Voices From Southern Forests

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Introduction

The faces and voices of the South have been changing dramatically over the last several decades, just like the rest of the nation. Population growth, immigration, urbanization, expanding minority proportions, a thriving economy, rising environmental sentiments and shifts in property ownership, among many other changes, have put forest and wildlife management in a much different context than at any time in the region's history. This paper examines the changing social, economic, attitudinal and other voices of Southerners and speculates about the meaning these changing voices might have on the future of forest and wildlife management in the South.

More Voices

Since 1970, the population of the South has grown from just more than 56 million to almost 87 million, growth of nearly 3 million, a 54-percent gain. The southeastern coastal subregion, South Carolina, Georgia and Florida, grew the fastest at 87.3 percent. The South's population growth was second in the nation only to the West and was the only region with net growth from domestic in-migration, gaining around 380,000 through in-migration between the 1980s and the middle 1990s.

In some southern states, the rate of population growth in just 28 years has been nothing short of phenomenal. Among the South's 13 states, those having the highest rates of growth since 1970 were Florida (more than doubling, with 18.8 percent growth), Texas (73.9 percent), Georgia (63.1 percent), South Carolina (46.9 percent), North Carolina (46.3 percent) and Virginia (46.0 percent). Northern Virginia; the Atlantic and Gulf Coast counties; Florida; North Georgia; the Piedmont Crescent of North Carolina, South Carolina and Georgia; Northwest Arkansas/Northeast Oklahoma and Southeast Texas are subregions having the most counties with high population growth since 1970—all above 5.5 percent in just 28 years (Figure 1). Nine counties grew between 300 and 399 percent in those 28 years (seven were in Georgia or Florida), eight grew between-400 and 499 percent (five in Texas), five grew between 500 and 799 percent (in Florida, Georgia and Texas) and one, Flagler County, Florida, grew 880 percent! Remarkably, 198 of the South's counties saw population losses over these same 28 years. Of counties losing population, 62 are in Texas, 23 in Arkansas, 21 in Oklahoma, 20 in Mississippi, 14 in Louisiana and 11 in Alab a m a.

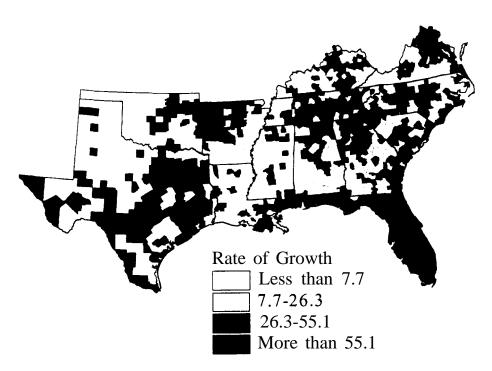


Figure 1. Percentage growth of population among counties of the South, 1970-1998.

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More Voices, Especially Urban Ones

While population in both metro and **nonmetro** counties grew as a whole, it is obvious that metropolitan counties accounted for most of the South's gain between 1970 and 1998.

- The slowest growing half of **nonmetro** counties grew 15.2 percent in total population.
- The fastest growing half of **nonmetro** counties grew 30.9 percent.
- The slowest growing half of metro counties grew 63.2 percent, twice as fast as the fastest growing half of **nonmetro** counties.
- The fastest growing half of metro counties grew 68.0 percent.

Of the 10 fastest growing Metropolitan Statistical Areas (MSAs), eight are in Florida and two in Texas. Punta Gorda, Florida, tops the list with 420.9-percent growth between 1970 and 1998. The next six fastest growing MSAs are also in Florida. Only one MSA, Pine Bluff, Arkansas, lost population, -1.2 percent.

Population growth is concentrated for the most part in ever expanding urban areas, while a number of other counties trend toward becoming more rural through loss of population. Of the 164 counties in the South with more than 100-percent growth in population since 1970, 119, almost 73 percent of them, are classified as metropolitan counties. Of the nonmetro counties showing the greatest gains in population, most are either adjacent to counties included in MSAs or in high natural amenity subregions, such as the Southern Appalachians, the Ozarks or along the Atlantic coast (Economic Research Service 1997).

