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Stephen Shifley wrote in 2000 that "In Missouri there are about 62,000 acres of forest with some trees that are at least 130 years old. Fewer than 8,000 acres would be considered good examples of relatively undisturbed old-growth forest. Only about 800 acres would be considered excellent examples of old growth" (Shifley 2002b).

Nevertheless, sorting through the available information on Missouri old growth is challenging. Specifying exact acreage for many old-growth sites is impossible given variations in data on the sites. Researchers differ in their definitions of old growth and many sites appear to be a mixture of old growth and second growth, difficult to separate from one another in statistics. For the first edition of this survey, Tim Nigh of the Missouri Department of Conservation (MDC) furnished us with a list of "all known high quality forest tracts" (Nigh 1992). The department's grade "A" meant "relatively stable land undisturbed (e.g. old growth, ungrazed forest, ungrazed prairie with few or no exotic plants and good diversity of conservative species)"; and "B," "late successional or lightly disturbed communities" (Sweet 1989). Michael Leahy, Tim Nigh's successor in MDC, compiled a table of sites for our revision. The table outlines "representative old-growth sites on public lands." "These sites are a mix of old second growth (90-120 years) and old-growth (120+ years) sites with minimal grazing and exotic species influences" (Leahy 2001). Stephen Shifley gave us a list of "upland old-growth forest tracts" in Missouri and Illinois "compiled from state natural areas inventories in 1992." "Minimally disturbed old-growth forest" is Class A; "high-quality old forest" is Class B, and "previously disturbed (mature second-growth forest)" is Class C (Shifley 2000). Given the large number of sites described as old growth by these and other sources, and the fact that the history of many sites is unclear, we present below only a selection of sites that appear to have experienced relatively little disruption.

The state has changed its definitions of forest types since we compiled the first edition of the survey. We have altered our terminology to reflect the shift. According to the new definitions, forests are multistoried, are "dominated by trees," and have a closed canopy "with trees reaching heights of 60-100+ feet." "Woodlands are natural communities with an overstory of trees ranging from 30 to 100% canopy closure with a sparse understory and a ground layer rich in forbs and graminoids." Canopies are from 20-90 feet high. Savanna is "essentially a prairie with scattered, open-grown trees. The ground is covered by a thick stand of warm-season grasses, perennial forbs and sedges" (Leahy 2001). As a result of the new definitions, various sites that were classified as savannas are now classified as woodlands.

As of early 2003, Mark Twain National Forest is managed under a management plan approved in 1986 and since amended twenty-five times. April 16, 2002, USFS announced its intent to prepare an Environmental Impact Statement for revising this plan. Public meetings on the revision began in that year.

Small areas of old growth in Missouri include **Fountain Grove** (Linn County): 35 acres of mostly old-growth wet-mesic bottomland forest, owned by the Missouri Department of Conservation (MDC); **George A. Hamilton Forest** (Lincoln County): 33

acres of "outstanding" dry-mesic forest with White Oak averaging 51 inches dbh (diameter at breast height), large Northern Red Oak, Black Oak, and Shagbark Hickory, owned by the Missouri Department of Natural Resources (MDNR); **Salt River Narrows*** (Monroe County): 14 acres of dry limestone/dolomite forest with old growth and old second growth, "A-B" quality, owned by the US Army Corps of Engineers (USACE); **Buck Mountain Natural Area** (St. Francis County): 13 acres of undisturbed dry, dry-mesic, and xeric igneous forest with Post Oak, Blackjack Oak, and Black Hickory in a 194-acre Natural Area, owned by MDC; and **Hughes Mountain Natural Area** (Washington County): 10 acres with small areas of old-growth Blackjack Oak, Eastern Red-cedar, and Black Hickory that intersect igneous glades, owned by MDC (MDC 1992).

MARK TWAIN NATIONAL FOREST, southern Missouri

The National Forest includes many trees 200 to 300 years old scattered in younger stands and pockets of old trees on relatively inaccessible slopes. Dry woodlands and flatwoods, however, are the two types of areas where extensive old growth may exist (Richards 1993).

