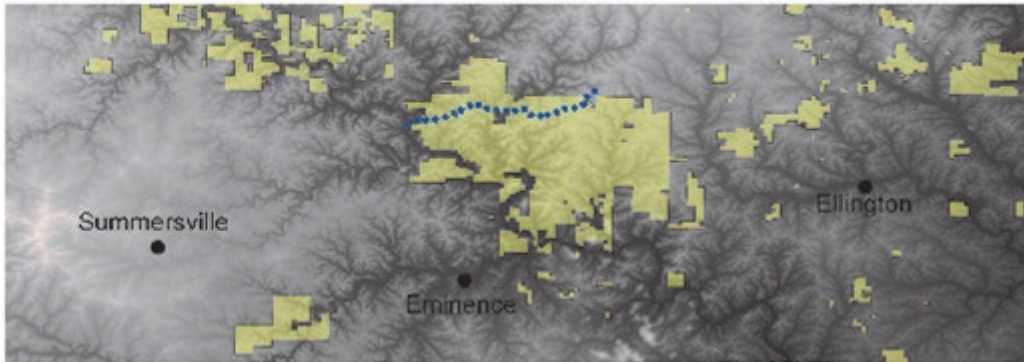


Annual Report of the L-A-D Foundation



September 2011



Approximate route of the Camp Zoe Road (CR 19-250) across Pioneer's Roger Pryor Pioneer Backcountry, which is depicted in the cover photograph.

COVER PHOTO: Along the Camp Zoe Road in Shannon County, connecting Highway 19 near Round Spring and extending for more than a dozen miles east across the Roger Pryor Pioneer Backcountry before exiting Pioneer Forest near Midridge. It has been dubbed by staff as Missouri's most scenic forest drive. Each season carries a distinctive feel, spotted with dogwood in the spring, covered with leafy green in the summer, filled with Ozark fall color, and offering views through the forest each winter. PHOTO BY: Greg Iffrig

“Incorporated in 1962, L-A-D Foundation is a Missouri private operating foundation dedicated to sustainable forest management, protection of exemplary natural and cultural areas in Missouri, and providing support and advocacy for projects and policies that have a positive influence in the Missouri Ozark region.”

Leo Drey began acquisition of forest land in the Missouri Ozarks in 1951. The name Pioneer Forest was originated by Pioneer Cooperage Company of St. Louis, and in 1948 it was sold to National Distillers Products Corporation, and the forest was renamed the Seton Porter Forest. Then in 1954 Leo Drey purchased all of the land, added it to the forest land he already owned, and renamed it all Pioneer Forest. In 1962 Leo Drey founded the L-A-D Foundation primarily to hold and protect areas of outstanding natural or cultural resource value in the Missouri Ozarks. In 2004 Leo Drey donated Pioneer Forest, as a limited liability corporation, to the L-A-D Foundation to be managed, as it had been for 50 years, as an exemplary model of conservative single-tree selection forestry.

ANNUAL REPORT

of the L-A-D Foundation

September 2011

—TABLE OF CONTENTS—

<i>From the President</i>	5
<i>Pioneer Forest Management</i>	6
<i>Land Consolidation</i>	8
<i>Research</i>	10
<i>Education and Outreach</i>	11
<i>Recreation and Natural Areas</i>	13
<i>Grantmaking and Community Support</i>	17
<i>Public Policy Issues</i>	19
<i>Administrative Issues</i>	23
<i>Appendices</i>	27
<i>Glossary of Terms</i>	30

OTHER PHOTOGRAPHS AND IMAGES: Photo and image credit information used in this report is found with each image; all are printed from digital files, and those not originating with the Foundation have been given to us for our use and are reproduced here with permission. The maps we have used are taken from digital map files of Missouri that are renderings of the U.S. Geological Survey topographic quadrangles and are produced using ArcMap software from ESRI.

L-A-D Foundation

Board of Directors:

Leo Drey, Chairman, University City
John Karel, President, St. Louis
Eleanor Drey, Vice President, San Francisco, CA
Kay Drey, Secretary, University City
Laura Drey, Vice President, Durham, NC
Susan Flader, Vice President, Columbia
Wayne Goode, Treasurer, St. Louis
Leon Cambre, Rolla
Dorothy Ellis, Thayer
Edward (Ted) Heisel, St. Louis
Jerry Vineyard, Ozark
Rindy O'Brien, Washington, D.C.

Advisory Council:

Jon Smith, Mountain View
Clint Trammel, McDonough, GA
David Larsen, Columbia
Bill Terry, Jadwin

Emeritus Board:

Richard C. Smith, Columbia

Senior Staff:

Terry Cunningham, Forest Manager
Greg Iffrig, Liaison to the Board
Jason Green, Forester
Brandon Kuhn, Forester

Technicians:

Danny Skaggs
Mike Adams
Tim Dyer

St. Louis Office Manager:

Dona Ellis

From the President

During this past year our Board and staff have achieved much progress in several aspects of the Foundation's mission, and have helped fulfill the vision of our Founder and Chairman, Leo Drey.

The bulk of the Foundation's lands lie within the watershed of the Current River, widely recognized as one of the nation's premier streams. In addition to its natural beauty and significance, the Ozark National Scenic Riverways and its immediate area are home to several local communities, where people work in the nearby woods and sawmills, where families raise their children, and where tourism benefits local economies. Taking care of the river and demanding better management of the Riverways will provide a better future for everyone. It is among our highest priorities.

Pioneer Forest has just completed the largest timber salvage project in its history. Damage from the storm of May 2009 was a blow to which our staff responded quickly and skillfully. Crews have worked for the past two and a half years and are just now making the transition back to single-tree selection harvests. That is a welcome return.

Staff and board are working diligently to resolve the management difficulties that have arisen with the DNR lease of the Roger Pryor Pioneer Backcountry. We hope the lease can be maintained, but good stewardship of the resource is our highest obligation, and if the agency cannot provide that due to budgetary restrictions, we will reluctantly seek an alternate strategy for management of the area.

Terry Cunningham, who has been with Pioneer Forest for 39 years, and who now serves as Forest Manager, has announced his intention to retire within the next 18 months. The Board and staff have already begun working with Terry to plan for the future. We will add a field position to bring Pioneer's full-time staff up to seven. This will help the field staff keep pace as they manage a forest that has grown substantially in quality and volume.

Finally, the year 2012 will mark the 50th anniversary of the L-A-D Foundation. It will be appropriate to celebrate and reflect on this milestone, even as we plan for the future.



L-A-D Foundation

PIONEER FOREST MANAGEMENT
LAND CONSOLIDATION
RESEARCH
EDUCATION AND OUTREACH
RECREATION AND NATURAL AREAS
GRANTMAKING AND COMMUNITY SUPPORT
PUBLIC POLICY ISSUES
ADMINISTRATIVE ISSUES

Pioneer Forest Management



Forester Brandon Kuhn
PHOTO BY Lauri Drey

TRANSITION FROM SALVAGING WINDSTORM DAMAGE

For the past two years Pioneer Forest has salvaged timber from the straight-line windstorm that occurred on May 8, 2009. We estimate that storm to have impacted 22,000 acres. To date, the salvage operations have harvested 35 million board feet of blowdown timber from Pioneer Forest land. It is still unclear how the damage will affect our five-year data inventory project that is scheduled to start in the fall of 2012. This information will show us how the storm affected our forest-wide volume, growth, and mortality.

We have been slowly reducing the number of crews on Pioneer as they finish salvage operations. Our peak number during salvage operations was 23 crews. Currently, we have seven crews that are working on us. Surprisingly, four of those crews worked blowdown for over two years and have moved to marked timber as of August of 2011. The remaining three crews have been working in marked timber for the past several months. We are hoping to maintain approximately six crews on Pioneer as we transition into normal timber marking operations.

Timber markets remain relatively stable. Timber sale bids in the area have ranged from \$160-210 per thousand board feet, and as we transition into marked timber, our prices will remain at the \$180 per thousand board feet as it was before the storm.

NEW TIMBER SCALING PROGRAM

For years our staff has marked and scaled all our timber and sold it based on a system which has worked well in the past but slows down marking in the field. We are transitioning to a new program that will require loggers to weigh loaded trucks and convert the log weights to board feet. This method reduces human error and appears to be an acceptable change for our logging crews. This trend of weighing loads is becoming more popular in the industry. We will now require our loggers to weigh every load of logs that they haul off the forest and pay Pioneer Forest based on the weight of their loads. We have been utilizing this system throughout the blowdown cleanup. In addition, Pioneer's foresters will continue to select and mark each tree chosen for harvest as in the past.

PINE MANAGEMENT AREA, RANDOLPH TRACT

We actively manage 120-acres of shortleaf pine immediately east of the Virgin Pine along Highway 19 near Round Spring. Our harvest in the area was completed over the winter of 2010-2011, and we reduced the stand density to where the pine trees have an average spacing of 25 feet. The stand appears

much healthier than before. The J & G Logging crew, named the 2011 State Loggers of the Year, did an exceptional job and continue other logging in the surrounding acreage which we refer to as Pioneer's Randolph Tract.