Of total population growth in the South since 1970. just more than 26 million, 85 percent of the total, was in 180 counties classified as metropolitan. Further, 35 percent of total regional growth occurred in only 92 metropolitan counties in just three states, the Atlantic coastal states of South Carolina, Georgia and Florida. Currently, the largest Metropolitan Statistical Areas in the South are Dallas/Ft. Worth (4.7 million), Houston/Galveston/Brazoria (4.4 million), Atlanta (3.6 million), Miami/Ft. Lauderdale (3.6 million), Tampa/St. Petersburg/Clearwater (2.3 million), Norfolk/Virginia Beach (1.6 million) and Orlando (1.6 million).

Minority Voices

More voices, more urban voices and increasingly, more minority voices are rising from the forested South. In the past 20 years, there has been increasing interest in minority voices, particularly those of African Americans. Studies

of blacks' perceptions of nature have contributed to a better understanding of how this minority population views forests and other aspects of nature (Johnson et al. 1997b). Much of the available research has looked at minority interests in outdoor recreation and, to a more limited extent, at human/wildlife interactions (Dolin 1990). While a great deal of the focus has been on urban populations outside the region, the results nonetheless are useful in better understanding minority voices in the South (Johnson et al. 1997a). In a sense, examining the findings of these studies gives "voice" to the apathy or disinterest perceived to exist among blacks concerning nature and wildlife. In this paper, we include comparative results from the recent National Survey on Recreation and the Environment (NSRE), with a focus on attitudes toward wildlife management issues.

Dolin (1990) discusses five theoretical postulates that have been offered to help explain blacks' presumed lower interest in nature, wildlife or wildlife causes: socioeconomic status, personal priorities, mythology, lack of access and identification with slavery. The socioeconomic status postulate says that blacks have less interest because of lower socioeconomic status, giving them less time or discretionary income for wildlife pursuits. Similarly, the personal priorities hypothesis says that outdoor activities and wildlife involvement are not high in priority because other, more pressing material concerns ate more important in blacks' everyday lives. As for mythology, Dolin postulated that blacks view nature more holistically than whites, thus not perceiving themselves as separate from nature. As a result, blacks identify less with the idea of specially designated parks, have less familiarity with parks and nature preserves in general, and have less desire to have contact with nature and wildlife. However, Marks (1991) reported results from a study that appeared to refute the mythology hypothesis. He found that blacks in a South Carolina county were less likely than either whites or Lumbee Native Americans to believe that animal and human worlds exist as a single, holistic space, that humans are not distinct from other animals, or that non-human animals feel pain as humans do.

The "lack-of-access-to-wildlife" hypothesis suggests that blacks have lower interest in nature and wildlife because they were denied access during the segregationist era, a phenomenon believed to persist today through local customs. Marks (1991) mentions that even hunting activities have been segregated in that blacks hunt mostly rabbits, squirrels and **racoons**, while whites pursue deer and quail. Finally, the slavery identification hypothesis holds that blacks lack an identity with the natural environment, including wildlife, because of their history with slavery where their relationship with the land was compulsory, rather than voluntary.

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All these theories are compelling. Taken alone, however, none of them provides a satisfactory explanation. Rather, as Floyd and Gramann (1993) surmised, a number of influences probably work together to determine environmental attitudes, recreation behaviors and certainly wildlife involvement. Also, any one theory can be more or less salient for specific segments of the southern African American population. For example, socioeconomic status or personal priorities may be less important to more affluent African Americans, and slavery or mythology may be less meaningful to rural blacks who live close to the land. As Marks (1991) observed, black hunters in his study may have felt less sympathy and more distinction between themselves and wild animals because as the most marginalized members of the community, they needed ways to assert a superior status to some other life form.

