibility and not one to be surrendered to client interests. While soil science may be intimidating to some, and require certain expertise, you do not have to be a Soil Scientist to identify a watercourse. In the case of watercourses, defined by Connecticut's Wetlands Act, no special credentials are required, only common sense.

In Connecticut watercourses are legally defined as "rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs, and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border upon this state or any portion thereof. Intermittent watercourses are delineated by a defined permanent channel and bank and the occurrence of two or more of the following: (a) evidence of scour or deposits of recent alluvium or detritus, (b) the presence of standing or flowing water for a duration longer than a particular storm incident, and (c) the presence of hydrophytic vegetation." Would a drainage ditch along one of our town or state roads be a watercourse under this definition and thus require protection under Connecticut's Wetlands Act? We also define in our Regulations the meaning of bogs, marshes, swamps, submerged lands and vernal pools. To learn more you can access our website at www.pomfretct.org.

In my next article I will discuss erosion and sedimentation control, which is vital to the protection of wetlands and watercourse ecosystems. Measures taken to reduce the potential for wetland and/or watercourse pollution resulting from land clearing or other construction activities, are often required as a condition for granting a wetlands permit. These measures must be shown on a site plane and could range from the simple to the complex depending on the nature and scope of the activity. Such protective measures can usually be accomplished at little expense, but not always. Like everything else hay bails aren't cheap anymore. I

hope you will stay tuned and in the meantime, your comments and suggestions are welcome.

My thanks to Katarina Rutkowski for her review and comments concerning this article.

Further Reading:

Cathy Pedevillo, 1995. *Habitat Values of New England Wetlands*. U.S. Fish and Wildlife Service in cooperation with the U.S. Army Corps of Engineers, Concord, NH.

Kenneth J. Metzler & Juliana P. Barrett, 2006. *The Vegetation of Connecticut.* Connecticut Department of Environmental Protection, Hartford, CT.

Kenneth J. Metzler & Ralph W Turner, 1992. *Wetlands of Connecticut.* Connecticut Department of Environmental Protection in cooperation with the U.S. Fish and Wildlife Service, Hartford, CT.