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EXPLORING FAMILY FOREST LANDOWNER DIVERSITY: PLACE, RACE, AND GENDER IN ALABAMA, UNITED STATES

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Abstract
Family forestry is characterized by heterogeneity in ownership structure, owners' objectives, and management practices. Differences among forest landowners by age and occupation have been regularly documented, but other social dimensions, such as race and gender, have received considerably less attention. We conducted exploratory research on racial and gender differences among forest landowners in two Alabama counties via a mail survey in order to identify promising areas for future research and forestry outreach. We found that gender and race influence land holding practices, management objectives, access to information and technical support. African American and female forest landowners tend to be less involved in forest management but would like more information. Understanding how forest landowners from different social backgrounds use, value, and manage forest is crucial for developing appropriate programs to encourage landowners from all segments of society to manage their forests for private and public benefits, and further research is warranted.

Keywords: *female forest landowners, non-industrial private forests, North America*

Introduction

There are an estimated 620 million acres of forestland in the conterminous United States (Smith et al. 2004). Almost 40%, or 248 million acres, is in family forest ownership (Butler & Leatherberry 2004). In the South, about 95% of the private forest owners and 63% of the private forest land are in family ownership (private forests comprise 89 percent of the South's timberland[4]) (Birch1996; Wicker 2002). Family forestry is characterized by heterogeneity

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[4] In addition to family forests, private forests include land owned by corporations and trusts, for example timber companies, Real Estate Investment Trusts (REITs), and Timber Investment Management organization (TIMOs).

and complexity in terms of ownership structure, owners' objectives, and management practices. Differences among forest owners for characteristics such as age and occupation have been regularly documented (e.g. Birch, 1996). However, other social dimensions, such as race, ethnicity, and gender have received considerably less attention.

Land ownership in the Southern United States continues to change and is diverse in human demographic characteristics and in the ways that individuals relate to forests (Tarrant et al. 2002). The South is the only region of the country with a widespread, historical and current, rural African American population[5] (Frey 1998; Wimberly & Morris 1997), and research shows a growing number of African-Americans with familial roots returning to the South (Stack 1996). Although U.S. Census data shows that Hispanics and Latinos have migrated heavily to the South in recent years, they appear to own relatively little forest land. In addition, very little is known about female forest owners in the South in terms of how they may differ from male owners, although preliminary research suggests that significant differences may exist (Warren 2003). Beyond demographic diversity, data in Wear & Greis (2002) show historical and projected patterns of forest cover change, importance of the timber industry, and urbanization across the South that indicate clear differences in subregional patterns across places. Members of different social groups—including those centered on place, race, and gender—have various histories and life experiences that shape unique natural resource uses and values (Schelhas 2002), and one-size-fits-all management strategies, communication methods, and policies will be neither productive for forest management nor provide benefits across all segments of society.

In discussing *place,* we refer to the geographical specificity inherent in locations (Clark, Feldman, & Gertler 2000). Places are complicated, reflecting both unique biophysical, social, and economic attributes, as well as instilling in their residents and visitors various attachments to and senses of place (Kruger et al. 2008; Rodman 1992). Over time, places both determine and are determined by the unique social and economic practices that occur (Dicken 2000). Different forest-people relationships have been shown to occur at different places (Geist & Lambin 2002). For our purposes, place reflects the unique set of biophysical, social, economic, and cultural attributes of a location that we expect to find reflected in the characteristics and behaviors of forest landowner.

In discussing *race*, we focus on differences between African American (or Black) and White landowners. African Americans account for a significant

[5] We use the U.S. Census Bureau's race categories, which include White ("A person having origins in any of the original peoples of Europe, the Middle East, or North Africa") and Black or African American ("A person having origins in any of the Black racial groups of Africa."). (www.census.gov/population/race/about).