To gain further insight into African American wildlife views, we analyzed four wildlife associated questions from the NSRE and compared responses between black and white Southerners (Table I). In this comparison, whites were more likely than blacks to say an opportunity to view wildlife was important and that wildlife encounters made their recreational trips more enjoyable. However, there were no differences for contributions to wildlife organizations or preferences for wildlife interpretive signs. These findings suggest that while most southern African Americans are sensitive to wildlife management issues, some may prefer less direct contact with wildlife.

Table 1. Percentage of population 16 years old or older in the South by race and wildlife attitude. 1994-1995.

Race		
Black"	White ^b	chi square
76.2	85.5	0.042
71.7	77.5	0.278
77.4	72.8	0.409
75.7	96.2	0.001
	76.2 71.7 77.4	Black" White ^b 76.2 85.5 71.7 77.5 77.4 72.8

 $^{^{}a}N = 70$

 $^{^{}b}N = 454$

In further analysis of the NSRE, southern blacks and whites of comparable socioeconomic status were compared for involvement in various wildlife recreation activities. When compared, whites were more likely to participate in nonconsumptive wildlife activities and fishing, generally indicating a greater desire than blacks for wildlife recreation. Hunting was the one exception.

Looking further at minority voices, we focused on low-income residents of economically depressed inner-city areas who usually are disadvantaged in terms of access to natural resources and outdoor recreation due to lack of opportunities, fear of crime or other local conditions (Kaljee et al. 1995). In 1990, approximately one in seven census tracts in the nation's hundred largest cities were classified as an area of extreme poverty where minorities, especially blacks and Hispanics, were more likely to reside. Blacks in these depressed urban communities typically made up three-fifths of the population, although, increasingly Hispanic Americans are moving into these poor neighborhoods.

To get a beget idea of inner-city attitudes about wildlife, wildlife questions from the NSRE were compared between inner-city, metropolitan and rural respondents. Metropolitan residents are those living in cities, but not in the depressed inner-city areas. Comparing responses to the same four wildlife management questions shows that inner-city respondents are less likely than either metropolitan or rural dwellers to contribute to wildlife organizations or to be more satisfied when encountering wildlife during an outdoor recreation trip. However, inner-city dwellers were more likely than metro respondents to say the opportunity to view wildlife or fish and wildlife interpretive signs were important. Overall, rural respondents appeared more supportive of wildlife issues, compared with either of the urban groups.

Economic Voices

One of the principal indicators of the strength of an economy, nationally or intraregionally, is its population's income. As incomes rise or fall, so do consumption of goods and services, savings, government tax receipts, and people's lifestyles. As incomes rise, so too does the influence of consumers' voices. Per capita income in the South in 1980 was \$11,453; by 1990, it was \$12,898-a rise of a little more than 12 percent in 10 years (English and Gentle in preparation). This was a moderate growth rate, below that of the North at almost 18 percent and the Pacific Coast at almost 14 percent. The national per capita income growth rate between 1980 and 1990 was 14.5 percent. Growth in per capita income in all regions, however, has accelerated as the United States' economy has heated up. While the gains were modest relative to other regions, the South had the most to gain by having the lowest per capita income in 1980.

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The southern growth that did occur resulted in the nation's largest decline in percentage of people living in poverty. Increasingly, the share of total wage earner income going to women and minorities is rising, changing the distribution of consumer "voting" power.

Along with income, sustainability of a region's economy is dependent on its productive diversity. Measured as a ratio of the number of viable economic sectors relative to the maximum number of sectors possible, the South experienced a growth in economic diversity of almost 18 percent between 1982 and 1992 (English and Gentle in preparation). This rate of diversification was slightly higher than the national average between 1982 and 1992, which was just more than 17 percent.