One result of our harvesting is that many tops and other logging debris are left across the forest floor. After these decompose to an acceptable level we will then plan for a prescribed fire and modify our forest management to protect our hardwood stand while promoting a healthy pine management area.

This summer we also completed a timber stand improvement in this same area of the Randolph Tract. We were fearful that after opening up the canopy, many of the small hardwoods (3"-6") would capitalize on newly created growing space and directly compete with the pine. Normally we would not consider using a non-commercial thinning in this area, however, we contracted Quality Forest Management to do this work, and we already have begun to see the results.

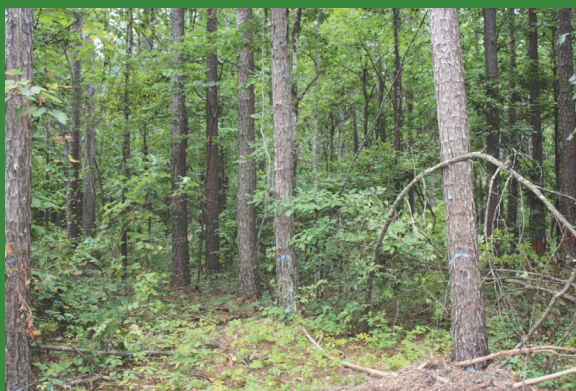
We hope that our treatments will increase the vigor and health of this stand and also increase the diversity of the herbaceous layer.

PIONEER FOREST MANAGEMENT PLAN

In early 2011 the Management and Stewardship Committee reviewed a draft Pioneer Forest Management Plan prepared by staff. Copies were distributed to the Board prior to the spring meeting, and all were encouraged to make comments before a final copy was produced.

The Pioneer Forest Management Plan defines the history and objectives for the forest, evaluates current forest conditions, describes forest policy that will guide future management decisions, and outlines activities that are deemed necessary for sustainable harvest levels.

The plan was originally adopted in 2002 and is reviewed every five years. Updated versions will be published every 10 years, or as often as revisions are needed.



The Randolph Tract/Pine Management Area: Pre-Harvest



The Randolph Tract/Pine Management Area: Post-Harvest

PHOTOS BY Jason Green

L-A-D Foundation

PIONEER FOREST MANAGEMENT
LAND CONSOLIDATION
RESEARCH
EDUCATION AND OUTREACH
RECREATION AND NATURAL AREAS
GRANTMAKING AND COMMUNITY SUPPORT
PUBLIC POLICY ISSUES
ADMINISTRATIVE ISSUES

Land Consolidation

PURCHASED LAND

Jerktail Mountain, Shannon County, 242 acres in the Northwest Quarter of Section 5, T29N, R3W.

Early in 2010 Pioneer staff contacted the owner of this inholding which had been identified as a high priority several years ago by the Stewardship and Management Committees. This property is between Pioneer Forest and the Ozark National Scenic Riverways (not within the park's boundary), and fits within the western boundary of the Roger Pryor Pioneer Backcountry.

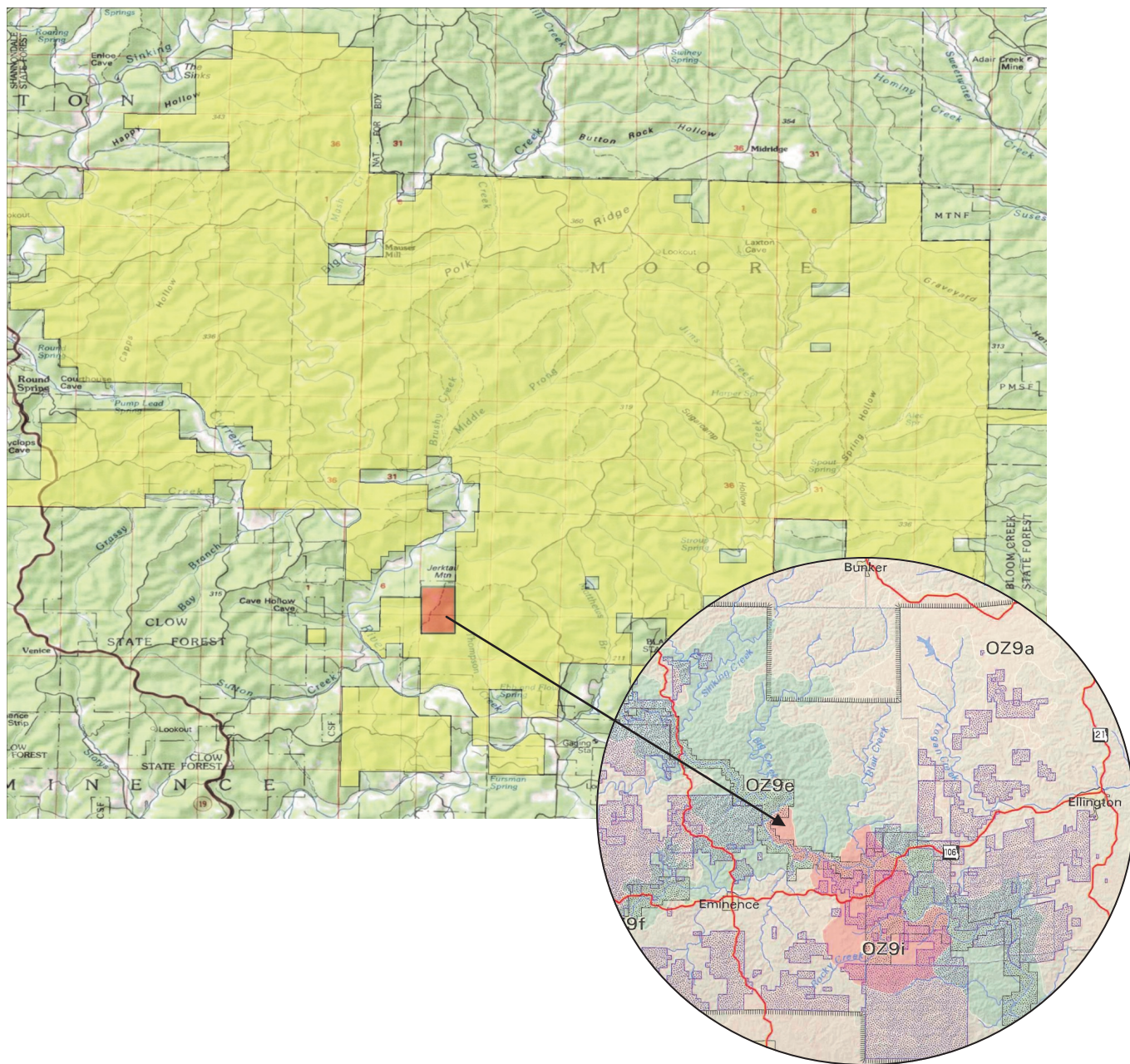
About half of the property is an open igneous glade on south- and west-facing slopes. Pioneer had already owned the northern portion of the mountain. Jerktail is centered in the Current River Hills region, within an isolated outcrop of about 20 igneous glade/oak knobs between Eminence and Ellington. The Precambrian igneous bedrock is more common to the St. Francois Mountains 40 to 50 miles farther east.



PHOTO BY Greg Iffrig

This is not a timber-producing site, but it has high natural history values and a strong potential for restricted, specialized rhyolite glade flora and fauna.

Following a strong recommendation from the staff, the Executive Committee approved negotiation and the final price. The purchase of this 242-acre tract was concluded in May 2011.



Jerktail Mountain Purchase. Upper map shows the location relative to Pioneer Forest. The lower map (taken from page 173 of the Atlas of Missouri Ecoregions, Missouri Department of Conservation, 2002) shows its approximate location within the Eminence Igneous Glade/Oak Forest Knobs land type association, colored here in pink.

L-A-D Foundation

PIONEER FOREST MANAGEMENT
LAND CONSOLIDATION
RESEARCH
EDUCATION AND OUTREACH
RECREATION AND NATURAL AREAS
GRANTMAKING AND COMMUNITY SUPPORT
PUBLIC POLICY ISSUES
ADMINISTRATIVE ISSUES

Research



Spicebush butterfly feeding on tall larkspur.
PHOTO BY Angela Sokolowski

TALL LARKSPUR POPULATION DISCOVERED

Tall larkspur (*Delphinium exaltatum*) is rare nationally. It is found in several eastern states, with Missouri having the only populations west of the Mississippi River, two hundred miles west of any other sites. There have been two significant populations discovered on Pioneer Forest. Both are located where Pioneer shares a boundary with the National Park Service, and both are in the upper Current River. One is near Akers Ferry, and the other was discovered just this year near Devils Well. Tall larkspur prefers filtered sunlight in order to bloom and set seed. It seems to require an overstory that helps the soil to retain its moisture. Pioneer is participating in a several year-long study on our land to inventory, monitor, and investigate management options. This study with the National Park Service will provide information on how we may better protect these and other Missouri sites.