The dry woodlands are located in central Missouri and in a swath across southwest Missouri on soil over bedrock at a depth of 20 to 40 inches. They take the form of narrow ridges and southwest aspects on side slopes with scattered trees, mostly Post Oak and Chinquapin Oak. The total of the dry woodlands and of the flatwoods described below may reach 30,000 acres. Some areas have been harvested; some not. Most of the dry woodlands are overgrown from decades of fire suppression, but the Forest Service has started to restore fire on a landscape scale, and in conjunction with The Nature Conservancy is studying the plants in the dry woodlands and flatwoods (Amelon 1993, Richards 1993). An example of dry woodlands, in the vicinity of the White River, is Hercules Glade Wilderness (Paney County): a 12,314-acre federally designated Wilderness, including treeless glades, with woodlands on the slightly deeper soil around the edges. Prescribed burns have been conducted in the White River region of the National Forest for more than twenty years (Amelon 1993, Richards 1993, Alden 1992, Furness 2001). Two possible old-growth xeric pine and pine-oak woodlands are 15 acres in Kaintuck Hollow (Phelps County) and 50 acres in Paddy Creek Wilderness Area (Texas County) (Murphy and Nowacki 1997).

The flatwoods are primarily in central Missouri and have scattered Post Oak on upland plateaus underlain by fragipan. Little Bluestem and other of the shorter prairie grasses grow here. Many of the Post Oak flatwoods were once old fields (Amelon 1993, Richards 1993).

Caney Mountain Wildlife Area, in south-central Missouri (Ozark County)

Extensive virgin Post Oak woodland within a 6574-acre Wildlife Management Area. The virgin woodland covers "several thousand hectares," according to R. P. Guyette and B. E. Cutter (1991). Area manager Daniel Billings thinks that approximately 60-70% of the area is in glade or woodland, which would mean some 4000 or 4500 acres (1993). The refuge shows some signs of cutting of Shortleaf Pine, White Oak, and Eastern Red-cedar; but most of the woodland was never logged, and many Post Oaks are

over 200 years in age. On the outskirts of the woodland are old Eastern Red-cedar, one more than 500 years in age. Due to fire suppression since the 1940s, small trees have overgrown parts of the woodland. Nevertheless, all tree sites have some "grass and herbaceous cover." In the selected segments of the area now burned periodically, many native species are returning. MDC owns the Wildlife Area (Billings 1993, Guyette and Cutter 1991).

Within the woodland is the Caney Mountain Natural Area of more than 1000 acres, including the former Upper Caney Creek Natural Area and White River Bald Glade. The 230 acres of the former Caney Creek Area include dry-mesic old-growth forest on a "steep, rocky, chert-covered, E and N-facing sideslope from near bottoms to near ridgetop." In the Bald Glade are Post Oak on knobs and primarily warm season grasses and forbs (Billings 1993). Leahy attributes 200 acres of old-growth dry-mesic chert woodland and 200 acres of old growth dry chert woodland to Caney Mountain Natural Area (Leahy 2001).

AB Ranch,* central Missouri (Camden County)

An approximately 4900-acre (2000 ha) mosaic of dry woodlands and glades, dominated by White Oak, Post Oak, and Black Oak. Black Hickory and Blackjack Oak are the other species present. The woodland is located for the most part on xeric, south-westerly aspects, and the dry forest on mesic north-easterly aspects. Light grazing by livestock occurred until the early 1970s, but the site has never been logged. It has experienced fire of anthropogenic origin semiannually since settlers arrived. AB Ranch provides habitat for more than 300 native vascular plant species and few exotics (Rebertus and Burns 1997, Leahy 2001).

St. Francois Mountains Natural Area,* southeast Missouri (Iron County)

Three types of old-growth woodland within a 7028-acre Natural Area, which includes parts of seven igneous knobs in the St. Francois Mountains, takes in all of Taum Sauk Mountain State Park and Proffit Mountain Conservation Area, and 80 acres of Johnson's Shut-Ins State Park. Taum Sauk Mountain State Park has 500 acres of dry-mesic igneous woodland with White Oak, Black Oak, and Shortleaf Pine. Elsewhere in the St Francois Mountains Natural Area, are 80 acres of dry-mesic bottomland woodland with White Oak and 500 acres of dry igneous woodland with Post Oak, Blackjack Oak, Black Oak, Scarlet Oak, and Shortleaf Pine. The understory for the last is blueberry (Leahy 2001). The Natural Area is owned by the Department of Natural Resources (MDNR) and MDC.