More specific to the forests of the South are economic trends associated with forest industry. McLaren and Lyddan (1997) surmised that the "Sunbelt' region has emerged in the 1990s as the focal point of the world's forest products industry. Estimates show the region accounting for an estimated 25 percent of world paper production, 33 percent of pulp output and 35 percent of solid-wood products manufacturing. Output of both southern pine plywood and pine lumber grew about 80 percent in the 1980s and 1990s. These dimensions of wood industry growth reflect growing product demand, advances in manufacturing technology and declines in federal timber harvests in the Pacific Northwest. The South also accounts for an estimated 40 percent of the productive timberland in the U.S., 45 percent of total housing starts, 45 percent of U.S. paper production, 65 percent of paperboard production, 73 percent of pulpwood consumption, 70 percent of wood pulp output, 45 percent of lumber production and 65 percent of panel output. An estimated 46 of the 50 largest wood-consuming pulp mills in the U.S. are located in the region.

Forest-based industries in the South employ nearly 650,000 people, reflecting an annual increase of 1.38 percent per year since 1982 (Aruna et al. 1997). Forest industry employment in the South accounts for about 40 percent of the total U.S. forest-based employment, with wages increasing from \$8.5 billion in 1982 to \$15.3 billion in 1990 (excluding inflation). Forests in the South are significant to its economy, and Forest Service projections show continued increases over the next two decades (Haynes et al. 1995).

Environmental Voices

As the "philosopher" Yogi Berra is reported to have said, "Things ain't what they used to be, and they never were." This may be an apt description of our understanding of the attitudes of Southerners toward their environment. Generalizing about the South and Southerners has long been a favorite national

pastime. Among the generalizations sometimes heard is that Southerners are slow to change; that they are among the last to adopt the changing lifestyles of the nation. Thus, goes the thinking that Southerners have yet to jump aboard the environmental bandwagon, including concerns for endangered species and environmental protection. What's more, being conservative, Southerners would never tolerate government meddling in the activities of private landowners.

Research of the past decade suggests, however, that if such characterizations of Southerners ever were true, they are rapidly becoming less true. So, in addition to the growing number of voices, in addition to urban, minority and economic voices, southern environmental voices are rising and increasingly being heard.

Over and over, research has shown that environmental attitudes vary little across geographic regions (e.g., Christianson and Arcury 1992). Thus, looking broadly at Americans' environmental attitudes is usually a good reflection of those found in a particular region or state. In the South, as elsewhere, environmental concern among our citizenry developed rapidly in the 1960s and seemed to peak by Earth Day, 1970 (Dunlap 1991). This was followed by an apparent decline in concern during the early 1970s, but this decline began a turnaround in the latter half of that decade leading to a rebound in public attention toward the environment in the 1980s. By the early 1990s, environmental concern as evidenced by opinion surveys had attained an all-time high. In 1994, only 2 percent of the American public indicated they were unsympathetic to the environmental movement (Times Mirror 1994). Ninety percent indicated they believe there is a reasonable balance needed between economic progress and environmental protection.

Thus, the first environmental voice being discovered in the South that we discuss is that of the general public. Opinion polling over the past two decades strongly supports the contention that "environmentalism has become not only a top-of-mind issue for the vast majority of Americans, but increasingly it is becoming a way of life for people both as voters and as consumers" (**Times** Mirror Magazines Conservation Council 1992). Opinion surveys of residents of Alabama and the Mid-South conducted in 1992 also provided evidence that the environmental values and opinions of Southerners closely mirror those of the broader general American public (Bliss et al. 1994). Three-quarters of respondents to these southern surveys agreed with the statement, "Private property rights should be limited if necessary to protect the environment," while fewer than one quarter agreed that, "Forest owners have the right to do as they please with their forests, regardless of what it does to the environment" (Bliss et al. 1994). Moreover, southern forestland owners share the public's concerns about

clearcutting and herbicides, support regulation of harvesting practices on private land where necessary to protect environmental values, and seek a balance between protecting the environment and protecting the rights of private property owners. As well, differences of opinion between owners of large and small tracts, and between urban and rural owners, are not as great as commonly assumed (Bliss et al. 1997).