BLACK BEAR SURVEY

In the summer of 2011, the Missouri Department of Conservation began a black bear trapping effort in several counties in the eastern Ozarks and southeast Missouri. This includes Pioneer Forest where for many years MDC and Pioneer staff had noted signs of black bear. Tracks were often observed, and Pioneer staff would find food eaten that had been left intentionally to attract bears.

During May and June, Pioneer Forest Technician Dan Skaggs began assisting MDC's Chief Fur-Bearing Biologist Scott McWilliams with trapping efforts. Two bears, one a 450-pound male (the largest trapped this year in the state), were captured on Pioneer.

A small tooth was extracted, weight and other measurements were made, a hair sample was taken, and then a radio collar was placed on each bear. The range of the collared bears is being studied, and an effort is being made to determine the size of Missouri's population.



Black bear trapped on Pioneer Forest.
PHOTO BY Terry Cunningham



Pictured are Pioneer Forest Technician Dan Skaggs and Scott McWilliams of MDC after placing a radio collar on the bear prior to its release.
PHOTO BY Terry Cunningham

L-A-D Foundation

PIONEER FOREST MANAGEMENT
LAND CONSOLIDATION
RESEARCH
EDUCATION AND OUTREACH
RECREATION AND NATURAL AREAS
GRANTMAKING & COMMUNITY SUPPORT
PUBLIC POLICY ISSUES
ADMINISTRATIVE ISSUES

Education and Outreach



PHOTOS BY Hank Dorst

L-A-D FOUNDATION BROCHURE

A new informational brochure for the L-A-D Foundation was completed earlier this year. It provides a quick overview of the Foundation's mission. The brochure is intended to reach people who may be inspired by the vision of Leo A. Drey and who wish to help enrich the preservation and management of natural and cultural assets, particularly within the Missouri Ozark region.

PIONEER FOREST COMMUNITY DINNER

The annual outdoor dinner celebrated its fifth anniversary this spring. Guests enjoyed beef and pork barbecue, homemade pies, and good company. The event is hosted by the L-A-D Board for the local community, and is held on the headquarters campus of Pioneer Forest, located just north of Salem. This year's event drew more than 135 of our forest neighbors, friends, logging contractors, community leaders, and a variety of officials from across the area, making it the largest attendance to date.



Front row: Kay Drey and Terry Cunningham; Second row: Leo Drey, Susan Flader, Jerry Vineyard, and Leon Cambre; Third row: Shannon County Presiding Commissioner Jeff Cowan, Wayne Goode, and Shannon County Northern Commissioner Dale Counts; Fourth row: Dent County Presiding Commissioner Darryl Skiles, Shannon County Southern Commissioner Herman Kelly, and Dent County Southern Commissioner Dennis Purcell

PHOTO BY Martha Cunningham

DISCOVER MISSOURI NATURAL AREAS—A GUIDE TO 50 GREAT PLACES

This new publication was authored by Mike Leahy and published by the Missouri Department of Conservation on behalf of the Missouri Natural Areas Committee. Highlighting more than 180 natural areas designated in Missouri, these 50 areas are intended to represent the range of biological diversity across the state. Included in the introduction are pictures of the L-A-D Foundation's Current River and Clifty Creek Natural Areas, and there is a write-up on Clifty Creek as one of the 50 featured areas.

PIONEER FOREST LUMBER LLC CO-SPONSORED THE MISSOURI GATEWAY CHAPTER, US GREEN BUILDING COUNCIL (USGBC) MEETING

In May several of Pioneer's staff spent an evening in St. Louis visiting with architects, engineers, and others interested in green building. We displayed red and white oak flooring as well as information about other Pioneer products available through Smith Flooring. Printed information was also provided about the new 100% FSC-certified products that will be available through Pioneer Forest Lumber LLC.

NATURAL AREAS CONFERENCE

The Foundation co-sponsored the 37th Annual Natural Areas Conference that was held at Lake of the Ozarks, Missouri October 25-29, 2010. The conference offered lecture sessions, roundtables, and workshops. The Natural Areas Association provided exhibit space, and the Foundation displayed information on its management of lands that are designated as natural areas or in similar programs.

VISITS TO PIONEER, TOURS, AND OUTREACH

Sierra Club: A tour of Pioneer Forest was given to the Sierra Club on October 16, 2010. Jason Green conducted the tour of the Roger Pryor Pioneer Backcountry.

Southern Illinois University Forestry Department: Terry Cunningham and Brandon Kuhn gave a tour of the Randolph tract to a group of 25 forestry students on June 3, 2011.

University of Missouri Forestry Department: Dr. John Dwyer brought a group of forestry students to visit Pioneer Forest. Jason Green conducted the tour of the Randolph tract on June 6, 2011.

University of Kentucky: Two professors from the university visited Pioneer Forest on June 28, 2011. Senior lecturer Erik Reece from the English Department and Dr. James Krupa from the Biology Department received a tour of the forest from Terry Cunningham. Erik Reece is writing a book about Robinson Forest, a 14,000 acre tract of land owned by the University of Kentucky. Both gentlemen were gathering information for the book.

Tom Grissom: Tom Grissom became interested in Pioneer Forest and wanted to explore management techniques to apply to his own forest land in Kentucky. Mr. Grissom visited Pioneer Forest during the spring Board meeting in 2011 and participated in the group field trip, which included stops at the Randolph Tract and Big Creek.

L-A-D Foundation

PIONEER FOREST MANAGEMENT
LAND CONSOLIDATION
RESEARCH
EDUCATION AND OUTREACH
RECREATION AND NATURAL AREAS
GRANTMAKING AND COMMUNITY SUPPORT
PUBLIC POLICY ISSUES
ADMINISTRATIVE ISSUES

Recreation and Natural Areas



Pictured in front of the entrance sign at the Backcountry left to right are: Mike Adams, retired Forest Manager Clint Trammel, Forest Manager Terry Cunningham (standing), Jason Green, Greg Iffrig, Brandon Kuhn, L-A-D Foundation Chairman and Founder Leo Drey, Dan Skaggs, and Tim Dyer (both standing).

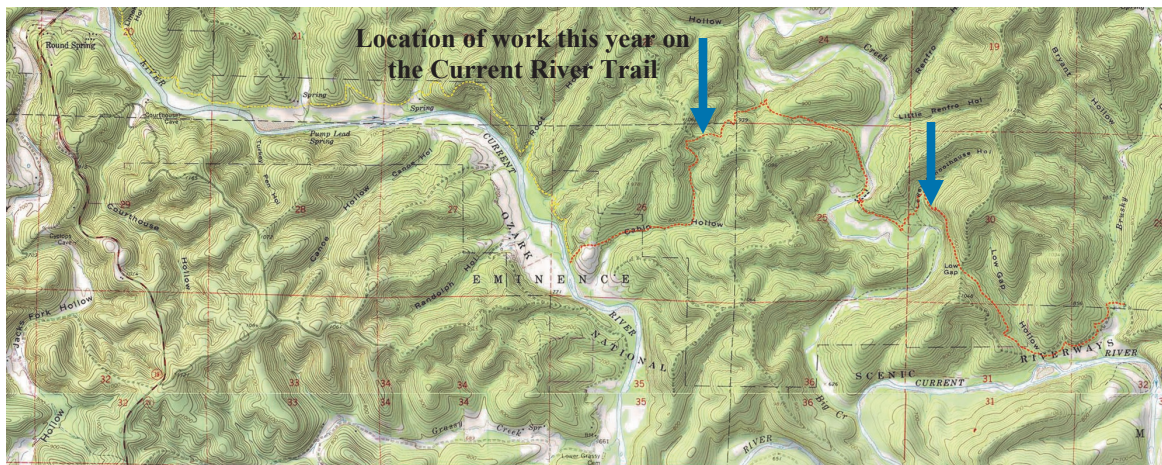
PHOTO BY Martha Cunningham, April 2011

Pioneer's trails experience began with the construction of 13 miles of the Blair Creek Section of the Ozark Trail in the 1970s. Then in the 1990s, Pioneer added other hiking trails, a walking trail, and an interpretive drive through the forest. Today, Pioneer includes more than 40 miles of routes for the public that offer a variety of experiences. Most of these are in the 61,000-acre Roger Pryor Pioneer Backcountry.

Volunteers from AmeriCorps, John Burroughs School, the Ozark Trail Association, the Sierra Club, and others, have been responsible for trail maintenance and construction.

Brushy Creek Trail. Originally conceived by Sierra Club members and initially developed as a route to the Current River, this trail is now 19 miles, with two different loops. In August, *Backpacker* magazine featured 'a hike near you' in each of the fifty states for their readers. Missouri's was the Brushy Creek Trail in the Roger Pryor Pioneer Backcountry. This national attention will undoubtedly draw more users. Staff have arranged for several volunteers to inspect this entire route this fall and conduct work trips during the winter for maintenance or re-routing as may be needed.

Current River Trail. This past winter the initial groundbreaking for the development of the Current River Trail began between Big Creek and Brushy Creek. Approximately 20 high school students from the graduating senior class of John Burroughs School participated in mid-May. Staff from AmeriCorps led an advance crew into Pioneer with tools and radio equipment and provided site prep, training, and leadership.