share of the population in the Southeastern States. Decline in African American farmers and farmland ownership over the past century has been well documented (Wood & Gilbert 2000; Zabawa 1991). We know much less about African American forest owners and ownerships. The few regional surveys that have reported race and ethnicity data have found them to represent only a small percentage of forest landowners and to own an even smaller percentage of forest land, although some sampling bias is suspected because minority landowners appear less likely to respond to mail surveys. Birch et al. (1982) found that in 1978 African Americans comprised 8.5% of family forest landowners and held 4.7% of the family forest lands. Recent data from the Forest Service's National Woodland Owner Survey (Butler 2008) from the same states found that African Americans comprised 4.2% of the family forest landowners and held 1.4% of the family forest land (Table 1).[6] The relatively small percentage of African American forest landowners in these surveys has made it difficult to statistically examine differences among forest landowners by race. Most of what we know about African American forest landowners has come from several studies that used purposive, rather than random, samples (Gan & Kolison 1999; Gan et al. 2003). These studies found African American forest landowners to be similar to the broader population of family forest owners in having diverse objectives, occupations, and tending not to be farmers (Gan et al. 2003). However, they were also found to have smaller tracts and to manage land less intensively than majority the broader forest owners population. Furthermore, they were generally not aware of or using assistance programs, and faced more constraints than their majority counterparts (Gan et al. 2003).

Table 1. Estimated Area and Number of Private Family Forests by Race for 12 Southern U.S.A. States

	Total		White		Black or African American	
Forest holding size (in acres[7])	Area (1000 ac)	Owners (1000)	Area (1000 ac)	Owners (1000)	Area (1000 ac)	Owners (1000)
Total	116,174	3,326	103,191	3,326	1,609	140
1-9	6,141	2,097	5,347	1,734	253	93
10-49	21,234	1,182	18,612	1,043	694	38
50-99	16,086	295	14,419	261	249	5
100-499	39,151	176	35,768	255	383	3

[6] These are the only region-wide surveys reporting race of forest landowners. Caution should be used in comparing results from these two studies since different sampling methods were used.
[7] 1 acre equals 0.4 hectares.

500-999	11,593	25	10,365	22	30	0
1000-4999	15,872	13	14,301	12	--	--
5000+	6,096	1	4,379	1	--	--

Note: 12 Southern U.S.A. States are Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma (eastern), South Carolina, Tennessee, Texas (eastern), Virginia

Source: Butler et al. 2009.

Gender has been under addressed in the North American forestry literature. While there has been limited research on female forest owners, studies suggest that they often have less land and are older than their male counterparts (Londo 2004). There are also indications that they have different forest and landscape values (often broader and less timber oriented), and are often less likely to engage in many forest management practices (Bliss et al. 1997; Crim et al. 2003; Lidestav 1998; Palander et al. 2009; Sullivan 2005). In the U.S. South, Warren (2003) found that female farm operators held a higher portion of their farmland as woodland, and that, while females held smaller tracts than males, the number of female forest owners was increasing or holding steady.

Both African American and female farmers have filed class action lawsuits against the U.S. Department of Agriculture claiming discrimination in access to assistance programs (Schelhas 2002). Technical and financial assistance are critical to managing forests to meet the needs and desires of owners, as well as to ensure sustainable long term benefits to society from forests such as watershed protection, biodiversity, carbon sequestration, and timber supply. Only by knowing more about forest owner diversity can government and private programs effectively reach all segments of the forest owner population.

Objectives and Study Sites

Our research was part of an exploratory study to identify some promising areas of difference among forest landowners of multiple social groups that would be useful in future research as well as in forestry outreach and extension.[8] Macon and Escambia counties were selected because they were similar in many respects, but also differed in some ways that were expected to produce diversity in the sample (see map in Figure 1). Similarities included the presence of an Interstate Highway, presence of a National Forest, and being predominantly rural counties. Both counties had significant African

[8] "Social and Economic Relationships between Forests and People in Rural Alabama: Characterizing Underserved Populations in Selected Counties," funded by the USDA Forest Service's Southern Research Station. Crim et al. (2003) and Fraser, Gywali, and Schelhas (2005) report on other aspects of this project.

American populations, but with different histories and proportions of the population. Escambia County has a strong forest industry presence compared to Macon County, which has a primarily agricultural history. Macon County is located in central Alabama, and Escambia County is located in southern Alabama along the Florida border. Both regions were formerly occupied by the Creek Tribe before Native Americans were forcibly removed to Oklahoma in the 1830s.