In another poll conducted for the Southern Appalachian Assessment (Cordell et al. 1996), the following were among the attitudes of that region's residents:

- "There should be more harvesting of timber in national forests" (less than 18 percent agreed).
- . "Land that provides critical habitat should not be developed" (almost 73 percent agreed).
- . "The Endangered Species Act has gone too far, and it should be restricted" (less than 34 percent agreed).
- · "Industries which pollute streams and air should pay for cleanup" (almost 84 percent agreed).
- . "More public land should be set aside as wilderness" (almost 69 percent agree).

The second newly discovered environmental voice is that of grassroots environmental and other non-governmental organizations (NGOs) which have sprung up in communities throughout the South. In Alabama, for example, ongoing research has identified some 150 grassroots groups interested in sustainable development (Bailey et al. 1997). These groups range from single-issue NIMBY ("Not in My Back Yard") groups fighting hazardous waste incinerators, to private property rights organizations, "waterwatch" groups and groups opposing timber harvesting on national forests.

As striking as the diversity of these groups is the main-stream character of their members. The typical grassroots activist in Alabama is less likely to be a radical, wild-eyed, long-haired youth than a fiscally conservative, middle-aged, working mother of three with deep concerns and opinions about environmental issues (Bailey et al. 1993). Increasingly, grassroots organizations are connected with national, even international networks and communicate via newsletters, faxes, e-mail and chat rooms in cyberspace. Many have their own web pages and are thereby linked to potentially thousands of web surfers. Through such electronic media, local issues become state issues and state issues can gain global attention.

A third newly discovered environmental voice is that of communities. Along with increasing environmental awareness has come growing concern about the social and economic aspects of a forest-based economy. The economic and

social life of much of the South is intricately enmeshed with the forest, which provides raw materials for the region's economy, as well as the defining features of the landscape.

A growing body of research illustrates the consequences, both positive and negative, of different levels of forest dependency (Bliss et al. 1998a,1998b, Sisock 1998). For example, the pulp and paper industry in Alabama is the major employer and economic lifeblood of many communities. State tax policies designed to recruit and sustain the industry in the state, however, have left impoverished local public school systems (Joshi 1997). The voices of those who call for more positive social outcomes from forest-based industry and development are only beginning to be heard, but they will almost surely grow in influence.

Owner Voices

Added to the environmental voices are many other voices arising from the growing number and changing composition of owners of private rural land. Of these owners, steadily increasing proportions live elsewhere but on the land (absentees), and they own it for an increasingly wide range of reasons. In a recent survey of owners (Teasley et al. in preparation), the estimated regionwide percentage who own IO or more acres and who are absentee owners was 56.2 percent. The makeup of private land in tracts of 10 or more acres, as reported by all owners, is 48 percent woodland, 2 1 percent pasture land, 21 percent crop or hay land, 2 percent water, and 8 percent other uses. The reasons owners give for owning rural land include having personal recreation opportunities (43 percent), raising livestock for sale (42 percent), investing to eventually sell (39 percent), growing landscaping shrubbery for sale (3 1 percent), providing recreation opportunities for others (31 percent), enjoying my own personal green space (27 percent), living in a rural setting (25 percent), renting dwellings for profit (25 percent) and using as a tax shelter (20 percent). Eight percent indicated owning to provide habitat for wildlife and 3 percent indicated growing timber for sale as a reason. Forty-three percent of southern landowners are retired, 26 percent are self employed and 18 percent work for a private business. Their average age is 6 I, and only 12 percent are under age 45. Forty-two percent are 65 years or older, and 44 percent have an annual income of \$50,000 or more.

As mainstream Americans, landowners are little different than others in the environmental attitudes they hold. In a survey of southern landowners (Teasley et al. in preparation), nearly 77 percent agreed to strongly agreed with this statement, "The balance of nature is very delicate, so we must try to limit economic growth that exploits **nature.**" **This** environmental voice was heard equally strongly from resident as well as absentee owners. And, when asked what they intended

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to emphasize on their land, 38 percent indicated improvement of the natural conditions, while about 27 percent indicated uses that will earn income. About 32 percent were undecided about what to emphasize. A significantly higher percentage of absentee owners put emphasis on income earning, while a higher percentage of resident owners emphasized improving natural conditions.