Volunteers from the Ozark Trail Association assisted ahead of time to flag the intended route. Then a second OTA volunteer crew, based at a camp in the new Current River State Park, spent part of a weekend adding to the trail work which Burroughs had begun. Everyone is planning for additional efforts this coming fall and winter.

Backcountry Horse Trail. Pioneer's section of the Ozark Trail along Blair Creek is dedicated to foot travel. Volunteers from Show-Me Missouri Backcountry Horsemen approached Pioneer for an equestrian trail route through the forest that would link other sections of the Ozark Trail farther north and south already having horse use. We asked that they visit Pioneer, review options on the ground, and then present a proposal. We concluded that the idea for a linear route generally paralleling the Ozark Trail to encourage long-distance and overnight use, with limited staging areas (perhaps to be off the forest), had merit, and was in keeping with the mission of traditional recreation pursuits on Pioneer land.

We are researching a possible route with the Missouri Department of Natural Resources, the Ozark Trail Association, the Sierra Club, Mark Twain National Forest, and the Backcountry Horsemen, with the hope that those interested in equestrian use may be able to enjoy high-quality trail riding experiences on Pioneer Forest.

PIONEER'S NATURAL AREAS AND FOREST RESERVES

The L-A-D Foundation and the Pioneer Forest staff monitor natural areas and forest reserves located on lands of Pioneer Forest. We have been involved with the following stewardship issues during the past year:

Leatherwood Forest Reserve. This reserve in Shannon County includes the Leatherwood Creek valley and hillsides along either side of more than five miles of this Ozark stream. During the derecho windstorm of May 8, 2009, significant blowdown occurred across a broad ridge, above the creek in Section 14, just outside the reserve. Salvage operations were conducted in 2010, and steps are being taken to ensure that control of motorized access is re-established.

Lily Pond Natural Area. At the Lily Pond we have installed a routed wooden sign acknowledging the donation of this small tract (8 acres) by The Nature Conservancy to the L-A-D Foundation in 2006. Lily Pond was designated a Missouri Natural Area in 1975 and is within a much larger 1900-acre area of Pioneer Forest in Reynolds County.



PHOTO BY Greg Iffrig

Virgin Pine. This shortleaf pine woodland in Shannon County stretches for one mile along either side of Missouri Scenic Highway 19 and just south of Current River. Our goal here is to preserve the character of this landscape, the individual trees, and views through the pine across the Current River watershed. Cutting the dense sapling undergrowth beneath the old shortleaf pine trees several years ago resulted in vigorous growth of mostly oak brush, in many places quite thick, and now approaching knee high. Discussions among the staff, and with others, suggest that small (several acre) spot burns would allow maximum control and be the most effective long-term management treatment. Such an effort would be completed over two or more years and is set to begin this fall.



Pictured left to right: Leon Cambre, Wayne Goode, Terry Cunningham, and Greg Iffrig (background).
PHOTO BY Lauri Drey

NATURAL AREAS UNDER SPECIAL MANAGEMENT AGREEMENT WITH THE MISSOURI DEPARTMENT OF CONSERVATION (MDC).

The L-A-D Foundation owns seven properties, in counties beyond Pioneer Forest, that are leased to the Missouri Department of Conservation. These properties are: Ball Mill, Clifty Creek, Dripping Springs, Hickory Canyons, Horseshoe Bend, Piney River Narrows, and Rocky Hollow Natural Areas.

We have been involved with the following stewardship issues during the past year:

Ball Mill (Perry County). Windstorm damage resulted in blockage of the short trail. We have asked MDC that cutting and removal be restricted to what is necessary for pedestrian access. Adjacent acreage, which the Foundation was able to acquire here has been under restoration. Each year we meet with the Conservation Department's regional and local Perryville staff to assess progress and plan for future work. There were heavy rains in the spring and early summer that flushed out the resurgence at the base of the bluff. In July that opening, normally covered with loose rock and stones, was opened to reveal the underground water passage.

Clifty Creek Natural Area (Maries County). A field review with MDC staff was conducted in 2010, and we await completion of a new Management Plan.

Hickory Canyons Natural Area (Ste. Genevieve County). Work on re-marking the boundary line continued this past year. We have also contacted several neighbors along the west side of the property where the Foundation holds an approximately 1/2-mile long easement for access. We are seeking to remind them of the Foundation's interest in this land.

On October 3, 2010, a ceremony was held at Hickory Canyons to dedicate the "Allen Brohn Trail," which included installing an engraved bronze plaque. Members of the L-A-D Board, MDC officials, and members of the Brohn family were in attendance. Allen Brohn, who passed away in March of 2010, was one of the early members of the L-A-D Foundation Board.



Pictured is MDC Deputy Director Tom Draper, L-A-D Board members, and the Brohn family at the Hickory Canyons trail dedication.
PHOTO BY Greg Iffrig

Rocky Hollow Natural Area (Monroe County). A field review with Missouri Conservation Department staff is to be conducted, followed by the completion of a Draft Management Plan.

SPECIAL AREAS UNDER MANAGEMENT AGREEMENT WITH THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF STATE PARKS

Staff members also monitor the management of three properties leased to the Missouri Department of Natural Resources namely, Dillard Mill, Grand Gulf, and the Roger Pryor Pioneer Backcountry. These are the stewardship issues we have been involved with during the past year:

Roger Pryor Pioneer Backcountry. Interest in and use of the Backcountry seem to be growing. Both the Pioneer Salem and St. Louis offices have had more inquiries over the past two years. Holiday weekends have brought the most use, especially Memorial Day and Labor Day. Our own and others' observations indicate that use during the 2011 Memorial Day weekend was higher than ever. The August 2011 issue of the *Backpacker Magazine* described the Roger Pryor Pioneer Backcountry's Brushy Creek Trail and suggested that its readers "Hike the state's most deserted forest." This increasing attention has become more of a problem as the Division of State Parks staff has been reduced and their management efforts re-directed, almost completely, to other state park properties.

Earlier this year, staff and board members discussed the Backcountry with Missouri Department of Conservation Deputy Director Tom Draper. Tom had been familiar with the Backcountry from his days as Forester for MDC's Ozarks Region. In past years we have had occasional visits by conservation agents. However in late June and then again in early July, there were two weekends where one or more agents were on the ground at the Backcountry. During those visits a number of citations were issued for ATV misuse in Blair Creek. We also know that this illegal use has now spread to Big Creek.

Pioneer's staff has become quite concerned that there is increasing evidence of road violations by visitors who are taking motorized vehicles off authorized roads and into the forest itself, onto secluded gravel bars, and actually into some of the area's most remote and pristine streams. It is not clear as yet whether or not DNR has the capability to control this abuse. We are working with the DNR and others to find a solution. The L-A-D Board does recognize its responsibility to protect the special character of the Backcountry and will act accordingly.



Exterior view of Dillard Mill. Repair work to restore operation of the mill's water components was completed in the summer of 2010.
PHOTO BY Greg Iffrig

L-A-D Foundation

FOREST MANAGEMENT
LAND CONSOLIDATION
RESEARCH
EDUCATION AND OUTREACH
RECREATION AND NATURAL AREAS
GRANTMAKING AND COMMUNITY SUPPORT
PUBLIC POLICY ISSUES
ADMINISTRATIVE ISSUES

Grantmaking and Community Support



Ozark Kids' Connection Program
PHOTO BY Bonebrake Center of
Nature and History

FOUNDATION GRANT PROGRAM

Since 1962 the L-A-D Foundation has given more than 65 grants, totaling more than \$350,000, to various groups with projects that support the Missouri Ozark region. Examples of support have included environmental and conservation education, natural areas, community projects in the Ozarks, advocacy, and grassroots organizing. The Foundation distributes general submission guidelines and deadline information annually to more than 100 organizations and individuals. This information is also posted on the L-A-D website, www.ladfoundation.org

Friends of Ozark Riverways. Beginning in the summer of 2009, the Foundation provided a grant for the Missouri Coalition for the Environment's research project to establish a database about the Ozark National Scenic Riverways (ONSR) management problems. When the ONSR was established in 1964, only 14 motorized access routes were envisioned to provide launch, camp, and other public services along the ONSR's 134 shoreline miles. Additional information is being gathered to identify the increasing pressures on the rivers and their watersheds. This includes the collection of on-the-ground information needed to resolve the over-development challenges and other management issues. The information is to be used to seek broader public recognition of the continuing need to preserve the ONSR and its outstanding river resources. The Foundation provided financial assistance, including funds it has received from the Leo Drey Pioneer Foundation, to continue its support for this effort.

2011 Grant Program. In April 2011, the Grants Committee received 22 grant proposals. The letters of inquiry came from several previous applicants, but also from many new individuals and organizations. Finalists were asked to submit additional proposal information by August 15, 2011. Final proposals are being reviewed by the Committee.

Final selections and funding recommendations will be presented to the Board for approval at its fall meeting in October. Grant checks will be presented by a Board or staff member in person to each of the organizations in November 2011.