Macon County is part of Alabama's Black Belt, an area of rich prairie soil that, after White settlement, was characterized by plantation agriculture in the mid-1800s. Whites and Blacks (generally slaves) occupied the area in relatively equal numbers in the early days of settlement, as indicated in the 1840 census (Yamaguchi 1981). Following the Civil War, the plantation system was replaced by share cropping, which often trapped African Americans in exploitive relationships and made landownership difficult. Tuskegee National Forest, the smallest National Forest in the country, emerged out of a depression-era effort to move farmers and reforest lands in that were poorly suited for agriculture (Pasquill 2008; Warren & Zabawa 1998). Macon County's land use history is primarily agricultural, although forest cover has increased over the past few decades as landowners, often with government support, have planted trees on former agricultural land. Farming has declined, with the only significant crop in 2006 being hay (see Table 2). Macon County lies on the rapidly developing Interstate Highway 85 corridor (from Raleigh-Durham, NC to Montgomery, AL), but stands out along this corridor for having been thus far largely passed over by development (Wear & Greis 2002).

Escambia County has an early history of forestry with agriculture developing later. Escambia lies in the heart of the longleaf pine region in Alabama. Several forest-related enterprises have been very important in contributing to Escambia County's economy for many years, including logging, sawmills, paper mills, turpentine, and wood products (Waters 1983). In the 1880s, several wealthy lumber barons emerged in Escambia County; but there were only a few agricultural plantations in the County and thus little slave labor (Waters 1983). Most African Americans arrived in the 1870s to work in the timber industry (Waters 1983). The T.R. Miller Company, located in Escambia County, was a pioneer in selective cutting and replanting pine trees in an effort to sustain the company's operations into the future. Tree farming and reforestation eventually became widespread in the county, and the county's economy was firmly rooted in forest land and wood product processing (Waters 1983). Today Escambia County continues to be a major forestry producer, while agriculture has grown (Table 2). It is also the site of the only Federally-recognized Native American tribe in Alabama, the Poarch Band of Creek Indians. A Creek Indian who helped Andrew Jackson during

the Creek War was given land in the area, and additional Creeks who had eluded the forced exodus then settled in the area to work in the timber industry and as share croppers in the late 1800s (Waters 1983). In 1974, the Poarch Creek reservation was formed out of 17.74 acres of former Poarch Board of Education lands (Waters 1983).

Due to variances in place and history, some differences between the two counties are notable (see Table 3). The most obvious is the percentage of the population who are African-American: 85% in Macon County and 30% in Escambia County. It is apparent that the difference in the racial structure of the populations came from historical causes. Macon was an agricultural county in which the plantation system was widespread, while Escambia county's economic history is rooted in the timber industry. Escambia also has a Native American presence unique in Alabama. Some difference in gender and age is also evident. The causes of differences in gender and age structure may also be related to current economic structure and life cycle. For example, Escambia has a stronger forest industry presence, which may attract male and younger working-aged individuals.

Table 2. 2006 Agricultural and Forestry Comparisons for Macon and Escambia County, Alabama

	Macon N=125	Escambia N=110
Cash receipts (1000 $)		
Crops	8,019	19,937
Livestock and Poultry	3,503	4,153
Forest products	7,113	23,696
Total Farm & Forestry	21,475	57,321
Crops (acres)		
Cotton	*	25,500
Corn	*	1,700
Peanuts	*	9.2
Wheat	*	1,100
Hay	4,600	2,700
Land Area (Sq. miles)	610.52	947.38

