

Field Report for Baltimore NE, Baltimore SE

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INTRODUCTION

The Baltimore NE and SE 1:100,000 work areas are located in northeast Maryland along the upper Chesapeake Bay and in SE Pennsylvania within the Susquehanna River Watershed. Bailey* (1978) recognizes two ecoregions, the Southern Mixed Forest Province (2320) and the Eastern Deciduous Forest Province, Appalachian Oak Forest (2214).

The objectives of this field trip were to determine: the wetland types in areas of Baltimore NE missed on the previous trip; the most common water regimes; if any of the coastal barrier ponds were fresh; the subclasses of PFO and PSS; if linears should represent the Riverine or Palustrine system (riparian vegetation) along perennial streams; the parameters necessary for separating lower perennial from upper perennial streams based on the limited information available; and the identity of wetland plant species present.

The aerial photography for the two work areas is 1:58,000 Color Infra-red positives taken on April 4 and 21, 1981 and March 24, 1982.

It should be noted that by convention E2EM1 and PEM1 indicate Phragmites australis and that the mapping conventions of June 10, 1980 are being followed.

* Bailey, Robert G. 1978. Description of the Ecoregions of the United States. USDA Forest Service. Ogden, Utah. 77pp.

IN-FIELD AND PHOTO OBSERVATIONS

Relay

SITE 1--PEM5E--Scirpus fluviatilis and Typha latifolia are clearly dominant. There is a polygon of shrubs and trees (Cornus amomum, Alnus sp. and Salix nigra) separable on the photography. This marsh is close to the legal limit of tidal water on the Patapsco River but we did not feel that the marsh is influenced by the tide.

SITE 2--PEM6/OWT--Hibiscus palustris was the only species present (January) and was very flooded at the time. Its location would suggest that it receives some tidal influence.

--PEM1/5R--Typha latifolia, T. angustifolia and Phragmites australis are the dominants.

--R1EM2N--Sparganium (americanum?) and Peltandra virginica beds were exposed at the time of the field check. Because of the predominance of freshwater species we felt that the fresh estuarine boundary on the Patapsco River should be made downstream of this site.

Odenton

SITE 3--PSS1/EM5E--Alnus sp. and Polygonum arifolium are the dominants with a variety of other species also occurring. The photo signature is very light suggesting only emergents but there are enough shrubs to mix classes. There is an area of PF01E, a few dead trees and some evidence of beaver. Across Rte. 3 to the east is an area that had been classified as PF04/1A but this proved to be upland.

Gibson Island

SITE 4--PF01E--Acer rubrum and Liquidambar styraciflua are the dominant species. This had been classified as PF01/SS1E and although there is an abundant shrub understory, the canopy closure is close to 100%. The surrounding area had been called PF01/4A but is is upland.

Sparrows Point

SITE 5--E2EM5/6P6--Spartina patens and Hibiscus palustris dominate with Scirpus Olneyi and Spartina cynosuroides common.

--E2SS1/EM5P6--Iva frutescens and several emergents are co-dominant. The entire site had been classified as E2EM5P. The presence of Scirpus Olneyi, Spartina cynosuroides, Hibiscus and Kosteletzkya virginica probably indicates oligohaline conditions.

Middle River

SITE 6--PF01Ad--Liquidambar styraciflua and Acer rubrum are the dominant species. This site had been given a "J" water regime but the ditches are not maintained and probably do not have much affect.

SITE 7--PF01C--Liquidambar styraciflua dominates the understory with several other species present while Magnolia virginica dominates the understory. Most of the area is probably an "A" water regime and there is some PF01/4A.

SITE 8--PSS1/EM2F--Cephalanthus occidentalis dominates with an Agrostis sp. Around the edge are Vaccinium corymbosum and Leucothoë racemosa. Soils (Woodstown and Fallsington) would indicate drier conditions than those found.

--PF01C--Liquidambar styraciflua dominates the overstory while V. corymbosum and L. racemosa are common in the understory.

SITE 9--PF01/SS1C--Liquidambar styraciflua dominates the overstory while several shrub species comprise the understory. There was some question about water regime, "E" vs. "C", but "C" seems more appropriate when considering soils, time of year and earlier work for the area. There has been some tree cutting here.

Aberdeen

SITE 10--PSS1/EM5E--This site had been overlooked during interpretation, probably because of the regularity of the polygon. Betula nigra and an unknown grass are co-dominant.