2010 Grant Recipients. In the fall of 2010, grants were awarded to the following organizations:

Greater Ozarks Audubon — GLADE summer conservation education program
Watershed Committee of the Ozarks — completion of Watershed Center Rain Garden
Mark Twain Forest Watchers — advocacy in opposition to woody biomass for energy
Ozark Regional Land Trust — protect farms and forests in priority Ozark watersheds
Bonebrake Center of Nature and History — community educational programs for kids
Tumbling Creek Cave Foundation — protecting cave by cleanup and site restoration efforts
Sierra Club-Eastern Missouri Group — ongoing trail building and maintenance projects
Missouri River Relief — organize and enhance Missouri river cleanups

COMMUNITY SUPPORT

Throughout the year, the L-A-D Foundation and Pioneer Forest contribute to various projects and community groups.

Bunker Fire Department. Pioneer Forest has contributed funds to assist with maintenance and support of the department.

Miller Workshop. In the spring of 2011, L-A-D provided financial assistance to cover travel expenses for two staff members (Division of State Parks) who are responsible for Dillard Mill to attend a workshop on mill maintenance.

High School Scholarships. In May 2011, Pioneer Forest awarded a scholarship for continuing college assistance to student Courtney Bland, and also awarded high school seniors Chelsea Bland of Bunker, and Chelsea Brewer of Eminence, first-year college scholarships based upon their academic achievement, financial need, and service to the school and community.

Eminence High School Endowment. Pioneer contributed to this fund to support ongoing scholarship assistance for graduating seniors.

Other Community Projects. Pioneer Forest contributed funds to the Dent County 4-H, Upper Current River Stream Team, Eminence Project Prom, and the Shannon County Relay for Life.

Pictured is Bryant Creek in Ozark County, Missouri. L-A-D helped the Ozark Regional Land Trust protect a property on Bryant Creek with a conservation easement. The photo was taken from a bluff on the property.

PHOTO BY Ted Heisel, Ozark Regional Land Trust.



L-A-D Foundation

FOREST MANAGEMENT
LAND CONSOLIDATION
RESEARCH
EDUCATION AND OUTREACH
RECREATION AND NATURAL AREAS
GRANTMAKING AND COMMUNITY SUPPORT
PUBLIC POLICY ISSUES
ADMINISTRATIVE ISSUES

Public Policy Issues



PHOTO BY Greg Iffrig

CURRENT RIVER ADVOCACY, WITH THE FRIENDS OF OZARK RIVERWAYS

Congress passed the Ozark National Scenic Riverways legislation in 1964, assigning the National Park Service with the responsibility of protecting 134 miles of river. Years before the national park was established, Leo Drey had significant ownership along the two rivers and had already established the L-A-D Foundation in 1962.

Today the L-A-D Foundation's Pioneer Forest is the largest privately-owned property within the watershed of the Current River. The Foundation also owns nearly 1000 acres of land which are protected under scenic easements held by the NPS.

There are many signs that management by the NPS has been inadequate, and that the qualities of the river, its lands, and the experience of park users have deteriorated. In May the national conservation organization, American Rivers, listed Current River as one its Most Endangered Rivers. There is much at stake. The Nature Conservancy has said, "the Current River is the most biologically significant river in the Midwest."

The L-A-D Foundation has joined with many organizations and individuals to speak up for the health of the river and the future of the park. Keeping the national park well-managed is the priority conservation issue the state of Missouri faces.

A new coalition, the Friends of Ozark Riverways has been leading the way for individuals and more than 20 business and conservation groups across the state, making the case for improved management. The L-A-D Foundation has been part of these efforts, by providing financial support, and working to encourage others to participate. FOR's efforts during the past year have included the following:

- Letter to NPS Director Jon Jarvis, January 2011. This included a detailed report entitled "*Vehicles and Horses in the Riparian Corridor: A Call for Management to NPS Standards.*"
- Alpine Shop Event. In February 2011, FOR participated in the Alpine Shop's Great Kayak and Canoe Event in Kirkwood, Missouri. FOR hosted a table display throughout the weekend event and

gave a presentation on the last day.

- Earth Day Festival, Forest Park, St. Louis, Missouri. On April 17, 2011, FOR participated in the Earth Day Festival in Forest Park. Thousands of people attended the annual event, and FOR took the opportunity to raise awareness.
- Petition Drive Launched. Also at Earth Day and throughout the summer, FOR has been educating National Park supporters about the problems at ONSR. The goal is to collect more than 2500 signatures to present to Director Jarvis later in the year. FOR has distributed petition sheets and also collected old canoe paddles that were donated by supporters as a unique way to present signatures.
- Press Conference, St. Louis, Missouri. In May 2011, a press conference was held in St. Louis at the Alpine Shop to announce the listing of the Current River by the national conservation group, American Rivers, as "endangered" for 2011. Kally Higgins, who grew up on the Current River in Van Buren, moderated the session and spoke for Friends of Ozark Riverways; Gordon Philpott, an American Rivers Board member and long-time St. Louis resident, made the national announcement for American Rivers that the Current River had been added to its 2011 Most Endangered Rivers list; Lisa Hollenbeck spoke as a business owner of the Alpine Shop; and Wallis Warren of Eureka spoke for the Ozark Fly Fishers.

There were several reporters and at least one of the media's video cameras present. Stories have been appearing in print and online around the state, including an interview on KMOX radio in St. Louis, the *River Hills Traveler* online, the *Salem News*, and several TV stations in St. Louis and Springfield. Interviews have been held with the *St. Louis Post Dispatch* and the *St. Louis Beacon*. News has also been available online, including coverage by the *National Parks Traveler*.

- Social Media and Communications. FOR has a Facebook profile that currently has more than 1,000 followers. In addition, more than 500 supporters receive ongoing email updates regarding FOR news and activities. In July 2011, an online petition was posted for supporters to submit signatures.



Friends of Ozark Riverways hosted an information booth at the Earth Day Festival in Forest Park, in St. Louis on April 17, 2011.
PHOTOS BY Kally Higgins



THE NATURE CONSERVANCY

The Foundation was supportive of a recent purchase by the Missouri Chapter of The Nature Conservancy (TNC) to protect riverfront property below Akers Ferry. Following the purchase, Foundation President Karel was quoted by several newspapers regarding the Conservancy's good effort.

The Missouri Chapter of TNC also appointed a new Missouri Director, Todd Sampsell, earlier this year. Sampsell comes to Missouri from Pennsylvania where he served as Deputy State Director. Recently, Foundation President John Karel met with Todd to discuss issues of mutual interest.

ELK RESTORATION

Elk from Kentucky arrived at the Missouri Department of Conservation (MDC) Peck Ranch Wildlife Area in southeast Missouri in May 2011. All of the 34 elk and five calves received radio collars as part of a collaborative research project with MDC and the University of Missouri.

In June 2011 the Missouri Chapter of the Rocky Mountain Elk Foundation hosted a banquet in St. Louis and invited the L-A-D Foundation to contribute supportive words (see sidebar) for their program raising funds for the state's elk restoration project. The L-A-D Foundation has publicly expressed its interest and support for bringing elk back to Missouri ever since the recent efforts began.

The 346-square mile elk restoration zone covers parts of Shannon, Carter, and Reynolds counties and includes much of Pioneer's largest block of land. The elk are expected to remain primarily in the refuge area at first, but then to roam once they become acclimated. Forest and woodland of Pioneer may provide cover if elk range north to the Current River and have forage available from nearby open fields.

SALEM BIOMASS ELECTRIC PLANT

In 2010 ProEnergy Services of Sedalia, Missouri, proposed to build a forest-fueled biomass plant in Salem, Missouri.

Pioneer Forest staff members Terry Cunningham and Jason Green wrote a letter to *The Salem News* (October 19, 2010) expressing reasons why the plant wouldn't be a good decision for the community. A biomass facility would demand great quantities of timber and could result in destructive land management practices, including clear-cutting.

"The L-A-D Foundation strongly supports the reintroduction of elk into Missouri. We are also gratified that our Pioneer Forest lands have been identified as part of the core projected range for these wonderful animals in their native Ozarks."

John Karel
President, L-A-D Foundation
Letter to Norm Fogt,
St. Louis Rocky Mountain Elk Foundation
May 13, 2011

"Pioneer Forest has been practicing uneven-aged single tree selection for nearly 60 years. Our forest provides jobs to many people whose livelihood depends on the health of the forest ecosystem and the forest products industry. We are also concerned about the health of Missouri forest resources beyond our boundaries."

Letter from
Terry Cunningham
and Jason Green
The Salem News
October 19, 2010

In December 2010, Salem city leadership voted unanimously to cease negotiations with ProEnergy for the plant.

OZARK HELLBENDER SALAMANDER

In November 2010, President John Karel sent a letter on behalf of the Foundation to the US Fish and Wildlife Service conveying support for a proposal to list the Ozark hellbender salamander as endangered but with a request to also list critical habitat.

The Foundation owns significant acreage that provides or borders suitable habitat for this unusual creature and has offered to assist efforts to help stabilize its populations.



Ozark hellbender salamander.