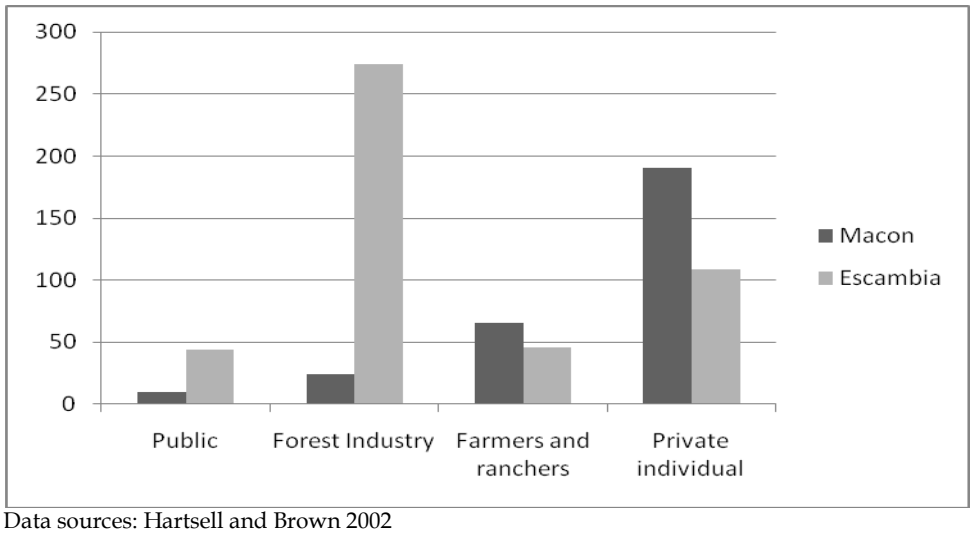
Data Sources: USDA, NASS, Alabama Field Office.

Table 3. Demography and Economy in Macon and Escambia, Alabama

	Macon %	Escambia %
Gender		
Male	45.9	50.7
Age		
Under 20 years	31.2	27.1
20-64 years	54.9	59.3
65 Years and above	14	13.6
Race		
White	14	64.4
Black and African American	84.6	30.8
American Indian & Alaska Native	0.2	3
Asian	0.4	0.2
Other	13.4	1.6
Poverty rate	28.3%	20.1%
Household medium income	$23,378	$29,330

Data source: Census 2000

Figure 1: Forestland Ownership in Macon and Escambia, Alabama



Data sources: Hartsell and Brown 2002
Unit: 1000 acres

Historical differences between the two counties are reflected in forestland ownership. The significant presence of forest industry in Escambia, but not in Macon, and the high frequency of small-scale family owners in Macon (see Figure 1), explains the fact that, even though the two counties have similar forest coverage (74% in Macon and 78% in Escambia; Hartsell & Brown 2002), about 58% of the forest land in Escambia County is owned by forest industry in contrast to 8% in Macon County.

Data and Methods

Data on forest owners were collected via mail survey. A random sample of 500 names in each of the two counties was drawn from a list of forest owners with more than 10 acres of forest land based on county fire prevention tax records. Questionnaires and follow-ups were mailed to these owners in accordance with Dillman's (2000) method for mail surveys.

There were 418 delivered questionnaires for Macon County and 392 for Escambia County. The survey consisted of 35 questions in landowner-friendly language, focusing on ownership objectives, forestland attributes, management activities, assistance programs, and land owner characteristics. The response rates were 30% for Macon and 28% for Escambia.

We examined the differences for forest owners in terms of holding size, management objectives, and information access and capital assistance by place, race and gender. Although our small sample size has limited our ability to utilize statistical tests, we believe the descriptive results are strongly suggestive of differences related to place, race, and gender and merit further research. In addition to basic data description, an analysis of variance (ANOVA) was used to investigate the characteristics of family forest landowners. This method compares the statistical difference between multiple categories based on sample means and variances (Moore & McCabe 2003).

Results and Discussion

Landowner Characteristics

There were only a small number of both African-American and Native American forestland landowners in Escambia County represented in the results, therefore we focused our analysis of race on Macon County and used data from Escambia County to analyze gender relationships. Table 5 summarizes the characteristics of the forest land owners by race in Macon County and gender in Escambia County.

In Macon County, nearly 64% of African-American were 55 years of age and above, slightly fewer than for Whites (75%). Thirty-six percent of African-Americans and 35% of Whites were between 35 and 54 years old. Very few respondents were younger than 34 years of age. In Escambia County, although the age structures of males and females were similar, males (20%

below 54 years old) were slightly younger than females (16% below 54 years old).