As recreation demand in the Nation continues its growth, pressures rise for access to both private and government lands. Private owners have responded to those seeking access in a number of ways, but the end result has been a gradual and steady decline in the amount of private land accessible to all but persons known by and close to the owners. In the South, 41 percent of owners post an average of 238 acres. Among the most prominent of reasons for posting are, "to know who is on the property" (40 percent), "to keep out persons not having permission" (40 percent) and "to keep hunters out" (32 percent). About 80 percent of southern owners expect to post the same acreage in the future, but 15 percent indicate they plan to post more.

Mostly, persons allowed on private land include members of the owner's household, immediate family members not currently living in the household, and friends, acquaintances or familiar others. A relatively low percentage of owners lease to outside individuals, clubs or other groups for hunting or other recreation (just more than 7 percent). The average lease covers 418 acres and between 10 and 15 persons. The majority of owners who lease do so at a fee lower than they believe the market would bear as a way to encourage someone they trust to help care for the land (66 percent). Even fewer owners permit persons having no personal relationship with them and not leasing, i.e., the general public, to use their land (6 percent).

Increasingly, southern landowners are absentee owners; significant because resident and absentee owners differ. Higher percentages of absentee than resident owners are members of business, trade or timber associations, whereas, higher percentages of resident owners are members of farm or breed associations. Resident owners have owned their tracts an average three years longer than absentee owners, and higher percentages have added acreage to their original tract. Further, the percentage of land in forest or woodland cover on resident-owned tracts is substantially less than that on absentee tracts (41 percent versus 53 percent). On the other hand, the percentage of resident land in pasture is substantially greater (27 percent versus 16 percent). Resident owners put greater emphasis on grazing livestock, whereas absentee owners emphasize harvesting timber, leasing for growing crops or for recreation, and share cropping.

Resident owners tend to be somewhat younger, and there is a higher percentage who are male when compared with absentee owners. Absentee owners tend to have higher annual incomes than resident owners, with substantially

higher percentages earning in excess of \$80,000. The changing voice of the private rural landowner, as more of them are urban-dwelling absentee owners, can have dramatic influences on forest and wildlife management in the South.

Population on the Land

Figure 2 identities the half of counties in the South that have the greatest percentage of their total area in undisturbed land use, including forest, water, range, and other undeveloped and uncultivated land. This is considered an indicator of wildlife habitat availability. Superimposed upon these more "habitat-abundant" counties is projected population expressed in population per square mile as expected by the year 2020. The darker the shading, the greater the population density growth expected. There are a number of darker-shaded counties raising the possibilities of substantial population impact on wildlife habitat in some areas of the South by the year 2020.

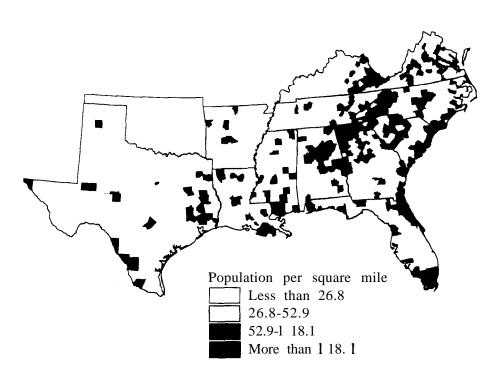


Figure 2. Projected population per square mile for the half of counties in the South having the greatest proportion of area in undisturbed land uses by 2020.