PHOTO BY Jeff Briggler, Missouri Department of Conservation



L-A-D Foundation

FOREST MANAGEMENT
LAND CONSOLIDATION
RESEARCH
EDUCATION AND OUTREACH
RECREATION AND NATURAL AREAS
GRANTMAKING AND COMMUNITY SUPPORT
PUBLIC POLICY ISSUES
ADMINISTRATIVE ISSUES

Administrative Issues



PHOTO BY Lauri Drey

GOVERNANCE AND STRATEGIC PLANNING

With the help of Lowenhaupt and Chasnoff and Lowenhaupt Global Advisors of St. Louis, the Foundation is reviewing its “best management practices” especially designed for non-profits. This will include a five-year strategic plan, clarify committee responsibilities and processes, and increase compliance with IRS tax filing regulations.

Several Board members are serving on a sub-committee to review policies pertaining to financial investments, litigation, and other matters. To promote this process, Board members already receive notices of all scheduled meetings and agendas, followed by minutes of each committee meeting. The information is also accessible via the Foundation’s website.

FOUNDATION WITHDRAWS PAYMENT-IN-LIEU-OF-TAXES (PILOT) CASE

In July 2007 the Foundation requested that six Ozark counties grant it a charitable classification for its Pioneer Forest land, enabling the Foundation to make a payment in lieu of taxes. The matter was brought before the State Tax Commission of Missouri. The counties considered Pioneer’s timber management to be a business, despite the charitable nature of Pioneer’s operation, and that such a change would impose an economic hardship.

In December 2010, the Board decided to withdraw its tax appeal and make its annual real estate tax payments for those lands regardless of the L-A-D Foundation’s non-profit tax status. In January staff hand-delivered letters to Commissioners in each of the six counties notifying them of its decision.

APPEAL OF MADISON COUNTY REAL ESTATE TAX

The L-A-D Foundation owns three tracts of land totaling 226 acres in Madison County and bordering Lower Rock Creek. Much of the

“Since any such potential negative consequences would be completely unacceptable to L-A-D, and to avoid any confusion about L-A-D’s intentions, the Foundation has decided to withdraw its tax appeal regarding Pioneer Forest lands. The L-A-D Foundation will make its usual annual tax payments to each county for those lands, and will do so based on our long-standing support for all the local communities and their citizens. We will do this regardless of our [non-profit] tax status.”

Letter excerpt from John Karel
to County Commissioners
January 10, 2011

surrounding lands are in public ownership, as a part of the Mark Twain National Forest. This Lower Rock Creek land is being held by the Foundation for its natural, scenic, and wildland values. It is open to the public for scientific research and non-motorized, primitive recreational uses. The lands were donated to the Foundation by Leo and Kay Drey in 2005, but Madison County did not grant the Foundation the customary exemption for non-commercial public uses. The Foundation appealed the matter to the Missouri Tax Commission and a hearing was held in August 2011 in the Madison County Courthouse to resolve the matter.

RECORDS TRANSFER AGREEMENT

In July 2009, certain historical records associated with Leo Drey and the L-A-D Foundation were donated to the State Historical Society of Missouri as part of their Western Historical Manuscript Collection.

The L-A-D Foundation is seeking an agreement with the State Historical Society to continue to donate historical records for archival organization and preservation. Additional records at the L-A-D office in St. Louis await transfer to the same manuscript collection.

LOGGER OF THE YEAR AWARD

One of the logging crews which is currently working on Pioneer Forest was awarded State Logger of the Year in the summer of 2011 by the Missouri Department of Conservation (MDC). Pioneer Forest nominated J & G Logging for the award as did MDC and the Current River Pole Company. J & G Logging (Jay Duncan, Gene Fisk Sr., and Gene Fisk Jr.) have been working on Pioneer in the Randolph Tract for the past year and do exceptional work. They are very conscientious regarding safety, best management practices, and taking care of the better trees they leave behind. They continue to be a positive example to the logging community. They won the regional award early this summer and then received the state award in July. Pioneer Forest now has two Loggers of the Year working on us; Tuttle Brothers Logging, who won the first Logger of the Year Award in 2007, and J & G Logging.



Pictured Left to Right are: Jason Jensen (MDC); Jay Duncan, Gene Fiske Sr. and Gene Fisk Jr. of J & G Logging; and Mike Bill (MDC)

PHOTO COURTESY OF MDC

PIONEER HOSTS BAR-B-QUE FOR LOGGERS

Pioneer Forest hosted a bar-b-que in late September 2010 as a thank you to loggers for their hard work and commitment allowing us to salvage blowdown timber throughout the prior 16 months. More than 60 people attended the event, including loggers and their spouses.

BOARD MEMBER JERRY VINEYARD AUTHORS BOOK

Jerry Vineyard's book entitled *Gargoyle Country: The Inspiring Geology of Springfield and Greene County*, was released in the summer of 2011. The 148-page book was written to appeal to a wide readership and includes information pertaining to the county's geology, including "gargoyles," which are outcrops of Burlington Limestone in fanciful shapes composed of fossil fragments of sea creatures known as crinoids, "Missouri's State Fossil."

The book is being marketed through the University of Missouri Press, bookstores such as Barnes & Nobel, internet sources including Amazon.com, and numerous libraries.

BOARD VICE-PRESIDENT SUSAN FLADER DEBUTS ALDO LEOPOLD FILM PROJECT

Board Vice-President Susan Flader has been traveling the country showing a new film, *Green Fire, Aldo Leopold and a Land Ethic For Our Time*. The feature-length documentary film explored famed conservationist Aldo Leopold's life and the ways his land ethic idea is applied all over the world today. Leopold is well known for his conservation classic *A Sand County Almanac*, and for his work as a philosopher, educator, forester, ecologist, and wilderness advocate.



Appendices



L-A-D FOUNDATION LANDS			
	COUNTY	SPECIAL DESIGNATION	SIZE
PIONEER FOREST (including each of the following special areas)			139,809.51 ACRES
Blair Creek Hanging Fen	Shannon	Forest reserve ¹ , 2011, 25 acres	
Bluff School, Medlock Cave	Shannon	Forest reserve, 1995, 51 acres	
Cunningham Sink	Shannon	Forest reserve, 2011, 24 acres	
Current River NA	Shannon	SAF Natural Area ² , 1955 and State Natural Area ³ , 1977, 10 acres; Addition, Natural Area, 2005, 255 acres; Total area 265 acres	
Fishtrap Hollow and Marshy Spring Hollow Fens	Shannon	Forest reserve, 1995, 45 acres	
Laxton Hollow	Shannon	Forest reserve, 1995, 145 acres	
Leatherwood Creek	Shannon	Forest reserve, 1995, 1003 acres	
Lily Pond NA	Reynolds	State Natural Area, 1975, 8 acres	
Old Schoolhouse Hollow Fens	Shannon	Forest reserve, 1995, 140 acres	
Pioneer Forest NA	Shannon	SAF Natural Area, 1964 and State Natural Area, 1977, 20 acres	
Sinkhole Ponds Complex	Reynolds	Forest reserve, 1995, 45 acres	
Sutton School Hollow Fens	Shannon	Forest reserve, 1995, 75 acres	
Triple Sink/Sunklands ⁴	Shannon	State Natural Area, 1980, 23 acres; Addition of 19 acres included as part of Sunklands Natural Area in 1999; total area 42 acres	
Tufa Creek	Shannon	Forest reserve, 2011, 116 acres	
RIVERWAYS CORRIDOR LANDS			1123.55 ACRES
Scenic Easements	Shannon, Carter	National Park Service, Ozark National Scenic Riverways, 1970, 951 acres	
Cave Spring	Shannon	Adjacent Current River, 172.55 acres	
LANDS LEASED TO THE MISSOURI DEPARTMENT OF CONSERVATION (MDC)			2103.5 ACRES
Ball Mill Resurgence ⁵	Perry	State Natural Area, 1979, 19 acres of 198.84 acres leased to MDC; total area 202 acres	
Clifty Creek	Maries	State Natural Area, 1971, 230 acres	
Dripping Springs	Texas	State Natural Area, 1973, 8.59 acres	
Hickory Canyons	Ste. Genevieve	State Natural Area, 1973, 420 acres; Addition of 560.91 acres in 1979; total area 980.91	
Horseshoe Bend ⁵	Texas	State Natural Area, 1973, 69 acres of 222 acres leased to MDC; total area 233 acres	
Piney River Narrows	Texas	State Natural Area, 1971, 50 acres of 258 acres leased to MDC	
Rocky Hollow	Monroe	State Natural Area, 1973, 188 acres; National Register of Historic Places, 1974; total area of 191 acres leased to MDC	