In Macon County, African-Americans and Whites had similar educational backgrounds. Almost 89% of African-Americans and 91% of Whites had at least some college education. An interesting finding is that almost 57% of African-Americans had received graduate education, which is much higher than that of Whites (34%). This result may be due to the fact that Macon County is the home of Historically-Black Tuskegee University. There was no apparent difference between males and females in having "some college" in Escambia County. However, females had slightly more education (24%) at the graduate level than their counterparts (18%).

The difference in average household income (weighted by the number in the group) between African Americans and Whites in Macon County was not significant, having $93,886 and $93,397 respectively. In Escambia County males were wealthier than females in terms of the average family income, $82,218 and $63,357, respectively. In particular, 38% of males received less than $50,000/yr., while 54% of females made less than that income.

Table 4. Characteristics of Forest Landowners Surveyed by Race, for Macon County, and Fender, for Escambia County, Alabama

Characteristics	Macon N=125		Escambia N=110	
	Black (%)	White (%)	Male (%)	Female (%)
Age (yr)				
< 25	0	0	0	0
25-34	0	1	2	0
35-44	7	10	6	3
45-54	29	15	12	14
55-64	14	41	35	27
65-74	32	23	26	32
75 and above	18	11	20	24
Mean	62.07	60.72	63.64	66.22
(SD)	(11.64)	(11.45)	(11.98)	(10.89)
P Value	0.50		0.28	
Education				
Less than 12th grade	7	1	5	5
High school graduation or GED	4	7	26	27
Some college	14	20	23	27
Associate or technical	11	6	11	3

Degree				
Bachelor's degree	7	32	17	14
Graduate degree	57	34	18	24
Annual household Income ($)				
< 25,000	9	5	11	23
25,000-49,999	23	16	27	31
50,000-99,999	27	49	35	29
100,000-199,999	36	16	20	14
200,000 or more	5	12	7	3
Average ($)	93,886	93,397	82,218	63,357
(SD)	(54,188)	(53,821)	(54,049)	(46,688)
P Value	0.72		0.02	

Forestland

The amount of the forestland owned by African-American and White landowners surveyed in Macon and Escambia counties varied from less than 10 acres up to 5,000 acres, with the averages being 153 acres and 475 acres, respectively. This difference is largely comparable to the discrepancy in average farm size between African American and White operators, with average sizes of 180 acres and 441 acres respectively (USDA 2002). The data for land ownership was similar to that of household income. About 71% of African-Americans, compared to 49% of Whites, held under 100 acres. Although the percentage of the median increment (100-199 acres) owned by African-American was greater than Whites, the percentage of the large holdings (more than 200 acres) is greater for Whites than African Americans, 42% and 13%, respectively (Table 5). Whites had statistically significant larger landholding sizes than the African Americans, 789.35 and 320.79 acres, respectively.

In Escambia County, males had statistically significant larger landholding sizes than the females, respectively 441.9 and 78.6 acres according to weighted size average. This difference is significantly different from the average farm size between male and female operated farms, 241/263 acres versus 152/155 acres, respectively (USDA 2002/2007). About 73% of the males, compared to 81% of the females, held less than 100 acres. The percentage of the median increment (100-200 acres) owned by males was close to that of the females. However, the percentage of the large increment (more than 200 acres) is larger for males than females, 17% and 8%, respectively (Table 5).

Table 5. Characteristics of the Forestland Owners Surveyed by Race, for Macon County, and Gender, for Escambia County, Alabama

Area (acre)	Macon N=125		Escambia N=110	
	Black (%)	White (%)	Male (%)	Female (%)
1-9	0	1	3	3
10-19	8	5	6	17
20-49	23	13	36	36
50-99	35	26	27	25
100-199	23	16	11	11
200-499	4	23	9	8
1000-4999	8	7	2	0
5000 and above	0	9	6	0
Average (acreage)	320.79	789.35	441.9	78.55
(SD)	(792.72)	(1521)	(1231)	(104.37)
P Value	0.007		0.004	

Ownership and Objectives

The ownership objectives of family forest landowners were diverse for both African-Americans and Whites. Almost 70% of family landowners considered owning forestland as an investment, regardless of Race. This contrasts with Gan & Kolison's (1999) finding that only 14% of African American landowners interviewees stated that investment was a forest ownership objective. In Macon County, a higher percentage of African Americans (nearly 85%) than Whites (75%) indicated passing the land to their children was one of their objectives In addition, African-Americans were more likely than Whites to have objectives of collecting non-timber forest products (32%, as opposed to 11%) and firewood (31%, as opposed to 10%), while Whites were more likely to indicate objectives of producing timber (63%, as opposed to 56%) and enjoying aesthetic beauty (74%, as opposed to 56%) (Table 6).