Mudlick Mountain Natural Area, in Sam A. Baker State Park, southeastern Missouri (Wayne County)

Old growth variously described as a total of 700 acres of old growth (rank "A") on a long slope (Kurz 1990); 300 acres of grade "A" old growth and 400 acres of grade "B" (Shifley 2001); or 1000 acres of old growth of unspecified rank (Leahy 2001). The 700-acre figure has been divided as follows:

--300 acres of dry igneous forest characterized as "old growth climax White Oak aged more than 200 years. Trees stunted and gnarled due to severe growing conditions and natural disturbance. Described as virgin forest" (Nelson 1985). More recently Leahy

writes of 500 acres of old-growth dry igneous woodland (2001).

--400 acres of dry-mesic igneous forest characterized as "old growth and mixed age virgin timber" (MDC 1992). Leahy writes of 500 acres of old-growth dry-mesic igneous forest. In this type of forest the dominant trees are Red Oak, White Oak, Black Oak, hickory, and Shortleaf Pine; and the dominant shrub is Flowering Dogwood (Leahy 2001).

Turkey Pen Hollow Natural Area, in Ha Ha Tonka State Park**,** central Missouri (Camden County)

A 967-acre Natural Area with 700 acres of remnant woodland and scattered glades. Post Oak dominates the woodland as a whole; White Oak grows on north-facing slopes. Prairie grasses and other flora are in the ground layer (McCarty 1993, 1998). MDNR has conducted prescribed burns since 1985 with a good response in the herbaceous layer. By 1993 the area struck visitors as "a 'classic' woodland--widely spaced, gnarled trees amongst a grassy understory" (Dorst 1993).

Peter A. Eck Natural Area, along the Piney River, south-central Missouri (Texas County)

A 316-acre tract with up to 230 acres (93.2 ha) of grade "A/B" old-growth and old second-growth dry-mesic chert forest (MDC 1992, Kurz 1990; Murphy and Nowacki 1997). Leahy describes the old growth as 100 acres in extent (2001). The entire area has had some cutting, but not for a long time. The slopes of ravines and forested ridge tops support White Oak, Northern Red Oak, Black Oak, Shortleaf Pine, Black Hickory, Mockernut Hickory, Black Walnut, Eastern Redbud, and dogwood, including trees more than 200 years old. The MDC owns the area (MDC 1992, Kurz 1990; Murphy and Nowacki 1997).

Hawn State Park,* east-central Missouri (Saint Genevieve County)

Within the 5000-acre State Park, some 220 acres of old growth on sandstone bluffs: dry-mesic sandstone forest (40 acres), dry sandstone woodland (100 acres), and dry-mesic sandstone woodland (80 acres). The dry-mesic sandstone forest is composed of Northern Red Oak, White Oak, Black Oak, hickory, and Shortleaf Pine with Flowering Dogwood. The dry sandstone woodland supports Post Oak, Plackjack Oak, Black Oak, Scarlet Oak, and Shortleaf Pine with blueberry. The dry-mesic sandstone woodland has White Oak, Black Oak, and Shortleaf Pine. MDNR owns the site (Leahy 2001).

Meramec Upland Forest Natural Area, in Meramec State Park, east-central Missouri (Franklin County)

Within the 461-acre Natural Area, 150 acres of dry-mesic chert forest and 80 acres of dry-mesic limestone/dolomite woodland (Leahy 2001). Dry chert forest is "mixed oak-hickory, oak-pine, or pine forest," with White Oak, Black Oak, Scarlet Oak, Shortleaf Pine, and Lowbush Blueberry as the dominant plants (Nelson 1985). The Meramec area suffered "tremendous wind damage in 1980" (Kurz 1990).

Hickory Canyons Natural Area, eastern Missouri (Sainte Genevieve County)

Some 190 acres of old growth of "A" quality in three tracts within the larger

Natural Area. The site's sandstone hills are "well-dissected," with outcrops, shelter caves, and box canyons (MDC 1992). The area is owned by the private Leo A. Drey Foundation and leased to MDC for management (Kurz 1990). The three tracts are:

--30 acres of dry sandstone forest. The dominant trees are Shortleaf Pine, White Oak, Black Oak, Scarlet Oak, and Post Oak. Murphy and Nowacki list this site as one of the areas "where representative" xeric pine and pine-oak woodland may occur (1997);

--70 (Leahy 2001) or 80 (MDC 1992; Nelson 1995) acres of mesic sandstone forest. Northern Red Oak, White Oak, and Sugar Maple dominate the canopy. Spicebush is present in the understory. This type of forest is very rare, with only a few high-quality tracts remaining;

--80 acres of dry-mesic sandstone forest. White Oak, Northern Red Oak, Black Oak, Shortleaf Pine, and Shagbark Hickory dominate. Flowering Dogwood grows in the understory. The understory and ground cover are well developed (MDC 1992; Nelson 1985; Leahy 2001).