<u>COUNTY</u>		<u>SPECIAL DESIGNATION</u>	<u>SIZE</u>
LANDS LEASED TO MISSOURI DEPARTMENT OF NATURAL RESOURCES			289 ACRES ⁶
Dillard Mill	Crawford	State Historic Site, 1977, 130 acres	
Grand Gulf State Park	Oregon	National Natural Landmark ⁷ , 1971 and State Park, 1984, 159 acres State Natural Area, 1986, 60 acre-portion	
Roger Pryor Pioneer Backcountry	Shannon	Lease to Missouri State Parks, 2005, a 56,675 acre portion of Pioneer Forest	
OTHER			267.42 ACRES
Lower Rock Creek	Madison	Recreation land, tax exempt, 226 acres	
Virgin Pine	Shannon	Scenic remnant corridor, tax exempt, 41.42 acres	
TOTAL LAND OWNERSHIP			143,592.98 ACRES
<p>¹The concept for Forest Reserves was discussed by Pioneer Forest staff in 1994; in 1995, the management plan for each of these areas was described along with boundaries, and following Leo Drey's agreement and the endorsement of the Foundation Board, the program was adopted. Additions were made in 2011.</p> <p>²The Society of American Foresters Committee on Natural Areas was organized in 1947.</p> <p>³The Missouri Natural Areas System began in 1971 with the first areas owned or leased by the Missouri Department of Conservation. Beginning in 1977, the Missouri Natural Areas Committee was established by agreement of the Missouri Department of Conservation and Missouri Department of Natural Resources to review and approve natural areas throughout the state under a variety of public and private ownerships.</p> <p>⁴Originally designated as a Missouri Natural Area in 1980 under the ownership of the Frank B. Powell Lumber Company; acquired by the L-A-D Foundation in 2006.</p> <p>⁵The total area of Ball Mill includes 3.27 acres owned by the Foundation and not leased. The total area of Horseshoe Bend includes 11 acres owned by the Foundation and not leased.</p> <p>⁶State Historic Sites and State Parks are managed by the Division of State Parks, Missouri Department of Natural Resources. The Roger Pryor Pioneer Backcountry is calculated in the Pioneer Forest acreage.</p> <p>⁷The National Natural Landmarks program is administered by the National Park Service. Grand Gulf is among fewer than 600 sites designated in the United States.</p>			

GLOSSARY OF TERMS

Acre – A unit of land area measurement equal to 43,560 square feet.

Advanced regeneration – Seedlings or saplings that develop or are present in the understory.

Age class – An aggregation of trees essentially the same age. Age class is often used synonymously with “size class.” Age intervals of 10 years are commonly considered to be the same age class.

Aquatic habitat – A local environment in or near water that provides food, a place to reproduce, and shelter for water-dependent species.

Aquatic invertebrate taxa – Includes a range of organisms such as snails, crustaceans, insect larvae, leeches, and aquatic worms.

Aspect – The cardinal direction that a slope faces (north, south, east, west).

Avifauna – Avian wildlife, birds.

Basal area – The area (in square feet) of the cross section of a tree stem, including the bark, generally at breast height (4.5 feet above the ground). In the aggregate, it is the total cross-sectional area per acre of all trees at breast height.

Biological diversity – The conditions of having a variety of biotic characteristics and traits (e.g., genus, species, and community types), life history stages, structural forms (e.g., stratification, zonation, and the physical structures of plants), biotic patterns (e.g., reproductive activity, food web, social, and interactive), and functions (e.g., nutrient cycling, hydrological cycling, and provision of habitat). Also termed “biodiversity.”

Biotic index – A range of values used to observe and compare biotic changes in response to pollution or habitat change.

Board foot – A unit for measuring wood volume. It is commonly used to express the amount of wood in a tree, sawlog, or piece of lumber. A piece of wood one foot wide by one foot long by one inch thick equals one board foot.

Bolt – A short log or a squared timber cut from a log, usually less than 8 feet in length.

Buffer strip – A strip of vegetation left unmanaged or is managed to reduce the impact a treatment or action on one area would have on an adjacent area.

Canopy – The more or less continuous cover of branches and foliage formed collectively by the tops, or crowns, of adjacent trees.

Canopy closure – The progressive reduction of space between tree crowns as they spread laterally.

CFI – Continuous Forest Inventory, an inventory repeated with regular frequency, over a long time period, to locate and estimate quantities by species, product, size, quality, and other characteristics.

Chrono-sequence – Forest stands covering a range of ages and management-related disturbances.

Clear-cut – A harvest method used in the even-aged silvicultural system. The removal of all merchantable and non-merchantable trees greater than 1.0 inch in diameter in one harvest cut. Pioneer Forest management does not include the use of clear-cutting.

Community – An assemblage of plants, animals, bacteria, and fungi that live in an environment and interact with one another, forming a distinctive living system with its own composition, structure, environmental relations, development, and function.

Conservative species – Plants most often associated with a specific habitat or natural community. For example, a weedy plant species can be found along roadsides, disturbed woodlands, and old fields, whereas a lead plant is only found in prairies and open glades. This may be better understood by comparing birds such as the common American Robin to the uncommon and more conservative Swainsons Warbler.

Cord – A unit of gross volume measurement for stacked roundwood based on external dimensions, generally a

4 by 4 by 8-foot stack (128 cubic feet of stacked wood).

Cross-tie – A transverse timber forming a foundation or support.

Cull – A tree or log of merchantable size that, because of defect, has no merchantable value. A cull may be highly valuable as a den tree.

Customary rights – Rights that result from long habitual or customary actions that have, by such repetition and by uninterrupted acquiescence, acquired the force of law within a geographical or sociological unit.

Cutting cycle – The planned interval between partial harvests in an uneven-aged stand.

Dendrochronology – The study of tree rings and tree ring patterns influenced by environmental factors such as climate and fire. Analyzing annual growth increments helps us to understand the age of a tree or a forest canopy and to compare responses to change between species and within a forest or a region.

Den tree – A living tree with a cavity large enough to shelter wildlife. Also called a cavity tree.

Diameter breast height (d.b.h.) – Diameter of a tree measured on the uphill side of the tree at 4.5 feet (breast height) above ground line.

Disturbance regimes – Any of a variety of events, such as wind, floods, and/or fires, that cause a significant change in the local or regional environment and the associated plants or animals.

Down woody debris – Woody portions of trees that have fallen and are lying on the ground. Down woody debris includes twigs, branches, logs, stumps, and whole trees that have fallen. Also referred to as either fine or coarse woody debris.

Duff – Partly decayed organic matter on the forest floor.

Ecosystem – A conceptual unit comprised of organisms interacting with each other and their environment, having the major attributes of structure, function, complexity, interaction and interdependency, and temporal change with no inherent definition of spatial dimension.

Endangered species – Any species in danger of extinction throughout all or a significant part of its range. Endangered species may be state or federally listed.

Erosion – The displacement of soil from one place to another by any means, including wind, water, gravity, logging, road building, and fire.

Even-aged management – A system of forest management in which stands of trees are maintained or cut with relatively minor differences in age, usually less than 10% of the rotation.

Even-aged silvicultural system – The application of a combination of actions that results in the creation of stands of trees of essentially the same age that are growing together. Managed even-aged forests are characterized by a distribution of blocks of single-age stands (and therefore, tree size) throughout the forest area. The difference in age between trees forming the main canopy level of a stand usually does not exceed 20% of the age of the stand at harvest rotation age. Regeneration in a particular stand is obtained during a short period at or near the time a stand has reached the desired age or size and is harvested. Clear-cut, shelterwood, or seed tree cutting methods produce even-aged stands.

Exotic species – Species that would not occur naturally in the location where they are found.

Federally listed – Animals or plants formally added to the federal lists of endangered or threatened wildlife or plants by the U.S. Fish and Wildlife Service and/or National Marine Fisheries Service. In legal terms, this also includes species formally proposed for addition to these lists.

Fluctuating asymmetry (FA) – A measure of developmental stability based on genetic complexity.

Forest – Generally defined as an area with over 60% canopy cover.

Forest structure – The layers of vegetation within a forest. These layers are, in general, seedlings, advanced reproduction, saplings, poles, and overstory. Except for seedlings, each of these layers can be made up of multiple age classes.

Fragipan – Loamy, brittle subsurface soil layer low in porosity and organic matter and low or moderate in clay, but high in silt and fine sand. A fragipan appears to be cemented and restricts roots.

Geo-reference – Spatial information related to geographic data allowing the data to be displayed along with other related geographic data within a geographic context.

GIS/GPS – Geographic Information System, best described as telling us where a particular oak is within the forest, compared to GPS (Geographic Positioning System), which tells us the particular point (x, y, z) where we are within the

forest.

Harvest cycle – The time period between harvest entries when using an uneven-aged management system.

Harvest rotation – The time period between harvests when using an even-aged management system.

HCVF – High Conservation Value Forests – Those forests that possess one or more of the following attributes:

1. forest areas containing globally, regionally, or nationally significant concentrations of biodiversity (e.g., endangered species) and/or large landscape-level forests contained within the management unit, where viable populations of most, if not all, naturally occurring species exist in natural patterns of distribution and abundance;
2. forest areas that are in or contain rare, threatened, or endangered species;
3. forest areas that provide basic services of nature in critical situations (e.g., protection of water catchments and control of soil erosion).

High-grading – Harvesting to extract only the most valuable trees from a forest. No consideration is given to regeneration requirements of tree species or future development and health of the trees or forest.