In Escambia County, males and females shared some common ownership objectives such as non-timber forest product collection, investment, and privacy. One obvious difference is that females (86%) were more likely to have objectives of passing the land to their children than the males (73%). Additionally, males were more likely to have objectives of hunting (63% compared to 41%) and enjoying beauty (63% compared to 55%), while females more frequently treated forestland as part of a home (58% compared to 42%) (Table 6).

Table 6. Ownership Objectives of Forestland Owners by Race, for Macon County, and Gender, for Escambia County, Alabama

Ownership objective	Macon N=125		Escambia N=110	
	Black (%)	White (%)	Male (%)	Female (%)
Enjoy beauty	56	74	63	55
Protect nature	62	66	63	54
Non-timber products	32	11	20	20
Investment	70	70	66	64
Part of home	52	58	42	58
Privacy	54	54	44	47
Pass land to children	85	75	73	86
Timber	56	63	70	62
Hunting	69	64	63	41
Recreation	36	36	22	28
Fire wood	31	10	19	9
Other	11	0	11	0

Note: Based on a closed ended survey question with multiple responses accepted.

There were no major differences between African-Americans and Whites in the ways they obtained their forest land in Macon County. More than half of land was purchased and about one third was inherited for both African-American and Whites. However, there was an apparent difference between the males and the females in Escambia. Nearly 57% of the females inherited their forestland whereas only 29% of the males did so. Almost 50% of the males, compared to 24% of females, had purchased forest land (Table 7). The high percentage of inherited forest land for females, combined with their higher age, suggest that a number of female forest landowners may be widows.

Table 7. How Forestland was Obtained, by Race, for Macon County, and Gender, for Escambia County, Alabama

Way to get forestland	Macon N=125		Escambia N=110	
	Black (%)	White (%)	Male (%)	Female (%)
Bought	56	52	48	24
Heir	37	32	29	57

Gift	4	2	3	5
Other	4	14	20	14

We asked questions about landowner desires for the future of their forest land once it was in the hands of their heirs. This was another way to assess the way respondents valued land, in this case across generations. In Macon County, African Americans indicated a very strong importance for cross-generational land retention (77%), with much less concern for how forests were to be managed (42%). Whites placed less importance on transferring forest land (67%), and, while placing greater importance on continuing management practices(57%) than African Americans. In Escambia County, females placed less importance than males in both keeping forest land (62% versus 74%, respectively) and continuing forest management practices (34% versus 64%, respectively).

Table 8. Importance of Continuation of Forest Landholding and Management Practices by Heirs (% Indicating Very Important), by Race, for Macon County, and Gender, for Escambia County, Alabama.

How important is it to you that your descendants:	Macon N=125		Escambia N=110	
	Black (%)	White (%)	Male (%)	Female (%)
Keep your forestland	77	67	74	62
Continue to manage your forestland in the same way you have	42	57	64	34

Management Activities

Overall, less than half of African-Americans and Whites had implemented any management practice on their forestland in Macon County. However, Whites visited their forestland more frequently than African-Americans and were more likely to plant trees, reduce fire risk, and protect wildlife habitat (Table 9). Males made more frequent visits to their forest lands and undertook more management actions than females in Escambia County. For example, 63% of males visited their forestland daily, while only 22% of females did so. In addition, is that 32% of males improved the wildlife habitat in their forestland, in contrast to 15% of females (Table 9).