Bennett Springs Savanna, south-central Missouri (Laclede County)

Unlogged dry-mesic chert woodland, 160 acres in extent, within a 995-acre preserve (Churchwell 2002). Underneath an open canopy of old-growth Black Oak, Post Oak, Blackjack Oak, and Black Hickory, such prairie plants as Rattlesnake Master, Lead Plant, and Switch Grass flourish (Ladd 1993). According to a 1991 study by The Nature Conservancy, the site supports 24 tree species, 20 species of sedges, 243 forb species, and 41 grass species (McCarty 1998). The site has burned frequently over the last fifty years--until "very recently" with wildfire. The balance of the preserve is undergoing long-term restoration to return it to high-grade woodland. The preserve is owned by The Nature Conservancy, which manages it jointly with MDNR, and is the site of research into natural communities. A road passes through the 160-acre area (Ladd 1993; Churchwell 2002).

Big Oak Tree Natural Area, in Big Oak Tree State Park, in the southeastern corner of the state (Mississippi County)

Old-growth wet-mesic bottomland forest, ranked "A-B+," covering 160 acres (MDC 1999) within a 940-acre Natural Area. The structure is even aged (MDC 1992), with a tree canopy averaging 120 feet in height and several trees over 140 feet. An 80-acre portion is uncut (Thom and Iffrig 1985). A driveway divides the old growth, and a boardwalk crosses the north center. The balance of the Natural Area is old second growth. MDNR owns the tract (MDC 1992).

The forest is healthy, but is under stress because of changes in hydrology, loss of fire, and an excessive number of deer (due, presumably at least in part, to lack of large predators), all of which cause concerns about regeneration. The water problem is complex. Big Oak is located in a bowl-shaped depression in the New Madrid Floodway. The state owns most of the depression, but agricultural interests own the rest. To help farmers to drain their land quickly in the spring, drainage canals that radiate from the park in all directions have been constructed. They shorten the duration of the periodic floods in the park.

The US Army Corps of Engineers' St. John's Bayou and New Madrid Floodway project would compound the water problem, as it would prevent the entry of floodwater

into the park by breaking the connection between the New Madrid Floodway and the Mississippi River. In November 2002, the MDNR denied the Corps of Engineers water quality certification for the project. If this denial holds, MDNR will address the problem of the drainage ditches by installing a low berm to try to prevent them from siphoning off floodwater (McCarty 2002, USACE 2003).

Stegall Mountain Natural Area,* southeastern Missosuri(Shannon County)

Old growth of uncertain extent within the 5500-acre Natural Area. Leahy lists 100 acres of dry igneous woodland and 100 acres of dry-mesic igneous woodland (Leahy 2001). Kramer told us that the old growth is in scattered five-acre pieces (Kramer 2001). The Nature Conservancy, the National Park Service, and the MDC (which owns the land) are cooperating in restoring the Natural Area (McCarty 1998).

McSpadden Tract, southeastern Missouri (Cape Girardeau County)

Old growth and old second growth on a 172-acre tract: "a large hillslope with E-facing bluffs and 2 SE running draws along the Mississippi with outstanding mesic and dry-mesic forest" (rank "A/B") (MDC 1992). The site includes an example of the unusual mesic forest found in deep coves along the Mississippi. This forest type contains species characteristic of the Appalachian Mountains to the east: American Beech, Tulip Tree, American Holly, and Cucumber Tree (Kurz 1990; Nelson 1985). The tract is privately owned (Gremaud 1992).

Big Spring Pines Natural Area,* in Ozark National Scenic Riverways, southeastern Missouri (Carter County)

Within a 345-acre Missouri Natural Area, a 150 acre (MDC 1992, Murphy and Nowacki 1997) or 160-acre (Shifley 1997, Leahy 2001) dry-mesic chert, pine-oak and oak-pine forest along the ridge tops and the upper half of slopes. The tract was selectively logged in 1915 prior to acquisition by the state and again 20-30 years ago. Nevertheless, trees of 250+ years of age "occur throughout the site," and the site has diverse species in most size classes. Dominant canopy species are Shortleaf Pine and Scarlet Oak. Also in the canopy are Black Oak, White Oak, Post Oak, Mockernut Hickory and Black Hickory. Flowering Dogwood and Sassafras are among the varied species in the understory. The National Park Service owns the unit, which is apparently sometimes referred to as “Big Spring Towering Pines”(Griffiths 1992).

