FIELD SUMMARY REPORT
TENNESSEE FINALS

I. STUDY AREA

A. 1:100,000 Maps Involved:

Blytheville SW, Blytheville NW, Dyersburg SW

B. Quads Involved: (* indicates checksite[s])

Dyersburg SW:

Stanley	Point Pleasant	Tiptonville	Samburg*
Caruthersville	Mooring	Ridgley*	Hornbeak
Cottonwood Point	Tennemo	Miston	Lane
	Caruthersville SE	Dyersburg	Newbern*
Clayton	Union City	Obion	Rives
Trimble	Kenton	Tatumville*	Yorkville*

Blytheville NW:

Luxora	Chic	Ripley S.
Osceola	Open Lake*	Gift
Nodena	Ft. Pillow	Fowlkes
Rosa	Covington	Gates
Golddust	Knob Creek	Durhamville
Giltedge	Ripley N.	Turnpike*
Bonicord	Friendship*	Brazil
Chestnut Bluff	Maury City	Alamo
Tibbs	Jones	Bells*
Brownsville*	Sunny Hill	Denmark*

Blytheville SW:

Drummonds	Munford	Brighton	Mason
Millington	Brunswick	Arlington	Galloway*
NE Memphis	Ellendale	Eads	Oakland
SE Memphis*	Germantown*	Collierville*	Rossville*
Stanton	Dancyville*	Hillville*	Mercer*
Lambert	Laconia*	Whiteville*	Bolivar West
Macon	Somerville	Hickory Valley	Middleburg
Moscow	Moscow SE	Grand Junction	Sawsburg

C. Personnel

David Parsons - USFWS
Peggy Nault - USFWS
Dennis Fowler - Martel Corporation
Michael Czerwinski - Martel Corporation

D. Date of Field Trip:

11/5/84 - 11/9/84

E. Available Photography

NHAP80, NHAP81, 1:58K CIR
Photos taken: 4/80, 2/81, 3/81

F. Collateral Data

USGS Quadrangles - all 7.5'
Soil Surveys: Dyer, Lake, Fayette, Shelby, and Madison Counties

Previous photo interpretation: finished 1978. 50% B/W and 50% CIR, imagery taken 1978, 1975.

II. OVERVIEW

The book by Robert G. Bailey, "Descriptions of the Ecoregions of the United States," classifies the division that includes the study area as the Eastern Deciduous Forest Province. The sections of the Eastern Deciduous Forest Province in which the mapping area occurs are the Oak-Hickory Forest and Southern floodplain Forest. In general, the land in this area is rolling, but this varies to steep bluffs on the edge of the Mississippi River floodplain to the virtually flat Mississippi River floodplain itself. The climate is continental and adequate precipitation is received in all months. Average annual precipitation is from 35 to 60 inches. A small water deficit usually occurs in the summer, whereas in the spring, a large surplus may develop. The average annual temperature is 40° - 60° F.

III. BIOLOGICAL CHARACTERISTICS OF WETLAND HABITATS

A. Marine: none represented

B. Esturine: none represented

C. Riverine: The major rivers in the study area include: the Mississippi, the Hatchie, the Obion, the Wolf, the Loosahatchie, and the North, Middle, and South forks of the Forked Deer. These and all other perennial streams are classified as lower perennial ~~R2owtlor~~ R2OWH ~~R2owtlx~~ R2OWHX, except where vegetation takes precedence. The excavated modifier is used often since many streams have been channelized.

Intermittent streams are classified as R4SBC or R4SBCX except where vegetated, generally using the USGS quadrangle as a guide.

Riverine flats are classified as R2USA on the Mississippi River, and R2USC on all others.

Do not underline sp.

D. Lacustrine: Natural and man-made lakes are found in the study area. Since no depth information is available for any of the lakes, they are classified L10WH (natural), L10WHh (impounded) or L10WHx (excavated).

E. Palustrine: The majority of the wetlands in the study area are palustrine forested; most of which are located in the river floodplains. Many of these "bottoms", as they are called locally, have been cut into for agriculture and timbering.