Table 9. Management Practices by Race, for Macon County, and Gender, for Escambia County, Alabama

Forest management	Macon N=125		Escambia N=110	
	Black (%)	White (%)	Male (%)	Female (%)
Frequency of visit to forestland				
Daily	26	26	63	22
Weekly	15	26	25	14
Monthly	11	20	12	22
Quarterly	7	17	0	14
Yearly	22	9	0	14
Less than once a year	19	4	0	16
Forestry activities				
Site prep	7	12	12	9
Planted trees	7	19	19	9
Reduced fire hazard	18	40	25	16
Applied herbicides, pesticides or fertilizers	4	16	8	9
Wildlife habitat	21	42	32	15
Other	17	0	7	0

Income Contribution and Constraints

The contribution of forest land to family income was quite limited, although forests made some contribution to income for both African-American and White households. Sixty-nine percent of African-Americans and 53% of Whites indicated that they had not received any income from their forestland. Only 31% of African-Americans had received income from their forests, compared to 43% for Whites (Table 10). In Escambia there were no differences between males and females, with more than 60% of each indicating that they had no income from their forest land (Table 10).

Table 10. Contribution of Forest Land to Annual Income, by Race, for Macon County, and Gender, for Escambia County, Alabama

Income from forestland (%)	Macon N=125		Escambia N=110	
	Black (%)	White (%)	Male (%)	Female (%)
0	69	53	62	64
0-10	23	43	34	31

11-25	8	0	3	3
26-50	0	3	0	0
>50	0	1	0	3
Mean ($)	*2,432*	*3,540*	*1,842*	*2,275*
(SD)	*(1,212)*	*(1,770)*	*(872)*	*(1,221)*
P Value	*0.29*		*0.66*	

The constraints in using forestland faced by African-Americans and Whites varied greatly. The major concerns of African-Americans in Macon County were lack of money (35%), lack of knowledge of forest management (41%), and not knowing whom to trust (43%), while Whites appeared more likely than African Americans to indicate constraints of land availability (11%), low timber prices (31%), government rules (22%), and tree theft (32%). In Escambia County, low prices (31%) and lack of time (32%) were the major constraints faced by males, where the most common constraints for females were lack of money (33%), lack of time (38%), and not knowing whom to trust (33%) (Table 11).

Table 11. Major Constraints to Use Forestland, by Race, for Macon County, and Gender, for Escambia County, Alabama

Limitation	Macon N=125		Escambia N=110	
	Black (%)	White (%)	**Male (%)**	Female (%)
Money	35	21	25	33
Knowledge	41	16	18	19
Time	31	29	32	38
Don't know whom to trust	43	21	18	33
Don't have enough land	0	11	20	21
Trouble to find buyers	4	5	12	9
Low price	23	31	31	24
Heir or unclear title	8	3	7	3
Too many owners	8	3	7	6
Gov't rules	19	22	14	18
Afraid of lawsuits	15	11	7	9
Neighbours object	0	0	2	0
Tree theft	19	32	9	21
Other	14	6	0	0

Financial and Technical Assistance

There was an apparent difference between African-Americans and Whites regarding financial and technical assistance. Nearly 70% of Whites were aware of cost sharing programs and 45% of them made use of federal and state financial assistance. In contrast, only 36% of African-Americans were aware of cost sharing programs and only 20% of them made use of financial assistance. Surprisingly, females in Escambia County made greater use of assistance than their counterparts. More than 70% of the females were aware of cost sharing programs and 52% of them utilized programs; while 61% of the males were aware of the program and only 31% of them used the program (Table 12).

African-Americans and Whites received technical assistance in forest management from different sources. African-Americans were most likely to receive technical help from family member (63%) and university extension[9] (27%). In contrast, Whites more commonly received help from independent foresters (49%) and county or state foresters (46%) (Table 12). Females in Escambia County most often received technical help from family members (61%), but also often used independent (41%) and county or state foresters (51%) (Table 12).

Table 12. Financial and Technical Assistance by Race, for Macon County, and Gender, for Escambia County, Alabama

Financial and technical help	Macon N=125		Escambia N=110	
	Black (%)	White (%)	Male (%)	Female (%)
Cost sharing program awareness				
Yes	36	70	61	70
No	64	30	39	30
Use of state or federal cost-share program				
Yes	20	45	31	52
No	80	55	69	48
Technical helping in forest management				
County or state forester	33	46	26	51
University extension	27	13	6	10
Federal forester	12	14	8	16

[9] Historically-Black Tuskegee University, which offers forestry extension services, is located in Macon County.