Westport Island Natural Area, on the Mississippi River, half-way up the state (Lincoln County)

At least 100 acres of likely old-growth wet and wet-mesic bottomland forest within a 480-acre Natural Area that occupies the southern half of an island in the Mississippi. Leahy gives the 100-acre figure (2001). Shifley writes of 153 acres of grade “B” old-growth (2001). Meadows and Nowacki list the Natural Area as a place “where representative old-growth eastern riverfront forests may occur” (1996). Greg Gremaud of MDC believes that the trees on the island are short-lived for natural reasons, and that the age of the trees is not an indication of human disruption. Silver Maple, Eastern Cottonwood, American Sycamore, Pin Oak and Pecan dominate in the bottomland forest (Gremaud 1992). USACE owns the site; MDC manages it (Kramer 2002) Increased

siltation and large floods have eliminated many oaks (Leahy 2001).

Engelmann Woods Natural Area, in east-central Missouri (Franklin County)

Old-growth forest on loess and weathered dolomite soils within a 145-acre Natural Area. Shifley lists the site as having 135 acres of grade "B" old growth (2000); Leahy, as having a total of 60 acres of old-growth mesic limestone/dolomite forest (2001). Earlier sources divided the old growth into two types:

--41 acres of "high quality, mixed, undisturbed, and old growth" mesic forest with Northern Red Oak, Sugar Maple, American Basswood, and ash on north-facing slopes and ravine bottoms (grade "A-B");

--68 acres of old growth and recovered dry-mesic forest of Chinquapin Oak and Sugar Maple (grade "B").

MDC owns the area, which also has dry upland and wet-mesic bottomland second-growth sections (MDC 1992; Thom and Iffrig 1985).

Alley Spring Hollow,* in Ozark National Scenic Riverways (Shannon County)

Up to 100 acres of old-growth xeric pine-oak forest. The dominant trees are in some places White Oak and pine; in some, mostly White Oak with dogwood; in others, mostly pine. The site is owned by the National Park Service and is to be combined with MDC land to form a Natural Area (Kramer 2002).

Weldon Spring Conservation Area,* near St. Louis (St. Charles County)

More than 90 acres of old growth within a 7200-acre area that was formerly the site of the Weldon Spring Ordnance Works. Within the 385-acre Weldon Spring Hollow Natural Area is old growth described as 80 acres of mesic loess/glacial till forest (Leahy 2001) or 220 acres of grade "B" forest of unspecified type (Shifley 2000). Dominant trees are Northern Red Oak, Sugar Maple, elm, and basswood; the dominant shrub is Pawpaw (Leahy 2001). Outside the Natural Area are 12 acres of grade "A" old growth of unspecified type (Shifley 2000). The MDC owns the Conservation Area.

Dark Hollow Natural Area,* in the Union Ridge Conservation Area, northern Missouri (Sullivan County)

An old-growth oak-hickory forest approximately 80 acres in extent (Rebertus et al. 1997, Leahy 2001) within a 308-acre Natural Area. The Natural Area is within the Union Ridge Conservation Area (Missouri Web). The old growth occupies "a dissected maze of valleys, with elevation changes up to 61 m and slopes ranging from 20 to 70%." The ridges are dominated by White Oaks grown in the open; the drainages support Northern Red Oak, American Basswood, Sugar Maple, and elms, among other species (Rebertus et al. 1997). MDC ranked the forest as A-C, but primarily B with "old selective logging locally, primarily on ridges" (MDC 1992). The Natural Area is owned by MDC (Leahy 2001).

Schnabel Woods Natural Area, in central Missouri (Boone County)

An 80-acre Natural Area of dry-mesic limestone/dolomite forest with loess soils. The ridge tops are oak-hickory, while Sugar Maple, American Basswood, and associated northern hardwoods grow on the side slopes and in the coves and main drainage.

According to the State Natural Area nomination form from 1958, about 50 acres are old growth "of high natural quality" (Dorst 1993). More recently Leahy described the old growth as 40 acres (2001). Shifley characterizes Schnabel Woods and the adjacent Eagle Bluffs Conservation Area as together having 65 acres of class "B" old growth (2000). The University of Missouri owns Schnabel Woods, and has registered it with MDC (Thom and Iffrig 1985, Shifley 2000).