The temporarily flooded (A) water regime supports a variety of tree types. In decending order of occurance, they are: Oaks (Quercus sp.), including Pin Oak (Q. palustris) and Cherry Bark Oak (Q. falcata pagodifolia); Sycamore (Platanus occidentalis); Red Maple (Acer rubrum); Silver Maple (A. saccharinium); Sweetgum (Liquidambar styraciflua); Green Ash (Fraxinus pennsylvanica); Willows (Salix sp.); and River Birch (Betula nigra). Other less common species found were: Elms (Ulmus sp.); Paw Paw (Asimina triloba); Sugarberry (Celtis ~~occidentalis~~ laevigata); and Possumhaw (Ilex decidua). Cottonwood (Populus deltoides) was found only in temporarily flooded areas and in monospecific stands that were apparently cultivated. The Shagbark Hickory (Carya ovata); Shellbark Hickory (C. laciniosa); and Pecan (C. illinoensis) were also found in a few areas. The Shellbark Hickory was found in the slightly wetter temporary areas. Many of the floodplains were dominated by the temporarily flooded water regime.

The most dominant trees in the seasonally flooded water regime in decending order are: Sweetgum (Liquidambar styraciflua); Sycamore (Platanus occidentalis); Silver Maple (Acer saccharinum); Oaks (Quercus sp.) with Cherrybark Oak (Q. falcata pagodifolia); and Swamp Chestnut Oak (Q. mishauxii) being the most abundant, and Pin Oak (Q. palustris) and Willow Oak (Q. phellos) occuring in lesser numbers. Next in abundance are: Red Maple (A. rubrum); Willows (Salix sp.); American and Winged Elms (Ulmus americana); and (U. alata), respectively; and the Box Elder (Acer negundo).

Other less abundant species were: Cypress (Taxodium distichum); Ash (Fraxinus sp.); River Birch (Betula nigra); Swamp White Oak (Quercus bicolor); and Possumhaw (Ilex decidua). Water Locust (Gleditsia aquatica) was found to be fairly abundant in limited areas. Iron Wood (Ostrya virginiana) is sparce in most areas, but one checksite (39B) contained a large number of these species. Some seasonal areas are dominated by willows, but these are more frequently found in semipermanently flooded conditions. There are some seasonally flooded (C) areas, mainly along the Mississippi River and other large bottoms, where Cypress (Taxodium distichum) was more common than those species mentioned above. These areas are classified PF06C. These areas also contain Sweetgum (L. styraciflua), Swamp Chestnut Oak (Q. mishauxii), Willows (Salix sp.), and other ~~of the~~ Oaks.

The most common tree species found in the semipermanently flooded water regime is Willow (Salix sp.), occurring in many pure stands. These areas exhibit a very distinctive smooth and dark blue signature (check Site 28). The next most common are Sweetgum (L. styraciflua) and Cypress (T. distichum), followed by Locust (Gleditsia sp.) and Tupelo (Nyssa aquatica). Less common species found were Willow Oak (Q. phellos), Swamp Chestnut Oak (Q. mishauxii), Overcup Oak (Q. lyrata) and Water Oak (Q. nigra). Appearing incidentally were Possumhaw (Ilex decidua), Elms (Ulmus sp.), and Ash (Fraxinus sp.). Some semipermanently flooded areas have Cypress as the dominant species. These areas area classified PF06F. Appearing with the Cypress in these areas are Willows (Salix sp.), Water Tupelo (Nyssa aquatica), and Sweetgum (L. styraciflua). Appearing occasionally are Paw Paw (Asimina triloba), River Birch (Betula nigra), and Overcup Oak (Q. lyrata).

In instances where Cypress (T. distichum) is found in pure or nearly pure stands, the classification PF0Z is used. These occurred in semipermanently flood(F), intermittently exposed(G), and permanent(H) water regimes and are sometimes used in conjunction with the open water class.

The next most prevalent class is open water. Naturally occuring ponds such as oxbows are classified POWH. Smaller ponds may be labeled POWG. The majority of ponds are impounded (POWHh) and are located in agricultural and upland areas. Both the impounded(h) and excuvated(X) modifiers are found, and the semipermanently flooded(F), intermittently exposed(G), and permanent(H) water regimes are used. In cases where ponds are being drained and vegetation dominates, they are classified according to the vegetation type.