Non-profit group	0	9	7	9
Independent forester	15	49	21	41
Family member	63	34	30	61
Neighbor	12	7	3	15
Friend	12	11	12	10
Other forestland	9	3	6	11

Useful Sources of Information

African-Americans and Whites found information useful to help them manage their forestland. Overall, African-Americans identified more useful sources of information than Whites. The majority of African-Americans found publications, books, magazines, and talking with logging contractors to be useful. Whites, on the other hand, preferred to talk with forestry professionals and participate in landowner organizations (Table 13). Females identified more useful sources of information than males. Females were more likely to find value in talking with a forest professional, talking with a logging contractor, and publications or books, whereas males preferred to get help from visiting other forestlands and joining in landowner organization (Table 13).

Table 13. Useful Sources of Information by Race, for Macon County, and Gender, for Escambia County, Alabama

Category	Macon N=125		Escambia N=110	
	Black (%)	White (%)	Male (%)	Female (%)
Pubs, books, pamphlets	54	37	29	34
Newsletter, magazines, newspapers, internet	61	37	20	25
Conferences, workshops	31	12	7	9
Video tapes	33	10	9	3
TV & radio	50	17	12	14
Visit other forestland, field trips	35	24	20	12
Talking with a forest professional	56	67	57	63
Talking with other forestland owners	46	48	42	43

Talking with a logging contractor	41	19	23	35
Membership in a landowner org.	7	24	12	3

Discussion and Conclusion

This paper explored differences among family forest landowners in two Alabama counties by two key social groups, race and gender. The results show that these family forest landowners share many characteristics, goals, and practices. Most African-American and White landowners surveyed in Macon and Escambia Counties were relatively old. Most respondents had at least some college education. The average household income between African-Americans and Whites in Macon were not different statistically. There were also some notable differences. The average income of males was significantly higher than that of females in Escambia County. The ownership objectives of family forest landowners were diversified regardless of race and gender. However, the difference between the African-Americans and Whites was that the African-Americans were less aware of the cost sharing programs than Whites and also had lower levels of program participation than Whites. Whites visited their forestland more frequently than the African-Americans and more frequently planted trees, reduced fire hazards, and protected of wildlife habitat. African-Americans tended to be very broad in terms of their desires for sources of forest land management information, perhaps because they had greater overall information needs and less experience with forest management, while White landowners relied on forestry professionals. Also, African American forest land owners placed a higher value on passing the land to the next generation than their White counterparts.

Similarly, the survey revealed similar age structures for males and females and little difference in educational attainment by gender. The ownership objectives of family landowners were also diversified regardless of gender. However, the apparent difference between the males and the females was that the females were more likely to have participated in the cost sharing program than the males. Additionally, females have broad desires for information, regardless of source, compared to their male counterparts. This again likely reflects general lower knowledge of and experience in forest management. Males were significantly wealthier than the females in terms of the average family income, held more land than females, visited land more frequently, and managed their forestlands more than females.

Our results suggest that it is important to go beyond generalizing across the entire category of family forest landowners, and to design research to learn more about various social groups. In particular, certain groups should be characterized as underserved forest landowners based on their levels of

forest management and participation in technical and cost sharing assistance programs. African American and female forest landowners share many characteristics, including lower incomes and landholding sizes; forest use constraints related more to lack of time, money, knowledge, and trusted sources of help; greater reliance on family members and relatives for assistance; less specific desires for forest management information; and less concern for the future of their forest land. Notably, African Americans had very strong land values in combination with weak forest management preferences, likely reflecting the historical importance to them of the goal of land ownership (Zabawa, 1991) and less experience in forestry.

The findings have several policy implications. First, there is a need to enhance current programs targeting involvement of African Americans in financial assistance programs. Second, there is a need for establishing new program and methods to disseminate useful technical information to African Americans and females. Our study was small and exploratory, but the results suggest that there may be significant differences among forest landowners of different social groups and clearly indicates the need for further surveys designed to learn more about diversity among forest land owners.

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