Harry S. Truman State Park,* central Missouri (Benton County)

Old growth of uncertain extent within the 1440-acre state park. Leahy lists 80 acres of dry limestone/dolomite woodland (2001). Shifley listed 160 acres of class "B" old growth (2000). The park, which is owned by the Missouri DNR, has towering limestone bluffs overlooking the Harry S. Truman Reservoir.

Cuivre River State Park,* east-central Missouri (Lincoln County)

Sixty acres of old-growth dry-mesic limestone/dolomite woodland with Chinquapin Oak and White Oak in a 6394-acre state park (Leahy 2001). The park includes scenic limestone bluffs. Missouri DNR is the owner.

Fuson Conservation Area,* southern Missouri (Wright County)

Sixty acres of old-growth Post Oak upland flatwoods within the Conservation Area. MDC owns the area (Leahy 2001).

Allred Lake Natural Area,* southeastern Missouri (Butler County)

Sixty acres of old-growth swamp and wet bottomland forest within a 76-acre Natural Area (Leahy 2001). The swamp, 40 acres in extent, surrounds a natural pond that harbors two state-endangered species of fish. Here are found ancient Baldcypress and tupelo trees with a shrub layer of Swamp Rose. The wet bottomland, twenty acres in extent, supports Red Maple, Overcup Oak, Water Hickory and Swamp-privet, among other species. The site is owned by the MDC (Leahy 2001).

Cochran Woods, in Babler State Park, eastern Missouri (St. Louis County)

Fifty-three acres of dry-mesic forest, dominated by White Oak, Northern Red Oak, and Black Walnut, and 16 acres of mesic forest. Both are described as "A-B" quality and as having undergone "some selective cutting." The larger area is, however, also characterized as "essentially undisturbed." MDNR owns the Woods (MDC 1992).

Roaring River Cove Hardwoods Natural Area, in Roaring River State Park, southwestern Missouri (Barry County)

Within a 120-acre Natural Area, a possible 50 acres of old- growth dry-mesic limestone/dolomite forest. In 1992-93 the Natural Features Inventory gave 50 acres a grade of "B" (Dorst 1993), and described at least 25 of those acres as "old second growth" oak (MDC 1992). Shifley et al. chose the Natural Area as one of five Missouri sites to measure for an old-growth study and listed the old-growth tract as the full 120 acres (Shifley 1992, Shifley et al. 1997). Leahy lists 40 acres of old growth with White Oak, Chinquapin Oak, Northern Red Oak and, as the main shrub, Redbud. MDNR owns the site (Leahy 2001).

Pershing State Park,* northern Missouri (Linn County)

Forty acres of old-growth wet-mesic bottom woodland with cottonwood trees within the 3527-acre state park on the Locust River. MDNR owns the park (Leahy 2001).

Quercus Flatwoods Natural Area, in the George O. White State Forest Nursery in south-central Missouri (Texas County)

Within a 48-acre Natural Area, 40 acres of flatwoods oak forest on fragipan soils. Post Oak, more than 200 years old, dominates (Thom and Iffrig 1985), and is accompanied by Black Oak, Blackjack Oak, Black Hickory, and Eastern Red-cedar. Graded "B," the site has both old growth and old second growth (MDC 1992).

Bradyville Natural Area,* southeastern Missouri (Stoddard County)

Old growth within a 139-acre Natural Area, itself within the Otter Slough Wildlife Area. Leahy lists 40 acres of bottomland flatwoods with Pin Oak, Post Oak, and Cherrybark Oak (2001). Shifley lists 139 acres of class “B” old growth (2000). The Natural Area is owned by the MDC.

August A. Busch Memorial Conservation Area,* west of St. Louis in Missouri (St. Charles County)

On Dardanne Creek, within the 7000-acre Conservation Area, possible old-growth eastern riverfront forest. Among the principal species in eastern riverfront forests are River Birch, American Sycamore, Silver Maple, American Elm, Eastern Cottonwood, Swamp Cottonwood, Sweetgum, and Black Willow (Meadows and Nowacki 1996). The Conservation Area is owned by the state of Missouri, which purchased it from the federal government with the help of a gift from Mrs. August Busch. The MDC manages the site. It is adjacent to the Weldon Spring Conservation Area and, like the Weldon Spring Area, was formerly the site of the Weldon Spring Ordnance Works (Weldon 2003).

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