High-quality hardwoods – Hardwood trees or stands that will yield high-value timber products, such as face veneer, knot-free lumber, furniture, or specialty product stock and flooring.

Ingrowth – Trees that during a specified period have grown past an arbitrary lower limit, primarily of diameter or height. Ingrowth is usually expressed as basal area or volume per unit area.

Indicator species – A species whose presence in a certain location or situation at a given population level indicates a particular environmental condition. Population changes are believed to indicate affects of management activities on a number of other species or on water quality.

Karst (topography) – Terrain with distinctive characteristics of relief and drainage arising primarily from a higher degree of rock solubility than is found elsewhere. Some of these characteristics are springs, losing streams, underground drainage and water reservoirs, caves, natural bridges, and sinkholes.

Landscape – A physiographic unit capable of sustaining several populations of a species; a mosaic of landforms and plant communities irrespective of ownership or other artificial boundaries.

Layering – A forest regeneration technique in which portions of a plant, such as a limb, can be used to sprout roots and stems.

LEED – Leadership in Energy and Environmental Design; a certification system developed by the U.S. Green Building Council.

Legacy tree (or forest) – Preserves certain qualities (such as old-growth trees or forests, wildlife habitat, species, community, etc.) that may be lacking on a landscape scale.

Log landing – A place where logs are taken (skidded) to be loaded on trucks for transport to the mill.

Losing stream – A flowing stream that gradually gets smaller or disappears due to the loss of some or all of the flowage into below-ground channels or caverns.

Mature tree – A tree in which growth has reached the culmination of mean annual increment (economic maturity) and/or one in which growth equals loss of biomass, beyond which decline and mortality will eventually occur (biological maturity).

MBF – Thousand board feet.

MMBF – Million board feet.

Native species – Any species of flora or fauna that naturally occurs in a particular area, and that was not introduced by humans.

Natural forest – A forested area in which many of the principal characteristics of the native ecosystems are present.

Natural regeneration – An age class of trees created by natural seeding, sprouting, suckering, or layering.

Neotropical migrants – Bird species that breed in the United States during summer and spend winter in Mexico, Central America, South America, and the Caribbean Basin.

Non-timber forest products – All forest products except timber; other materials obtained from trees, such as resin, bark,

and leaves, as well as other non-tree plant or animal products found in a forest.

Old-growth forest – Ecosystems distinguished by old trees and related structural attributes. Old-growth encompasses the latter stages of stand development. These latter stages typically differ from earlier successional stages in a variety of ways that may include tree size; accumulations of large, dead woody materials, especially on the forest floor; number of canopy layers; species composition; and ecosystem functions.

Old-growth stand – A stand of mature trees that is unroaded or lightly roaded, with little evidence of previous logging, usually ranging in size from 15 to 500 or more acres, and of sufficient size and configuration to maintain specific ecological functions.

Overstory – The uppermost layer of foliage that forms a forest canopy.

Plantation – A forested area that lacks most of the principal characteristics of native ecosystems because of human activities, such as planting, sowing, and intensive crop-like management and harvests.

Progeny – Offspring from a parent, in this case, the offspring of tree species within the timber stand.

Regeneration – Seedlings and saplings existing in a stand. This is the process by which a forest is renewed, either artificially by direct seeding or planting, or naturally by self-sown seeds and sprouts.

Resurgence – A sinkhole that acts in the traditional manner of collecting and moving surface water directly to underground reservoirs and then, during especially heavy rainfall, reverses this flow of water to act like a spring.

Riparian area or zone – An area along the bank of a river, stream, lake, or pond identified by the presence of vegetation that requires free or unbound water or is more moist than normally found in the area. The zone may be a narrow strip of vegetation that borders a creek, river, or other body of water. Riparian zones may occupy only a small percentage of a watershed but are extremely important components of the general landscape.

Root-sprung – A condition of storm-damaged trees in which high winds bend a tree to the point where roots are partially pulled from the ground but the tree is not blown down.

Savanna landscape – A landscape characterized by widely spaced trees with an understory of native grasses and shrubs. Savannas are suitable for wildlife species not generally found in closed-canopy landscapes.

Scale – A measure of volume in a tree based on the diameter and height of the tree.

Silviculture – The art and science of producing and tending a forest by manipulating its establishment, composition, and growth to best fulfill the objectives of the owner, that may or may not include the production of timber.

Single-tree selection – A harvest method expressed by the selection of individual trees to be removed from a stand of trees, the basis of uneven-aged management.

Skid trail – A road or trail over which equipment or horses drag logs from the stump to a road or log landing.

Snag – A standing dead tree from which leaves and most of the branches have fallen. A snag may be newly dead and appear to be a leafless tree or may be little more than a tall stump from which all of the limbs and bark have fallen. Snags are used by a variety of wildlife species.

Spatial – Of or relating to space: such as “the spatial distribution of individual trees.”

Stream – A channel with a defined bed and a bank that carries enough water flow at some time during the year to flush out leaves. (1) Ephemeral streams are streams that flow less than 10% of the time, only in direct response to rainfall, with a channel that may be scoured or unscoured and is always above the water table. (2) Intermittent streams are streams that flow seasonally (10% - 90% of the time) in response to a fluctuating water table, with a scoured channel at least three feet wide. (3) Perennial streams are streams that flow year-round (more than 90% of the time), with a scoured channel always below the water line.

Stumpage – The value of standing timber or uncut merchantable timber.

Suckering – The generation of sprouts that grow along the trunk of a tree, usually after a drastic change in growing conditions, such as a heavy harvest, allowing a sudden increase of light to reach the trunk.

Sustainable forest management – The practice of meeting forest resource needs and values of the present without compromising the forest’s value for future generations.

Threatened species – Any species likely to become endangered within the foreseeable future and designated in the Federal Register or is State Listed.

Timber stand improvement (TSI) – A thinning made in timber stands to improve the quality, composition, structure, condition, health, and growth of the remaining trees.

Topographic relief – The three-dimensional quality of the surface of land, more specifically depicting the differences between the lowest and highest elevations within an area or region. (The most-used example would be a topographic map showing contour intervals.)

Topographic roughness – An index value obtained from the measure of a larger region divided by the measure of many small measuring surfaces.

Travertine – A mineral consisting of a massive layered calcium carbonate formed by deposition from spring waters or especially from hot springs.

Tufa – A natural, calcareous deposit associated with springs, lakes, and groundwater.

Understory – The area of the forest at the lowest height level below the forest canopy. Plants in the understory are a mix of saplings of canopy trees together with understory shrubs and trees. In the Ozarks, dogwoods, redbud, and bladdernut are rarely tall and are generally understory trees.

Uneven-aged silvicultural system – The application of a combination of actions that results in the creation of stands in which trees are in at least three age classes. Managed uneven-aged forests are characterized by a distribution of age classes and tree sizes ranging from regeneration to mature trees on each acre throughout the forested area. Regeneration in a particular stand is obtained throughout the harvest cycle and following a harvest and, in oak/hickory stands, is retained until a short time after complete canopy closure. Single-tree selection or small-group selection tree harvest methods produce uneven-aged stands.

Vascular Plant – A plant having specialized tissue for circulating resources (water, minerals, and photosynthetic products) through the plant. These include ferns, club mosses, flowering plants, and conifers.

Vegetative architecture – Stratified vegetation levels consisting of various canopy layers, understory layers, and groundcover.

Veneer – A thin slice of wood removed from a log. The thin slice is laminated onto a lower quality or more stable base often, but not necessarily, of the same species.

Veneer tree – A large (usually more than 18 inches in diameter), knot-free, high-quality tree from which veneer logs are obtained.

Volume – The amount of wood in a tree, stand of trees, or log expressed in some unit of measure, such as board feet, cubic feet, etc.

Watershed – An area of land with a single drainage network. A watershed may be very large, such as the Mississippi River watershed, or smaller, such as the Blair Creek watershed. A watershed may or may not include a perennial stream. Holmes Hollow in Shannon County is an example of a watershed without a perennial stream.

Wetlands – Those areas inundated by surface or ground water often enough to support plants and other aquatic life that require saturated or seasonally saturated soils for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas, such as sloughs, potholes, wet meadows, fens, river overflows, mud flats, and natural ponds.

Woody debris – All woody material, from whatever source, dead and lying on the forest floor.

Woodland – Generally defined as an area with less than 60% canopy cover.

Working forest – That portion of a forest dedicated to the production of forest products.



SEPTEMBER 2011. Between 1996 and 2006, the staff of Pioneer Forest prepared an *Annual Report to the Foundation* for the Board of Directors of the L-A-D Foundation. Beginning in 2007, this report was expanded to become the *Annual Report of the L-A-D Foundation*.

Other publications and information about the Foundation or Pioneer Forest are available from the L-A-D Foundation, 705 Olive Street, Suite 724, St. Louis, Missouri 63101 or from Pioneer Forest, P.O. Box 497, Salem, Missouri 65560. Information is also available at www.ladfoundation.org or at www.pioneerforest.org.



This report has been printed on recycled paper