Relatively few emergent areas were found in the study area. Smartweed (Polygonum sp.), Rushes (Juncus sp.), and Bulrush (Scirpus sp.) are the three most abundant emergents in ALL WATER REGIMES.

Other common emergents in the temporarily flooded water regime are Foxtail (Alopecurus sp.) and Sedge (Cyperus sp.).

The only other emergent identified at a checksite in the seasonally flooded water regime was Foxtail (Alopecurus sp.). Sphagnum moss was found at a checksite in the understory of a PF01C area.

In addition to the three most common emergents mentioned before, the semipermanently flooded water regime produced a good variety of emergents including Cattail (Typha sp.), Woolgrass (Scirpus cyperinus), Red-Rooted Sedge (Scirpus sp.), Lizardtail (Saururus sp.), Cutgrass (Leersia sp.), Sawgrass (Cladium sp.), which is very abundant in the Reelfoot Lake area (Check Site 37), Marsh flebane (Pluchea sp.), and Water Perslane (Didiplis sp.).

One permanently flooded (H) checksite (#6) contained American Lotus (Nelumbo lutea), ~~This was~~ AND IS classified POW/EM1Hh.

The modifiers d, h, x, and Kh are used with emergents. The modifiers Kh are used for areas that have been built for waterfowl enrichment.

The most commonly encountered species in the scrub-shrub (SS) class are Willow (Salix sp.) and buttonbush, ~~is scattered or absent~~. (Cephalanthus sp.), except in the temporarily flooded water regime (A) where buttonbush is scattered or absent. Other common species in this class in the temporarily flooded water regime are Elm (Ulmus sp.), Sweetgum (Liquidambar styraciflua), Box Elder (Acer negundo), and River Birch (Betula nigra).

In the seasonally flooded water regime, the other common scrub-shrub is Sycamore (Platanus occidentalis).

In the semipermanently flooded water regime, other common shrubs are Cocklebur (Agrimonia sp.) and Hibiscus (Hibiscus sp.).

Aquatic
~~Adequate~~ beds with unidentified species are found in the study area. The main concentration of these areas of Aquatic Bed (AB) are found in the Reelfoot Lake area in inaccessible areas. They exhibit a pinkish return and are classified PAB6. Most areas are classified in the semipermanently flooded water regime(F).

IV. IMAGERY

Overall, the resolution of the imagery is good. There is no bleaching and minimal spectral reflectance. However, a few areas of potential problems do occur and will be discussed in the following paragraphs:

The imagery in all of Flightline ~~lightline~~ 427 is grainy. This causes some difficulty in making the emergent/scrub-shrub/forested break. This graininess also causes small open water bodies to appear to have emergents in them, which ~~This~~ makes it difficult to be sure of using the classification POW/EM1Hh. The season of this photography is a big advantage over some of the other imagery. When this photography was taken, the conditions in the study area were closer to normal than in some of the other imagery. To help overcome this difficulty, close attention should be paid to checksites within this flightline.

Some of the imagery has dark edges, but these total less than ten percent of the total photography. At times, this darkness makes it difficult to pull out some small details, but this problem can be very well handled by use of adjacent photos and other collateral data.

Portions of the photography have a bluish emulsion that tends to make areas look wetter than they are. Conservative photo interpretation is called for in these areas. Adjacent photography is helpful in overcoming this.

Many of the river bottoms that were photographed in 1980 are under conditions of inundation. This is also cause for conservative classification of wetlands in these bottoms. Adjacent photography and collateral data, especially checksites, are the solutions to a majority of the difficulty of interpreting these very wet looking areas.

V. SUMMARY

The moderate climate and sufficient annual precipitation of Blytheville SW, Blytheville NW, and Dyersburg SW, Tennessee, allows a diverse community of wetlands to exist. Wetland occurs throughout the study area.

Overall, the imagery was of good quality, allowing good detail in delineation. Attention to topographic maps, soil surveys, on-site inspections, and previously interpreted imagery has helped to overcome, to varying degrees, the problems aforementioned. As always, direct on-site analysis of local communities affords more detailed information as needed by the user.

SUBMITTED BY:

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