--PF01A--Acer rubrum and Platanus occidentalis form the overstory. There are few shrubs but a thick carpet of Lonicera japonica, Toxicodendron radicans and several forbs exists.

--PF01E--Acer rubrum forms the canopy while scattered Cephalanthus occidentalis, 2 carices and a grass are common beneath. This site may grade into "F" in places.

Holtwood

SITE 11--PSS1/EM5A--Grasses and Rubus sp. dominate with several other species common. The stream coursing through the area is an R30WH.

Delta

SITE 12--PF01A--Acer rubrum dominates the overstory with some Quercus palustris and Platanus occidentalis. There is a small patch of PEM5E but probably not enough for delineation on the photo.

SITE 13--PEM5Eh--Typha latifolia and Phalaris arundinacea are co-dominants. This site had been classified as L2EM2A because the bright white signature is more indicative of Leersia oryzoides than Phalaris.

SITE 14--PSS1A--Alnus sp. and Rosa multiflora are the most common shrubs. There is a small area of PEM5E dominated by Juncus effusus too small to be seen on the photo.

Fawn Grove

SITE 15--PEM5Fh--Calamagrostis sp., Typha latifolia, Scirpus cyperinus and Juncus effusus are the dominants. Water is visible on the photo but from our vantage point we could not see it. Perhaps the persistent emergents were flooded at the time of photography. The wetland may grade into an "E" away from the dam.

Red Lion

SITE 16--PEM5Eh--Typha latifolia dominates with several other species common. This site becomes an "F" where shrubs end and Typha forms 100% of the cover.

West York

SITE 17--PEM5B--Sparganium americanum, as a persistent, and a Carex sp. are the dominants in this very wet seep. The area was overlooked because of the slope and lack of a wet signature.

--PEM5E--Typha latifolia, Phalaris arundinacea and the same Carex dominate. This is a continuation of the above wetland but here it is on the level flood plain.

--PFO1A--Platanus occidentalis dominates with Fraxinus americana and Ulmus americana common. This is a narrow band beside the river and represents a poorly formed, low levy.

Westminster

SITE 18--PEM5Fh--Typha latifolia is the dominant emergent with Carex stricta and Scirpus cyperinus also common.

--PSS1Eh--Acer rubrum and Alnus sp. are co-dominant. Cephalanthus occidentalis and Carex stricta are common.

--PEM2/OWZh--Leersia oryzoides and Sparganium americanum comprise a discrete marsh island within the pond but it is not possible to separate the two.

New Freedom

SITE 19--PEM5Bh--Polygonum sagittatum is the dominant species with several forbs and Calamagrostis sp. also common. This wetland had been dammed at one time saturating the substrate above the existing stream channel. The PEM will probably revert to upland eventually.

SITE 20--PFO1/EM5E--Acer rubrum and Carex stricta are co-dominant while the perimeter supports such species as Rosa palustris, Viburnum sp. and Calamagrostis sp.

SUMMARY

We were able to roughly identify the R1/E1 boundary on the Patapsco River and found that it was often difficult to identify scrub/shrub communities within salt marshes. Some areas we decided were "E" water regimes in the field were changed to "C" for consistency with earlier field reports and photo classification.

Phalaris had been confused with the Leersia signature on the photography resulting in classification as non-persistent emergent when, in fact, it is persistent.

It is difficult to generalize on perennial stream linears, whether they should be classified as Riverine or Palustrine. When the floodplain is relatively wide, there is little vertical drop and the river is obscured by overhanging vegetation then perhaps the Palustrine system is the best choice to indicate the presence of persistent riparian and wetland vegetation.

When considering the Riverine system it is not easy to determine R2's and R3's from a roadside survey. Without any concrete evidence and based only on our observations it would appear that a minimum drop of 20ft/mile with a forested watershed or stream corridor may indicate an R2 while a watershed in agriculture or having a vertical drop of as much as 30ft/mile may indicate an R3.

Finally we found that at least some intermittent streams support enough facultative wetland and facultative upland plant species to warrant being classified in the Palustrine system using an "A" water regime modifier.

APPENDIX I
Imagery Quality
Color Infra-Red

<u>Date</u>	<u>Quality</u>
April 4, 1981	Excellent
April 21, 1981	Excellent
March 24, 1982	Good resolution poor contrast

APPENDIX II

Field check sites for Baltimore NE and SE and partial plant community lists.