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Implications for Forest and Wildlife Management

More people, different people, changing attitudes and more affluence are changing the voices heard from and speaking about the South's forests. Few would argue with Yogi in his summation, "Things ain't like they used to be, and they never were." In this paper, we have observed a number of key trends that are sure to be important in determining the nature of forest and wildlife management now and in the future. Briefly summarized, they are:

- **Population growth** in the South is and will continue to be THE most significant factor influencing what we as natural resource managers do, might think about doing or can do as we seek to carry out our missions. Spreading development, more demands on the land, pressures for domestic water, etc., will reduce the area we have to work with, increase the number of voices calling on us to serve their causes, diminish the quality of and stresses on the natural environment, and of necessity push us toward alternative approaches to resource management. These changes will be especially acute in areas that are anywhere near the South's spreading urban complexes whose inhabitants will increasingly live a life detached from the land.
- Minority populations and their proportion of total population are growing rapidly. Many live in inner cities, while many others are gaining economic status. For many, there is little expressed affinity for the natural environment. Minority voices may speak for a somewhat different set of priorities from our forests and other natural forms of habitat than the predominantly white, rural Southerner of the past.
- **The economy** of the South is growing and diversifying steadily. Demands for raw materials, land for development, land to live on, and shifts toward more of a service and retailing economy are changing economic priorities, even in the face of a booming forest industry. Forests and habitat for wildlife are not likely to be high in priority on the agenda of such an economy.
- Owners of private fund increasingly mirror generally empathetic public attitudes toward the environment, are trending toward more absentee owners and are steadily decreasing general public access to their land. While absentee owners are oriented more to income earning, all owners voice interest in improving natural conditions on their land, including wildlife habitat. Increasingly, landowners are likely to be a factor acting to moderate somewhat some of the harsh impacts of population growth and urbanization on the South's forests and wildlife. In addition to the influence of landowner voices, another moderating influence is likely to be the significant number of southern counties that are losing population. These counties are becoming more rural-like in population levels.

Among factors of change and the voices arising from those changes, second
only to population growth and urbanization is the rising influence of the
environmental voices of Southerners. While most Southerners may not
readily act out their environmental leanings through the choices they make
in the supermarket or by changing their consumptive lifestyles, they almost
certainly will voice their environmental concerns in the voting booth, at city
council meetings, on the phone to their legislative representatives and over
the internet.

Overall, it seems to us that the fate of the South's natural resources, especially its forests and its wildlife, may not be all bad. Moderated by the trending in some counties and subregions toward a more rural-like character, by concern for the natural components of private land by its owners and by rising environmental leanings, it seems to us that pressures from urbanization, enormous population growth and booming economic demands may take shape in ways that will make responsible forest and wildlife management doable, at least through the next decade.

References

- Aruna, P.B., F.W. Cubbage, K.J. Lee and C. Redmond. 1997. Regional economic contributions of the forest-based industries in the South. For. Products J. 47(7/8): 35-45.
- Bailey, C. and J.C. Bliss. 1997. Collaboration for sustainable development: Activists, agents, and academics in Alabama. Nat. Res. Initiative Competitive Grants Program Project, Sch. of Forestry, Auburn Univ., Aubum, AL.
- Bailey, C., K. Alley, C.E. **Faupel** and C. Soleheim. 1993. Grassroots environmentalism in Alabama. Pages 31-39 in **Proc**. Nonindustrial Private Forests in the **1990s**, the Auburn Forestry Forum.
- Bliss, J.C., T.L. Walkingstick and C. Bailey. 1998a. Alabama's forest communities: Development or dependency? J. Forestry **96(3)**: 24-30.
- Bliss, J.C., M.L Sisock and T.W. Birch. 1998b. Ownership matters: Forest land concentration in rural Alabama. **Soc**. and **Natur**. Resour. 1 1(4).
- Bliss, J.C., S.K. Nepal, R.T. Brooks, Jr. and M.D. Larsen. 1997. In the main-stream: Environmental attitudes of mid-south NIPF owners. South. J. Appl. Forestry 21(1): 37-42.
- Bliss, J.C., S.K. Nepal, R.T. Brooks, Jr. and M.D.Larsen. 1994. Forestry community or granfalloon? J. Forestry 92(9): 6-10.

- Cordell, H.K., G. Helton, M. Tarrant and C. Redmond. 1996. Communities and human influences in Southern Appalachian ecosystems: The human dimensions. Pages 17-85 in The Southern Appalachian assessment: Social/cultural/economic technical report. Rept. 4 of 5, South. Reg., USDA For. Serv., Atlanta, GA. 220 pp.
- Christianson, E.H. and T.A. Arcury. 1992. Regional diversity in environmental attitudes, knowledge and policy: The Kentucky river authority. Human Organization 51(2):99-108.
- Dolin, E.J. 1990. Black Americans' attitudes towards wildlife. J. Environ. Ed. Pages 17-2 1.
- Dunlap, R.E. 1991. Trends in public opinion toward environmental issues: 1965-1990. Soc. and Natur. Resour. 4: 285-3 12.
- Economic Research Service. 1997. Nonmetro population growth rebound of the 1990's continues, but at a slower rate. Pages 46-5 1 in Rural conditions and trends. USDA Econ. Res. Serv., Washington, D.C. 108 pp.
- English, D.B.K. and **P.** Gentle. In preparation. Economic dimensions of the SEELA study. Pacific Northwest Res. Sta., USDA For. Serv., Portland, OR.
- Floyd, M.F. and J.H. **Gramann**. 1993. Effects of acculturation and structural assimilation in resource-based recreation: The case of Mexican-Americans. J. Leisure Res. **25**(1): 6-21.
- Haynes, R.W., D.M. Adams and J.R. Mills. 1995. The 1993 RPA timber assessment update. Gen. Tech. Rept. RM-259, Rocky Mt. For. and Range Exp. Sta., USDA For. Serv., Fort Collins, CO.
- Johnson, C.Y., J.M. Bowker, D.B.K. English and D. Worthen. 1997a. Theoretical perspectives of ethnicity and outdoor recreation: A review and synthesis of African-American and European-American participation. Gen. Tech. Rept. SRS-11, South. Res. Sta., USDA For. Serv., Asheville, NC. 16 pp.
- Johnson, C.Y., P.M. Horan and W. Pepper. 1997b. Race, rural residence, and wildland visitation: Examining the influence of sociocultural meaning. Rural Sociol. 62: 89-110.
- Joshi, M.L. 1997. Industrial recruitment policy and rural development: A case study of the pulp and paper industry in Alabama. Ph.D. diss., Sch. Forestry, Auburn Univ., Auburn, Alabama. 114 pp.
- Kaljee, L.M., B. Stanton, I. Ricardo and T.L. Whitehead. 1995. Urban African American adolescents and their parents: Perceptions of violence within and against their communities. Human Organization. 54(4): 373-382.
- Marks, S.A. 199 1. Southern hunting in black and white. Princeton Univ. Press, Princeton, NJ.
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- McLaren, J. and C. Lyddan. 1997. Introduction: The woodbasket of the world. Proc. Southern Forest Industry Conf., May 13-14, Birmingham, AL. Miller Freeman, Inc., San Francisco, CA.
- Sisock, M.L. 1998. Lords of the land: Forestland concentration and rural well-being in Alabama. Unpubl. M.S. thesis, Sch. Forestry, Auburn Univ., Auburn, Alabama.
- Teasley, R.J., J.C. Bergstrom, H.K. Cordell, S.J. Zamoch and P. Gentle. In preparation. Private lands and outdoor recreation in the United States. *In* H.K. Cordell, principal investigator, Outdoor recreation in American life: A national assessment of demand and supply trends. Sagamore *Publ.*, Champaign, IL
- Times Mirror. 1994. From anxiety toward action: A status report on conservation in 1994. Times Mirror Mag. Page 58.
- Times Mirror Magazine's Conservation Council. 1992. Natural resource conservation: Where environmentalism is headed in the 1990s. Times Mirror Mag. Page 4.