- SITE 1--PEM5E--Scirpus fluviatilis, Typha latifolia, Polygonum scandens,
Onoclea sensibilis, Juncus effusus, Carex stricta, Boehmeria cylindrica.
- SITE 2--PEM6/OWT--Hibiscus palustris.
--PEM1/5R--Typha latifolia, T. angustifolia, Phragmites australis,
Hibiscus palustris, Scirpus cyperinus.
--R1EM2N--Sparganium americanum, Peltandra virginica.
- SITE 3--PSS1/EM5E--Alnus sp., Polygonum arifolium, Typha latifolia, Onoclea
sensibilis, Rosa palustris, Leersia oryzoides, Phragmites australis.
- SITE 4--PF01E--Acer rubrum, Liquidambar styraciflua, Nyssa sylvatica, Magnolia
virginica, Osmunda cinnamomea.
- SITE 5--E2EM5/6P6--Spartina patens, Hibiscus palustris, Scirpus Olneyi, Spartina
synosuroides, Distichlis spicata, Kosteletzkya virginica.
--E2SS1/EM5P6--Iva frutescens, Spartina patens, Scirpus Olneyi.
- SITE 6--PF01Ad--Liquidambar styraciflua, Acer rubrum, Toxicodendron radicans,
Lonicera japonica.
- SITE 7--PF01C--Liquidambar styraciflua, Nyssa sylvatica, Osmunda cinnamomea,
Quercus sp., Vaccinium corymbosum, Smilax rotundifolia.
- SITE 8--PSS1/EM2F--Cephalanthus occidentalis, Agrostis sp., Vaccinium
corymbosum, Leucothoë racemosa, Aster sp., Rhexia virginiana.
--PF01C--Liquidambar styraciflua, Leucothoë racemosa, Vaccinium
corymbosum, Betula nigra.
- SITE 9--PF01/SS1C--Liquidambar styraciflua, Leucothoë racemosa, Vaccinium
corymbosum, Clethra alnifolia, Rhododendron viscosum, Sphagnum sp.
- SITE 10--PSS1/EM5E--Betula nigra, unknown grass, Lythrum salicaria, Epilobium
sp., Acer rubrum.
--PF01A--Acer rubrum, Platanus occidentalis, Betula nigra, Lonicera
japonica.
--PF01E--Acer rubrum, Cephalanthus occidentalis, Carex stricta, C.
folliculata.
- SITE 11--PSS1/EM5A--unknown grasses, Rubus sp., Calamagrostis sp., Setaria sp.,
Acer negundo.
- SITE 12--PF01A--Acer rubrum, Lonicera japonica, Viola sp., Quercus palustris,
Allium sp.
- SITE 13--PEM5Eh--Typha latifolia, Phalaris arundinacea, Polygonum arifolium,
Panicum sp.(?), Verbena hastata, Scirpus cyperinus, Alnus sp., Juncus
effusus.
- SITE 14--PSS1A--Alnus sp., Rosa multiflora, Salix nigra, Rhus typhina.

- SITE 15--PEM5Fh--Calamagrostis sp., Typha latifolia, Scirpus cyperinus, Juncus effusus.
- SITE 16--PEM5Eh--Typha latifolia, Epilobium sp., Leersia oryzoides, Polygonum sagittatum, Cicuta sp., Cornus ammomum.
- SITE 17--PEM5B--Sparganium americanum, Carex sp.(?), Epilobium sp., Polygonum sp., Viola sp.
--PEM5E--Typha latifolia, Phalaris arundinacea, Carex sp.(?), Ulmus americana, Phytolacca americana.
--PF01A--Platanus occidentalis, Fraxinus americana, Juglans sp., Viola sp., Solidago sp.
- SITE 18--PEM5Fh--Typha latifolia, Carex stricta, Scirpus cyperinus, Polygonum sagittatum.
--PSS1Eh--Acer rubrum (20ft.), Alnus sp., Cephalanthus occidentalis, Carex stricta.
--PEM2/OWZh--Leersia oryzoides, Sparganium americanum.
- SITE 19--PEM5Bh--Polygonum sagittatum, Epilobium sp., Solidago sp., Calamagrostis sp., Setaria sp.
- SITE 20--PF01/EM5E--Acer rubrum, Carex stricta, Onoclea sensibilis, Rosa palustris, Viburnum sp., Symplocarpus foetidus, Cicuta sp.